A patchwork approach to gender equality weakens the SDGs: time for cross-cutting action

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The journey to realizing women's and girls' rights has been a long one. We marked the 25th Anniversary of the Beijing Declaration in 2020, committed to the 2000 Millennium Development Goals, and renewed commitment in 2015 with the Sustainable Development Goals (SDGs). The 2030 Agenda for Sustainable Development should be used as an advocacy tool to initiate action and hold Member States of the United Nations accountable (1–3). At 5 years into the 2030 agenda, it is clear that many countries are not on track to meet some of the SDGs and targets. There is also fear the COVID-19 pandemic will result in setbacks and complacency from governments to commitments previously made. In order to realize women's and girls' rights, concerted action on gender equality throughout the SDGs is needed.

The ubiquitous nature of gender inequality and its relationship to the SDGs

Gender equality targets are embedded in 11 of the 17 goals (to different degrees), with one explicitly addressing gender equality (SDG 5: Achieve gender equality and empower all women and girls) (3). This is evidence of the ubiquitous nature of gender inequality and its relationship with other forms of inequality. Gender inequality is one of the most pervasive forms of inequality because it places women and girls at a disadvantage no matter what their social position, and no matter where in the world, interventions related to health, education, or other sectors are implemented in highly gendered contexts.

To demonstrate the importance of gender equality in relation to all aspects of health and well-being (SDG 3: Ensure healthy lives and promote well-being for all at all ages), we discuss the relationship of gender to two SDGs without gender-related targets or indicators: water and sanitation (SDG 6), and energy (SDG 7). In many communities, women and girls are burdened with water collection and water maintenance, and as a result are more exposed to different illnesses, incur musculo-skeletal damage, and experience chronic stress (4). Safe water, sanitation, and hygiene facilities are essential to women's and girls' well-being. Without such facilities within the home, workplace, or school, women and girls are disproportionately exposed to increased rates of illness, violence, and harassment, as they must travel to access water (4). The issue is even more acute for women and girls from rural and/or lower socioeconomic backgrounds. A study in India, for example, found that a woman from a lower caste has a greater risk of dying compared to a woman from a higher caste, due to factors such as poor sanitation and inadequate water supply and healthcare (5).

Indoor air pollution, a critical aspect of SDG 7, has become a major environmental health concern as a cause of non-communicable diseases, including chronic obstructive pulmonary disease, lung cancer, and heart disease. Indoor air pollution caused by

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unclean cooking fuels has caused 4.3 million premature deaths globally, with women and girls accounting for 60% of these deaths (6). Use of unclean cooking fuels has impacted on the health of rural women in low- and middle-income countries (7). It has also driven women further into poverty due to increased health expenditures (8). Given the integral nature of gender equality to water and sanitation, energy, and health, the omission of specific gender targets and indicators under SDG 6 and 7 is problematic.

A temporary salve to an endemic problem

The perceived indirect relationship of gender equality to other goals by practitioners, policymakers, and researchers means that it is regularly not prioritized or is missed altogether. Efforts to promote gender equality are seen as separate or different from efforts to address health-, social-, or economic inequality – for example, that health interests should not also contain efforts to promote women's empowerment. However, the objective interrelatedness of gender and the SDGs reflect the need for consolidated efforts to address both gender inequality as a standalone SDG, and to mainstream a gender perspective throughout all sectors and areas of sustainable development. Without explicit attention to gender equality it is often ignored – either due to confusion on how to address gender inequality, or an intrinsic de-prioritization of it. Attention should not be paid only to the standalone gender equality goal without efforts to integrate gender equality throughout the SDGs. Without integration, gender equality and the unique needs of women and girls will remain separate priorities, and relegated to gender specialists or advocates, rather than being holistically addressed within all areas of sustainable development.

By not addressing systems and structures of oppression, and underlying causes of poor social, economic, and health outcomes – like gender inequality – our interventions act as a temporary salve to an endemic problem. We remain in a constant cycle, continually responding to the inequitable outcomes that result from deeper structures and processes of inequality and exclusion – which sets us up for a never-ending job. If our purpose is to simply keep ourselves employed, then this strategy is working. However, if we truly want to address inequalities, we must seek to transform the systems and structures that perpetuate marginalization and exclusion and manifest as poor health and other forms of inequality.

The way forward: what should practitioners, policymakers, and researchers do?

Interventions that purposefully address gender inequality, including increasing women's autonomy, leadership, access to resources, or redistribution of labour, will have a positive effect on the outcomes of other SDGs. As a result, gender transformative policies and actions are needed. It is not enough just to draw attention to an issue, there needs to be mechanisms in place to ensure the issue is addressed and systemic barriers are challenged. First and foremost, gender equality must be seen as everybody's business, not a special interest and not only for women to work on. The SDG agenda must operate with gender as a cross-cutting aspect and therefore integrated within design, resources, implementation, measurement, and evaluation. Gender strategies must be designed with both short- and long-term gains, and policies with proven track records need to be scaled-up and implemented. Specific actions include:

1) **Political leadership and policymaking guided by evidence**: stay committed to the agenda of women's and girls' rights, including access to comprehensive sexual education, quality sexual reproductive health services and planning, safe abortion, and maternal and neo-natal care.
2) **Resource allocation and gender budgeting**: provide resources and tracking through using a gender equality marker (9) to ensure appropriate resource allocation.
3) **Intersectional lens**: think about how gender intersects with other social stratifiers as realities vary beyond gender, including based on race, geography, caste, socioeconomic status, education, religion, disability, age, sexuality, and so forth.
4) **Data**: collect and analyze sex and gender data. Sex and gender data are needed to understand context and measure progress. This includes quantitative and qualitative gender data, gender-specific indicators, and the use of proxy indicators. There should be a shift to implementation research.

5) **Gender-responsive approach**: use a gender-responsive approach to all areas of health and well-being, which includes analyzing gender determinants of health and designing health systems to address the unique needs of girls and women, boys and men, and all other genders.
6) **Shifting norms**: change norms through shifting the narrative on how women and girls are viewed: from vulnerable populations to drivers of health and well-being in their societies and leaders in their communities and society.
7) **Access to power**: put power into the hands of women and girls by increasing political leadership, formalizing their participation in the labour market and ensuring decent work.

In the era of the SDGs, the interconnectedness of sustainable development and gender equality is well established. Achieving gender equality must be integral if we are to make progress on and achieve all SDGs. However, without implementing action on gender equality across SDGs, it will take at least 100 years to close the gender gap, and more specifically 257 years for the economic gender gap (10). The urgency to prioritize gender equality is further demonstrated by the COVID-19 pandemic. We are witnessing wide-spanning inequities based on race, gender, socioeconomic status, and geographies. As we build back better, taking action on commitments made on gender equality is imperative.

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Adapting a water, sanitation, and hygiene picture-based curriculum in the Dominican Republic

Jennifer Nordhauser and Jason Rosenfeld

Abstract: Water, sanitation, and hygiene issues present barriers to health in rural Dominican Republic. Limited access to adequate water, sanitation, and hygiene accompanies a prevalence of water, sanitation, and hygiene-related diseases. To address these issues, an education and behavior change program using community health clubs has been adapted for areas at greatest risk of water, sanitation, and hygiene disease transmission. To support this initiative, a protocol was created to evaluate 147 images from a community health clubs toolkit for Dominican agricultural communities, or bateyes, to determine image comprehension and cultural appropriateness, as well as the demographic variables associated with visual literacy. A total of 112 interviews were completed across seven bateyes located near the city of La Romana; 60 images were determined to require additional adaptation. Further analyses demonstrated that age and education were significantly associated with greater visual literacy. These results reinforce that educational visual aids require testing for cultural appropriateness and that future work should be conducted to investigate factors that contribute to visual literacy.

Keywords: sanitation/hygiene, community health club, health education, community-based research/participatory research

Introduction

Between 2000 and 2015, access to basic drinking water sources and at least basic sanitation facilities in rural Dominican Republic increased from 81% to 86% and 70 to 74%, respectively (1). Despite this progress, inadequate water, sanitation, and hygiene (WASH) continues to contribute to a preventable burden of disease. According to the most recent demographic and health survey (DHS), the incidence of diarrhea within 48 hours in children under the age of five in the Dominican Republic in 2013 was 18% (2). In 2015, there were 5.7 cases of cholera per 1000 people amounting to 9637 estimated cases of cholera and at least 138 deaths due to cholera in the Dominican Republic (3). Risk factors for diarrhea and cholera transmission include poor adherence to WASH practices such as consistent hand washing, living in rural localities, and having disadvantaged socio-economic status (4, 5). In addition, poor WASH knowledge and practices have the potential to undermine the health benefits of better WASH infrastructure (6).

Available data do not accurately represent the realities of the most vulnerable rural localities in the Dominican Republic: *bateyes*. Bateyes are isolated and underdeveloped farming communities owned and controlled by agricultural corporations. These companies employ undocumented Haitian migrants and Dominicans of Haitian descent as low-skilled agricultural laborers. According to the 2013 DHS for the Dominican Republic, the estimated 500,000

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people living in bateyes are at high risk of preventable morbidity and mortality due to poverty, low education, and limited access to healthcare (2). For example, approximately 29% of children under five living in bateyes had diarrhea in 2013 (2). This preventable disease burden is exacerbated by the fact that only 25% of batey residents have access to an improved water source, 52% have access to an improved sanitation facility, and 31% are reported to openly defecate.

A community health club (CHC) program to address these issues in the sugarcane bateyes surrounding La Romana, Dominican Republic, is being developed. The CHC model leverages 'group knowledge, consensus building, and peer pressure' within a tight-knit population to instigate and perpetuate changes in WASH behaviors (7). Pioneered in Zimbabwe in 1995, CHCs have been successfully implemented and evaluated across 14 countries and social contexts in Africa, Asia, and the Caribbean (7–9). The club model uses participatory education activities to stimulate discussions about common health threats and help participants reach consensus about locally appropriate behaviors and solutions to prevent disease. The impact of the CHC model on WASH knowledge, behavior change, and social change has been documented elsewhere (9, 10).

One reason this model achieves sustainable WASH behavior change is the use of a visual aid toolkit in combination with participatory and adult learning techniques. The WASH toolkit is a customized deck of over 200 cards featuring images of common WASH practices including hand washing, kitchen hygiene, personal hygiene, sanitation, and environmental management. The toolkit is designed to highlight specific cultural practices, behaviors, and norms in each country and context. Local artists hand-draw the images to ensure the deck features culturally appropriate and visually recognizable elements unique to each community. With the CHC model, trained facilitators use the toolkit to engage program participants during the weekly meetings using participatory activities like three pile sorting, storytelling, and blocking the route of disease transmission (9).

A WASH toolkit was developed for Barahona, Dominican Republic in 2011 as part of a pilot CHC project launched in five bateyes (11). While developing a new CHC project in La Romana, it was determined that the existing WASH toolkit should be tested to identify any contextual and cultural differences between bateyes in the two localities. The goal of this study was to evaluate selected images from this previously developed toolkit for comprehension and cultural appropriateness in a new population and then to refine the entire toolkit for use in La Romana. In this paper, we reflect upon the utility of evaluating visual aids through structured interviews, and examine the data within the context of health literacy.

Methods

To evaluate the WASH toolkit, methods were adapted from a previous evaluation of a CHC toolkit in South Africa. These methods included structured interviews with heads of household to collect information about basic WASH behaviors as well as those respondents' recognition and ease of understanding of the images. The interviews included open-response questions to collect suggestions about how the images could be adapted to reflect local culture and context.

In the Dominican Republic, individual and collective WASH behavioral data, including types of latrines and available water supplies, handwashing and defecation practices, kitchen hygiene practices, and environmental management, were collected by the principle investigator (PI) from a sample of households in La Romana bateyes in 2014 (12). For the present study, we used the data from the 2014 study to identify images from the existing WASH toolkit that were applicable to the La Romana bateyes, but potentially required revision and contextualization.

Finally, specific images that appeared complex or ambiguous were also selected for evaluation through the following process.

The lead research assistant, a dual MD/MPH degree student from the University of Texas Health San Antonio's (UT Health SA) Long School of Medicine, who was unfamiliar with the WASH toolkit, examined and interpreted the existing 255 images. The research assistant recorded the details she observed in each image and recorded her interpretations of the behaviors portrayed in each image. The PI, a faculty member at UT Health SA with over 10 years of experience designing, implementing, and evaluating CHC programs globally, then reviewed the research assistant's

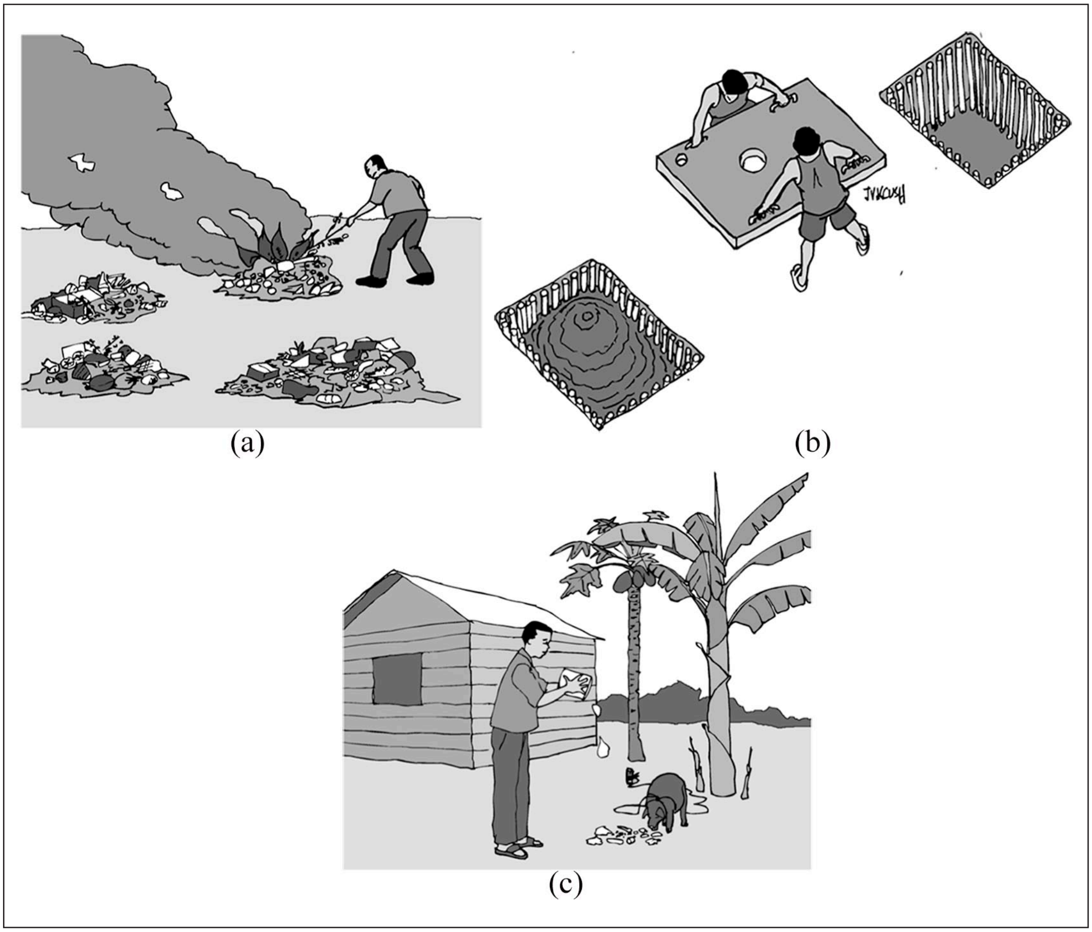

Figure 1. WASH toolkit image examples.
Figure 1a: WASH toolkit image of a man burning trash. From the WASH toolkit (Licensed under CC by 2.0).
Figure 1b: WASH toolkit image of building a new latrine. From the WASH Toolkit (Licensed under CC by 2.0).
Figure 1c: WASH toolkit image of a man feeding slops to a pig. From the WASH toolkit (Licensed under CC by 2.0).

interpretations to determine whether they matched the original intent of the images. Images that were determined to be unclear or incorrectly interpreted by the research assistant were selected for evaluation.

Figures 1a–c show a sample of evaluated images, with the following rationale for inclusion in the evaluation. The research assistant interpreted Figure 1a to depict steaming piles of waste, as the gray cloud above the pile of garbage was unclear. The intent of this image was to portray an individual burning trash. The research assistant interpreted Figure 1b to show two men simply moving a cement block. The intent of this image was show construction of a pit latrine, specifically the use and placement of a cement slab that covers the latrine pit. For Figure 1c, the artist intended to portray a man feeding scraps to a pig, but the research assistant was unsure of the pig's significance and thought the man was simply disposing of waste.

An interview script was developed to collect respondent demographics and to assess a maximum of 10 images per interview. Each card was used in at least 7 and in up to 10 interviews. The interview questions (Figure 2) assessed the respondent's ability

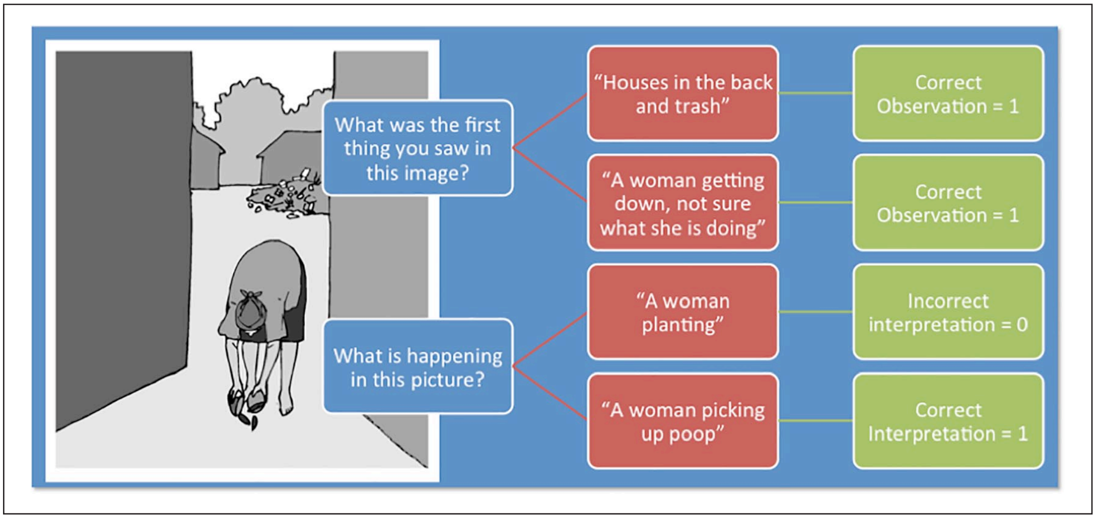

Figure 2. Flowchart for how image responses were evaluated. Images were evaluated according to observation ('What was the first thing you saw?'), which was counted correct as long as the respondent named something in the image. They were also evaluated for interpretation ('What is happening in this picture?'), which was counted correct if the action or behavior intended by the image was correctly identified (Image licensed under CC by 2.0).

to identify elements in the image, demonstrate understanding of the image's content, and interpret a meaning or an action implied by the image. Interviews also included open-response questions designed to measure the cultural and contextual appropriateness of the images. These questions included: 'Do you see this happen in your community?', 'Does this happen in your household?', and 'How could this picture better represent your community?'. The script was written in English and translated into Spanish and Haitian Kreyol.

In designing the interview protocol, we looked at other image assessment models. Bell and Morse, researchers in technical communication and environmental strategy, describe pictorial efficacy through an art-based analytical framework. Two of the parameters in their model are 'descriptive features and structures', or the pictures' content, and 'low-level interpretation', which describes 'the meaning or content of the picture in basic form' (13). The questions in our protocol reflected these parameters. In doing so, the interview responses provided data about how applicable the image content would be to communities using the WASH toolkit and how well program participants could interpret the images' meaning. The selected communities where the study was conducted were a convenience sample chosen by Hospital Buen Samaritano's batey outreach coordinator in La Romana. The coordinator chose these communities based on batey ownership (the Central Romana Corporation versus small, private landowners), distance from La Romana, and UT Health SA faculty's previous work and relationships in each community. Respondents represented a convenience sample of 112 individuals who were at home in one of the seven communities during the study team's visit, were 18 years of age or above, and were available for the duration of the interview. All respondents were consented prior to participating in the study. Data were collected over four days in June 2015 by a team of eight medical students, a faculty member from UT Health SA, and five interpreters of Spanish, Kreyol, and English from Hospital Buen Samaritano. Each team carried multiple printed sets of 10 images and conducted 21 to 25 interviews within the study period, alternating between the different image sets. A total of 147 images were selected and randomly grouped into 15 sets of 10 images, with some images repeated across sets to cross-validate responses.

This protocol was submitted to and approved by the UT Health SA Institutional Research Board as Exempt Human Research (HSC20150483N). This protocol was also reviewed and approved by

Hospital Buen Samaritano. Data were collected via the Magpi Mobile Application, which was downloaded on the students' personal smart phones (Magpi, Washington D.C.).

A binary grading system (0 = incorrect; 1 = correct) was developed to assess the respondent's ability to interpret each image, or their ability to correctly state the meaning or action implied by the image (Figure 2). Rounding down to the nearest whole percentage, images that received 50% or fewer correct responses for interpretation were recorded as requiring alteration. Qualitative responses about the practices portrayed in the images were compiled and analyzed for those images where revisions were deemed necessary.

The image grades were totaled to create two summative scores per respondent that ranged from 0–10, one score representing the number of images correctly recognized (e.g., 0 = no images correctly recognized and 10 = all images correctly recognized) and the other score representing the number of images correctly interpreted (e.g., 0 = no images correctly interpreted and 10 = all images correctly interpreted). These scores were analyzed using SPSS v.24 (IBM, Armonk, NY) to explore the relationships between respondent demographics, including age, education level, and gender, and level of visual literacy. To facilitate analyses, the continuous age variable was categorized into quartiles, while the categorical education variable (no education, primary school, secondary school) was converted into a dichotomous variable (no education and any education) due to the small percentage of sample respondents who had completed secondary school. Interpretation scores were normally distributed, which allowed for the use of independent samples *t*-tests to test differences between mean interpretation scores and level of education, and an ANOVA to assess difference in scores between the age quartiles.

Results

The study sample included a total of 112 respondents, 24 men and 88 women, with an average age of 42.8 years (47.3 years for men and 41.6 years for women). The majority of respondents (60.7%) had completed primary school, while 31.3% had no formal schooling. The reported occupations ranged from manual labor to teaching, whereas 40.2% reported that they were unemployed. Respondent demographics are provided in Table 1.

Of the 147 images assessed, 60 were found to require revisions. These images were frequently misinterpreted or misunderstood by the majority of respondents. After asking respondents to observe and interpret an image, they were asked to provide input to improve the quality of the images. Respondent suggestions included improving the quality of the images ('the fire looks like leaves' in Figure 1a), making components of the images more explicit ('difficulty recognizing full latrine' in Figure 1b), and changing components of the images to better reflect cultural practices ('not allowed to have pigs' for Figure 1c).

Education and age were found to have a statistically significant association with average interpretation scores (Table 1). The two-thirds of respondents that reported having completed primary or secondary school had an average score of 7.12 images correctly interpreted, while respondents who had not completed any schooling had a mean score of 5.03 ($t(63.159) = -4.883$, $p \leq 0.005$). In addition, respondents in the youngest age quartile had significantly higher scores than respondents in the oldest age quartile (7.23 versus 5.41, respectively), ($F(3, 108) = 3.569$, $p = 0.017$). There was no significant difference between respondents within the other age quartiles or between male and female respondents (Figure 3a–c).

Discussion

We determined that the majority of images assessed under this study were understood by the majority of respondents and were appropriate for the local context of the sampled bateyes. While 60 images were determined to require revisions, the recommended revisions were minor and predominantly due to differences in local practices. We also observed statistically significant differences in image interpretation accuracy between the youngest and oldest respondents and between educated and uneducated respondents. Many of the suggestions for individual image improvement were consistent between subjects, but we included all responses in the image revision notes.

As per Bell and Morse's model of pictoral efficacy, the results of this study reinforce the link

Table 1. Demographic variables and average interpretation scores.

	N (%)	*Mean interpretation score*	*Mean difference (CI)*	*p-value*
Total	**112 (100)**	**6.59**	–	–
Gender**				
Male	24 (24.4)	6.54	0.140	0.788
Female	88 (78.6)	6.40	(−0.891, 1.171)	
Education**				
No	37 (33.1)	5.03	2.093	<0.005*
Yes	75 (66.9)	7.12	(1.236, 2.949)	
Age†				
18–27	30 (26.8)	7.23	0.519 (−0.97, 2.01)	0.800
			0.974 (−0.53, 2.48)	0.335
			1.826 (0.32, 3.33)	0.011*
28–40	28 (25.0)	6.71	−0.591 (−2.01, 0.97)	0.800
			0.455 (−1.08, 1.99)	0.865
			1.307 (−0.22, 2.84)	0.122
41–56	27 (24.1)	6.26	−0.974 (−2.48, 0.53)	0.335
			−0.455 (−1.99, 1.08)	0.865
			0.852 (−0.69, 2.40)	0.478
57+	27 (24.1)	5.41	−1.826 (−3.33, −0.32)	0.011*
			−1.307 (−2.84, 0.22)	0.122
			−0.852 (−2.40, 0.69)	0.478

*Statistically significant p-value ($p < 0.05$).
**Mean difference determined using a Student's t-test.
†Mean difference determined using an ANOVA test.

between image content and interpretation. The majority of images determined to require revisions (where respondents had difficulty interpreting the meaning) were those where the descriptive features and structures of the image and the content were unclear or culturally inappropriate. For example, Figure 1a features a man burning trash, which was difficult for some to interpret. The smoke, the way the fire looked like leaves, and the ambiguity of the man's action with the trash piles were confusing to the majority of respondents. Figure 1b depicts the construction of a new latrine next to an old latrine filled to capacity with feces. However, respondents had trouble discerning that the first latrine was full. These two images demonstrate issues related to image clarity, feedback that will be given to the artist who will redraw the images. Figure 1c shows a man feeding food scraps to a pig. Since many batey residents explained that owning pigs is illegal, this image will be omitted or redrawn to depict a different animal.

We also found an association between education and visual comprehension and interpretation. This corresponds with the findings in the study conducted by Paasche-Orlow *et al.* who found that education level was one of the most common demographic characteristics associated with health literacy (14). Another important finding from our study was that younger individuals demonstrated better visual interpretation abilities than the more senior members, who also tended to have lower education levels than younger individuals. Paasche-Orlow *et al.* also identified age as a contributing factor to health literacy (14). This observation in our study is possibly due to young people achieving higher levels of education in the batey communities. Gender was not found to have a statistically significant association with literacy levels in our study, but the predominance of females in our sample population was a limitation. Based on our survey findings, CHC facilitators should be prepared to explain unclear images for the less educated and older population participating in the intervention.

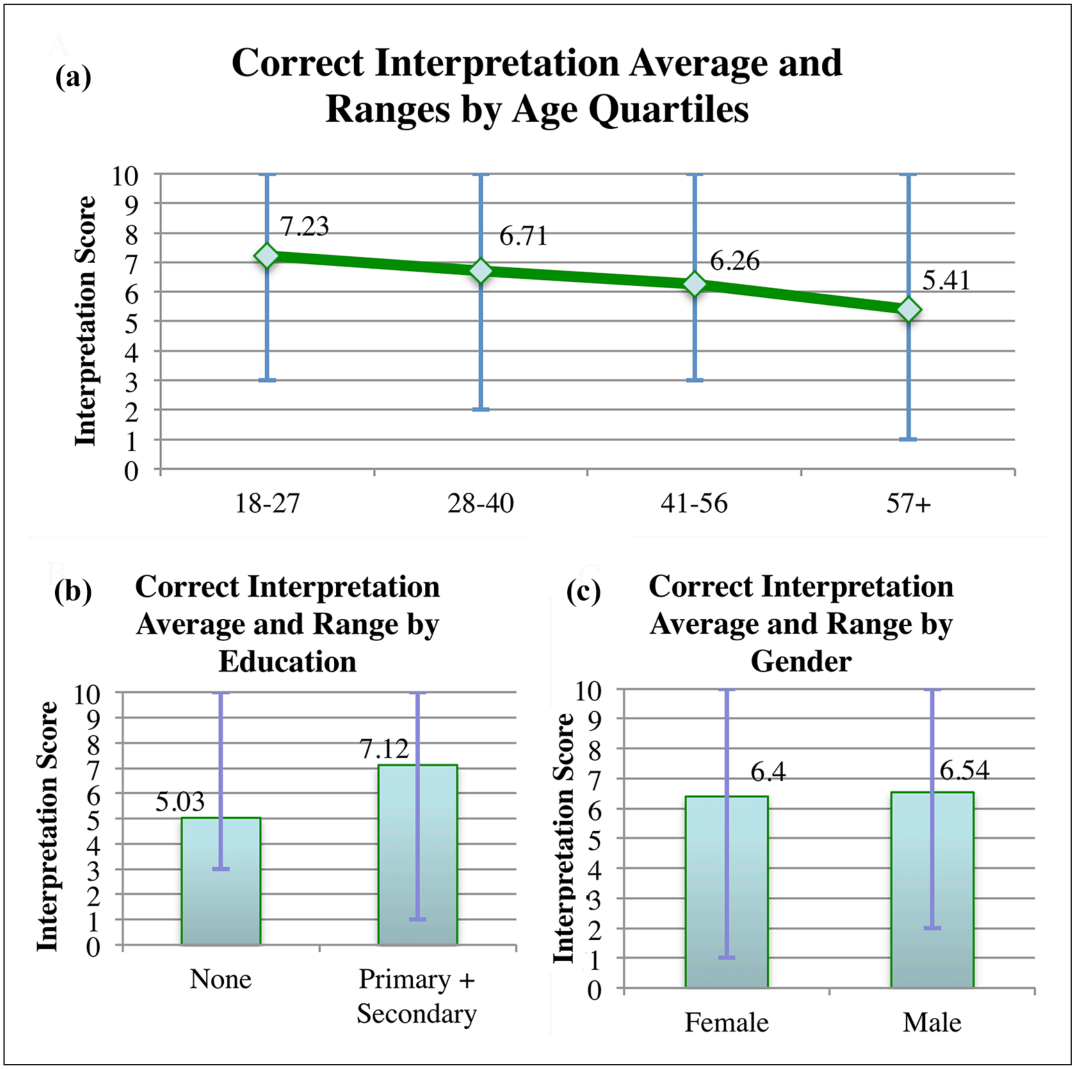

Figure 3a–c. Mean correct interpretation scores by (a) age, (b) education, and (c) gender.

Our study and results were limited by both time and logistical constraints. The student interviewers were only available for four days of data collection. This time frame limited the scope and scale of the research. Data were also collected during the day, when the working members of the household, who tend to be younger adult males, were unavailable. This resulted in a less representative study population.

Our study population was overrepresented by the less educated, older, and female respondents. According to DHS batey census data, 54% of the batey population is male and 46% is female (2). In our study, 21% of respondents were male and 79% were female. Further, 37% of the batey population is less than 15 years old, but our study was restricted to individuals who were 18 years or older (2). Finally, according to the census data, 15% of the population has no education, while more than 31% of our study population was uneducated (2). The study was also limited in that interviewers were often required to provide further clarification or explanations to assist respondents in providing constructive suggestions for revisions for unclear or culturally inappropriate images. While this potentially created bias about image content, this was necessary to obtain substantial feedback that could be used to improve image quality and content.

Our team's access to the study communities was also limited, resulting in the use of convenience sampling techniques. Transportation to the bateyes was provided by our host organization, Hospital El Buen Samaritano, who, as previously described, pre-selected the bateyes to participate in this study. Although the study team requested access to a wide range of communities, including bateyes that were privately owned and those further away from large population centers, we had no control over this selection process. Based on the limited number of sites our team visited, it is possible that the selected bateyes and sampled residents were different from the overall batey population outside of La Romana in significant ways. Overall, these limitations mean that our findings may not be generalizable to all bateyes in the region.

The next steps in the WASH toolkit development and revision process will be to revise the tested images and finalize the toolkit. Once all necessary changes have been made and irrelevant and redundant images have been removed, the PI plans to utilize the finished toolkit as part of a CHC program in bateyes surrounding La Romana. As with other CHC programs in Africa and the Caribbean, the PI, with support from future research teams, will periodically survey program participants to obtain suggestions for image improvement. Future work should include resampling the bateyes to incorporate a better balance of males and females, and testing the entire set of WASH images to further refine the toolkit. An evaluation of the WASH toolkit program should also be conducted after implementation to examine the toolkit's effect on WASH knowledge and behaviors. Further research should also explore how age, education, and other demographic factors contribute to individual understanding and interpretation of health-related images to create more effective and accessible visual aid tools.

In this study, we assessed the utility of an assessment protocol for visual aids in a community-based WASH education program in the Eastern Dominican Republic. We determined ways that the visual aid toolkit could be tailored for application in this new region. Our results should encourage public health educators and behavior change specialists working to implement a visual aid-based education system to understand the target communities' contextual and demographic variables influencing each individual's comprehension of health-related images.

This study fills an important gap in the literature by providing a systematic method to assess visual aids for other public health educators designing and adapting community-based health education programs. The results of our protocol reinforce the link between image content and interpretation. The majority of images determined to require revisions (where respondents had difficulty interpreting the images' meaning) were those where the descriptive features and the image content were unclear or culturally inappropriate. This is significant because to the best of our knowledge, this is the first published protocol that demonstrates this link. Therefore, others wishing to assess images used in health education programs could replicate this protocol.

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The authors declare that there is no conflict of interest.

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A systematic scoping review of asset-based approaches to promote health in communities: development of a framework

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Abstract: Asset-based approaches to health promotion have become increasingly popular as a way to tackle health inequalities by empowering people in more disadvantaged communities to use local resources and increase control over health and its determinants. However, questions remain about how they work in practice. This article presents the findings from a systematic scoping review of the empirical literature on asset-based approaches in communities. The aim was to identify the key elements of asset-based approaches, and how they are operationalised in interventions aimed at promoting health and reducing inequalities in local communities. Four databases were searched (Medline, PsycINFO, CINAHL, ASSIA) and papers were included if they described interventions explicitly adopting an asset-based approach but excluded if limited to asset identification. Thirty articles were included in the review. Data were extracted on the type of assets that the intervention built upon, how assets were mobilised, the expected outcomes and evaluation methods. A framework is presented that synthesises the key characteristics of asset-based interventions to promote health in communities. Three main approaches to mobilising assets were identified in the literature: (A) connecting assets, (B) raising awareness of assets and (C) enabling assets to thrive. It is argued that asset-based approaches to health promotion take a wide variety of forms, making it difficult to anticipate outcomes and to evaluate interventions. The framework presented here can be used to better understand the processes through which asset-based approaches work in practice to promote health and reduce inequalities.

Keywords: systematic review, communities, health promotion, asset-based approaches

Introduction

Health inequalities between people living in relatively more and less disadvantaged areas have been at the core of public health discourse in high income countries over the past two decades (1). In Europe, although various policies and practices have been adopted (2), health inequalities remain wide: recent evidence suggests that the percentage of people reporting good health can vary by up to 17% between those in highest (78%) and the lowest (61%) income quintile (3). In response to the rising concern among researchers and policy-makers regarding how to respond to inequalities, over the past decade an increasing interest has emerged in 'asset-based approaches' to health promotion (referred to as ABAs in this paper) (4,5). For the purposes of this paper, we define ABAs as interventions that focus on identifying and mobilising community assets to support health and wellbeing (5–8), and on strengthening people's capacity to make the best use of these resources with an aim to increase control over their health and that of their community (5,8–10). According to

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Morgan and Ziglio (6), a health asset can be 'any factor (or resource), which enhances the ability of individuals, groups, communities, populations, social systems and/or institutions to maintain and sustain health and well-being and to help to reduce health inequities'. Assets can be individuals and their skills and relations, or local organisations, or elements of the local environment that contribute to health and wellbeing (11). As evidence of the importance for health of social connections and individual and community empowerment has increased (12), researchers supporting the adoption of ABAs suggest that they could help reduce inequalities through strengthening social networks, empowering people to access and mobilise resources, and increasing their control over their own health and its wider determinants (7,9,13).

Three frameworks underpin ABAs to health promotion globally. First is Antonovsky's theory of salutogenesis (14), which argues for a shift from a pathogenic model of health towards exploring what makes people healthy, thus what are the protective factors for health. Second is the asset-based community development (ABCD) framework (15), which provides a step-by-step guide on how to identify the 'assets' already present in communities to mobilise them in support of community development. Third is the asset model proposed by Morgan and Ziglio (6), which called for three related actions to develop an evidence base for assets in public health: (a) the development of interventions based on a salutogenic perspective; (b) the use of assets mapping as proposed by Kretzmann and Mcknight (15) as a starting point to develop a trustworthy relationship between local people and professionals, to facilitate the planning of interventions effectively; and (c) the development of new evaluation frameworks and novel indicators to explain how salutogenic interventions work. However, ABAs still lack a robust evidence base (16,17), despite repeated calls for a systematic review of the evidence on ABAs in public health (18,19).

As the existing literature on ABAs centres predominantly on their theoretical basis and less on their implementation, there is uncertainty around what kind of outcomes can be achieved through ABAs (17,19), and it is unclear how interventions adopting ABAs are put into practice (20). Questions remain about what types of interventions are informed by ABAs, their key characteristics, and how they work (or not) in practice to reduce health inequalities. To this end, this systematic scoping review aimed to explore the published literature on interventions in local communities that *explicitly* adopted an ABA, to identify their key characteristics and to understand how assets are mobilised. More specifically, it aimed to answer the following question: How are ABAs operationalised when adopted in interventions aiming to promote health and reduce inequalities in local communities?

Methods

Drawing on Arksey and O'Malley's recommendations (21), this scoping review followed four steps: identifying relevant studies through searching databases; selecting studies; extracting and charting the data; and synthesising the evidence. The lack of an agreed definition of ABAs in public health posed a challenge to the development of a search strategy for this review. For instance, not all asset-based programmes name themselves as such, and as other researchers have pointed out (22,23), some authors have tended to adopt the asset-based label retrospectively. On the other hand, sometimes community-based programmes, such as arts-based projects, might not specifically seek to adopt a salutogenic approach to public health, yet, they build upon a positive view of health and well-being, such as promoting skills associated with good mental health rather than preventing risky behaviours (24,25). This is a facet that is shared with the assets movement. Given that this project was a scoping review, a decision was made to explore the characteristics of those interventions implemented in local communities making explicit reference to ABAs.

As suggested by Baxter *et al.* (26), initial iterative searches and in-depth reading of reports analysing ABAs helped identify the terms for the final search strategy (4–7,15–17). The final strategy was based on the 'population' and 'intervention' components of the PICO (population, intervention, comparator and outcome) framework (27), with population referring to people living in local communities and intervention referring to any intervention which explicitly adopted an ABA, combining the terms 'asset model', 'asset*map*', 'asset*-based', 'people or neighbourhood or communit*' and 'asset*', or 'salutogenesis' combined with terms associated with local communities and inequalities. Papers were included if they referred to a specific asset-based programme implemented in local communities. At least one of the programme components needed to have built upon or engaged with local assets and a description provided of the relevant intervention and expected outcomes. Papers only describing asset mapping were excluded, since this process is not considered an intervention on its own: assets must be mobilised for an intervention to be considered asset-based (5). Papers were included when the described intervention had a health promotion goal, using the World Health Organization definition of health promotion as: a process to increase people's control over their own health through developing personal skills, strengthening community action, creating supportive environments for health, reorienting health services or building healthy policies (28). The publication of Antonovsky's text on salutogenesis and health promotion in 1996 (14) was chosen as the starting date for the selection and papers were included if published in English, Spanish, Italian or Catalan (see inclusion/exclusion criteria in Supplemental Table 3 online). Although it is recommended to search and include grey literature in scoping reviews, due to the breadth of the topic, this review focussed on published literature only.

Four databases (Medline, PsycINFO, CINAHL and ASSIA) were searched between January and September 2017. Other databases were explored during the initial searches (Sociology abstracts and Social Service Index and Social Science Citation Index) but results did not meet the inclusion criteria, and these databases were therefore excluded from the final search. A forward citation search of four key texts was performed using Web of Science and Google Scholar (6,7,14,15).

The following information was extracted from included studies: a description of the intervention; the type of assets identified, and how these were being mobilised; the expected outcomes; how the intervention was evaluated (see Supplemental Table 1). This information was initially organised in a table (see Supplemental Table 3 online) under three overarching blocks: process, outcomes and evaluation. The aim of this first synthesis was to count extracted data and group commonalities across the studies, to provide an overview of the implementation literature. This information was then synthesised further by adopting a thematic approach, grouping together similar outcomes and evaluation practices under a common overarching label to develop a framework of the key characteristics of ABAs (see Supplemental Table 2). During this step, the findings were integrated with information from existing theoretical literature on ABAs on how to initiate a process adopting ABAs and its underpinning attributes (4–7,15–17). In addition, further synthesis was required to identify commonalities in how assets were mobilised or incorporated across the included interventions, as Supplemental Table 2 shows.

Results

The final search retrieved 760 papers after removal of duplicates. After sifting these by title and abstract, 50 studies were accessed full-text. Thirty met the inclusion criteria and were included in the final review. The PRISMA flow diagram (Figure 1) illustrates the selection process (56).

Included studies described 28 different interventions. As Supplemental Table 1 shows, there is wide variation in the form that ABAs take in health promotion (Supplemental Table 1).

Extracted data from the included studies were synthesised under the following themes: interventions processes, outcomes, and evaluation methods (see Supplemental Table 3 and the framework presented in Supplemental Table 2).

Intervention processes

Eighteen interventions targeted people living in communities as a whole, with fewer interventions directed at specific populations within the communities. Although the majority of the interventions were explicitly underpinned by the ABCD model or the asset model (6,15), some papers made reference to other approaches as also informing the intervention design, including community-based participatory research (42,47,53); positive youth development (30,36,41); community engagement (33,44); participatory research approaches (22,45,57); peer support models (49); socio-ecological model (,36,42,44); or social capital theory (31) (Supplemental Table 1). In the majority of the interventions, the assets identified were individuals and their skills, or existing

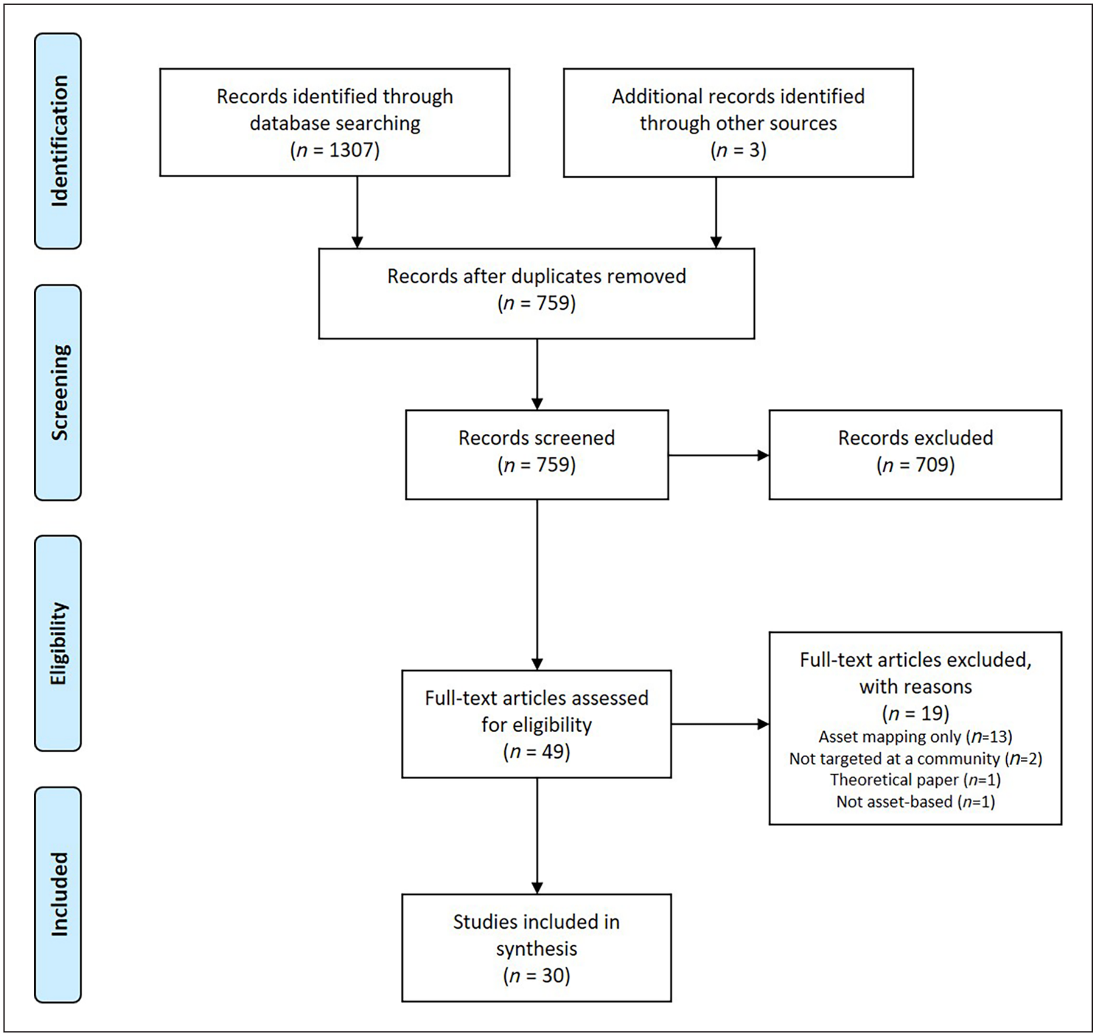

Figure 1. PRISMA flow diagram of the selection process.

organisations, and only three included elements of the physical environment (44,54,58).

We propose three main approaches to understand how assets are mobilised:

(A) connecting existing assets;
(B) raising awareness of assets;
(C) enabling assets to thrive (see Supplemental Table 2).

Approach A refers to programmes in which existing people and organisations recognise each other as assets and connect together to work or share resources. Examples included developing new partnerships (22,29,32,36,37,40,43–45,50–55).

Approach B refers to tangible existing resources which may be underused, or which other community members may not be aware of. Examples included signposting to services or other resources (31,33–35,42,46,48,54).

Approach C reflects processes where potential assets identified needed further support to develop their potential. It describes activities designed to encourage individuals to 'become' assets in their communities or to intervene on physical settings. Examples included training lay people to become peer supporters or to deliver an intervention (30,31,36,38,41,47,49,57); or establishing recreational parks (22,44,51); or green infrastructures (32,44,51).

In our analysis, eight interventions used approach A, seven used approach C, three used approach B and 10 used more than one approach combined.

Outcomes

Following South's framework on community-based outcomes (13), *outcomes* were categorised according to three levels: individual, community and organisational. Nineteen interventions anticipated changes in individual outcomes such as increased skills, healthier behaviours or self-confidence. Twenty interventions anticipated community changes such as engagement or development of partnerships and five interventions anticipated changes at organisational level such as developing new interventions or raising awareness of services (see Supplemental Tables 1 and 3 online). However, eighteen interventions included changes at more than one level.

Evaluation

Sixteen studies reported evaluation methods. Within these studies, 10 interventions adopted a mixed methods approach to the evaluation, although two of them limited the quantitative part to monitoring attendance or satisfaction (46,50). Two studies included self-administered surveys to collect data on health behaviour (34,41), or on engagement patterns (40). Only one study incorporated health data from an available census (41). Qualitative methods were used primarily to explore changes and impact through interviews. The remaining fifteen studies focussed on describing the intervention. Overall, limited discussion was found as to whether and how the intervention had contributed to the reduction of health inequalities. For example, Durie and Wyatt argue that traditional linear interventions cannot effectively tackle the complexity of inequalities (22), while adopting ABAs and enabling equal relationships between communities and services could be an alternative way to tackle such complexity. Other authors discussed inequalities as informing target groups or areas for the intervention, which may suggest that the interventions could reduce inequalities in those populations or areas (38,48). One paper specifies that impact on inequalities will be evaluated separately (37).

The combined evidence from theoretical texts and the synthesis from the scoping review led to the development of a framework (Supplemental Table 2) highlighting the key characteristics of ABAs to promote health in local neighbourhoods in three main blocks: process, outcomes and evaluation practices.

Discussion

This scoping review represents the first attempt to systematically review published empirical literature on ABAs for promoting health in local communities. It has shown that ABAs are implemented in a variety of forms and assets are being mobilised in different ways to improve health. It has proposed a framework for understanding the key dimensions of ABAs in health promotion.

The proposed framework can serve as a basis for reflection when asset-based interventions are being designed; for example, to underpin dialogues about what assets to mobilise, how, and for what purposes. It should be considered a work in progress to support discussion of what makes an intervention asset-based, and how expected outcomes might be brought about. The framework can be tested and refined through further analysis of ABAs.

It should be noted that most interventions sought to *connect* individuals and/or organisational assets. The theoretical literature aligns ABAs with community engagement approaches, which might explain this focus. Fewer interventions mobilised physical settings as assets, mainly through approach B, for instance by encouraging local residents to walk in green areas (38,44,54). Further research should explore barriers to mobilising physical assets.

On the other hand, 'enabling' people to thrive as assets (approach C) may reflect a more top-down strategy as it implies the public health workforce or other stakeholders recognising the potential in individuals. Approach C could also be used to refer to interventions enabling elements of the physical environment to become assets. However, because those actions (22,32,51) resulted from the *connection* of individuals or existing organisations, 'enabling' physical settings to thrive could also be considered as a secondary outcome of the asset-based process.

In fact, many of those outcomes that interventions aimed to achieve could also be thought of as processes leading to health improvement like changes in social capital or the development of local partnerships. It might be more helpful to define ABAs as processes leading to more salutogenic health promotion practice. A change as such requires a shift in mind-set in stakeholders engaged in implementing ABAs, which can be challenging (19). Further research on the potential causal pathways emerging from interventions adopting ABAs could help shed light on how ABAs can reduce inequalities and what their added value could be in comparison to more traditional deficit-based approaches. It seems that there is an implicit assumption about the relationship between connecting, raising awareness of, or enabling assets to thrive, with improved health and reduction of inequalities.

Finally, the variety of expected outcomes makes it difficult to compare interventions or identify common health indicators, a challenge shared by other academics researching community wellbeing (58). As argued by Baker (20), where evidence on ABAs is available, the variety of indicators adopted to measure outcomes makes it difficult to synthesise results and analyse ABAs' effectiveness. The difficulties of tracing and associating specific processes or intermediate social outcomes to health results resembled one of the assertions of the Chicago conference on community intervention in 2009 (59), where researchers proposed to study community intervention as part of a system, presenting system thinking as a potential paradigm. The proposed perspective considers the influence that both a complex system and an intervention can have on a local community and its members. Communities are indeed complex and open systems themselves, where various factors and people interact with each other in different ways, creating different synergies, not always as predicted (60). Asset-based interventions reflect this complexity, and so does the system within which these are implemented, and the health needs they aim to address. Evaluating an asset-based intervention in communities should therefore take a more comprehensive approach to account for those outcomes, impacts and changes (61), in the dynamics of the contexts, the synergies of the people, the settings and the relationships (19,62). Moreover, how those changes can help reduce inequalities should be further investigated.

To our knowledge, this is the first review to analyse the implementation literature on ABAs and the first attempt to provide a synthesised framework of the variety of assets mobilised and outcomes related to ABAs. Although this review tried to be as comprehensive as possible, the lack of inclusion of grey literature may have left out other examples of ABA implementation.

Conclusion

This review represents a first attempt to systematically search and synthesise the empirical published literature on ABAs to promote health in local communities. It has provided an overview of the key characteristics of interventions adopting an ABA and it has proposed three different strategies through which assets are mobilised within interventions: (A) connecting assets, (B) raising awareness on available assets and (C) enabling assets to thrive. It has discussed the challenges that evaluating ABAs can generate, given the variety of anticipated health-related outcomes, the blurred boundaries of ABAs as processes or outcomes and the different ways in which assets can be mobilised to bring about changes. A lot has been written on assets in public health from a theoretical perspective on the approach and how it should be implemented. Yet, the empirical literature has shown limited evaluation of ABAs that effectively identifies changes attributed to ABAs. The framework presented here can be used in further research that is needed to understand how ABAs can support health promotion and reduce inequalities.

Note

Tables 1 and 2 appeared in the ahead of print version of this article, but they have been removed and are now available online with this article: https://journals.sagepub.com/doi/suppl/10.1177/1757975919848925

Declaration of Conflicting Interests

The authors declare that there are no conflicts of interest.

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Supplemental material

Supplemental material for this article is available online.

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Impact of a tobacco cessation intervention on adherence to tobacco use treatment guidelines among village health workers in Vietnam

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Abstract: Community health workers (in Vietnam referred to as village health workers) have the potential to play a key role in expanding access to evidence-based tobacco use treatment. We conducted a cluster randomized controlled trial in community health centers in Vietnam that compared the effect of provider advice and cessation assistance (i.e. brief counseling and patient education materials) (BC) vs. BC + three sessions of in-person counseling delivered by a village health worker (BC+R) on providers' and village health workers' adherence to tobacco use treatment guidelines. All village health workers and health care providers received training. This paper presents data on the effect of the intervention on village health workers' adherence to tobacco use treatment guidelines, including asking about tobacco use, advising smokers to quit, offering assistance and their attitude, norms, and self-efficacy related to tobacco use treatment. We examined changes in adherence to tobacco use treatment guidelines before and 12 months after the intervention among 89 village health workers working in the 13 community health centers enrolled in the BC+R study condition. Village health workers' adherence to tobacco use treatment guidelines increased significantly. Village health workers were more likely to ask about tobacco use (3.4% at baseline, 32.6% at 12 months), offer advice to quit (4.5% to 48.3%) and offer assistance (1.1% to 38.2%). Perceived barriers to treating tobacco use decreased significantly. Self-efficacy and attitudes towards treating tobacco use improved significantly. Increased adherence to tobacco use treatment guidelines was associated with positive attitudes towards their role in delivering tobacco use treatment and increasing awareness of the community health center smoke-free policy. The findings suggest that, with training and support systems, village health workers can extend their role to include smoking cessation services. This workforce could represent a sustainable resource for supporting smokers who wish to quit.

Keywords: village health workers, adherence, tobacco use treatment, tobacco cessation, Vietnam

Introduction

Tobacco use continues to be the number one cause of preventable death worldwide (1). It is predicted that, if the current trend in tobacco use is maintained, by 2030 there will be more than 8 million deaths per year, most of which will occur in low and middle-income countries (LMICs) (2). Vietnam continues to have one of the highest smoking rates in the world. According to the Global Adult Tobacco Survey (GATS), the average smoking rate in 2015 in Vietnam was 22.5%: 45.3% for men and 1.1% for women (3). Identifying cost-effective models for treating tobacco use is a high priority in Vietnam and other LMICs.

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To facilitate access to low-cost evidence-based cessation services, the World Health Organization (WHO) recommends that countries use existing resources (i.e. healthcare workforce) and infrastructure (e.g. public health centers) (4). However, healthcare workers lack training and support systems to implement tobacco cessation services (5–8). In addition, although there is a large body of evidence for effective tobacco cessation interventions (9), these are based primarily on studies conducted in high-income countries. There are few studies on the implementation of practical strategies to adapt evidence-based approaches to treat tobacco dependence in healthcare systems in LMICs.

As in other LMICs, the public health system in Vietnam includes a large network of community health workers, also known as village health worker (VHW). VHWs implement national health promotion and disease prevention programs in villages within the communities in which they work, and serve as a bridge between health center providers and patients by conducting home-based follow-ups to ensure that patients are adhering to treatment and prevention plans (10). They are particularly effective in helping to connect hard-to-reach populations such as minorities, the elderly, children, and smokers to services (6,11,12). A number of surveys of VHWs have shown that they have the potential to play a critical role in expanding access to evidence-based tobacco treatment (6,11,12). Despite the need to better understand what might influence VHWs' performance and how to strengthen this workforce, we are not aware of any studies that have explored the impact of training and system changes to promote screening, advice, and cessation assistance on changes in VHW attitudes, self-efficacy, and norms and/or changes in adherence to tobacco use treatment guidelines (TUTG) (13,14).

In Vietnam, as in other LMICs where there is a high rate of tobacco consumption, services for tobacco dependence treatment are still underdeveloped. In this context, we conducted a two-arm cluster randomized controlled trial (RCT) that compared two strategies for implementing TUTG in community (?) health centers (CHCs) in Vietnam: provider advice and cessation assistance (i.e. brief counseling, educational materials) (BC) vs. BC + three sessions of in person counseling delivered by a VHW (BC+R).

This paper uses data from baseline and 12-month follow-up interviews with VHWs from the larger RCT to examine changes in self-efficacy, norms, and attitudes related to treating tobacco use and cessation patterns of practice, before and after implementing the intervention.

Methodology

Study setting

There are four administrative levels in Vietnam's health care system: central, province, district and commune level. At the commune level, CHCs provide primary health care for the community members. There are ten national health programs currently implemented at CHCs. Each CHC consists of five to six health providers that include one physician and four to five other staff (e.g. nurse, pharmacist, midwife). In addition, each CHC has a network of 8–20 VHWs who are directly managed by the CHC medical director. VHWs collaborate with CHC staff to implement national programs through community-based education, outreach, and counseling and by conducting home visits to monitor treatment plans (15). The 26 CHCs that participated in the larger RCT were located in the Dai Tu and Pho Yen districts in Thai Nguyen province – a mountainous and midland province located in the Northeast region of Vietnam and 80 km from Hanoi.

Study design

Baseline and post intervention surveys were conducted for the RCT in 26 communes in Thai Nguyen province (the explanation justifying the selection of this province and these communes was provided with greater detail elsewhere (15)) to analyze changes in VHWs' attitudes, norms, self-efficacy, and patterns of practice related to cessation services. Trained research assistants administered the surveys in person with VHWs from the 13 CHCs enrolled in the BC+R study condition and who met eligibility criteria for serving as a counselor. These criteria included having worked as VHW at that site for a year or more, not being a current smoker and being willing to participate in the required components of the study intervention (i.e. training and providing three sessions of counseling). In each CHC, 6–9 VHWs met criteria for a total sample of 89. CHCs were enrolled in three waves. Therefore, baseline and post intervention surveys were completed in August in 2014, 2015, and 2016. Written consent was obtained before each interview and the participants received 60,000 VND as compensation for their time.

VHWs received a 4-day training that covered evidence-based approaches to treating tobacco use, and training on motivational interviewing techniques and specific cessation strategies (e.g. identifying triggers, coping strategies). VHWs also attended a booster training session midway (4 months) through the 12-month intervention period. VHWs who made weekly visits to the CHCs had access to patient and provider educational materials and were exposed to posters promoting screening, advising, and cessation assistance. VHWs received an incentive of 20 dollars per month for the time they spent delivering cessation services. VHWs provided smokers with three sessions of in-person cessation counseling that focused on motivational barriers for treatment readiness and offered stage-based cessation advice (e.g. discussing triggers and appropriate coping strategies). Greater detail on the intervention is available in a previous publication (15).

The study was approved by the Institute of Social Medical Studies and the New York University School of Medicine Institutional Review Boards.

Measures

The survey collected information on the demographic and socioeconomic characteristics of VHWs (e.g. age, gender, education). Tobacco-related patterns of practices were assessed using three questions. Among the adult community members that you met with in the past month,

1. How many did you ask about whether they smoke?
2. How many who were current tobacco users did you advise to quit smoking?
3. How many who were current smokers did you offer counseling?

The responses to these questions used a five-point Likert scale: none, few, half, more than half, and all or most.

The survey also measured attitudes, self-efficacy, and norms related to tobacco use treatment using a four-point Likert scale: 1-strongly disagree, 2-disagree, 3-agree, and 4-strongly agree. These questions were informed by the Theory of Planned Behavior (TPB), which posits that behavior change is largely influenced by attitudes and beliefs about the behavior, subjective norms, and self-efficacy to perform the behavior (16).

Barriers to helping smokers quit were assessed using a four-point Likert scale: not a barrier, minor barrier, moderate barrier, and major barrier.

Data analysis

Stata 12.0 was used to analyze data. Demographics, socioeconomic factors, VHWs' barriers, attitudes, self-efficacy, norms, and practices related to tobacco use treatment between baseline and 12 months post intervention were summarized using descriptive statistics and compared using the chi-square test for proportions and the *t*-test for scales. Factor analysis was used to construct a scale for each group of questions related to attitudes, self-efficacy and norms. Multiple regression was used to identify the relationship among independent variables and adherence to TUTG, which included asking patients about smoking status, advising smokers to quit, and assisting them to quit.

Results

Participant characteristics

All 89 VHWs completed the baseline survey and the 12-month post-intervention survey. Consistent with national data in Vietnam, 86.5% were female and 13.5% were male. The average age of VHWs was 44; 49.4% reported having high school education, 47.2% had primary and secondary school education, and only 3.4% had vocational or college education. Participants had worked an average of 12.6 years as a VHW. At the 12-month post-intervention survey, more than half of the VHWs (52.8%) reported being aware of their CHC's smoke-free policy, and the rest (47.2%) reported not being aware of it. The VHWs also reported having received an average of 3.87 days of training on tobacco cessation post intervention.

Changes in practice patterns, perceived barriers to treatment, and TPB constructs

Table 1 shows the TUTG practice patterns among VHWs at baseline and at 12 months post intervention. There was a significant increase in

Table 1. Changes in VHWs' practices related to tobacco use treatment between baseline and 12 months post intervention.

Tobacco use treatment practices (N = 89)	*Baseline (%)*	*12 months post intervention (%)*
Asking patients about current smoking status[a]		
None/few	96.6***	67.4
Half/more+	3.4	32.6
Advising patients to quit smoking[a]		
None/few	95.5***	51.7
Half/more+	4.5	48.3
Assisting patients in quitting smoking[a]		
None/few	98.9***	61.8
Half/more+	1.1	38.2

[a] Five-point Likert scale included: none, few, half, more than half, or all or most.
VHWs: village health workers.
$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $+p < 0.2$.

VHWs' adherence to TUTG($p < 0.001$) with a higher percentage of VHWs reporting asking, advising and assisting their patients to quit. At 12 months post intervention, 32.6% reported that they asked half or more patients for tobacco use, compared to only 3.4% at baseline; 48.3% reported that they advised half or more of patients compared to only 4.5% at baseline and 38.2% reported that they assisted half or more patients compared to only 1.1% at baseline.

Here, significant differences in four of the five items related to the perceived barriers at baseline and 12 months post intervention were observed (data not shown in tables): lack of training/ knowledge ($p < 0.001$), lack of adequate referral resources ($p < 0.001$), time constraints during patient visits ($p < 0.01$), and patients having more pressing health issues ($p < 0.01$). Two commonly reported barriers at baseline, namely lack of training/ knowledge and lack of adequate referral resources, were significantly reduced: 79.8% at baseline compared with 28.1% post intervention, and 79.8% at baseline compared with only 40.5% post intervention, respectively. However, there was no significant change in the most commonly reported barrier at baseline: lack of patient interest (80.9% at baseline and 71.9 % at post intervention).

Table 2 describes the changes in the mean scores of items related to the TPB constructs at baseline and 12 months post intervention. There were significant changes in attitudes ($p < 0.001$), self-efficacy ($p < 0.001$) and norms ($p < 0.001$) at 12 months post intervention. For example, self-efficacy (e.g. agreeing to not having the skills to counsel patients) decreased from 52.8% at baseline to 15.7% post intervention.

Correlates of adherence to recommended TUTG

Table 3 shows the results of the bivariate analysis examining the correlation between patterns of practice and VHW characteristics, awareness of smoke-free policy and TPB constructs at 12 months post intervention. There was a significant correlation between being aware of the CHCs' smoke-free policy and the advising and assisting patients to quit ($p < 0.01$ and $p < 0.01$, respectively); 61.7% of VHWs who were aware of the policy reported advising half or more patients to quit, compared to 33.3% of VHWs who were not aware. Similarly, 51.2% of VHWs with awareness of the smoke-free policy reported assisting half or more patients to quit, compared to 23.8% of VHWs without awareness. There was a significant correlation between positive attitudes towards treating tobacco use and offering advice to quit, but not with cessation assistance. Positive norms were significantly associated with both offering advice to quit and cessation assistance.

Table 2. Changes in VHWs' attitudes, self-efficacy, and norms related to tobacco use treatment between baseline and 12 months post intervention.

Variables (N = 89)	*Baseline Agree/Strongly Agree (%)*	*12 months post intervention Agree/Strongly Agree (%)*	*Baseline (mean ± SD)*	*12 months post intervention (mean ± SD)*
Attitudes[a]				
Village health workers can be effective in helping people stop smoking[a]	88.8	93.3	3.1(0.6)**	3.3 (0.6)
Patients want me to help them stop smoking[a]	91.0**	100	3.0 (0.6)***	3.3 (0.5)
Advice from a village health worker is one of the best ways to help people stop smoking[a]	91.0	91.0	3.1 (0.5)	3.2 (0.6)
Smoking cessation counseling is a difficult task[a]	86.5	83.1	3.1 (0.7)**	2.9 (0.5)
Patients want to stop smoking[a]	89.9	95.5	3.0 (0.6)**	3.2 (0.5)
Smoking cessation counseling is not a good use of my time[a]	15.7	6.7	2.07 (0.5)	2.0 (0.4)
Patients appreciate it when I provide smoking cessation counseling[a]	88.8**	100	3.0 (0.5)**	3.2 (0.4)
Smoking cessation counseling is not an important task to me[a]	16.9*	5.6	2.0 (0.6)	1.9 (0.4)
Counseling patients about smoking is frustrating[a]	27.0*	14.6	2.2 (0.6)	2.1(0.5)
Smoking cessation intervention delivered by village health workers do not work[a]	32.6***	9.0	2.3 (0.6)***	2.0 (0.4)
The patients we see in our health center have so many other problems in their lives that stopping smoking use is a very low priority for them[a]	39.3	28.1	2.32 (0.7)	2.3 (0.5)
Mean score Attitudes, range 28–41[a]			**31.2 (3.3)*** **	**33.0 (2.6)**
Self-efficacy[b]				
I don't have the skills to effectively counsel patients about smoking cessation[b]	52.8***	15.7	2.6 (0.8)***	2.1 (0.5)
I am unaware of the best strategies for helping patients to stop smoking[b]	65.2***	21.4	2.7 (0.7)***	2.2 (0.5)
I am not confident in my ability to help patients stop smoking[b]	42.7***	12.4	2.4 (0.8)***	2.1 (0.4)
Mean score Self-efficacy, range 6–11[b]			**7.3 (1.9)*** **	**8.6 (1.0)**
Norms[c]				
Patients expect me to counsel them about smoking[c]	86.5**	97.8	3.0 (0.5)**	3.2 (0.5)
Smoking cessation treatment is a top priority in this health center[c]	71.9**	88.8	2.9 (0.7)***	3.3 (0.7)
Mean score Norms, range 5–8[c]			**5.9 (1.0)*** **	**6.5 (0.9)**

[a,b,c] Four-point Likert scale included: Strongly Disagree, Disagree, Agree, Strongly Agree.

VHWs: village health workers

[a] Cronbach's alpha = 0.71.

[b] Cronbach's alpha = 0.70.

[c] Cronbach's alpha = 0.33.

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.

Table 3. Bivariate analysis of factors related to VHWs' adherence to tobacco use treatment guidelines at 12 months post intervention.

Characteristics (N = 89)	*Asked[a] (%/Mean)*		*Advised[a] (%/Mean)*		*Assisted[a] (%/Mean)*	
	None/Few	*Half/More+*	*None/Few*	*Half/More+*	*None/Few*	*Half/More+*
Gender						
Male	83.3	16.7	50.0	50.0	41.7	58.3
Female	64.9	35.1	52.0	48.0	64.9	35.1
Age (mean years)	43.6 (7.9)	45.9 (6.2)	43.9 (7.5)	44.8 (7.3)	43.3 (7.3)	46.1 (7.2)
Education						
Primary and secondary school	66.7	33.3	45.2	54.8	57.1	42.9
High school	68.2	31.8	59.1	40.9	65.9	34.1
Vocational/college/university	66.7	33.3	33.3	66.7	66.7	33.3
Years working in the position (Mean/SD)	12.2 (5.0)	13.4 (3.3)	13.0 (4.3)	12.2 (4.8)	12.2 (5.0)	13.2 (3.9)
Aware of CHC smoking policy						
Yes	95.7	4.3	38.3**	61.7	48.9**	51.2
No	97.6	2.4	66.7	33.3	76.2	23.8
Barriers (Moderate barrier/Major barrier)[b]						
Time constraints during patient visits[b]	100.0	0.0	63.2	36.8	73.7	26.3
Lack of training/knowledge[b]	94.4	5.6	63.9	36.1	72.2	27.8
Lack of adequate referral resources[b]	96.0	4.0	48.0	52.0	64.0	36.0
Lack of patient interest[b]	95.3	4.7	50.0	50.0	64.1	35.9
Patient has more pressing health issues[b]	93.9	6.1	53.1	46.9	65.3	34.7
Mean Score Attitudes (Mean/SD)[c]	**33.0 (2.6)**	**33.7 (1.5)**	**32.1 (2.1)****	**34.0 (2.7)**	**32.3 (2.5)****	**34.0 (2.5)**
Mean Score Self-efficacy (Mean/SD)[d]	**8.5 (1.0)**	**9.3 (0.6)**	**8.5 (1.1)**	**8.7 (0.8)**	**8.6 (1.0)**	**8.5 (0.9)**
Mean Score Norms (Mean/SD)[e]	**6.5 (0.9)**	**6.3 (1.1)**	**6.3 (0.9)**	**6.7 (0.9)**	**6.3 (0.8)***	**6.8 (0.9)**

[a] Five-point likert scale included: none, few, half, more than half, or all or most.
[b] Four-point likert scale included: Not a barrier, Minor barrier, Moderate barrier, Major barrier.
[c,d,e] Four-point likert scale included: Strongly Disagree, Disagree, Agree, Strongly Agree.
[c] Cronbach's alpha = 0.71.
[d] Cronbach's alpha = 0.70.
[e] Cronbach's alpha = 0.33.
VHWs: village health workers; CHC: community health center.
$^{***}p < 0.001$ $^{**}p < 0.01$ $^{*}p < 0.05$.

Table 4. Logistic regression of VHWs' adherence to tobacco use treatment guideline at 12 months post intervention (Ask, Advise, and Assist).

Independent variables (N = 89)	*Advised*[a] *None or few vs. half or more*		*Assisted*[a] *None or few vs. half or more*	
	OR	*95% CI*	*OR*	*95% CI*
Gender				
Male (ref)	1		1	
Female	0.8	0.2–3.4	0.2*	0.1–0.8
Age (mean years)	1.0	1.0–1.1	1.1*	1.0–1.2
Aware of clinic smoking policy				
No (ref)	1		1	
Yes	2.8*	1.1–7.5	4.9**	1.5–15.4
Lack of training/knowledge	0.5	0.2–1.4	0.5	0.2–1.4
Attitude total score	**1.4****	**1.1–1.8**	**1.3***	**1.0–1.7**
Norm total score	**0.8**	**0.4–1.6**	**1.0**	**0.5–2.0**

[a]The regression model included all variables with a p-value < 0.2 in bivariate.
VHWs: village health workers.
$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

Despite large increases in self-efficacy, this construct was not associated with offering advice or cessation assistance.

In the logistic regression analyses (Table 4), awareness of the smoke-free policy remained significantly associated with advising patients and assisting patients to quit. VHWs who were aware of the smoke-free policy at their CHCs were 2.8 times more likely to advise patients ($p < 0.05$) and 4.9 times more likely to assist patients than those who were not aware of the policy ($p < 0.01$). Positive attitudes were also significantly associated with both advising and assisting patients to quit: those with positive attitudes were 1.4 times more likely to advice ($p < 0.01$) and 1.3 times more likely to assist ($p < 0.05$). In terms of VHWs' characteristics, female VHWs were 84% less likely to assist patients to quit smoking than male VHWs ($p < 0.05$). Age was also significantly associated with assisting patients to quit ($p < 0.05$).

Discussion

Training, supervision, and exposure to additional CHC-based system changes that were part of the larger RCT intervention led to significant increases in rates of offering advice and cessation assistance. The low baseline rates of engagement in offering patients cessation services was not surprising. At the start of the study, Vietnam had not yet included treatment of tobacco use as one VHWs' core prevention activities. The striking increase in the rate of adherence to TUTG revealed in our study suggested that VHWs' performance with respect to guideline adherence could improve significantly with adequate training, supervision, and support from CHCs.

Our findings are consistent with two other studies conducted in the USA that found that lay community advisor and health worker training led to increased delivery of cessation assistance, including brief counseling (17,18). A 2014 systematic review of intervention design factors that influence VHW performance in LMICs also confirmed the positive impact of training on lay health worker performance (19). In addition, the review found that interventions that involved supervision and offered ongoing training and financial incentives led to better performance in certain settings. Our intervention included these additional components which may have worked synergistically to promote VHW-delivered treatment. Further research is needed to delineate what intensity of training and supervision is needed, and how compensation may motivate performance in order to inform policy decisions about funding to support widespread engagement of

VHWs in cessation services in LMICs. Furthermore, as intervention design factors often influence each other and are highly context-dependent (19), there is also a need for research to focus on translating evidence-based tobacco interventions into local contexts by identifying factors that may improve VHWs' performance.

In addition to increases in adherence to treatment guidelines, VHWs' attitudes, norms and self-efficacy related to treating tobacco use improved significantly. Similarly to other studies conducted among health care providers, we also found an association between the TPB constructs and rates of advice and cessation assistance (20,21). Previous studies have shown that training can improve the level of confidence to deliver cessation services among lay health influencers (17,22), and improve knowledge and attitudes among community health advisors (18). However, these have been conducted primarily in the USA and analysis of the relationships between attitudes, norms, and self-efficacy and delivery of cessation services has not been well studied among lay health workers. In the regression analysis, only attitudes were associated with offering advice and assistance. However, the small sample size may have precluded our ability to measure significance across other TPB constructs.

Although we found improvement in all of the TPB constructs, it is notable that, at baseline, prior to exposure to the intervention, VHWs' attitudes and norms appeared to support their role in helping patients quit. The baseline findings are consistent with two qualitative studies conducted in Vietnam in which VHWs strongly endorsed their role in delivering cessation services, saying that it 'fits well' with their current responsibilities (6,23), and further noted that they were 'more suitable than their clinical colleagues' to offer cessation assistance. In this study, the intervention improved attitudes further and provided the knowledge, resources and skills needed to increase self-efficacy and to translate positive attitudes and perceived norms into service delivery (16).

VHWs' perceived barriers to treatment declined after participating in the intervention. The largest declines were for two commonly reported barriers at baseline, that is the lack of training/knowledge and lack of resources. In contrast, there was less of a decline in perceived barriers related to a lack of interest in quitting among smokers and the belief that patients have more pressing health issues. This is likely related to the fact that the training addressed knowledge and resource barriers through skill building, the availability of new patients, and VHW educational materials. In contrast, the training may not have focused enough on raising tobacco cessation as a major priority and not only as a health issue but also as an economic issue given the cost of purchasing tobacco products. These findings will help inform further adaptations to the VHW training curriculum and highlight the importance of evaluating a range of outcome measures to assess the effectiveness of training and supervision.

Also, consistent with the previous studies (21,24,25), our study found a significant association between awareness of CHC smoking policy and VHWs' likeliness to offer smoking cessation advice. While monitoring and enforcement of the smoke-free policy remains sub-optimal in public areas, including healthcare settings in Vietnam, our findings further suggest that enhancing the awareness of and providing a rationale for smoke free policies among CHC staff and VHWs may result in higher rates of cessation treatment by changing tobacco-related social norms and attitudes.

There are numerous articles endorsing VHWs' central role in delivering preventive services, including the role of VHWs in delivering cessation services, but few studies have examined the effect of capacity-building efforts (e.g. training) and other intervention design factors (e.g. supervision, protocols and guidelines) on tobacco use treatment practice patterns among this workforce (6,11,12,26,27). This paper adds to the literature by providing evidence that, with training, supervision and a small incentive, this workforce can play a central role in reaching tobacco users to offer evidence-based tobacco cessation assistance. Further research is needed to assess the effectiveness of VHW-delivered cessation interventions. However, the findings suggest that VHWs should be considered an important resource for implementing national tobacco control program goals in LMICs in which health workers are critically important members of the public health care system. In Vietnam, a first step is to define cessation services as one of the national preventative priorities, which would make funding and standardized training available to expand the role of VHWs to include screening and treatment of tobacco use through clear policies and guidelines.

Limitations

Our study has several limitations. First, the sample size was relatively small (89 VHWs) and the study site included only two districts in the suburban province. Therefore, findings may not be generalizable to VHWs in other locations in Vietnam. Second, the selection of the VHWs to participate in the intervention was not random. However, VHWs across regions have a national standardized scope of work and trainings so they may experience similar barriers when carrying out the services.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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‘No one ever asked us’: a feasibility study assessing the co-creation of a physical activity programme with adolescent girls

Méabh Corr and Dr Elaine Murtagh

Abstract:
Background: Globally, the poor activity level of adolescent girls is a public health concern. Little research has involved adolescents in the design of interventions. This study assessed the feasibility of involving girls in the co-creation of an activity programme.
Methods: Thirty-one students (15–17 years old) were recruited from a post-primary school. The Behaviour Change Wheel guided intervention design, providing insights into participants’ capability, opportunity and motivation for change. Step counts and self-reported physical activity levels were recorded pre- and post-intervention. Feasibility benchmarks assessed recruitment, data collection, acceptability and adherence.
Results: Activity and educational sessions were delivered for six weeks during physical education class. Average attendance was 87% (benchmark = 80%). Eligibility was 61% (benchmark = 60%). There was a 100% retention rate (benchmark = 90%). All participants ($n = 31$) completed baseline measures and 71% ($n = 22$) completed post-measures. 54% ($n = 17$) of students completed pedometer measurements, with 32% ($n = 10$) having complete data. Average daily steps were 13,121 pre-intervention and 14,128 post-intervention ($p > 0.05$). Data collection was feasible, receiving a mean score > 4/5 (benchmark > 3.5/5).
Conclusions: The Behaviour Change Wheel can be used to co-create an activity programme with adolescent girls. Predetermined benchmarks, except for pedometer recordings, were reached or exceeded, providing evidence for the need of a randomised controlled trial to test effectiveness.

Keywords: physical activity, physical education, adolescent girls, school-based intervention, feasibility study

Background

Globally, adolescents don’t accumulate sufficient physical activity (PA) (1), with almost 95% of adolescent girls considered insufficiently active (1). The influences on PA during adolescence are multifactorial (2), and several barriers hinder participation, including feeling incompetent and disliking sport (3,4). Adolescent behaviours are predictive of adult behaviours; therefore promoting a healthy lifestyle at this stage is crucial to shape healthy adult behaviours (5).

Interventions to date aiming to improve PA levels of adolescent girls have demonstrated modest effects (5) and it is suggested this is partly due to the failure of the intervention to address participants’ needs (6). Exploring adolescent girls’ views of PA can produce vital information to guide intervention design (7). There have been some studies conducted which involved formative work to include participant perceptions in intervention design, such as the Trial of Activity for Adolescent Girls (TAAG) in the US and other studies conducted in Australia and the US (8–10). However, there remains a paucity of research focusing on involving adolescent girls in

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programme design (11). Without the involvement of the youth's voice, interventions may fail to accurately represent the needs of the participants (12). Therefore, this research aims to investigate the feasibility of involving adolescent girls in the design of a PA programme that they are involved in.

Recent systematic reviews and meta-analyses (5,13) have found that school-based PA interventions are more effective when based on a relevant theory. Many frameworks providing guidance on designing interventions exist. However, for this study, the Behaviour Change Wheel (14) (BCW), a synthesis of 19 frameworks for behaviour change, guided intervention design. The BCW provides insight into the motivations, capabilities and opportunities the participants perceive and how these relate to their behaviours (14).

As involving adolescent girls in PA programme design is a relatively unexplored area, it is vital to conduct a feasibility study to identify any key uncertainties before a full-scale trial (15,16). The aim of this study was to assess the feasibility of co-creating a PA intervention with adolescent girls, assessing recruitment, data collection, acceptability and adherence.

Methods

The reporting of this study followed the CONSORT statement (17) and the COREQ guidelines (18).

This study comprised two phases: formative research for intervention design and assessment of intervention practicability.

Participants

Participants ($n = 31$), approximately 15–17 years old, were recruited from a post-primary school using a convenience sample. Participants were approached in a face-to-face manner. The target group was insufficiently active girls (based on a PA questionnaire for adolescents (PAQ-A) (19) score of > 2.7 (20)). However, no interested participants were excluded. The majority of participants were inactive (80%, $n = 25$) with a mean PAQ-A score of 2.1 ± 0.3. Active participants (20%, $n = 6$) had a mean PAQ-A score of 2.9 ± 0.4, slightly above the threshold of > 2.7. A co-educational school was chosen, as in this setting females can be at a disadvantage when it comes to PA (21). This research aimed to provide opportunities for females to be active in a single-sex environment, which can be more beneficial (22).

Appropriate consent was sought before programme commencement.

Formative research phase

The BCW guided the intervention design (23). In the hub of the BCW is the COM-B system, suggesting an individual's motivations, capabilities and opportunities are related to their behaviour (23). The BCW and the COM-B system systematically guided the intervention design, selecting the most appropriate intervention functions and behaviour change techniques (BCTs) necessary to reach the target behaviour (23).

The eight steps of intervention design as outlined in the BCW guide (23) were followed, beginning at step 4 as steps 1–3 have been established in literature. Students completed a COM-B 23-item self-evaluation questionnaire assessing their capability, opportunity and motivation relating to their PA behaviours (14).

The areas of capability, opportunity and motivation that participants identified as being most important for their behaviour change in the COM-B questionnaire (Table 2) were explored further during the focus groups. Two focus groups lasting 30 minutes were held with approximately eight students in each. The female researcher, who had previous focus group experience, facilitated the discussion using a semi-structured guide. Focus groups were transcribed verbatim using pseudonyms to protect participant identity. The data were coded by the researcher and analysed using directed content qualitative analysis (24), mapping the data onto the COM-B frame.

Using both the questionnaire data and the focus group results, intervention functions were identified (step 5). The BCW outlines which intervention functions are appropriate to address the COM-B areas identified (14). Using the APEASE criteria (assessing affordability, practicality, cost-effectiveness, acceptability, safety and equity) (23), intervention functions were selected. Step 6 was not relevant for this study. BCTs designed to serve the chosen intervention functions were then selected (step 7). Frequently used BCTs were chosen from a possible 94 options (25). Finally, an appropriate mode of delivery was chosen (23).

The completion of these eight steps provided an outline for a six-week intervention to address areas of the COM-B system identified by participants (Table

1). Intervention content, including PA and educational components, was designed using direct suggestions from participants discussed in the focus groups.

Measures

Feasibility benchmarks.

Feasibility benchmarks were defined to assess recruitment, data collection, acceptability and adherence.

Recruitment was assessed via recruitment records. A predefined eligibility rate of 60% was deemed feasible (8).

Acceptability of measures (pedometers, questionnaires, focus groups) was assessed via a questionnaire using a 5-point Likert scale. A score of 1 indicated low acceptability and a score of 5 indicated high acceptability. A predefined mean score of ⩾ 3.5/5 for positive statements and ⩽ 1.5/5 for negative statements was deemed feasible (26,27).

Acceptability was assessed via attendance and a side-by-side matrix. A pre-defined attendance rate of 80% was deemed feasible (28). A side-by-side matrix assessed importance of programme content etc. versus satisfaction levels of this aspect. A mean score of ⩾ 3.5/5 was deemed acceptable (26,27).

Adherence was assessed using the retention rate and the number of participants who completed both measures. A retention rate of 90% was deemed feasible (29) and a 60% completion rate for both measures was deemed feasible (8).

PA and 'enjoyment'

Participants completed the PAQ-A questionnaire to assess PA levels (19) and the 'Physical Activity Enjoyment Scale' (PACES) at baseline and post-measures, which is a valid measure of PA enjoyment among adolescent girls (30).

Pedometers were worn for seven consecutive days at baseline and post-intervention, which is a sufficient period to estimate habitual behaviour without burdening participants (31). Participants received instructions for wearing their pedometer and a record sheet to log non-wear times.

Analysis

Pedometer and questionnaire data were managed using Excel. Mean steps per day for pre- and post-measurements were calculated. Participant summary scores for the PAQ-A and PACES were calculated using the relevant scoring protocols (19,30). A paired t-test was used to compare mean scores at pre- and post-measures. 100% (n = 31) and 71% (n = 22) completed the PAQ-A and PACES at baseline and post-measures respectively. 32% (n = 10) of participants had full sets of pedometer data.

Qualitative data from focus groups were analysed thematically allowing for the identification of recurring themes (32). The qualitative data analysis software NVivo 10 was used to manage the focus group data (33). A thematic network was created by first generating a list of codes of any potential themes or patterns. These codes then formed the initial basic themes within the data. Categories of basic themes were then grouped together, resulting in organising themes. Global themes were created by combining organising themes to encapsulate the principle metaphors in the text as a whole (34). Similar procedures adopted during pre-intervention focus groups were used during post-discussions.

Results

Phase 1 results

Behavioural diagnosis.

Participants are identified by pseudonyms (e.g. P1) and focus groups are labelled as FG1 and FG2. Participants discussed their capability to be active. Acquiring physical skills and physical stamina was important for behaviour change. Some students felt incapable of being active, due to poor skills and instructions. Girls spoke of an Ultimate frisbee PE class, and how they felt they lacked the skills needed to participate:

> They didn't show us how to throw it [the frisbee], they just expected us to know how to do it (FG1; P3).

Students also discussed barriers to exercising outside of school:

> When I go to the gym I use machines, I feel like I'm not doing anything properly and people are judging you (FG1, P3).

Table 1. Weekly schedule of activities including BCTs and intervention functions.

	Intervention function	*BCTs*	*Content – school based*	*Content – home based*
Week 1	Education Training	Demonstration of the behaviour Instruction on how to perform a behaviour Feedback on the behaviour Information about health consequences Goal setting	Theory: benefits of PA Practical: aerobics Set SMART goal (specific, measurable, attainable, realistic, timed). Weekly SMART goals will be set in school to be completed at home.	Record daily steps Plan PA sessions Follow SMART goal
Week 2	Enablement Modelling Training	Goal setting Action planning Habit formation Demonstration of the behaviour Instructions on how to perform a behaviour Feedback on the behaviour	Theory: planning for PA Practical: kickboxing Set Week 2 SMART goal	Record daily steps Plan to exercise with a friend Follow SMART goal
Week 3	Education Enablement Coercion	Self-monitoring of behaviour Biofeedback Monitoring of emotional consequences	Theory: nutrition and fuelling your body for exercise Practical: yoga Set Week 3 SMART goal	Monitor how you feel after exercise in your PA diary Record daily steps Follow SMART goal Commitment to activity: this week I will…
Week 4	Education Training Enablement Incentivisation	Self-monitoring of behaviour Monitoring of emotional consequences Feedback on behaviour Demonstration of the behaviour	Theory: time management Practical: pilates Set Week 4 SMART goal	Monitor how you feel after exercise in your PA diary Record daily steps Follow SMART goal Identify time management strategies to fit in PA
Week 5	Education Training Persuasion	Credible source Biofeedback Instruction on how to perform a behaviour	Theory: PA promotion strategies Practical: HIIT training (high-intensity interval training) Set Week 5 SMART goal	Identify your PA female role model Record daily steps Follow SMART goal Include at least 1 at-home HIIT session
Week 6	Education Enablement	Instruction on how to perform a behaviour Monitoring of emotional consequences Goal setting	Theory: review of what has been covered + planning for summer months Practical: fun team games	Plan for the summer – how will you continue your new PA habits?

Table 2. Results from the COM-B questionnaire.

COM-B component	*List of possibly relevant factors*	*N = 31*	*%*
Capability			
Physical	Have more physical stamina	17	54
	Have more physical strength	18	58
	Have better physical skills	17	54
	Overcome physical limitations	9	29
Psychological	Have more mental strength	14	45
	Know more about why it is important	6	19
	Overcome mental obstacles	19	61
	Know more about how to do it	12	38
	Have better mental skills	9	29
	Have more mental stamina	17	54
Opportunity			
Physical	Have more time to do it	23	74
	Have it more easily accessible	14	45
	Have the necessary materials	11	35
	Have more money	9	29
Social	Have more people around me doing it	10	32
	Have more triggers to prompt me	8	25
	Have more support from others	7	22
Motivation			
Automatic	Feel that I want to do it enough	22	71
	Feel that I need to do it enough	10	32
Reflective	Develop a habit of doing it	20	64
	Believe that it would be a good thing to do	15	48
	Develop better plans for doing it	17	54

Definitions (14): physical capability: physical skills, strength or stamina; psychological capability: knowledge or psychological skills, strength or stamina to engage in the necessary mental processes; physical opportunity: opportunity afforded by the environment involving time, resources, location, cues, physical 'affordance'; social opportunity: opportunity afforded by interpersonal influences, social cues and cultural norms that influence the way we think about things, such as the words and concepts that make up our language; automatic motivation: automatic processes involving emotional reactions, desires (wants and needs), impulses, inhibitions, drive states and reflex responses; reflective motivation: reflective processes involving plans (self-conscious intentions) and evaluations (beliefs about what is good and bad).

Students also felt they were limited by their own lack of knowledge:

> We don't know what else we can do apart from sports (FG2, P4).

Within psychological capability, students identified mental stamina and needing an ability to overcome mental obstacles. During focus group discussions, overcoming mental obstacles was discussed:

> When I run, my mind says, 'I can't do it'. I would like that to be 'you can do it' (FG1, P4).

Other students agreed, saying:

> Yeah, if you're on a treadmill 15 minutes feels like two hours! (FG1, P1).

When considering physical opportunity, time was the most prominent factor. Students noted how study takes priority over exercise:

> We'll be in school all day then study after school (FG2, P3).

These concerns particularly pertained to preparing for State Examinations. Participants also discussed social opportunity, noting having people around was motivating. Students felt cautious about participating alone but found enjoyment in exercising with others:

> It's fun with someone with you and time goes quicker (FG1, P4).

When discussing motivation, participants identified needing to 'feel they wanted to do it'. Students discussed their lack of motivation, and felt the gender roles evident in PA contributed to this:

> Girls aren't really taught that they should want to do it [be physically active] (FG2, P3).

When discussing reflective motivation, specifically developing habits of being active, students suggested the following:

> I tho follow (FG1, P2).

The development of a structured plan would allow them to work towards goals.

Findings from the COM-B 23 questionnaire can be found in Table 2.

Intervention functions

The behavioural diagnoses arising from the COM-B questionnaire and focus groups were combined to design a six-week intervention.

All nine intervention functions were considered. However, restriction and environmental restructuring were excluded due to impracticality. Intervention functions and BCTs used can be seen in Table 1 (25).

PA programme

Students participated in weekly 90-minute PA and educational sessions during PE for six weeks. Students tracked their steps using a pedometer, working to meet individualised incremental step goals. Students also kept a PA diary, monitoring steps and weekly goals. Using pedometers in conjunction with a PA diary makes them an effective way of improving PA levels (35).

Phase two results

Feasibility benchmarks

Recruitment was feasible, exceeding the predetermined 60% benchmark, with 80% ($n = 25$) of participants scoring $\leqslant 2.7$ in the PAQ-A.

Acceptability rates were high. The average attendance was 87.16%, exceeding the 80% target, except for the last week of school. Each aspect of the side-by-side matrix scored greater than 3.5/5 for satisfaction levels, exceeding the benchmark.

Using pedometers motivated students to be active. One student commented she 'didn't realise how lazy I was until I put it on' (FG1, P4). Others agreed, stating that comparing steps with peers was motivating. However, recording steps was a burden, and students desired a device that could synchronise with their phones.

Students also enjoyed using PA diaries and found it supportive to share goals with others, as articulated by one student:

> Who cares if you make goals… but if you've told someone you can't get away with not doing it (FG1, P5).

Students were encouraged to write down how they felt after exercise, which proved to be effective in increasing motivation to exercise:

> When I could see that I was writing down that I felt better, it made it a bit easier (FG2, P5).

Using diaries also enabled students to overcome mental obstacles:

> After school the last thing I want to do is go for a run, but when you look back and see I did it yesterday and I felt great after (FG2, P2).

The study had a 100% retention rate, exceeding the 90% benchmark. All participants ($n = 31$) completed baseline questionnaires and 71% ($n = 22$) completed the post-assessments, exceeding the 60% benchmark. All students invited to participate in focus groups agreed, exceeding the 60% benchmark. Use of pedometers to measure step count did not meet the benchmark of 60%, with 32% of students with full sets of data.

The average scores assessing acceptability of the measures exceeded the predetermined benchmarks, with each item scoring $\geqslant 3.5/5$ and $\leqslant 1.5/5$ for positive and negative statements respectively.

PA

Mean PAQ-A score pre- ($n = 31$) and post-intervention ($n = 22$) was 2.39 ± 0.51 and 2.51 ± 0.45 respectively. There was no difference in PAQ-A scores from pre- to post intervention ($p > 0.05$).

Full pedometer data were received from 10 participants. Mean steps per day pre- and post-intervention were 13,121 ± 4,883 and 14,128 ± 5,637 respectively ($n = 10$). No other pedometer data were recorded or returned to the researcher.

The mean PACES score pre-intervention ($n = 31$) was 64.4 ± 7.21 and post-intervention ($n = 22$) was 65.4 ± 9.02 ($p > 0.05$).

Student perceptions

Focus groups post-intervention were used to gain an understanding of the participants' perceptions of the intervention. Two themes emerged: programme novelty and unleashing potential.

Programme novelty

Students discussed the novelty of the programme and activities provided. The programme allowed students to participate in PA away from males:

> I didn't dread coming because the boys weren't there (FG1, P5).

Participants also enjoyed the activities:

> It was something different, not just the stuff we always do in PE (FG1, P3).

The exposure to new activities provided alternative forms of PA to the participants. Several of the participants had never experienced yoga, and one student commented on the benefits of this:

> None of us have really done it [the activities], so we're all on the same page (FG2, P4).

Students also enjoyed having ownership of the programme. Providing autonomy within activities increased accountability for participation:

> Like they [the activities] were things that we suggested them so we couldn't not do it (FG2, P3).

Unleashing potential

Participation in this programme also led to a realisation of other PA opportunities available. Girls discussed how, prior to this programme, sport and PA were synonymous:

> I always just associated physical activity with games from PE (FG2, P5).

Other students further illustrated their lack of awareness of their PA opportunities:

> When you said on the first day that walking was physical activity, I just never considered it (FG1, P2).

Students noted they felt more capable of being active, gaining an awareness of the possibilities available:

> Now I feel like I know there is other things to do apart from play sport (FG1, P3).

Discussion

The aim of this study was to assess the feasibility of co-creating a PA programme with teenage girls using guidance from the BCW (14). Both intervention content and study procedures were feasible as demonstrated by successful recruitment, retention, adherence and acceptability. The use of focus groups provided girls with autonomy and ownership of the programme and is therefore a key element of the intervention design. A future randomised controlled trial (RCT) would include the intervention functions and BCTs used in this study as they were selected as a result of the behavioural diagnosis. However, the exact content and activities provided would depend on the interests of the girls involved in the study. Some possible changes that may occur in an RCT based on feedback from the participants include a longer programme duration and better links with other subjects, particularly for the education component. Within this study, girls felt the educational component would be better suited to a classroom setting and suggested the involvement of other teachers to deliver this component, moving towards a more whole-school approach.

While unintended, this intervention was delivered during regular PE time. Previous research has identified that many girls fail to participate in school PE (36,37), often citing feelings of self-consciousness as a barrier to participation, particularly in front of males (38). These findings were reflected in this study, with girls in the focus groups noting that they would not participate in a programme outside of PE for fear of ridicule from peers. Single-sex environments have been shown to be more beneficial for females (21), and this intervention provided an opportunity for girls to be active away from their male counterparts. Another important element of this intervention was the autonomy and ownership given to students in the programme design, resulting in increased accountability for their participation. Research has shown that girls often disengage from PE due to the activities provided, with team sports dominating the curriculum (39,40). While it may not be possible for PE teachers to conduct a behavioural analysis as was done in this study, it would be possible for them to include the opinions of students in the selection of activities during PE. This could be facilitated through discussions or questionnaires at the beginning of the year or by creating shared expectations and plans for the yearly PE curriculum. Providing girls with more choice and a variety of activities may lead to increased participation levels in PE class. The results of this study demonstrate that it is feasible to co-create a PA programme with adolescent girls and similar approaches could be adapted by researchers and teachers aiming to increase the PA levels of this cohort.

Within this study, the one procedure which was not acceptable was the use of pedometers, with only 10 students having full sets of data. Allowing girls to choose the evaluation methods used is an important consideration for the intervention moving forward. In recent years there has been a surge in the number of people using wearable wrist-worn devices to monitor and track their PA levels. While the idea of using these consumer wearables has grown in popularity, it is important to ensure valid and reliable devices are chosen for use within research (41). It is also important to consider the feasibility and cost-effectiveness of using such trackers in a school setting. A possible solution to this measurement issue is to use the pedometers in conjunction with an app on a smartphone. However, monitoring and tracking methods of PA should be agreed upon with the participants to ensure it is acceptable.

Lessons to be learned from this study include the importance of formative research in intervention design and the importance of providing autonomy to participants. As previously mentioned, girls' disengagement in PE and PA often comes from a dislike of activities on offer; therefore, providing a choice of activities is imperative in increasing participation rates. Researchers looking to develop similar interventions should focus on creating multi-component programmes and identifying an appropriate theory to underpin the study, as a recent meta-analysis by Owen *et al.* (42) found these interventions to be more effective at increasing PA. The methods for monitoring PA should also be considered for future studies, ensuring the method chosen is acceptable to the participants.

Strengths and limitations

The co-creation of this programme between the researcher and students, underpinned by the BCW, is a strength. Involving the participants in the design of the content provided them with ownership and autonomy. However, the researcher's involvement in the evaluation is a potential limitation. Future studies should use different methods of monitoring PA that are acceptable to adolescent girls.

Conclusion

It is feasible to involve adolescent girls in the co-creation of a PA programme under the guidance of the BCW. This study makes an important contribution to existing evidence on the development of theory-driven school-based public health interventions.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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Development of the Korean Global Physical Activity Questionnaire: reliability and validity study

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Abstract: The goal of this study was to develop a Korean version of the Global Physical Activity Questionnaire (K-GPAQ) and to examine its reliability and validity. The English version of the GPAQ was translated to the Korean language (K-GPAQ) via forward–backward translation. Reliability of the K-GPAQ was evaluated using a one-week interval test–retest method with 115 individuals. Criterion-related validity of the K-GPAQ was examined with 199 participants using accelerometers. Cohen's kappa and Spearman's correlation coefficients were used to measure test–retest reliability and validity, respectively. A Bland–Altman analysis was used to assess agreement between physical activity (PA) levels measured via K-GPAQ and the accelerometer. Coefficients for the reliability of the K-GPAQ showed moderate agreement for recreational PA and slight agreement for work-related PA (Cohen's kappa: 0.60–0.67 for recreational PA and 0.30–0.38 for work-related PA and Spearman's rho: 0.27–0.47 for work-related PA and 0.53–0.70 for recreational PA). Criterion validity of the total amount of PA, as measured by the K-GPAQ and the accelerometer, showed a weak but significant correlation ($r = 0.34$, $p < 0.01$). The K-GPAQ is a reliable and valid questionnaire to measure PA although K-GPAQ overestimated PA levels.

Keywords: physical activity, health promotion, lifestyle

Introduction

Physical activity plays a significant role in preventing non-communicable diseases and improving quality of life. However, a report from the 2014 Korea Health and Nutrition Examination Survey (KNHANES) indicate that only 20.5% of Korean adults meet the World Health Organization's (WHO) physical activity guidelines (1). In order to develop an effective strategy to promote physical activity, it is important to accurately measure the duration, frequency, intensity, and type of physical activities (2). There are several methods that are commonly used to measure levels of physical activity, such as questionnaires, movement sensors, heart rate telemetry, direct observations, and

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calorimeters (3,4), and the strengths and limitations of each method have been reported (5). Physical activity questionnaires are widely used to assess levels of physical activity in large populations because they are easy to administer and relatively low-cost (6–8).

One of the most commonly used questionnaires is the Global Physical Activity Questionnaire (GPAQ) which was developed by the WHO to measure physical activity levels as part of the WHO STEPwise program for surveillance of chronic disease risk factors (9). The GPAQ consists of 16 items grouped into three domains of physical activity: work, travel, and recreational activities, in addition to sedentary behavior. Currently, about 50 countries use the GPAQ to assess physical activity patterns (9). In 2013, the Korea Centers for Disease Control and Prevention (KCDC) adopted the GPAQ as a physical activity measurement for the Korea National Health and Nutrition Examination Survey (KNHANES). In this study, we developed a Korean version of the GPAQ (K-GPAQ) and tested its reliability and criterion-related validity.

Methods

Study design and procedure

This study consisted of three steps: (a) translation, (b) reliability test, and (c) validity test. First, the English GPAQ was systematically translated into Korean using the forward-backward method (http://www.who.int/chp/steps/GPAQ/en). On completion of translation, both reliability and criterion-related validity tests were conducted consecutively. The study was approved by the Institutional Review Board at Yonsei University, Seoul, Korea, and written consent forms were obtained from all participants of the reliability and validity studies.

Translation

Forward translation

The original English GPAQ was translated into Korean language by two independent experts who earned doctoral degrees in the fields of public health and exercise physiology in English-speaking countries. Once they had completed the translation, a panel of experts in physical activity, exercise physiology, public health, and medicine reviewed each version, reconciled differences between the English and the Korean versions, and derived the first draft of the K-GPAQ.

Backward translation

The first K-GPAQ draft then underwent backward translation into English by two other experts: one medical doctor with a doctoral degree in public health and one professor with a doctoral degree in exercise physiology. Once backward translation of the K-GPAQ into English was complete, the backward translated versions and the original English version were compared to examine their agreement in meaning. In case of disagreement, the items were noted and revisions were made by a panel of experts in the area of physical activity, exercise physiology, public health, and medicine.

The first extended panel meeting

The extended panel consisted of principal and co-investigators as well as external experts. External experts included two professionals from the department of medicine specializing in family medicine and public health, and three professionals specializing in measurement and evaluation. This panel reviewed the content validity, the forward-backward translated versions of the GPAQ, and finalized the second K-GPAQ draft.

Pilot test

Once the second draft had been developed, focus-group interviews were conducted with 50 participants recruited through convenience sampling. Participants were evenly distributed for sex and age. Researchers familiar with the K-GPAQ provided explanations and answered any questions that participants had. Face-to-face semi-structured interviews were conducted after completion to examine whether the participants understood each question.

The second extended panel meeting

Once focus-group interviews from the pilot test were completed, the extended panel reviewed the results. Panel members revised words and expressions that focus-group participants had difficulties in understanding. Through this process, the third draft of the K-GPAQ was developed. The National Institute of the Korean Language (NIKL) then reviewed the third K-GPAQ draft and checked expressions and grammar including pre- or post-positions and orthography. The extended panel reviewed the comments from the NIKL, made significant changes accordingly, and developed the final version of K-GPAQ.

Reliability test

A total of 128 participants were recruited to assess reliability of the final version of the K-GPAQ. For the reliability test, we used the stratified random sampling method with eight strata based on sex (male and female) and age (19–44, 45–64, and 65 years or above). Study subjects were recruited by posters advertised in local communities over at least 4 weeks. Those who were interested in the study contacted study staff and then were screened for eligibility, criteria for which included: (1) ages 19–75 years, (2) ability to read and understand Korean, (3) availability to participate on test and retest survey dates and (4) have no restriction on physical activity during test and retest period (except for those who are hospitalized due to injuries or illness). Eligible volunteers were informed about the study by study staff and consent was obtained from each participant. Once the informed consent was received at each local community center, study staff scheduled two dates for the test and retest and participants visited their designated centers and completed the K-GPAQ. Participants completed the K-GPAQ twice with a one-week interval between the test and retest. The tests were administered at the same place and the same time of day.

Criterion-related validity test

A total of 216 participants participated in the validity test for the K-GPAQ. Study sampling was conducted using the same sampling methods that were used for the reliability test. Participants were asked to wear an accelerometer on the right side of the waist, with an elasticized belt aligned with the mid-axilla, all day for seven consecutive days except when bathing, swimming, and sleeping. Research staff sent text messages to the participants every morning to remind them wear the accelerometers. On the day after completing seven consecutive days of wearing the accelerometer, the participants completed the K-GPAQ with face-to-face explanations by experienced research staff. Sample size was calculated with $d = 0.4–0.6$ based on the association between the test-retest results for the K-GPAQ and the association between the data from the K-GPAQ and from Actigraph (10) using the following equation: $N = [(z\alpha + z\beta) \div C] \times 2 + [C = 0.5 \times \ln[(1 + r)/(1 - r)] \times 3$, where N = total sample size and r = constant coefficient. Given α (one tailed) = 0.05, $\beta = 0.20$, and eight strata based on sex and age groups, the sample size for each group was 16 for the reliability test ($N = 128$) and 27 for the validity test ($N = 216$).

Measurements

K-GPAQ

The K-GPAQ measures three domains of physical activity: work, transport, and recreational physical activities, along with sedentary behavior. It covers a typical week, soliciting information about the participant's physical activity type, intensity, duration, and frequency. The total amount of time engaged in physical activity is the sum of the three domains, encompassing moderate- to vigorous-intensity physical activity. All analysis was conducted according to the GPAQ analysis guide (11).

Accelerometer

The ActiGraph GT3X+ accelerometers were used to monitor physical activity (Actigraph, Pensacola, Florida, USA). The accelerometer recorded activity by capturing a minute-by-minute record of activity counts based on a three-dimensional axis (horizontal, vertical, and diagonal). The activity counts were categorized into sedentary, light-, moderate-, or vigorous-intensity physical activity. On the basis of cut-points established in previous studies (3), less than 100 activity counts per minute was categorized as sedentary, 100–1951 activity counts as a light activity, 1952–5724 activity counts as moderate activity, and more than 5724 activity counts as vigorous activity.

Data analysis

Descriptive statistics based on calculated mean values were used to describe participants' socio-demographic characteristics. To test reliability, the Cohen's kappa coefficient and the Spearman's correlation coefficient were used for categorical data and numerical data, respectively. We added the 95% confidence interval (CI) of the Spearman correlational coefficients. Also, we analyzed intraclass correlation coefficient (ICC, two-way random effect model with absolute agreement definition) to assess the absolute agreement of all physical activity and sedentary behavior. Paired *t*-test and Spearman's correlation analysis were used to analyze the criterion-related validity of the K-GPAQ and the accelerometer. The validity of the K-GPAQ was compared with the accelerometer data. For accelerometer data analysis, the previously mentioned cut-off points for activity counts were used to determine moderate and vigorous intensity physical activity (3). We included minute-by-minute physical activity data at different intensities for our primary analysis. We further analyzed data which only included 10 minute bouts of physical activity where only moderate and vigorous intensity physical activities that were performed for 10 continuous minutes or more were included for analysis (12) (Supplementary Table 1). Furthermore, Bland–Altman plots were produced using SigmaPlot version 13 (Systat Software, Inc., San Jose, CA, 2014) to evaluate agreement between amounts of physical activity measured by K-GPAQ and the accelerometer. SPSS version 21.0 (SPSS 21.0, Inc., Chicago, IL, 2014) was used for all other analyses.

Results

Reliability

A total of 128 participants were initially recruited, however, 13 participants did not complete the second test and data from 115 participants were used for reliability testing. The socio-demographic characteristics of the participants are displayed in Table 1. There was an even distribution in gender, age, and income level. The GPAQ showed fair-to-good inter-rater agreeability, with recreational-related physical activities showing higher agreement ($\kappa = 0.60$–0.67) and work-related physical activities showing fair agreement ($\kappa = 0.30$–0.38) (Table 2). The amount of total physical activity from the test (first) and retest (second) showed moderate-to-strong correlation with Spearman's correlation coefficients ranging from 0.47 ($p < 0.01$) to 0.70 ($p < 0.01$). Analysis according to the different domains showed that recreational physical activity had the strongest correlations ranging from 0.53 ($p < 0.01$) to 0.70 ($p < 0.01$), and work-related activity had the weakest correlations ranging from 0.27 ($p < 0.01$) to 0.47 ($p < 0.01$). Furthermore, sedentary behavior showed strong reliability, with a Spearman's correlation coefficient of 0.65 ($p < 0.01$).

Criterion-related validity

A total of 216 participants were recruited for the validity test. Out of 216 participants, 14 did not wear their accelerometers for a sufficient period of time or number of days (less than five days out of seven days), and three did not complete the K-GPAQ. Therefore, data from 199 participants were analyzed for criterion validity, and the participants' socio-demographic characteristics are presented in Table 1. Spearman coefficient analysis showed that there was a weak correlation between the K-GPAQ-measured physical activity and accelerometer-measured physical activity for moderate physical activity ($r = 0.33$, $p < 0.01$), moderate-vigorous physical activity ($r = 0.34$, $p < 0.01$) and sedentary behaviors ($r = 0.18$, $p < 0.01$) (Table 3). When actual means of physical activity minutes were compared, the K-GPAQ over-reported vigorous, moderate and vigorous-moderate physical activity by 81.45±212.3, 91.61±483.5, and 173 ± 590 minutes per week, respectively, when compared to accelerometer-measured physical activity minutes. Although moderate-intensity physical activity showed moderate significant correlations ($r = 0.33$, $p < 0.01$), vigorous-intensity physical activity showed weak correlations ($r = 0.10$). We further analyzed validity between the K-GPAQ-measured physical activity and accelerometer-measured physical activity according to two age groups (Adults vs. Elderly) (Table 3). The results showed that correlations between the K-GPAQ-measured physical activity and accelerometer-measured physical activity were similar between two age groups; however, there was a tendency to over-report

Table 1. Characteristics of participants.

	Reliability test (N = 115)			*Validity test (N = 199)*		
	Total (n = 115)	*Males (n = 55)*	*Females (n = 60)*	*Total (n = 199)*	*Males (n = 82)*	*Females (n = 117)*
Age (years)						
19–44	40	20	20	97	40	57
45–64	37	18	19	73	36	37
> 65	38	17	21	29	6	23
No response	0	0	0	0	0	0
Education level						
< Middle school	17	2	15	9	2	7
High school	64	30	34	40	11	29
College	24	15	9	68	24	44
> College	7	6	1	71	42	29
No response	3	2	1	11	3	8
Income level (USD)						
No income	21	9	12	15	2	13
< 1000	17	6	11	12	4	8
1001–2000	12	7	5	16	6	10
2001–3000	13	7	6	23	7	16
3001–4000	13	7	6	23	14	9
4001–5000	12	5	7	31	21	10
> 5001	22	11	11	63	26	37
No response	5	3	2	16	2	14
Marital status						
Single	38	23	15	58	25	33
Married	65	28	37	120	49	71
Bereaved	9	1	0	8	3	5
Divorced	3	3	8	2	2	0
No response	0	0	0	11	3	8
Occupational status						
Blue collar/service	18	8	10	14	8	6
Managerial/professional	23	14	9	101	52	39
Other (e.g., students, homemaker, unemployed)	72	33	39	72	19	53
No response	2	0	2	12	3	9

moderate physical activity in the elderly age group (91.61±483.5 vs. 223.07±433.6 min per week).

Bland–Altman analysis

Bland–Altman plots compared vigorous and moderate physical activity as measured by the K-GPAQ and the accelerometer (Figures 1 and 2). The difference between the two instruments in measuring vigorous physical activity was 71.70 minutes. Figure 1 indicates that the K-GPAQ tends to overestimate vigorous physical activity when compared to the accelerometer. However, the limits of agreement for the two instruments had wide ranges, from –322.55 to +465.96, with 7 outliers (Figure 1). For moderate physical activity, the difference between the two instruments was 110.73 minutes (Figure 2). Moderate physical activity had negative bias for the K-GPAQ, with the majority of points under zero. The limits of agreement for

Table 2. Reliability (test–retest) of the K-GPAQ.

Physical activity domain				*Test (1st)*	*Retest (2nd)*	*k*[a]	*rho*[b]	*rho*[c]	*ICC*
Work	Vigorous PA	Q1	Yes			0.30**			
		Q2	Frequency (day/week)	0.4 (1.4)	0.5 (1.5)		0.45**	0.45** (0.09–0.70)	
		Q3	Time (min/day)	16.8 (82.6)	14.0 (51.9)		0.27**	0.27** (−0.06–0.55)	
		Total time	(min/week)	48.55 (237.3)	56.6 (222.5)		0.33**	0.33** (−0.05–0.63)	0.86*** (0.79–0.90)
	Moderate PA	Q4	Yes			0.38**			
		Q5	Frequency (day/week)	2.0 (2.6)	1.98 (2.5)		0.40**	0.39** (0.19–0.57)	
		Q6	Time (min/day)	52.9 (114.3)	56.25 (114.8)		0.44**	0.44** (0.24–0.61)	
		Total time	(min/week)	217.4 (492.3)	259.7(581.0)		0.42**	0.42** (0.23–0.60)	0.75*** (0.63–0,83)
	Moderate-vigorous PA	**Total time**	(min/week)	267.5(621.3)	299.5 (681.2)		0.47**	0.47** (0.27–0.64)	0.85*** (0.78–0.90)
Transport-related PA in the form of walk or cycling		Q7	Yes			0.50**			
		Q8	Frequency (day/week)	4.4 (2.4)	4.3 (2.6)		0.49**	0.49** (0.31–0.64)	
		Q9	Time (min/day)	40.9 (34.0)	50.7 (83.3)		0.43**	0.43** (0.25–0.60)	
		Total time	(min/week)	210.2 (182.3)	285.88 (553.0)		0.48**	0.48** (0.32–0.62)	0.23 (−0.12–0.47)

Table 2. (Continued)

Physical activity domain				*Test (1st)*	*Retest (2nd)*	*k*[a]	*rho*[b]	*rho*[c]	*ICC*
Recreational activities	Vigorous PA	Q10	Yes			0.60**			
		Q11	Frequency (day/week)	1.9 (2.2)	1.67 (2.3)		0.70**	0.70** (0.53–0.82)	
		Q12	Time (min/day)	30.2 (41.2)	32.76 (50.3)		0.61**	0.61** (0.44–0.77)	
		Total time	(min/week)	123.0 (183.7)	117.30 (181.1)		0.68**	0.68** (0.52–0.82)	0.64*** (0.47–0.76)
	Moderate PA	Q13	Yes			0.67**			
		Q14	Frequency (day/week)	1.9 (2.3)	2.2 (2.3)		0.59**	0.59** (0.41–0.75)	
		Q15	Time (min/day)	32.8 (42.6)	45.2 (62.9)		0.53**	0.53** (0.34–0.70)	
		Total time	(min/week)	125.7 (170.3)	191.5 (326.1)		0.55**	0.55** (0.38–0.71)	0.36** (0.08–0.56)
	Moderate-Vigorous PA	Total time	(min/week)	239.4 (264.1)	304.5 (400.4)		0.70**	0.70** (0.55–0.82)	0.56*** (0.36–0.70)
Sedentary behavior (min/day)		Q16		370.3 (266.7)	382.5 (250.1)		0.65**	0.66** (0.52–0.77)	0.79*** (0.70–0.86)
Total	**Vigorous PA**			**170.8 (294.8)**	**174.34 (324.7)**		**0.69****	**0.69**** (0.55–0.81)	**0.73***** (0.60–0.82)
	Moderate PA			578.3 (580.2)	724.21 (1108.7)		0.53**	0.53** (0.33–0.69)	0.49** (0.23–0.66)
	Moderate-Vigorous PA			729.1 (759.9)	881.56 (1248.7)		0.61**	0.61** (0.43–0.77)	0.52*** (0.27–0.68)

Data presented as mean (SD) min/week.
PA; physical activity, Q; question, ICC; intraclass correlation coefficient.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
[a] Kappa's correlation coefficient.
[b] Spearman's correlation coefficient.
[c] Spearman's correlation coefficient with 95% confidence interval (CI).
Total moderate-vigorous PA: all moderate-vigorous physical activity including travel-related physical activity.
Total moderate PA: all moderate physical activity including travel-related physical activity.

Table 3. Validity of the K-GPAQ-measured physical activity against accelerometer-measured physical activity.

	Accelerometer-measured PA (N = 199)	*K-GPAQ-measured PA (N = 199)*	*Mean diff*[a]	*rho*[b]	*rho*[c]
All ages					
Vigorous PA (min/week)	12.8 (44.4)	84.5 (200.0)	−71.70 (201.1)	0.10	0.10 (−0.05–0.24)
Moderate PA (min/week)	297.3 (200.1)	408.0 (503.0)	−110.77 (477.8)	0.33**	0.33** (0.18–0.46)
Moderate–vigorous PA (min/week)	310.0 (216.5)	492.5 (606.5)	−182.47 (569.8)	0.34**	0.34** (0.19–0.48)
Sedentary behavior (min/day)	1154.9 (91.4)	560.0 (227.9)	594.85 (233.2)	0.18**	0.18** (0.04–0.32)
Adults (19–64 years)					
Vigorous PA (min/week)	12.0 (34.3)	93.4 (212.6)	−81.45 (212.3)	0.09	0.09 (−0.07–0.23)
Moderate PA (min/week)	309.2 (203.2)	400.9 (511.3)	−91.61 (483.5)	0.37**	0.37* (0.22–0.51)
Moderate–vigorous PA (min/week)	321.2 (216.0)	494.3 (627.2)	−173.06 (590.3)	0.36**	0.36** (0.21–0.50)
Sedentary behavior (min/day)	1159.2 (91.0)	558.2 (222.7)	601.04 (225.3)	0.19*	0.19* (0.04–0.35)
Elderly (> 64 years)					
Vigorous PA (min/week)	17.5 (82.6)	32.1 (82.5)	−14.59 (100.1)	−0.02	−0.02 (−0.31–0.38)
Moderate PA (min/week)	227.0 (167.5)	450.0 (464.9)	−223.07 (433.6)	0.33	0.33 (−0.11–0.69)
Moderate–vigorous PA (min/week)	244.4 (211.8)	482.1 (475.8)	−237.66 (434.8)	0.38*	0.38* (−0.05–0.71)
Sedentary behavior (min/day)	1129.6 (91.7)	571.0 (260.4)	558.57 (277.0)	0.08	0.08 (−0.32–0.47)

Data presented as mean (SD) min/week.
*$p < 0.05$, ** $p < 0.01$.
[a] Mean diff: Mean accelerometer-measured physical activity minus mean K-GPAQ-measured physical activity.
[b] rho: Spearman's correlation analyses between accelerometer-measured physical activity and K-GPAQ-measured physical activity.
[c] Spearman's correlation coefficient with 95% confidence interval (CI).
K-GPAQ: Korean Global Physical Activity Questionnaire, PA; physical activity.

moderate activity ranged from −825.77 to +1047.23, with 9 widely separated outliers (Figure 2). The K-GPAQ tended to overestimate moderate activity when compared to the accelerometer.

Discussion

The purpose of this study was to develop a Korean version of the GPAQ and determine its reliability and criterion-related validity in measuring physical activity compared with objectively measured accelerometer data. The main findings indicate that the K-GPAQ showed adequate reliability throughout all physical activity domains. Furthermore, the K-GPAQ-measured physical activity time significantly correlated, weakly to moderately, with accelerometer-measured physical activity time. However, the K-GPAQ-measured physical activity levels are significantly higher compared with accelerometer-measured physical activity.

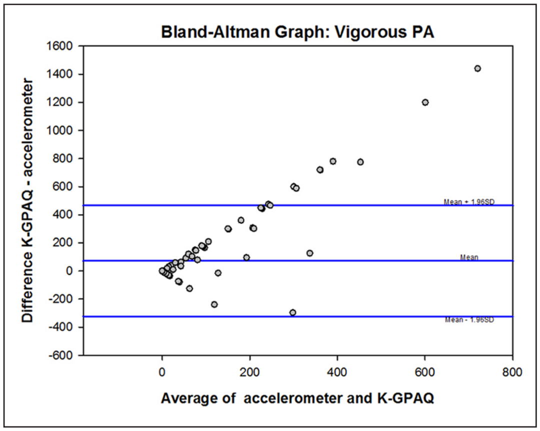

Figure 1. The Bland–Altman plot for vigorous physical activity using accelerometer and GPAQ data.

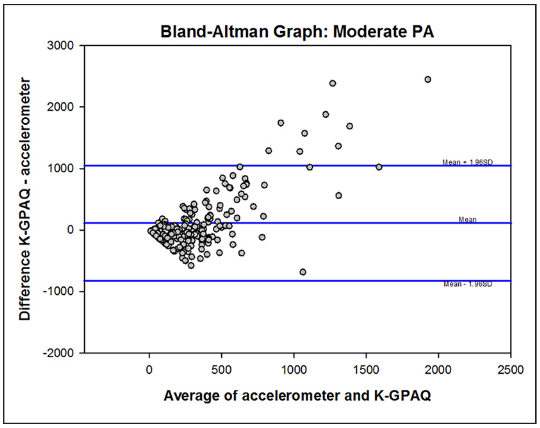

Figure 2. The Bland–Altman plot for moderate physical activity using the accelerometer and GPAQ data.

The result from the current study indicated that in the recreational activity domain, the K-GPAQ had acceptable reliability when compared to the reliability of the questionnaire found in other countries (13–16). Specifically, the K-GPAQ's reliability was highest for moderate-to-vigorous activity in the domain of recreational physical activity and lowest for vigorous work-related physical activity. The relatively lower reliability in the work-related domain seems mainly because of difficulty in accurately defining intensities and amount of work-related physical activities in Korea. However, in other previous studies that investigated the reliability of the GPAQ in seven countries including Bangladesh, China, Ethiopia, Indonesia, South Africa, Japan, and Taiwan, reliability was higher in the work-related domain compared with the recreational activities and transport-related physical activity (14). Although it is unclear why reliability for recreational physical activity was higher than for work-related physical activity in our study, we can speculate that our study included good representation from the elderly, who may have difficulty defining work-related physical activity.

Our study found that weak-to-moderate correlation between the K-GPAQ and accelerometer-measured physical activity. Correlation between K-GPAQ-measured moderate-vigorous physical activity and accelerometer-measured physical activity ($r = 0.34, p < 0.01$) was higher than that of other countries, including Latin America ($r = 0.22$) (17), South Africa ($r = -0.16$) (13), and China ($r = -0.02$) (13). Although the correlation coefficient was higher compared with other countries' reports, the K-GPAQ-measured physical activity was significantly higher than accelerometer-measured physical activity. Many studies reported that the accelerometer is a gold-standard for physical activity measurement; however, it may not measure certain physical activities such as biking, hiking (on the mountain), swimming, weight training, yoga, and Pilates. In South Korea, hiking, walking, weight training, and biking were included in the top 10 most popular sports (18), and these physical activities were not measured by the accelerometer as moderate-vigorous physical activity, despite being recorded by the K-GPAQ as moderate-to-vigorous physical activity. Therefore, the 182 minute higher amount of physical activity measured by K-GPAQ compared with accelerometer-measured physical activity may not be an over-estimation, but rather due to the accelerometer's inability to measure certain types of physical activities. While the accelerometer has many disadvantages, it is used to provide objective information on the intensity of physical activities. Adding daily physical activity logs, heart rate monitor data, body temperature sensor data, and data from other sensors of physical activity may offset the shortcomings of accelerometers.

We further analyzed our physical activity validity data according to two age groups: participants under age 65, and those over or equal to 65 years old. Most of the results from correlation analyses were similar, except sedentary behavior. However, when physical activity minutes were compared between the K-GPAQ- and accelerometer-measured physical activity, discrepancies between physical activity minutes measured by the K-GPAQ and the accelerometer were much greater in the elderly (173 vs. 237 min) than in their adult counterparts. This could be attributed to either over-estimation of the K-GPAQ or under-estimation of the accelerometer. The accelerometers used in our study categorized physical activity counts between 1952 and 5724 as moderate physical activity (3). In South Korea one of the most prevalent physical activities in the elderly is hiking (18); however, most hiking by the elderly may not be categorized as moderate physical activity by the accelerometer, but the K-GPAQ recorded hiking as moderate physical activity. This phenomenon may explain why the K-GPAQ over-estimated physical activity against the accelerometers in the elderly compared with adults under 65 years old. The cut-point for accelerometer for the elderly may need further study (19–21), but it is beyond the scope of our study.

Walking is the most popular form of physical activity in South Korea (18). The GPAQ included walking in the category of 'travel to and from places' as well as 'recreational activities'. In recreational activities, the GPAQ clearly explained to include brisk walking as moderate-intensity physical activity. However, the GPAQ did not specify the speed of walking in the domain of 'travel to and from places'. Therefore, the GPAQ-measured physical activity included any intensity of walking as 'travel to and from places' and also brisk walking as recreational activities. Since accelerometers may not categorize walking, especially slow speed walking, as a moderate intensity physical activity, the K-GPAQ-measured physical activity may overestimate moderate physical activity compared to accelerometer-measured physical activity (19,22,23). This may help explain the tendency of participants to over-report physical activity when using the K-GPAQ and the low correlation values found between the K-GPAQ-measured physical activity and accelerometer-measured physical activity, both in this study and in other similar studies (13,20,21,24). It warrants the need for further research on the appropriateness of current cut-offs for walking activity.

The Bland–Altman analysis conducted in our study found that people who participated in vigorous physical activity and moderate physical activity were more likely to over-report the level of their activity. These findings are consistent with those of several previous studies (25,26). Therefore, when interpreting the physical activity data from the K-GPAQ, it should be noted that the amount of self-reported vigorous physical activity and moderate physical activity might be overestimated. Similar findings from a study done on a Chinese adult population by Chu *et al.* (27), reported that participants remembered vigorous and moderate physical activity more accurately than lower levels of physical activity (25). This may be because participants experience perceptual and cognitive difficulty when estimating lower level of physical activity (28,29).

This study has several limitations. First, the small sample size for reliability and validity tests may be a limitation, considering that the K-GPAQ was developed for population-based surveillance. However, the sample included a balanced number of participants from all age groups, income levels, education levels, and occupations from both rural and urban areas. Second, the participants were recruited through convenience sampling. We recruited the study participants though the poster advertisements; this recruitment method might be biased in that active people are more likely to be attracted in study participation than less active people. Third, physical activity domain-specific validity for the K-GPAQ was not examined, because the accelerometer cannot differentiate between the three physical activity domains: work-related, transport-related, and recreational-related physical activity. Forth, considering other variables (sociodemographic or other) that may affect validity, the sample included a balanced number of participants from all age groups, income levels, education levels, and occupations from both rural and urban areas. Fifth, face-to-face interviews may affect self-reported data. Therefore, we only used the face-to-face semi-structured interviews when we conducted a pilot study. The final limitation of this study is that we used the same cut-off points of physical activity intensity across all ages for the participants.

This study describes a systematic approach to develop the K-GPAQ and examined its reliability and validity. The reliability of the K-GPAQ was established using the test-retest method, and the validity was established by comparing K-GPAQ measured physical activity with objectively measured physical activity. We have provided evidence and objective validation of the K-GPAQ, which is a convenient tool for assessing physical activity. Further research is needed to optimize the ability of the K-GPAQ to assess levels of physical activity in the Korean community.

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Junga Lee and Choae Lee contributed equally for this work.

Declaration of conflicting interests

The authors declare that there are no conflicts of interest.

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Supplemental material

Supplemental material for this article is available online.

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Utilizing an HIV community advisory board as an agent of community action and health promotion in a low-resource setting: a case-study from Nova Iguaçu, Rio de Janeiro, Brazil

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Abstract:
Introduction: Brazil's HIV burden has greatly increased over the past decade, especially for socially marginalized and vulnerable groups such as adolescents, women, and men who have sex with men. The reasoning for worsening HIV outcomes is complex, but ongoing economic and political crises have placed extreme operational and financial burdens on both the public health system and HIV-related civil society, affecting both treatment and prevention efforts and delivery.
Context: Community-based HIV-related health-promotion activities have continued in Nova Iguaçu, Rio de Janeiro, despite these setbacks. These efforts have been led by a semi-independent community advisory board and engagement group based at the Hospital Geral de Nova Iguaçu with support from researchers based at the Oswaldo Cruz Foundation.
Methods: The research team supported, documented, and participated in various activities led by the community advisory board and engagement group from 2017–2018 including meetings, community workshops/lectures, production of health promotion materials, and the dissemination of research findings.
Results: The research team utilized the concepts of vernacular knowledge and critical pedagogy to describe and document the ongoing, bottom-up approach, community-led efforts of the community advisory board and engagement group. In particular, we describe the process of stakeholder engagement, popularization of research results, and resource sharing spearheaded by the community advisory board in Nova Iguaçu.
Conclusion: The community advisory board demonstrates how community-led efforts are essential to HIV and AIDS response efforts in light of worsening HIV burdens and global shifts towards biomedicalization. Their HIV-related activities rely on existing community networks and resources with secondary support from a research team. This illustrates a key intervention point between traditional research and an empowering community mobilization that can inform similar efforts in other low-resource settings.

Keywords: case study, community action, empowerment/power, health promotion, HIV/AIDS, knowledge translation, Latin America

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Introduction

Many global institutions, such as the Joint United Nations Programme on HIV/AIDS, have declared the end of the HIV and AIDS epidemic is imminent; however, closer scrutiny of global HIV data and country reports show that global HIV incidence has, at best, plateaued since 2005 (1). Brazil has suffered steadily worsening HIV outcomes. National HIV and AIDS data showed an increased HIV burden across several vulnerable populations: women, young adults, and men who have sex with men (MSM). There was a 28.6% increase in HIV diagnoses for pregnant women, and a 5% increase in HIV diagnoses for 20–24-year-olds when compared to other age groups. The decade also saw a 20% increase in HIV diagnoses for MSM (2). Incidence rates in the region of Rio de Janeiro are especially concerning. In 2007, 329 AIDS cases were registered in the city of Rio de Janeiro, compared to 2416 in 2015 (2), a 600% increase.

The reasons for these worsening trends are complex, but recent economic and political crises have placed extreme operational and financial burdens on Brazilian health systems, especially on the public *Sistema Único de Saúde* (SUS) (3), which incorporates the national HIV and AIDS response. This has affected the overall delivery of HIV response and HIV-related civil society (4). Community efforts have increasingly been cut in favor of top-down, biomedical approaches. Several authors discuss this trend both in Brazil and globally. These researchers (4–7) stress the need to maintain community-based efforts to combat HIV both for treatment and prevention in light of global shifts.

This case study describes community-based, HIV-related activities completed in partnership between researchers at the Oswaldo Cruz Foundation (FIOCRUZ) and an HIV community advisory board and engagement group (CAB) from the public General Hospital of Nova Iguaçu (HGNI) in Brazil. These community-led efforts continue in light of financial and operational crises. The objective of this manuscript is to document these efforts in the context of weakening Brazilian health systems, with implications for similar circumstances in other localities, especially in the Global South.

Background

Setting: Nova Iguaçu

Nova Iguaçu is a low-income, independent municipality in the state of Rio de Janeiro, with a large *favela* community of roughly 800,000 people. Violence from the ongoing drug war in the state is common. HGNI is the sole public hospital for the region and serves around 4000 HIV-infected patients in total. Each month the HIV center sees around 1000 patients, roughly 150 of whom are children. HGNI and the CAB form part of the International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPAACT), a US-funded network of HIV and AIDS research sites focusing on pregnant women, children and adolescents. In 2019, there were 10 active studies at HGNI.

As of 2019, the CAB consisted of patients living with HIV attending HGNI, their family members and partners, and members from the community at large, who participated in activities regardless of HIV status or whether they were patients of HGNI. The CAB was led by two coordinators selected from the community. In December of 2017, CAB coordination was offered to two community members with more in-depth experience working in grassroot projects in Nova Iguaçu. As described in the section below, this resulted in a more independent CAB, more frequent and consistent events, and the introduction of systematic community engagement activities.

Overview of activities

The CAB was responsible for community engagement and activities related to clinical research, such as study recruitment. Since 2017, the CAB has strengthened its community engagement and empowerment (8,9) activities, with the support of the research team based at FIOCRUZ and HGNI.

The CAB organized monthly lectures on various health topics directly and indirectly related to HIV. These *palestras* were open to the public and promoted at HGNI and throughout the community. Topics included a talk on resilience and solidarity for those living with HIV and information related to syphilis infection. Local experts and other stakeholders were invited to give an interactive lecture with community discussion to follow. The suggestions for topics came from the CAB. These lectures offered a space for an exchange of knowledge between health professionals and the community. They also created a safe space of inclusion for women, adolescents, HIV positive, queer, and other socially marginalized individuals of the community.

In 2018, the CAB collaborated with other local civil society groups in Nova Iguacu, especially with a group of breast cancer survivors, *Clube das Amigas da Mama*, and an HIV charity, *Pastoral da AIDS*, among others. These partnerships established links among stakeholders and emphasized inclusive solidarity, community resilience, and empowerment. Mutual activities involved workshops, museum trips, and lectures. The partnerships encouraged exchanges between shared resources. For example, the CAB logo was designed by a community member who was referred by *Clube das Amigas da Mama*. They also exchanged other operational resources, such as transportation to and from events.

In 2018, the CAB began hosting *roda de conversas*, or roundtable talks with representatives from other civil society groups in Nova Iguaçu. The purpose of these *rodas* was to create a forum where different groups could express solidarity, needs, and challenges to their work, as well as facilitate partnerships between these community members of Nova Iguaçu. The CAB continued to host these talks every other month in 2019.

The CAB coordinators also participated in local conferences. In September 2018, the CAB coordinators participated in an international course hosted at FIOCRUZ with the University of Coimbra (Portugal) regarding the popularization of science. They participated in a local conference concerning civil society, religion, and HIV in Niteroi, Rio de Janeiro in August 2018.

The CAB has organized health education materials to distribute at CAB meetings and other community events. Such materials included information related to medication and prostate cancer screening. Beginning in 2018, the two CAB coordinators began training to disseminate relevant and impactful research findings from the IMPAACT projects based at HGNI, working directly with the research team. Their objective was to translate scientific findings into information that was relevant and useful for HIV-related issues within the community, such as the prevention of vertical HIV transmission, and information for serodiscordant couples.

The research team intentionally took a secondary, supportive role to all CAB activities. The CAB had final decisional and organizational authority, whereas the research team provided resources and technical support. The CAB established their own agenda, activities, and outreach. The bulk of the CAB productivity happened organically, within the existing networks and systems of Nova Iguaçu that were intuitive to CAB members as community members.

Although the CAB members, especially the two coordinators, were often familiar with various concepts from traditional research and social science literature, they were not trained public health practitioners or researchers. They did not take into consideration traditional social science methodologies or theories when planning their activities. Instead, they leveraged the expertise of the research team to integrate research methods and theories into their activities, promoting shared experiences and collaborative problem solving. This bottom-up, organic approach has parallels to various established theoretical concepts and pathways. We reviewed social science literature to better identify these, resulting in the present case study. We found useful concepts related to vernacular knowledge and critical pedagogy. What follows is a brief discussion of these concepts with two in-depth case examples from the CAB activities from 2017–2018.

Vernacular knowledge

Vernacular Knowledge (VK) was first described by Jeffrey Escoffier in *The Invention of Safe Sex: Vernacular Knowledge, Gay Politics and HIV Prevention* (10). VK is the collective, dynamic, shared knowledge of a given community. CAB activities in Nova Iguaçu relied on these same inherent, intuitive understandings. As outsiders, this set of experiences and information was not readily accessible to the research team but being able to identify and utilize it was essential to effective collaboration with the CAB.

VK is not simply a linguistic framework. It is a set of diverse cultural constructions and behaviors that have an informal, assigned, and collective meaning. Escoffier defines VK as dynamic, complex information and resources acquired through shared and individual life experiences. It is 'assembled from the everyday learning by doing … the response to challenges and observations' (10, p. 4). It is a form of group resilience, especially for those who are socially stigmatized or marginalized. This collection of understandings is compartmentalized into 'frameworks' or '"interpretive schemes" that bring together facts, stereotypes, behavioral and personal conduct, and theory bites in order to locate, perceive, label, and identify occurrences' (10, p. 4). Escoffier describes these frameworks for gay men in the United States, including 'cruising' or 'passing', amongst several others (10, pp. 4–5). All these concepts offered a form of resilience to broader social exclusions and stigmas. 'Passing' includes an informal code of conduct that allowed gay men to avoid discrimination or harassment by appearing as heterosexual in certain contexts, such as employment settings. The invention of 'safe sex' was a direct reaction to the lack of access to, and exclusion from appropriate government HIV and AIDS prevention and treatment options. These frameworks cultivated collective knowledge and awareness amongst gay men, built community, and protected them.

Escoffier stresses that VK is both intuitive and 'taken for granted'. Frameworks are not often conscious until a situation arises that requires their reevaluation. The early days of the AIDS epidemic required a collective reworking of gay frameworks, especially for sexual practices. 'Safe sex' was developed as a sex-positive framework that promoted the use of condoms and other prevention techniques in the face of 'authoritarian' public health knowledge that initially sought to deny gay existence through sex negativity (10). This shift of relying on themselves rather than scientific knowledge galvanized broader lesbian, gay, bisexual, and transgender political activism (11).

Frameworks unique to Nova Iguaçu included understandings of community stakeholders, informal community leaders and other influencers. It included a complex geographical understanding of the community, and its internal referral systems. For example, CAB members knew how and where to find a group of individuals living with HIV who had left treatment. These patients had left treatment for fear of stigma, discrimination, or exposure to hostility in clinical settings. The VK of the CAB made outreach to them more effective and efficient. This outreach from other CAB members offered a layer of protection and legitimacy, which the research and clinical teams of HGNI/FIOCRUZ could not provide.

Establishing a deeper knowledge of VK in Nova Iguaçu has helped our researchers better understand HIV prevention and treatment needs and behaviors not captured by traditional HIV surveillance methods. This has been especially true for socially marginalized groups within the community that are at higher risk for HIV, and most likely to be excluded from traditional public health authorities. Future efforts will continue to identify and engage with key stakeholders from these marginalized groups.

Critical pedagogy

Several activities between the research team and the CAB represent an exchange of knowledge, for example in dissemination of research findings. It was important that CAB members not only memorized and repeated materials, but could also understand and apply it to their lives. It must be incorporated into their VK. VK alone does not account for this exchange.

'Critical pedagogy' (CP) is a pedagogical concept that describes this exchange pathway. CP was first described by the Brazilian philosopher, Paulo Freire in 1970 (12). CP conceptualizes traditional education as hegemonic and oppressive and proposes a more democratic model. Freire characterizes traditional education as 'banking', in which students and teachers are set in a vertical relationship. Knowledge is deposited from the teacher to the student, as in a bank, in a single direction. In this model of banking education, knowledge is static, and unquestioned, and the teacher is a figure of authority. Consciousness is absent: students are 'not called upon to know, but to memorize the contents narrated by the teacher' (12, p. 80). Freire characterizes this as oppression, because knowledge is not created or transformed, but transferred without critical understanding from either student or teacher.

CP is Freire's alternative to banking education. CP is a two-directional and critical pathway: the teacher provides a problem statement, then through mutual dialogue, students are expected to synthesize, problem solve, and return this knowledge, with their unique understanding of it, to the teacher. The teacher then re-evaluates their own understanding of the information using students' input. The student is actively collaborative in the production of knowledge (12). Freire labels this 'problem-posing' education. Its goal is to create a sense of *conscientização*, often translated into English as 'consciousness rising' or 'critical consciousness' but more literally means 'the process of becoming aware' (12). Freire states this process of awareness is transformative, as it allows individuals to identify, label, question, and dismantle oppression (12).

This problem-posing education has been used during the construction of health-promotion materials, and in the workshops with the CAB coordinators. Future activities must continue to emphasize these types of exchange to maximize the participation and empowerment of the CAB, as well as allow the researchers to evaluate our own understanding of public-health knowledge. CP fosters a sense of *concietização* within CAB and community members that helps them to locate their place within the community. Members must understand key elements of their environment: what resources they have available, what resources are missing, and how to articulate demand and access to both.

VK alone is often a reaction to exclusion from, or incongruence with, traditional health and science knowledge and does not necessarily represent an exchange between the two. CP is the mechanism that allows for this exchange and the *democratization* of VK, by elevating it to the same legitimacy as traditional or authoritarian knowledge. The concepts of VK and CP are therefore useful for community-based efforts because they offer a complementary pathway for constructing tailored responses. They create positive feedback (13), in which public health knowledge is informed and constructed from the bottom up using the VK of a community, and, in turn, this same community is able to decode scientific knowledge that serves their unique needs. 'Authoritarian' knowledge often offers a clinical, or internal, validity, and VK offers a contextualized, or external, validity. A population's *conscientização* is key in establishing this exchange, so they may understand and articulate their specific needs, and then demand these needs be met by health and government authorities. However, prior conceptualizations (14) of how these theories can be used in sexual health and prevention efforts do not consider how organizations must operate in solidarity within the broader community context. The CAB's work in Nova Iguaçu demonstrates how community-led groups often do rely on one another, especially within the context of resource sharing. The CAB naturally creates partnerships with similar groups in the community. These partnerships are, at the surface, often pragmatic in nature (as in the previous logo example). Yet, at a deeper level, the CAB establishes essential bonds based on shared VK and a mutual sense of belonging to the community. These bonds are often not explicitly expressed and are possibly taken for granted by the community members, but this makes them no less significant. Mapping and better understanding them offers a boundary critique (15) and insider's portrait of the community of Nova Iguaçu, its needs, and its resources. This cannot be captured by the research team through traditional surveillance methods. We are inherently outsiders and do not have the intuitive understanding of these fluid, dynamic community networks.

This link between the VK and CP was essential to our efforts with the CAB in Nova Iguaçu. What follows are two in-depth case examples to better understand the practical, intuitive application of VK and CP by the CAB.

Case examples

Health promotion – construction of medication pamphlet

Design.

From August to September 2017, the CAB and researchers collaborated on the construction of health information pamphlets related to medication. The CAB coordinated efforts with *As Mulheres Poderosas* and another HIV-specific patient and family group based at FIOCRUZ, the *Associação Lutando para Viver*. Health education related to medication was seen as a topic closely related to HIV that would also impact the community at large. Building on stronger and more deliberate exchanges of vernacular and scientific knowledge, a series of four workshops was held with the CAB, community members, and the research team to determine what content to include. The two CAB coordinators invited CAB members to participate via word of mouth and social media messaging. In total, 10 individuals participated in each workshop. A pharmacist was present at all workshops to help orient more technical considerations for materials included in the pamphlets.

The VK of the community was utilized to ensure the pamphlet language and content resonated with the community it served. CP was utilized to facilitate an exchange between the participants and the pharmacist. At the first workshop the pharmacist fielded general questions from the participants, allowing them to guide and explore the question of medication through dialogue, as in the problem-posing method of Freire. The research team then encouraged participants to locate this information in their individual contexts and language, in other words fuse new information with their VK. This synthesis was then presented back to the research team and the pharmacist over a series of three workshops, after which the final pamphlets were developed collaboratively.

Results

In total, 5000 pamphlets were printed and distributed by CAB members at their regular community meetings in Nova Iguaçu, and at two annual community-engagement fairs held at FIOCRUZ: 'FIOCRUZ para Você', a vaccination campaign targeting the immediate favela communities surrounding FIOCRUZ, and the 'Semana Nacional de Ciência e Tecnologia', a week-long fair emphasizing science and technology education for students in public schools in the same localities. Both events have wide circulation. CAB members distributed materials and oriented basic questions with the assistance of the research team at both events. The participating pharmacist was also present to assist with more technical questions. A conscious effort was made to have participating community members and the research team appear equal. For example, during the actual events, all participating members (researchers and CAB) wore identical shirts. No visible or spoken distinction was made between who was from which organization, and all were available to orient basic questions and information in the packets.

After both events, the research team held an open roundtable discussion with the participants. All 10 participants attended this roundtable. They stated they felt 'validated (*valorizados*)' by 'understanding themselves as agents of social transformation (*se-percebendo como agentes de transformação social*)', especially by taking on roles of 'health promoters (*promotores de saúde*)' in their own community in partnership with the research team. It was discussed that this reinforced the necessity of the scientific community to collaborate with a civil society to 'articulate an active sense of community' (*o exercício de uma cidadania ativa para a autonomia dos cidadãos*). CAB members, the majority of whom are HIV positive, felt collectively and individually empowered by this experience. This is not insignificant given the visceral endurance of HIV-related stigma in Brazil.

This activity reinforced the necessity of both VK and CP in health-promotion activities to construct health education materials that offer a sense of ownership to the communities they serve, and to validate socially marginalized persons living with HIV. It also created a critical exchange of knowledge between traditional researchers, the CAB, and community members. This exercise allowed the research team to evaluate our own future activities with the CAB in a transformative way that would not have emerged through a top-down approach, i.e., production of materials without equal collaboration from the community. For example, the community insisted on material that would not be exclusive to HIV, but useful for the community at large. This exercise was not without limitations. Evaluation and analysis focused more on the participants and their sense of empowerment in an open, roundtable discussion. The roundtable was recorded and analysis was informal, rather than thematic. The next step is to evaluate, measure, and analyze wider community impact on medication related knowledge, skills, and behaviors.

Dissemination of HIV research results

Design

Beginning in December 2017, the research team and the CAB coordinators focused efforts on disseminating research findings from two studies (16,17) conducted at HGNI. The objective of this workshop was to train the CAB coordinators regarding ongoing HIV research to demonstrate and validate the direct role that the community of Nova Iguaçu plays in global HIV research and ensure that innovations in HIV response were disseminated amongst the community. One of the two studies focused on serodiscordant relationships and the benefits of early HIV treatment, and the other focused on post-exposure prophylaxis for neonates (important given the high burden of HIV-positive pregnant women in Brazil).

The two research articles were translated from formal English into Portuguese by two members of the research team. The team then presented the studies to the two CAB coordinators using the CP problem-posing method of open dialogue rather than simple instruction. The researchers utilized the study results to encourage participant inquiry to expand their broader HIV knowledge, rather than simply repeat materials. For example, the concept of an undetectable HIV viral load led to a broader discussion on the importance of treatment as prevention and the reduction of social stigmas so that more people would access HIV treatment.

After the initial presentation, the research team provided the CAB coordinators with the original materials used for the workshop and the instructions that they should synthesize, interpret, and re-present the material to the research team. The CAB leaders were encouraged to decode, or critique, the study results. The objective was for them to transform the presentation into their own VK, language, and understanding. The research team emphasized this element and made themselves available for ongoing questions that arose during this process. Then 2 weeks after the initial workshop, the CAB coordinators re-presented the materials to the research team. Their unique input created metaphors and illustrative explanations for concepts such as treatment as prevention using their own ideas rather than those originally presented by the research team. They also tailored the material with a community presentation in mind. For example, in their own presentation they emphasized elements that were not expressly related to the study results, such as not only the importance of HIV treatment, but also how to engage in treatment within the SUS in Nova Iguaçu for those who had stopped treatment or never started for fear of social stigma. This demonstrated a fusion between their VK of the reality of Nova Iguaçu and the information provided in the study results.

Results

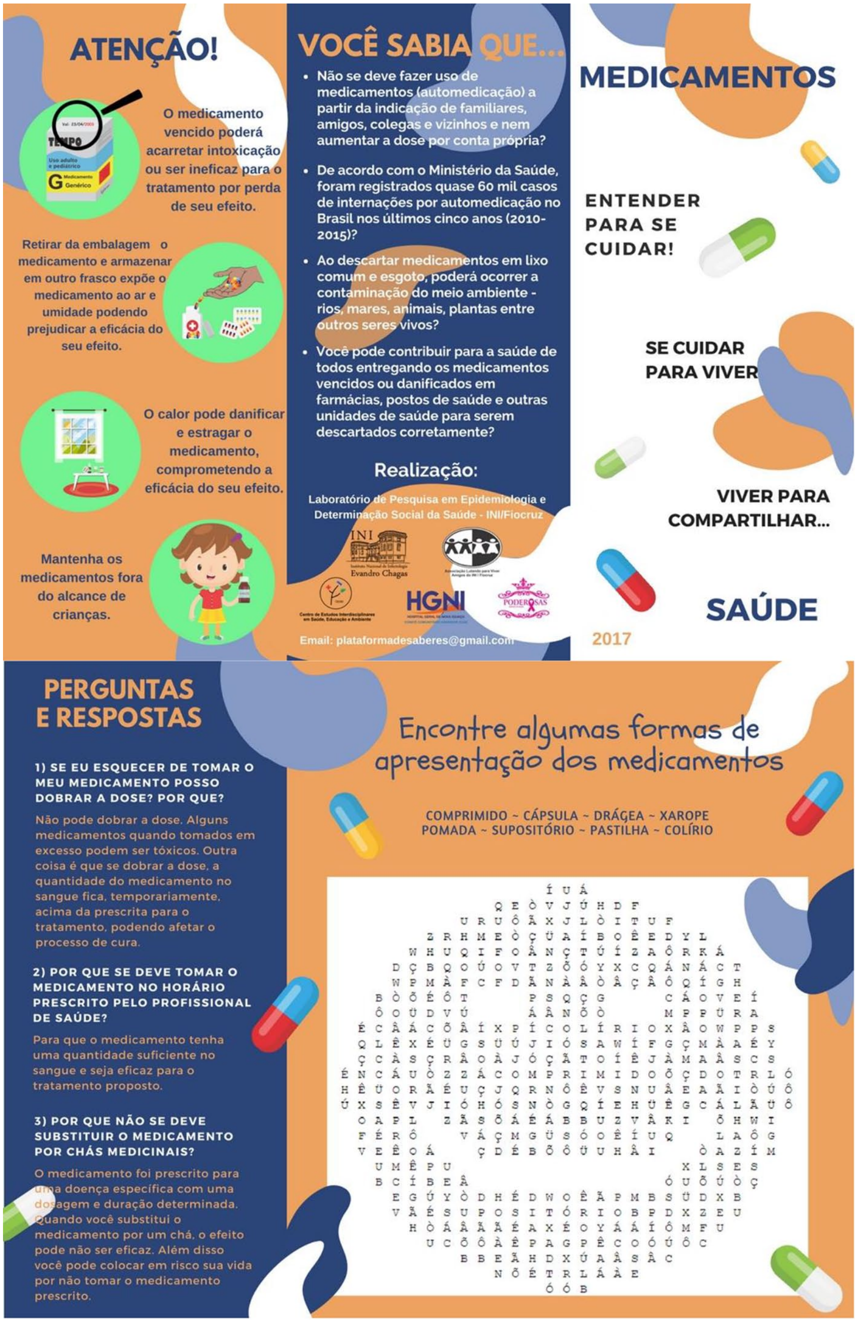
The CAB coordinators presented the treatment as a prevention/serodiscordant study at their open community meeting in 2018. The lecture opened a wider discussion on social and internalized stigmas related to HIV and the importance of linkage to care collaboration amongst different stakeholders, such as the *Pastoral* and community health workers from the SUS (representatives from both organizations were present). The second study was presented later in 2018. An open roundtable discussion between the coordinators and the research team was scheduled to analyze and further discuss the experience of this activity.

After their initial presentation to the research team, the two CAB leaders felt validated and elevated by their role in disseminating research findings to the community. Their individual HIV knowledge was also improved by their self-report. They emphasized that the workshop reinforced the need to confront social stigmas related to HIV treatment and being HIV positive in general.

With this second activity the research team worked directly with the CAB leaders to transform scientific knowledge into VK, utilizing CP as the key to unlocking this exchange. Although the activity has continued into 2019, it has already reinforced that community involvement is essential to the dissemination of HIV clinical research findings and in transforming these findings into efforts to improve HIV prevention and treatment within the community. The preliminary workshops with the CAB leaders also instilled a sense of importance and strength in a greatly underserved and resource-limited community. These efforts helped connect the CAB leaders, and Nova Iguaçu, to the world and sought to reinforce a sense of collective *conscientização*. The limitations of this exercise again are related to wider community impact.

Discussion and conclusion

The CAB's work demonstrates community-led HIV-related activities that rely on existing local networks and resources with secondary support from a research team. This illustrates a key intervention point between traditional research and empowering community mobilization. Given current worsening HIV trends in Brazil, this is significant. It is an example of how existing community groups, such as a CAB, can continue frontline efforts in light of overall health system weakening. Given these reasons, the research team felt it necessary to describe



ATENÇÃO!

O medicamento vencido poderá acarretar intoxicação ou ser ineficaz para o tratamento por perda de seu efeito.

Retirar da embalagem o medicamento e armazenar em outro frasco expõe o medicamento ao ar e umidade podendo prejudicar a eficácia do seu efeito.

O calor pode danificar e estragar o medicamento, comprometendo a eficácia do seu efeito.

Mantenha os medicamentos fora do alcance de crianças.

VOCÊ SABIA QUE...

- Não se deve fazer uso de medicamentos (automedicação) a partir da indicação de familiares, amigos, colegas e vizinhos e nem aumentar a dose por conta própria?
- De acordo com o Ministério da Saúde, foram registrados quase 60 mil casos de internações por automedicação no Brasil nos últimos cinco anos (2010-2015)?
- Ao descartar medicamentos em lixo comum e esgoto, poderá ocorrer a contaminação do meio ambiente - rios, mares, animais, plantas entre outros seres vivos?
- Você pode contribuir para a saúde de todos entregando os medicamentos vencidos ou danificados em farmácias, postos de saúde e outras unidades de saúde para serem descartados corretamente?

Realização:

Laboratório de Pesquisa em Epidemiologia e Determinação Social da Saúde - INI/Fiocruz

Email: plataformadesaberes@gmail.com

MEDICAMENTOS

ENTENDER PARA SE CUIDAR!

SE CUIDAR PARA VIVER

VIVER PARA COMPARTILHAR...

SAÚDE

2017

PERGUNTAS E RESPOSTAS

1) SE EU ESQUECER DE TOMAR O MEU MEDICAMENTO POSSO DOBRAR A DOSE? POR QUE?

Não pode dobrar a dose. Alguns medicamentos quando tomados em excesso podem ser tóxicos. Outra coisa é que se dobrar a dose, a quantidade do medicamento no sangue fica, temporariamente, acima da prescrita para o tratamento, podendo afetar o processo de cura.

2) POR QUE SE DEVE TOMAR O MEDICAMENTO NO HORÁRIO PRESCRITO PELO PROFISSIONAL DE SAÚDE?

Para que o medicamento tenha uma quantidade suficiente no sangue e seja eficaz para o tratamento proposto.

3) POR QUE NÃO SE DEVE SUBSTITUIR O MEDICAMENTO POR CHÁS MEDICINAIS?

O medicamento foi prescrito para uma doença especifica com uma dosagem e duração determinada. Quando você substitui o medicamento por um chá, o efeito pode não ser eficaz. Além disso você pode colocar em risco sua vida por não tomar o medicamento prescrito.

Encontre algumas formas de apresentação dos medicamentos

COMPRIMIDO ~ CÁPSULA ~ DRÁGEA ~ XAROPE
POMADA ~ SUPOSITÓRIO ~ PASTILHA ~ COLÍRIO

```
                        Í U Á
                  Q E Ò V J Ú H D F
              U R U Ô Ã X J L Ò I T U F
          Z R H M E Ò Ç Ü A Í B O Ê E D Y L
        W H U Q I F O Â N Ç T Ú Í Z A Ô R K Á
      D Ç B Q O Ú O V T Z Õ Ó Y X C Q Á N Á C T
      W P M À F C F D Ã N À Â Ò Â Ç Â Ô Q Í G H
    B Ò Õ É Ô T       P S Q Ç G       C Á O V E Í
    Ô O Ü D V Ú       Á Â N Õ Ò       M P P Ü R A
  É C Â Á C Õ Â Í X P Í C O L Í R I O X Â O W P P S
  Q L Ê X É Ü G S Ü Ú J I Ó S A W Í F G Ç M À A É Y
  Ç C À S Ç R Â O À J Ó Ç Ã T O Í Ê J À M A Â S C S
É N C Á U Ò Z Z Á C O M P R I M I D O Õ Ç D O T R L Ó
H Ê Ü O R Ã É U Ç J Q R N Ô Ê V S N U Â E A Ã I Ò Ú Ô
Ú X S Ê V J I Ó H Ó S N Ò G Q Í E H Ü Ê G C Á L Ã Ü Ô
  O A P L   Z Ã S Õ Á É Á B B U Z V Â K I   Õ H W I
  F É R Ô     V Á Ç M G Ü S Ó O Ê Í U Q     L A Ô G
  V E Ê O Á     Ç D É B Õ Ô Ü U H Â I     Ò A Z Í M
    U M Ê P U                           X L S E S
    B C Í B E Â                       Ó U Õ Ú Ò Ç
      E G Ú Y Ò D H É D W O Ê Ã P M B S Ü D X B
      V Ã É S U P O S I T Ó R I O B P D X Z E U
        H Ò Á Â Ã Ã É A X É O Y Á Á Í Ô M F U
          U C Õ Ô À Ê P A G P Ê C O Ó Ú Ô C
              B B E Ã H D X Ú A Â S Â C
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Figure 1. Pamphlet related to medication developed and distrubuted by CAB members in 2017.

and document these activities to better understand the resilience of a marginalized community in Brazil, as well as offer a case example for other localities with similar circumstances, especially in the Global South. The research team utilized existing social science theories to describe and articulate these activities. We sought theories that reflected the existing work of the CAB, rather than use these theories deductively. This bottom-up approach was organic, community led, and community owned. By prioritizing this collaboration between FIOCRUZ, the CAB, and the community, we sought to address the gap of social responses to HIV in Brazil.

Our work has limitations. First, we worked with a newly restructured CAB and had not yet seen the full impact of their activities, especially in terms of measured, wider population-based outcomes related to HIV knowledge, attitudes, and behaviors. Our research dissemination efforts are ongoing. Further research is needed to measure and analyze the wider impact of these community-led activities. At present, we lack the resources to fully implement an evaluation of community impact. Future research efforts must continue to operationalize community-based HIV and AIDS responses, especially in determining how to measure and establish wider external validity. Our efforts were targeted to a small concentration of individuals closely affiliated with CABs and other civil society groups. Future interventions are needed to better understand how these efforts can be transformed to have a wider impact, especially for community members who feel excluded by social institutions, such as CABs, which despite community-based structures, are still closely aligned with traditional research institutions.

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Understanding the slum–health conundrum in sub-Saharan Africa: a proposal for a rights-based approach to health promotion in slums

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Abstract: Sub-Saharan Africa is the world's least urbanized region but is ironically also the region with the largest proportion of urban slum dwellers. However, there exists limited understanding of the impact of slums on health in the region. To address this knowledge gap, we conducted a systematic search in PubMed, Google, and Google Scholar to identify and review studies examining the slum–health relationship in sub-Saharan African cities. Subsequently, we performed thematic analysis of 40 studies to identify themes that explain the health impact of slums in the region. The majority of studies characterize slums as health-damaging settings, where poverty and unfavorable environmental conditions pose threats to public health and safety. Only a handful of studies suggest a beneficial relationship between slums and health, in such areas as affordable housing provision, employment generation, and community cohesion. We argue that the literature's overwhelming emphasis on the environmental risks of slums feeds into a neoliberal urban agenda that seeks to clear slums at the expense of their beneficial contributions to health. Accordingly, we advocate a shift in policy discourse, from static characterization of slums as health risks to a health-promotion agenda that emphasizes the housing and service rights of slum populations.

Keywords: health promotion, housing, public health, sub-Saharan Africa, urban slums

Introduction

Sub-Saharan Africa (SSA) is the world's least urbanized region (1), but is ironically also the region with the largest proportion of urban slum dwellers. In 2014, an estimated 55% of the region's urban population resided in slums (2), described as 'high density, squalid central city tenements [and] spontaneous squatter settlements without legal recognition or rights. . . (3)'. Typically located on marginal land (e.g. floodplains), sub-Saharan African slums are largely unplanned and illegal (4), and as such lack connection to municipal services, including water and sanitation services. Slums are frequently the target of demolition campaigns across the region because of their discursive depiction as illegal, unplanned, and unhealthy settlements. However, the BBC News network recently carried a story of rare victory for slum dwellers in SSA, when a Nigerian court ruled against forced clearance of the Otodo-Gbame slum by the Lagos state government (5). While the court observed a case of human rights violation, the Lagos state government claimed the slum needed to be cleared in the interest of public health because it represented an 'environmental risk.'

A few years prior to the court ruling on the Otodo-Gbame slum, Zimbabwe (6), Rwanda (7), and Ghana (8) undertook massive slum clearance campaigns

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with essentially the same (stated) motive—to protect public health against unhealthy housing conditions, although a neoliberal economic rationale was also clearly evident but less publicly acknowledged by municipal governments. Global development policies, such as the 'Cities Without Slums' initiative and Target 11 of the Millennium Development Goals (9), constitute a major source of the persistent vilification of slums as environmental risks. A critical examination of the etiology of slum clearance in the region reveals a clear intent to 'sanitize' urban space and increase the appeal and global competitiveness of cities as centers of tourism and capital investment (9).

Our experiential knowledge of SSA's urban context leads us to contend that global development policies targeting slum clearance have been rolled out on a massive scale, often without addressing how governmental neglect contributes to the environmental blight of slums, including their characteristic poor housing, water, and sanitation infrastructure, and their related health hazards (e.g. cholera outbreaks). Some commentators, including Huchzermeyer (9), have thus questioned the health-promoting intent of the Cities Without Slums Initiative, given its close affinity with the World Bank, whose neoliberal approach to slum upgrading throughout the 1970s and 1980s did very little to address the proliferation of slums in the global south (10). In this regard, we ask rhetorically, are slums in SSA conclusively health damaging, or are they the proverbial scapegoat upon which other global development agendas are implanted on the urban landscape? To address this pertinent question, we conducted a narrative review of the public health literature to understand the influence of slums on urban health in SSA. The specific objective of this review was to identify and explain the pathways through which slum housing conditions might influence health in the region. The review addresses a critical gap in the global health literature, where the health impact of sub-Saharan African slums remains woefully understudied, despite recent reports indicating that this region has the world's largest proportion of urban slum populations (2).

Conceptual framework and methodology

Hwang *et al.*'s (11) conceptual framework on 'housing' guided the conduct of this review. This framework extends the meaning and scope of housing and its relationship with health beyond mere physical artifacts (e.g. buildings) to include economic and psychosocial dimensions. They conceptualize housing as an assemblage of interlinked physical, economic, and psychosocial elements that blend the house (or physical dwelling), home (or psychosocial aspects of physical dwellings), neighborhood (or surroundings of physical dwellings), and community (or psychosocial and material aspects of neighborhoods) as a singular unit of analysis. While acknowledging the critical presence of confounding variables, the framework suggests that housing characteristics can produce health risks of physical, biological, and chemical nature, as well as socioeconomic and cultural conditions that may be detrimental to, or supportive of health.

Empirical studies conducted in Canada (12), the USA (13), and the UK (14), using this and related conceptual frameworks, have linked various outdoor and indoor housing conditions to prevalence of physical and mental health problems. However, these Western-based models may not adequately account for the nuances of the housing–health relationship pertaining to sub-Saharan African slums, given the locational, cultural, and socioeconomic differences between developed and developing regions. Despite this potential limitation, we found Hwang *et al.*'s (11) framework to be a useful analytical lens for understanding the health impacts of slum housing in SSA.

Methodologically, the review followed a narrative literature review approach (15). Unlike systematic literature reviews, narrative reviews are methodologically less discriminatory in the identification, assessment, and selection of studies (16), thus allowing for inclusion of evidence of varying scientific quality. In this regard, we deemed a narrative review methodology more appropriate for this study, since: (a) research on slum health in SSA is still emerging, with only a handful of studies examining the slum–health relationship; and (b) much of the available evidence on the slum–health relationship in the region is anecdotal, and as such may be unsuitable for other kinds of review. The review process followed the guidelines of Green *et al.*'s (15) four-stage methodological framework for conducting narrative reviews.

The first step of this framework is identification of information sources. They recommend searching electronic databases, references of known articles, and authoritative texts. In keeping with the guidelines of the framework, we first conducted a search in PubMed, a major public health database. This initial search produced scant peer-reviewed literature on the topic, compelling us to proceed with another round of searching in Google and Google Scholar. This information-seeking strategy allowed for the identification of relevant peer-reviewed articles and gray literature, defined here to include expert reports and commentaries (see also 17). The inclusion of gray literature was necessary, since slum health in SSA is an emerging area of public health research (18).

The second stage of the framework involves defining parameters and restricting the literature search. This is considered a critical step in the review process, since it is impractical to include or review all studies that may be related to the topic of interest. With the assistance of a research Librarian, the authors conducted a systematic search in PubMed, Google, and Google Scholar in July 2015 (and updated in June 2017) using specific keywords, which we modified to obtain more focused hits as the search progressed. The final set of keywords used included 'sub-Saharan Africa', 'slum*' 'housing,' 'informal housing', 'health', 'health risk*', 'well-being', 'social determinants of health', 'housing poverty', and 'disease*'. Although not defined and included as search terms at the outset, studies containing such words as social support, stress, income, safety, infectious diseases, non-communicable diseases, mental health, and injury were considered for selection. Our search was focused on identifying and selecting only studies that were conducted in cities or urban areas.

The third stage involves defining selection criteria with which search records can be categorized into relevant and non-relevant papers. The two search episodes together yielded 12,331 records. Given the large number of records suggested by Google and Google Scholar, the research Librarian, in consultation with the authors, made a decision to sort the results by relevance (as opposed to date of article publication) and to screen only the first 150 records of each hit (or search query). We based this decision on preliminary screening of the first five hits, which revealed most records above the 150th record to be irrelevant to the research topic. Accordingly, we reviewed the titles and abstracts of 464 studies for relevance (see flowchart, supplementary material, available online). We deemed studies relevant only if their titles and abstracts suggested a focus on the health impact of urban slums in SSA. Based on this selection criterion, the review excluded 392 of the 464 records upon screening their titles and abstracts. Full-text screening of the remaining records by two independent evaluators resulted in further exclusion of 43 studies. We identified 11 additional relevant studies through expert recommendations, hand searching the online journal *Environment & Urbanization*, and gleaning the references of the remaining 29 studies. Inter-rater disagreements between the authors in the selection process were resolved by the participating research Librarian.

The final step of Green *et al.*'s (15) framework involves producing a short but meaningful overview of the research topic. Here, we developed and utilized a data extraction form with which we extracted and summarized the findings of each included study. Subsequently, we relied on a thematic analysis approach to explore themes within the findings. This process involved comparing, grouping, and synthesizing the findings of multiple studies to arrive at themes that addressed the slum–health relationship in SSA. We present our results as follows.

Results

As summarized in the data extraction table (supplementary material, available online), our review identified physical, chemical, biological, socioeconomic, and material pathways through which slums influence health in SSA. Our results demonstrate that while slums have adverse health impacts, they also support health in a multiplicity of ways.

Infrastructure, material conditions, and physical risks

Dampness and mold

Damp and moldy housing conditions in SSA are much more prevalent in slums than in non-slum areas (19). Recent studies in Nigeria (20) and South Africa (19,21) indicate a disproportionate exposure of slum households to dampness and mold. Some studies associate dampness and mold in slum houses with a variety of respiratory conditions (22). In fact, the odds of asthma and asthmatic symptoms among children, such as wheezing and cough, are two or more times greater in damp houses than in non-damp ones, as reported in studies in South Africa (23), Kenya (24), and Ghana (25).

Accidental fires

Slum dwellings in sub-Saharan African cities are prone to fire outbreaks and accidental injuries, since a significant proportion of these dwellings have been constructed with flimsy, combustible materials (e.g. cardboards, wood, and plastic). The risk of fire outbreaks and fire-related injuries and deaths in slums is heightened by the use of candles and kerosene lamps to fulfill domestic energy needs in the absence of electricity and other cleaner sources of energy (26). Fire outbreaks in slums have destroyed properties worth millions of dollars, killed scores of people, and injured many others, as recorded in recent fire disasters in the Kibera and Mathare slums of Kenya (27) and the Joe Slovo slum of South Africa (28).

Indoor air pollution

Household dependence on biomass fuel is high in sub-Saharan African slums, due to their lack of cleaner sources of domestic energy supply. This dependence is a major source of indoor air pollution and its related health impacts in slums (29). Exacerbated by inadequate ventilation and dwelling space, indoor air pollution is a major cause of health problems in sub-Saharan African slums, with recent studies linking biomass burning in these deprived areas to illness episodes in Uganda (29) and eye infections and respiratory-related deaths in South Africa (30). Vulnerable groups, including women, children, and the elderly, bear much of the health effects of indoor air pollution in slums, since they typically spend most of their time indoors (31).

Land use

Most urban slums in the region are also located in flood-prone areas, along major waterways where they are predisposed to floods and flood-related health hazards (32). The immediate health impact of floods in slums is loss of human life, but also of primary concern is the disruption of existing water and sanitation services, which often exposes flood-affected residents to risk of malaria, typhoid, diarrhea, and cholera epidemics. Flood-induced epidemics and mortality have been reported in urban slums in Mozambique (33), Tanzania (34), and Nigeria (35).

Slum houses in the region are also typically unplanned and constructed without access routes. Such land use patterns can impede access for firefighters and firefighting equipment during fire emergencies (36).

Chemical risks

Lead and asbestos

Home and neighborhood exposure to lead (Pb) and asbestos in SSA is still high (37), despite sustained global campaigns against the use of these toxic materials in housing construction (38). The persistent use of Pb pipes in water distribution systems is a major source of drinking water contamination throughout the region. Recent physico-chemical analysis of pipe water samples from Kisumu, Kenya (39) and Kampala, Uganda (40) found Pb levels that were several times above the World Health Organization's recommended maximum limit (10 μg/g) for drinking water. Risk of exposure to Pb in the region is also directly attributed to the use of Pb paints in homes (41). Frequent exposure to Pb-contaminated water or Pb paint can be injurious to health, including cognitive disabilities, neurodevelopmental defects, and even death in young children (42). In South Africa, for example, an estimated 1,428 people died from Pb poisoning in 2000 alone (43).

Exposure to asbestos constitutes a significant health hazard in sub-Saharan African slums, where it is popularly used as a non-corrosive roofing material. In South Africa and Zimbabwe, a large proportion of people also live in houses located on asbestos fiber dumps or in neighborhoods contaminated with asbestos (44). Asbestos is a primary source of carcinogenic fiber that can cause lung cancer, asbestosis, and mesothelioma when inhaled in sufficient quantity (45). Asbestos-related diseases and deaths in SSA are largely undocumented (46). As such, no reliable data on domestic and neighborhood exposure to asbestos and its related health impact exist in the region. However, anecdotal evidence from South Africa (47) and Nigeria (48) suggests that residential exposure to asbestos may be a major cause of asbestos-related diseases and deaths, particularly among residents of informal housing.

Biological risks

Slum dwellings in SSA suffer from biological risks because of their poor quality. Defective walls, dampness, mold, and absence of waste-collection services in slums produce housing milieus that are conducive for the survival of disease-hosting rodents, such as rats and mice. Prevalence of pest-borne diseases, particularly Lassa fever, a viral hemorrhagic disease hosted and transmitted by *Mastomys natalensis*, has been reported in poor housing conditions in Sierra Leone (49) and several other West African countries (50). Studies conducted on informal settlements in Johannesburg and Port Elizabeth (19), South Africa, also reported risks of pest-borne diseases (51). In 2014–2016, there was massive spread of the Ebola disease in the slums of Liberia (52,53), Uganda (54), Sierra Leone, and Guinea due to overcrowded and rodent-infested housing conditions.

Environmental conditions such as lack of potable water and poor sanitation in slums are linked to incidences of diarrheal diseases in Tanzania (55) and Burkina Faso (56), as well as malaria-related mortality in Liberia (57). Owing to poor water and sanitation infrastructure, these diseases are reportedly more prevalent in urban slums than in other urban settlements (58,59).

Socioeconomic conditions

Poor socioeconomic conditions such as poverty, housing insecurity, and poor access to healthcare are some of the major sources of health concerns in urban slums in SSA. Rates of child malnutrition due to poverty are higher in slums and even comparable to rates experienced in rural areas, as in Kenya (60) and Niger (61). Housing insecurity due to threats of slum clearance is a known psychosocial stressor that affects both physical and mental health in sub-Saharan African slums. For example, in a Ghanaian study of three socio-environmentally contrasting neighborhoods, slum dwellers were found to have comparatively higher odds of reporting poor physical and mental health status (62).

In contrast to the above, slums in SSA are also a source of socioeconomic wellbeing, as they constitute sites of informal enterprises, social cohesion, and self-help services. Various studies observe that in Ghana (63), Kenya (64,65), and South Africa (66), slums contribute to health and wellbeing through provision of affordable housing, employment, and income opportunities for the urban poor. Slum-based microenterprises, described as small-scale retail businesses owned and operated by households (64), are particularly significant, as they serve as an escape route from extreme poverty and its multiple health impacts.

Neighborhood crime and social capital

Slums in SSA are commonly associated with high prevalence of crimes and social vices. Male adolescents in sub-Saharan African slums are several times more likely than their non-slum counterparts to use drugs and alcohol (67). Such pathologies oftentimes also translate into high rates of crime, including armed robbery, sexual offenses, violence, and a general atmosphere of insecurity in slums (68).

In contrast, slums in SSA also foster social capital, community connectedness, and a sense of belonging, all of which are critical health resources for the urban poor. Although slums have also been reported as zones of ethnic conflicts in some countries (69), they nevertheless have inspired community action against the health and social impacts of exclusion, material deprivation, and environmental decay in some places, including Francistown, Botswana (70) and Addis Ababa, Ethiopia (71).

Discussion and conclusion

Having previously explored the slum–health relationship using Hwang *et al.*'s (11) conceptual framework, we now return to the question of whether sub-Saharan African slums are conclusively health damaging. Our review found sub-Saharan African slums to be complex socio-environmental milieus that present both health risks and health benefits. The majority of studies reviewed tend to focus on establishing causal linkages between extreme poverty and poor living conditions in slums and ill-health. These studies present evidence linking the physical, chemical, and biological characteristics of slum settlements to various diseases and injuries. This literature has, for example, established a causal relationship between structural defects in dwellings and respiratory health problems, including asthma, likewise between homes built with lead pipes and asbestos and neurological defects, cognitive disabilities, and various types of cancers. Similarly, the presence of rodents in slums has been linked to risk of pest-borne diseases, particularly the transmission of Lassa fever and Ebola virus. At a glance, these research findings appear to justify slum clearance on health grounds. However, an emerging body of literature from the region now suggests a beneficial relationship between slums and health. This literature frames slums as locations where thriving informal microenterprises, employment opportunities, affordable housing, and community cohesion provide critical health resources for the urban poor, thus suggesting a need for policymaking to look beyond the static characterization of slums as health-damaging milieus.

Examples of community cohesion and self-help development programming in slums are particularly bountiful in the literature. In the 1990s, several slum communities in Nigeria utilized the leverage of community cohesion to mobilize their residents for immunization, HIV/AIDS, and environmental clean-up campaigns (72). In Harare, Zimbabwe, community mobilization in slums has provided labor for slum-upgrading activities (73), which attests to the importance of slums as places of social support. These examples point to the health and social benefits of community resilience and community cohesion in slums, which can further be strengthened by adopting health-promotion practices that emphasize the rights of slum dwellers to urban citizenship.

Despite the emerging understanding that a beneficial relationship exists between slums and health, there is still a strong governmental inclination to clear slums in SSA. The growing popularity of slum clearance in the region, including the recent attempt by the Lagos state government to clear the Otodo-Gbame slum, clearly depicts an agenda far removed from one with a health focus. Rather than slum clearance, which often leads to displacement and homelessness of slum dwellers, it is reasonable to expect health-focused slum agendas to include policy interventions that improve the living conditions and quality of life of slum populations. The policy of slum clearance in SSA thus appears to serve a neoliberal 'place marketing' agenda that relies on a health rhetoric to demolish slums, improve urban esthetics, and pave the way for new infrastructural developments that typically serve wealthier populations and international tourists (74). Such neoliberal revanchism tends to accentuate existing patterns of housing and health inequalities between the poor and wealthy. Against this background, we suggest the adoption of a health-promotion agenda that deprioritizes slum clearance while ensuring infrastructural improvements and access to education, healthcare services, and basic water and sanitation in slums. Evidence from India, where slum upgrading and service schemes have improved health (75), also supports a rights-based approach to health promotion in slums.

Implementation of this agenda may require, among other considerations, substantial public sector investment in slum infrastructure, recognition of housing rights, and regularization of land tenure. Although resource intensive, from the perspective of the state, this approach to health promotion has a potential to protect the health and wellbeing of vulnerable slum populations in SSA.

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Supplemental material

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Food store environment examination – FoodSee: a new method to study the food store environment using wearable cameras

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Abstract:

Introduction: Food environments shape food behaviours and are implicated in rising rates of obesity worldwide. Measurement of people's interactions with food stores is important to advance understanding of the associations between the food environment and in-store behaviour. This paper describes a new method, Food Store Environment Examination (FoodSee) to measure people's interaction with the food store environment in a feasibility study focused on convenience stores and children.

Methods: One hundred and sixty-eight randomly selected children (aged 11–13 years) recruited from 16 randomly selected schools in Wellington, New Zealand, used wearable cameras for 4 days that recorded images every 7 s. The study was conducted from July 2014 to June 2015. All images of convenience stores and service stations, and a sample of images from supermarkets, were evaluated to determine the feasibility of assessing food availability and marketing. The outcomes of interest assessed were: food product availability, placement, packaging, branding, price promotion, purchases and consumption.

Results: Thirty-seven children (22%) visited a convenience store or service station at least once during the study period. In total, there were 65 visits to 34 different stores. Seven hundred and nineteen images revealed the in-store environment. Of those, 86.1% were usable and able to be analysed for the outcomes of interest.

Conclusions: The FoodSee methodology provides a promising new method to study people's interaction with the in-store food environment. The evidence generated will be valuable in understanding and improving the food store environment within which people shop, and will contribute to efforts to address obesity globally.

Keywords: food availability, food marketing, childhood obesity, consumer nutrition environment, wearable cameras

Introduction

Obesity rates are rising significantly across the globe (1). As a result, researchers have measured the impact of the food environment on health and dietary patterns (2–5). While cross-sectional and longitudinal studies have had varied results (6),

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there is increasing evidence of an association between the community nutrition environment (the type, availability and accessibility of food outlets) and dietary intakes and behaviour (7,8).

There has also been growing attention from researchers towards understanding the consumer nutrition environment and how the availability, product assortment, price, promotion and placement of food within a store influence dietary factors (3,9,10). The food environment has changed over time with access to most food outlets increasing (11) and the rise of large supermarket chains dominating the food supply chain in many countries (12). Supermarkets can facilitate a greater variety of healthier food choices to consumers than other food stores, however they can also increase the purchase of energy-dense, nutrient-poor foods by allowing extra shelf space for these foods, selling them at low prices or placing them at the checkout and end-of-aisle displays (13,14).

Convenience stores present a food environment that is 'BMI unhealthy' in that most of the food available is highly processed, energy-dense, nutrient-poor snack food (15,16). The presence of convenience stores within neighbourhoods has been linked to lower-quality diets, especially for low-income individuals in the United States (8,17). Food purchases made at convenience stores contribute significantly to total daily energy and sugar intake among urban school children. In one US study, the most frequently purchased items were sugar-sweetened beverages, candy and snack foods, which were often inexpensive (18). Within retail outlets, the cash register area is a place where impulse-purchasing decisions are made, a feature that has been exploited in convenience stores by the placement of unhealthy foods (chocolate, confectionary, salty snacks) by the cash register (19).

The in-store environment of convenience stores is complex. Studies have used a range of methods and tools to measure such environments, the choice being dependent on the aspect of the store that is being measured (3). Methods range from checklists that measure key indicator products such as fruit, vegetables and snack foods (20), or measuring the ratio of shelf length of healthy to unhealthy food in-store (21). Food purchase is normally measured by collecting receipts from participants (22). To explore consumer behaviour in-store, qualitative methods have been used including key informant interviews (21,23) and focus groups with children (24). Such studies typically introduce participant recall and social desirability bias (25). To our knowledge, no studies have objectively examined people's interaction with the food store environment.

Wearable cameras are a relatively novel research tool, and their utility to enhance existing dietary assessment methods has been tested with adult participants with promising results (26,27). The feasibility of using wearable cameras as a mechanism to understand food purchasing and consumption behaviour among teenage participants was assessed by Cowburn and colleagues (22). This study used multiple data-collection methods including wearable cameras, GPS, participant interviews, food and drink purchase consumption diaries, and an audit of food outlets located near schools (22). As the researchers were interested in quantifying food purchase and consumption rather than the consumer food environment, images from the inside of food stores were not analysed. However, the researchers suggested it would be worthwhile examining the feasibility of using image data to measure the food store environment in future studies, an aim of the present study.

This paper describes a new method to measure people's interaction with the food store environment, Food Store Environment Examination (FoodSee). Image data from wearable cameras worn by children generated from the Kids'Cam study (28) were analysed for the food store environment of convenience stores. The primary purpose of this paper is to describe the method, its development and feasibility for community-based nutrition research.

Methods

Study design

FoodSee is an ancillary study of Kids'Cam, a cross-sectional observational study of 168 children (aged 11–13 years) in the Wellington region of New Zealand (28). Data were collected from July 2014 to June 2015. Participants wore a wearable camera and a GPS unit on lanyards around their necks. The camera captured a 136° image of the scene ahead approximately every 7 s, and the GPS unit captured latitude and longitude coordinates every 5 s. Children understood the purpose of the research as 'to study the world in which children live' but were blinded to the Kids'Cam study aim to measure children's exposure to food marketing (29). Ethical approval was given by the University of Otago Human Ethics Committee (Health) (13/220) to study any aspect of the world that children live in (28). A detailed analysis of the in-store food and beverage marketing was not conducted given its complex nature and multiple marketing occurrences; rather, it was simply coded as 'in-store marketing'. Further details of the methodology for Kids'Cam is published elsewhere (28,29).

In FoodSee, all children's images previously coded as 'convenience store' or 'service station' in the primary Kids'Cam study were re-examined, and the images of the in-store environment coded. Service stations were included as they were used by the children in a similar manner to a convenience store. A sample of images previously coded as supermarkets was also assessed. Manual coding of images was performed using a protocol to guide content analysis (30). Images were excluded from the analysis if they were blurred, or a significant portion of the image was blocked.

Protocol

A FoodSee study protocol was developed, piloted and refined. To do this, two researchers (CM and MS) reviewed the images and scoped the information that could be generated from the images. Issues resolved included agreement on the unit of measurement, which was finalised as each visit a child had to a food store. A visit began with the first in-store image, and concluded with the final in-store image. Another consideration was whether to count the total number of product categories or the individual items of food and beverages in each image, and whether to count items as accurately as possible or to estimate the count to the nearest 10 items. It was decided to count both product category and the items within a category as accurately as possible.

Coding schedule

The following outcomes of interest were identified and defined in relation to FoodSee:

The 'consumer food environment' refers to the conditions customers encounter when entering a store, including price, availability, promotion and nutritional information (3). 'Food availability' refers to the adequacy of the supply of food (31). This was measured by counting the 'food and drink items' in the photos and classifying them by product category and the total number of individual food items present. Each food or beverage item was only coded once per convenience store encounter. For example, the initial photo picturing the item was coded as 'available' and subsequent images containing the same item were noted as 'previously coded'.

The product categories were based on those used in the Kids'Cam food marketing study and extended to reflect the uniqueness of the in-store environment (29). For example, the category 'confectionary' was separated into confectionary packets, single serve confectionary (e.g. confectionary that is 10c or 20c per individual item), lolly mixtures (individual candy grouped into bags) and chocolate. All foods were classified as either recommended (core) or not recommended (non-core) based on the World Health Organization Regional Office for Europe Nutrient Profiling Model (32). This model was chosen as it categorises food as eligible or ineligible to be marketed to children.

'Food position' refers to the proximity of a food product (33). The images in the study were from a camera worn at a child's chest height. Therefore, images where products were at the forefront in the image, displayed at a child's eye level or within easy reach of them were coded as 'accessible'. Items on high shelves or behind a counter were coded as 'inaccessible'.

Marketing was defined as:

> any form of commercial communication or message that is designed to, or has the effect of, increasing recognition, appeal and/or consumption of particular products and services. It comprises anything that acts to advertise or otherwise promote a product or service (34, p.9).

In-store marketing includes on shelf displays at checkouts, pay points and end of aisles in supermarkets, special offers and pricing incentives. Glanz *et al.*, discuss food marketing relating to product, price, placement and promotion (35). In this study, food products were coded as discussed above. In addition,

Table 1. Summary of coding schedule.

Setting	*Marketing medium*	*Product category non-core*	*Placement*	*Behaviour*
Convenience store	Product	Confectionary (packet)	Fridge	Purchased
Service station	Packaging	Single serve confectionary	Freezer	Consumed
Supermarket	Price promotions	Lolly mixture	Display fixture	
		Sugary drinks and juices	Manufacturer-supplied display fixture	
		Iced confectionary	High shelf/wall	
		Chocolate	Counter with cash register	
		Fast food	Behind counter	
		Snack foods	Under counter	
		Cookies, cakes and pastries	Counter bench (side)	
		Milk product (non-core)		
		Other: non-specified – frozen potato products, dips		
		Processed meats		
		Product category core		
		Milk and milk products		
		Water		
		Breads and cereals		
		Fruit and vegetables		
		Meat and alternatives		
		Mixed meals		

if the item was packaged this was coded, and if a product had a visible price promotion, it was coded as 'price promotion'. Other examples of promotion codes were 'manufacturer-supplied displays' and 'signs'. See Table 1 for the codes used and Figure 1 for an example of an image from a convenience store, and an example of coding for this image.

'Food purchase' was coded when a purchase transaction occurred in exchange for a food or drink item. This included exchanges at shop counters and tills. Food purchase coding noted whether the purchase was by the child themselves, or a peer.

'Consumption' was coded when a sequence of images revealed a food or drink item being consumed. An eating or drinking episode was initiated by the presence of a food or drink item. The participant handling the food or drink item and/or a decrease in the amount of food or level of the drink in images followed this. See Figure 2 for an image sequence example of food purchase and consumption.

Coding of image data

An Excel spreadsheet (available upon request) was developed to enable the systematic coding of each image. To add context, field notes were recorded in the spreadsheet. For each image, the participant identification number, date and time of photo, and image identification number were recorded. In order for a food or drink item to be coded, the coder had to clearly identify the type of food or beverage product, for example 'chocolate' or 'sugary drink'. For an image to be coded for marketing, the logo, brand name or registered trademark needed to be clearly identified so that 50% of the image could be seen by the coder.

Each food store visit was treated as a separate item for analysis. The coding enabled calculation of the total number of food items observed in one visit to a food store, and the healthfulness of those items.

Category	Products (n)	Items (n)	Package	Position Arms Reach	Where in shop?	Promotion Branded Display	Signs (n)	Price Promotion
Confectionary Single Serve	8	20	Yes	Yes	Counter Bench (Side)	0	0	0
Lolly Mixture	3	11	No	Yes	Counter Bench (Side)	0	0	0
Chocolate	13	35	Yes	Yes	Counter Bench (Side) Manufacturer Supplied Display Fixture	2	2	6

Figure 1. Example image from convenience store.

Quality control

To ensure accuracy, the coding of two coders (CM and MS) was tested for inter-coder reliability. A score of 90% concurrence with model answers on a test dataset of two convenience store image sequences (*n* images = 10) was achieved before coding could commence. Where there was a discrepancy, the codes were discussed and the schedule was refined accordingly.

Results

Images from 37 children from the main dataset revealed the inside of a convenience store or service station. In total, there were 65 visits, with some children visiting a convenience store more than once during their 4-day data-collection period. Each visit consisted of 11 images, on average, which took approximately 1 hour to code. The total coding time was 65 hours. This value assumes an understanding of the coding procedure, such as food categories and data entry. Further, coding time was reduced because images from convenience stores had already been identified in the Kids'Cam study. However, scrolling through the photos to find exposure to food stores can be easily done as multiple images can be viewed at once and long periods of time are spent at home or school.

To test the feasibility of the FoodSee method, other food settings images from a sample of three supermarkets were also analysed. The total coding

Figure 2. Image sequence food purchase and consumption.

time differed depending on the length of time spent in a supermarket and therefore the total amount of images per encounter. Convenience store visits tended to be of short duration (2–3 min) whereas one trip to the supermarket could take over 30 min. However, as supermarket product categories are organised in aisles, coding was simpler than for convenience stores, where many different products and types of products are crowded together in a compact space. The prices of products were clearly visible and the placement of products at ends of aisles or at the checkout was also identifiable through the image data. It was also possible to code for purchase and consumption.

The images were practical for assessing the outcomes of interest studied: food availability, marketing, food purchase and consumption. Of the 719 images captured in a convenience store or service station, 620 (86.2%) were usable. Few images were excluded due to blurriness, blockage or the coder being unable to clearly detect the food products in the image. Images were mostly of high quality and it was possible to count both categories of products as well as the number of individual items within a category. The placement of a camera around a child's neck enabled a sense of what is within a child's reach in a store within their reach. Other marketing features, such as the use of semiotics on packaging or promotional displays were all easily visible in the data. In some images, children were exposed to multiple products and marketing stimuli, such as 100 individual chocolate bars, in branded displays with prominent price marketing.

Discussion

This paper reports on a novel approach to study people's interaction with the food store environment, using wearable cameras as data-collection instruments.

The methodology has several advantages to previous methods. As the participants were blinded to the food store environment analysis, it was possible to gain an objective measure of their behaviour. The objective and unobtrusive method overcame the participant recall and social desirability bias of previous methods (25). This method enabled both food availability and marketing to be assessed, whereas previous studies have required multiple methods such as NEM-S (food availability) (20) and the Gro-Promo tool (food marketing) (36).

While this study focused on measuring children's interaction with the food store environment of convenience stores and service stations, the method could also be used to assess the food store environment of a supermarket, as demonstrated by the high usability of images captured during the three supermarket visits. While supermarkets are generally categorised as BMI-healthy in food environment research (37) there is some evidence that the food sourced from supermarkets by young people, for example, is not necessarily healthy (38) and that supermarket promotional activities include a high percentage of unhealthy foods (39). The image data provide spatial information on people's exact location within the supermarket that could be mapped in geographic information systems to facilitate micro-spatial analysis. Micro-spatial analysis can highlight people's movement through a supermarket, as well as the location of features of interest and the exact location at the time of exposure. This further supports the content analysis, as was done for alcohol marketing in another ancillary study to Kids'Cam (40). Further more, while children were the participants in this study, it is a method that could also be used with adults (41).

Although we believe this study provides robust data on the use of wearable cameras to study people's interaction with the convenience store environment, it has some limitations. Some food purchases may have been missed in the data collection. In future studies this could be validated by collecting receipts, however, by doing so, participants would no longer be blinded to the study's objectives. As this method is reliant on where the person goes in-store it may not fully capture all food available or marketed, however the method enables an individual measure of actual food availability rather than using food stores as a proxy. While coding the images manually took time, it should be noted that the method does not require researcher time to visit food stores as in existing methods such as NEM-S(20).

Conclusions

The FoodSee methodology provides a promising new method to study people's interaction with the food environment in food stores. The evidence generated will be valuable in understanding and improving the environments in which people shop for food, and contribute to efforts to address obesity globally.

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Authorship

CM, MS and LS conceived the idea and developed the study protocol. CM and MS developed the coding schedule. LS, MS, MB and TC collected the data. LS provided overall leadership of the research. All authors contributed to the manuscript and approved the final version.

Ethical standards disclosure

Ethical approval was given by the University of Otago Human Ethics Committee (Health) (13/220) to study any aspect of the world that children live in. All participating children, parents and schools signed written consent to participate in the study.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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A culturally informed lower-extremity complication prevention program for people living with diabetes in south India

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Abstract:

Background: Diabetes and its complications are increasing in frequency worldwide. Lower-extremity complications carry a high risk for morbidity and mortality, yet are largely preventable through education and self-monitoring. In India, rural areas lack access to education, care, and treatment. Despite existing evidence-based programs to reduce diabetes-related lower-extremity complications in areas with limited resources, uptake and sustainability may be hampered by the lack of translation to the local cultural context.

Aims: To address this gap, this study used the Culturally Informed Healthy Aging nursing process to develop a lower extremity complication prevention program in a rural village. The paper describes the results of a community health needs assessment conducted annually from 2009 to 2014, and subsequent pilot test of an intervention incorporating these results.

Methods: The Culturally Informed Healthy Aging process is a naturalistic, inductive method used to identify and address health needs. Components include community partnership, community assessment, program planning, selection of health priorities, workgroup formation and translation of evidence, and program outcome evaluation. The programming is assessed using process evaluation, which allows for continuous monitoring and program modification.

Results: Community assessment revealed a number of values, beliefs, and practices related to foot care and assessment in rural south India. These were incorporated into culturally informed programming and evidence-based protocols were adapted for use in the local context. Programming resulted in increased community capacity for lower extremity complication prevention, accessible population screening, and culturally informed foot care education.

Discussion: Strengths, limitations and implications for care in rural India and other areas are discussed.

Keywords: communities, English, culture/ethnicity, healthy aging, chronic disease/non-communicable disease, capacity building (including competencies), health promotion

Introduction

In India, diabetes is on the rise in all settings, leading to increased morbidity across the lifespan (1), increased risk for complications such as neuropathy, and ultimately risk for foot ulceration, infection, and surgical amputation. Lower-extremity complications have a substantial impact on socioeconomic and

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personal welfare. These complications are largely preventable, although many people in India lack health education and self-care knowledge. Culturally tailored health interventions that engage in partnerships with local communities are important to address these population health needs. Documented cultural inquiry leads to identification of cultural capital, health beliefs, values, and practices that are important for the development of successful interventions. The aim of this study was to use the Culturally Informed Healthy Aging (CIHA) nursing process to develop a lower-extremity complication prevention program in rural south India.

Background

The prevalence of diabetes is increasing in all settings in India. Past studies have shown rates of type 2 diabetes at 15.5% in urban Chennai (2), 5.9% in a peri-urban area outside Madras (3), and 6.4% in rural Tamil Nadu (4). A recent survey in Tamil Nadu revealed increasing rates of diabetes, 21.9% in urban settings and 13.4% in peri-urban villages (1). Researchers have also examined diabetes-related lower-extremity complications' effects on morbidity and mortality in the Indian population. Two studies documented neuropathy prevalence at 27.5% (5) and 26.1% (6). In a study of 1319 people with diabetes in India, foot infection rates were 7.6% and amputation rates were 3% (7). Mortality associated with major amputation in 194 patients in Chennai was 16% after a 2.5-year follow-up (8).

The impact of lower-extremity complications is significant. Many people walk between locations to meet basic needs. Individuals with chronic wounds and amputation are more likely to be disabled and unable to work. Lower-extremity complications also come with significant costs. One study found that people with diabetes-related foot complications in India spent a significantly larger proportion of their income on healthcare (20–33%) than those without foot complications (9%) (9).

Many people in India lack knowledge to prevent complications. In one study, 67% of participants had low scores on foot-care questionnaires, with lower scores correlating with female gender, low educational level, older age, and diabetes complications (10). In a peri-urban population, only 36% of those surveyed practiced foot self-care, only 8% wore appropriate footwear, 97% did not wear shoes in the home, and 10% did not wear shoes outside the home (7). In a survey of 500 people with diabetes living in rural areas, 99.8 % did not inspect their feet regularly, 26% did not wash their feet daily, and 76.4% did not know that people with diabetes should take special care of their feet (11).

Programs to address foot complications in resource-limited settings have primarily focused on increased awareness, self-care education, and provider training (12–14). Although these programs have the potential to impact outcomes, one standardized intervention is typically applied to communities with very different resources and culture. Large-scale awareness campaigns lack penetration to rural areas with fewer resources and would need adjustment to fit the local context (15). Furthermore, Indians also engage in a number of self-care prevention practices not addressed by such programming. This includes non-allopathic treatments (16). For example, people with foot ulcerations may go first to lay providers whereas others try home remedies (8). Many use homeopathy or Ayurvedic treatments (16). Ayurveda is a centuries-old health practice in India that emphasizes activity, diet, and holism—treating the whole person, physically, mentally, spiritually, and emotionally. Natural remedies are mainstays of Ayurveda. For example, because of its proven anti-inflammatory effects, turmeric (curcumin) has long been used to treat wounds, including diabetic wounds (17,18).

Thus, despite the existence of evidence-based programs and practices to reduce diabetes-related lower-extremity complications, uptake and sustainability may be hampered by the lack of translation to local cultural context. To address this gap, this study used the CIHA nursing process to develop a lower-extremity complication prevention program in a rural village. Institutional review boards approved this study at both participating universities and the partner organization.

Methods

The CIHA process was used to identify and address health needs. The CIHA process (Figure 1) is a naturalistic inductive method used by nurses, in collaboration with local communities, to develop locally appropriate community health programming that is equitable and just (19,20). Nursing principles

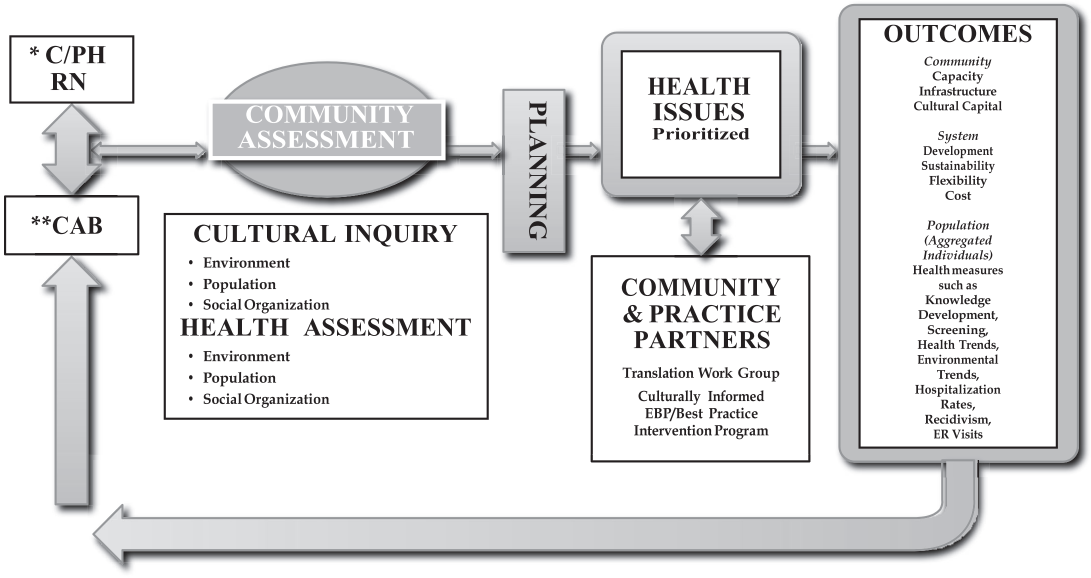

Figure 1. Culturally informed community nursing practice process (17).
*C/PH RN: Community/Public Health Registered Nurse.
**CAB: Community Advisory Board.
Source: Skemp & Peacock ©.

inform building trusting partnerships through provision of holistic evidence-based care to individuals, groups, families, and/or communities (21). Culturally informed partnerships facilitate recruitment and community engagement for programming and research (22). A community advisory board (CAB) of local stakeholders is formed, and membership changes as program development proceeds and needs change.

A component of the CIHA method is the community assessment, a two-step systematic process for collecting and organizing information about the community (Figure 1). The first step is an inductive Cultural Inquiry, which identifies available cultural capital (people, institutions, and resources). The second step is a health assessment of the environment and the population, and identification of existing health systems. This assessment includes formal local healthcare institutions, indigenous and alternative health systems, values, beliefs, and practices (19).

Based on these results, health priorities are identified and a working group is formed to focus on the chosen area for programming, measurable outcomes, and relevant evidence-based practices. The working group uses local information, resources and experts to translate the evidence-based practices into local culturally informed programming. The program is then implemented, with ongoing monitoring and process evaluation. Process evaluation allows for continuous monitoring and program modification when needed.

Culturally informed community nursing practice process

CAB and community/public health nursing partnership

In 2009, a partnership formed between the second author and Indian colleagues from the Swami Vivekananda Youth Movement (SVYM), a nongovernmental organization (NGO) in Karnataka state that provides health and education services to approximately 100,000 rural people, including displaced tribal populations. The purposes of the partnership were to use the CIHA process to identify meaningful health outcomes for the population, implement a response, and to provide a community-based learning experience for US-based health sciences students. During annual 4-week site visits from 2009 to 2014, the faculty leader and students collaborated with the program CAB in conducting the CIHA community assessment, and assisting with program implementation and evaluation. Follow-up monthly meetings were conducted via web conferencing and email.

Community assessment

The CIHA community assessment in the rural village of Hosakura (a pseudonym) began in 2009 and was updated annually. We focus here on the community assessment findings pertaining to diabetes.

Cultural inquiry key findings

a. **Physical environment of the community**. Hosakura is in south India, 72 miles from the nearest city. With a tropical climate, seasonal variation ranges from hot and dry summers to a monsoon season. Agriculture (e.g. rice, sorghum, ragi, sugarcane, tobacco) is the primary economy. Housing includes pucca (cement and mortar construction) and kachha (traditional hut construction of dirt, cow dung, thatch, and stones). Transportation is mainly by bicycle and foot, with some motorcycles and animal-drawn carts.
b. **Population of the community**. Hosakura has a total population of 650 people (339 male and 311 female). The village (haddi) is split into different castes with a northern, more affluent half and a southern half of lower socioeconomic and caste status.
c. **Social organization of the community**. In Hosakura, there are a few small shops that sell dental and hygienic items, fresh fruit, school supplies, tobacco products, and convenience foods. The nearest town for supplies is approximately 4 miles away. Local government includes the Gram Panchayat, elected officials who are responsible for the needs of the community. The Swamiji is an influential local religious leader. There is one public school serving grades 1–10.

   Men typically work all day in the fields with cow-drawn carts and rest in the evening or visit neighbors. Most children attend school every day except Sunday. Women awaken early and perform household activities such as walking to obtain water and firewood. They care for children and elders, and prepare meals, including bringing lunch to their husbands in the field. Girls help with household tasks.

Health assessment key findings

a. **Environmental health.** Most villagers obtain water from a public tap, walking on uneven roads to obtain water and other necessities. Most do not have indoor toilets and use the outdoors.
b. **Population health.** In 2010–2011, the SVYM conducted a community survey on barriers to self-care and the prevalence of diabetes, which included Hosakura (n = 1923). This survey found that 16.5% of the rural population was at high risk of diabetes as measured by age, family history, and waist circumference. Of those at high risk, 78.2% followed up with HbA1C testing, resulting in 34 new diabetes diagnoses. Many of the villagers had an HbA1C level above 8% (64 mmol/mol), placing them at high risk of diabetes-related complications. Providers identified a “chasm” between the providers’ perspectives on the importance of self-care and community members’ lack of health-seeking behavior. Authors identified untreated chronic lower-extremity wounds in the community. For example, one community member with an infected ankle wound had presented to a primary health center (PHC) and received a topical corticosteroid. Another had not been treated for a large, open wound on his lateral right foot. No formal foot-care education or assessment programs for diabetes existed.
c. **Healthcare organization.** Access to care is a major issue due to few qualified providers, lack of transportation, incompatible schedules in a primarily agriculture-based economy, poverty, and lack of knowledge regarding the importance of routine care.

Providers focus on treatment of foot problems rather than prevention. Hospitals in India may be government run, private, corporate, or part of an NGO. Rural villages and tribal areas are served primarily by sub-centers with no physician staff, or by PHCs with one general practitioner. These small PHCs may serve 20,000–30,000 people. Rural villagers do not receive the same level of care (including assessment and education) as those who live in towns or cities. Rural physicians may not be aware of current guidelines for the prevention of diabetes-related complications, whereas others face limited resources. For example, the cost and upkeep of glucometers prevents rural villagers from monitoring blood glucose at home. Transportation or work schedules interrupt visits. Insulin therapy is nearly impossible because of the lack of refrigeration and fear of injections. The PHC in Hosakura has one physician and several support staff (2-3) and each year serves over 8000 people from the surrounding area. An 80-bed hospital affiliated with SVYM is located 4 miles away. A single physician at this hospital cares for people with diabetes. Provider turnover is a significant problem due to lower pay and standard of living in rural areas.

We identified a number of practices specific to foot care and assessment. Ayurveda treatments are often used instead of—or complementary to—allopathic treatments for wounds. Touching someone's feet is a sign of admiration and respect; it would be unusual for someone of higher status (e.g. a physician) to touch the feet of someone of lower status (e.g. a farmer or laborer). Thus, some patients refuse foot care or avoid sharing their concerns. Barriers to foot assessment by physicians include (a) patients having "dirty" feet from walking barefoot in the mud; (b) out-patient clinics are too busy for in-depth evaluation; (c) diabetes follow-up care is usually confined to evaluation of blood glucose; (d) it is uncommon for physicians to provide wound care; and (e) ulcers are regarded as an issue to be addressed by surgeons.

Some local practices place individuals at high risk of foot injury. For example, many people do not wear shoes when working in muddy fields due to a belief that the area around the oxen and plow is sacred. It is common practice to go barefoot, especially in homes and temples. Home self-care remedies include using a washing stone to smooth calluses and ash to clean the feet. Many people use readily available chloramphenicol 1% eye ointment as a wound antiseptic.

Program planning

a. **Health issues prioritized.** In 2010, partners identified diabetes as an area for potential programming and established the CIHA Diabetes Healthy Aging Program, including educational programming on diet, exercise, medication management, oral care, and foot care. This paper focuses on the lower-extremity complication prevention aspects of this program.
b. **Translation workgroup and selection of evidence-based methods.** Lower Extremity Amputation Prevention (LEAP) principles and American Diabetes Association guidelines were used as the evidence base for foot-care programming (14,23), and were tailored to Hosakura based on the results of the community assessment. Key outcome measures for this project were (a) improved community capacity for prevention and management of lower-extremity complications, (b) lower extremity complication prevention program sustainability, and (c) culturally accessible population screening and education for lower-extremity complications.

Working closely with SVYM and community partners, the authors trained community health workers (CHWs) on foot care and assessment based on level 1 LEAP principles (14). Classroom training included didactic materials, demonstration, and return demonstration using local supplies and examples from a local context. CHWs were observed directly in the community during foot assessment and self-care education to ensure competency. Before education sessions, CHWs reported that they were unaware of diabetes complications or that people with diabetes should take special care of their feet. The team developed a foot-care kit of essential tools, readily available from local stores. The local Swamiji religious leader endorsed the program by allowing a CHW to demonstrate foot care on his feet at a community education session attended by approximately 60 community members and leaders. Additionally, he participated in a public service informational video, endorsing the training.

Pilot testing and process evaluation

In 2012, during the annual faculty student site visit, the lower-extremity complication prevention program was pilot tested in Hosakura. This pilot test was affected by decreases to CHW funding, meaning that program implementation had to be modified for workforce limitations. To address this, one CHW, known and respected in Hosakura, was selected to receive one-on-one training in the community, and subsequently led training with other CHWs and community members in a train-the-trainer format. During the pilot-testing period, the CHW and Indian/US team members saw 30 people in Hosakura with pre- or active diabetes.

To increase access, interventions incorporated beliefs, values, and practices surrounding feet and foot care whenever possible. Ongoing updates to the community assessment allowed for these beliefs to be incorporated when they were identified. For example, although people living with diabetes were hesitant to show their feet to physicians, they eagerly participated in foot assessments when supported by their religious leader and delivered by a respected CHW. Pilot testing also identified the need to integrate inspection of the lateral malleolus, as the practice of sitting cross-legged on hard ground led to an increased risk of wounds on the ankle. Common harmful behaviors—such as using razor blades on the toenails, walking barefoot, and leaving wounds uncovered—were also identified and addressed. Additionally, Ayurvedic and allopathic physicians incorporated turmeric application as a wound management strategy. Understanding the daily life of villagers promoted increased program accessibility and uptake of health promotion activities through provision of in-home outreach by a CHW. Based on results of pilot testing, the workgroup updated the CIHA assessment and refined foot-care education protocols.

During pilot testing, the team recorded a video of the CHW conducting foot self-care procedures in the local language(s), with local supplies, within a variety of local contexts in Hosakura and at the PHCs. This video was intended for community education using tablet technology. To assess community comfort with the technology, an Apple iPad was taken to various rural communities and demonstrated. Villagers expressed interest in the iPad, and were able to use it with minimal training.

After pilot testing and program modification, the CHW continued to visit the original 30 people at least monthly, and recruited others who were interested in learning about diabetes and foot care. From June 2012 to May 2013, the CHW visited 151 new people with pre- or active diabetes and made 611 follow-up visits. The CHW's monthly community visits (Table 1) included home visits, follow-up visits, and phone calls. There were 120 encounters for foot-care counseling and 103 encounters for foot-care demonstration. The CHW also provided referrals to the local hospital outpatient department (OPD) for those who needed more extensive diabetes assessment and counseling. Over 1 year, 239 people were referred to the OPD for further assessment and treatment. Beginning in the second month of the program, community members requested that the CHW provide foot-care training for three local PHCs (16 visits for three PHCs).

Program outcomes

Community capacity for prevention and management of lower extremity complications was increased. When US partners returned in 2014, a new CHW continued to visit program participants in Hosakura, as the original CHW had married and left the NGO. Although home visits were sustainable, the CAB was no longer collecting data on individual visits because of limited resources. However, the CAB developed two yearly diabetes camps. Camps included foot-care education and formal foot assessment delivered by CHWs and local providers. Camps also included a full array of services such as vital signs and blood glucose measurement, exercise and nutrition education, and eye exams. Each camp hosted over 50 participants from the surrounding area and each participant was given their own foot-care kit for home self-care. The educational foot self-care videos continued to be used and accepted by

Table 1. Monthly community health worker activities in the Hosakura area.

Month	*New patients*	*Follow-up*	*Home visits*	*Phone call*	*Referral to OPD*	*Foot care counselling*	*Foot care demonstration*	*PHC visits*
June 2012	30	N/A	0	0	0	0	0	0
July 2012	23	30	0	0	23	16	24	0
August 2012	15	27	24	0	15	13	6	1
September 2012	10	38	13	0	12	8	4	2
October 2012	11	59	7	0	10	10	8	2
November 2012	7	64	15	1	7	7	4	2
December 2012	3	50	13	1	20	3	3	1
January 2013	12	60	14	2	22	14	12	1
February 2013	8	71	16	3	30	10	8	2
March 2013	15	88	19	3	45	17	15	2
April 2013	12	70	14	3	30	15	12	2
May 2013	5	54	16	2	25	7	7	1
Total	**151**	**611**	**151**	**15**	**239**	**120**	**103**	**16**

OPD: out-patient department; PHC: primary health center.

community members. Indian partners continued to develop videos and create similar media for nutrition and exercise education. Local shoe stores reported increased sales of footwear for people with diabetes.

Resources demonstrated sustainability. Because the CAB was unable to continue data collection, it is difficult to determine the medium- and long-term impact of the CHW outreach program. However, many of the resources and activities created by the CIHA team were incorporated into a new community programming intervention. These resources, still being used today, include a diabetes care booklet, foot-care kits, educational videos, and foot-care education protocols. Evaluation of the long-term sustainability of lower extremity complication prevention programming is ongoing.

Population education and screening for lower extremity complications was culturally accessible. Program interventions incorporated beliefs, values, and practices identified through the community assessment. For example, involving the local Swamiji religious leader and obtaining his endorsement helped to address cultural barriers to touching of the feet. Having an in-depth understanding of daily life for villagers informed the decision to provide in-home outreach rather than clinic-based programming. Culturally informed diabetes resources that were congruent with local context were created by incorporating elements learned during community assessment and by partnering with community members. The ultimate success of the project was that it was taken over, expanded, and improved upon by engaged community members.

Discussion

This project is in accordance with the World Health Organization action plan for non-communicable diseases (NCDs) that seeks to decrease premature death from NCDs by 25% by 2025 (24). Diabetes is a leading cause of disability and death, resulting in 1.6 million deaths worldwide in 2012 (24). Although individualized, primary care is important to control diabetes and prevent complications, community interventions that increase knowledge, raise awareness, and focus on prevention are also essential. The CIHA method is effective for assessment, planning, and evaluation purposes related to community programming. Culturally informed community assessment helps to identify and address common barriers to care, whether physical, geographic, monetary, educational, or cultural. For example, in Hosakura many people do not access care due to geography and work schedules. Villagers work long days in the fields, which prevents travel for health-related needs. Culturally informed programming took these barriers into account and services were provided through community outreach. When home-centered care was supplemented by yearly diabetes camps, local providers ensured that all education, screening, and follow-up care was provided in just 1 day.

There were several limitations to this study. First, funding for CHWs decreased in 2012, leading to program modifications. Retaining health workers in rural settings in India is a significant problem due to factors such as less pay and lower standard of living noted in the community assessment. Additionally, CHWs were primarily funded through grants, which are time limited. In many locations, CHWs are required to be women. This limits recruitment and retention, especially because women often leave positions when they marry, as was the case with our trained CHW. Funding limitations also affected our ability to collect data, as we did not have staff that could dedicate specific time to this. Although funding was a major limitation, uptake of the program was successful among villagers who engaged in foot self-care and among providers (e.g. physicians) who incorporated assessment of the feet in yearly diabetes camps. Another limitation was the difficulty in collecting data on health outcomes such as infections, amputations, and lab values including HbA1C, which would have provided rich evidence for the effectiveness of this study. Difficulty in obtaining data was due to a lack of funding, staff time constraints, and limitations in formal documentation of problems. Additionally, HbA1C was not consistently used to monitor glucose levels in this setting during this time period.

A major strength of the program was the long-term relationship between community members and the first and second authors who shared a goal of building community capacity for healthy aging through the diabetes program. This relationship allowed for the extension of trust to participating students. Conducting a cultural assessment demonstrates an *essential* interest in the people we serve, by taking the time to understand the lives they live and to work together through community engagement for appropriate (culturally informed) programming. The culturally informed lower-extremity complication prevention program was only possible because of the sustained work of Indian and US teams with a core vision and mission.

Implications

Most lower-extremity complication prevention programs focus on provider training in a train-the-trainer format. The LEAP program incorporates self-management principles of patient education, self-inspection, and self-care. Although provider education is extremely important, engaging people living with chronic disease in caring for their own conditions is imperative for tertiary prevention. This project demonstrates that the combination of provider (health worker) training and self-management support can increase education, screening rates, and referrals to appropriate treatment. Furthermore, this project demonstrated the LEAP program can be adapted for use in a culturally informed way.

This project revealed that CHWs are an important part of chronic disease care, especially in rural areas in India. With this project, CHWs increased the number of foot screenings, referrals to physicians, and educational sessions offered to community members. Community assessment also revealed problems with recruiting and retaining CHWs in rural India. Funding for CHWs is imperative to achieve positive health outcomes and should be considered for future health initiatives. More work needs to be done to determine what sort of incentives would retain CHWs in rural areas.

Cultural inquiry of Hosakura also revealed local beliefs, values, and practices surrounding feet and foot care, and the CIHA method promoted the use of available cultural capital, incorporated local context, and allowed for outcome measurement valued by local stakeholders. Although different communities have different health priorities, incorporating these cultural elements into community programming can overcome barriers, promote uptake, and increase sustainability. The CIHA process is structured but versatile, and this project demonstrates its use in practice. Further research would demonstrate its effectiveness in different settings.

Conclusion

India's diabetes burden is substantial and increasing. Paired with limited access to care and lack of self-care education, especially in rural areas, this will undoubtedly lead to an increase in diabetes-related complications unless culturally informed, evidence-based, and affordable prevention strategies are implemented. The CIHA model goes beyond traditional participatory research to provide a method for capacity building through culturally informed assessment, community partnerships, cultural capital utilization, and culturally informed health planning. Nurses are in a unique position to partner with other healthcare professionals and community members to design evidence-based programs in a context that is congruent with the local culture, resources, and environment in order to build capacity for healthy aging.

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Conflict of interests

Authors have no competing interests to declare. All authors listed have made a substantial contribution to the conception, design, and/or analysis and interpretation of data. All authors listed have contributed to drafting or revising the article. All authors listed approve the version submitted to Global Health Promotion.

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Taking a closer look at gender-transformative health promotion programming as a vehicle for addressing gender-based inequities in health and care

Salinda Anne Horgan[1], Shu-Ping Chen[2], Trevor Tuininga[2] and Heather Stuart[1]

Abstract: Gender-transformative health promotion addresses the reciprocal transactions between the socio-cultural contexts that shape gender-based values and the gender-normative behaviors and health experiences of individuals. A scoping review was conducted to (a) highlight how, when and under what circumstances gender-transformative health promotion is applied in practice, and (b) critically assess the operationalization of gender-transformative health promotion principles in practice to develop a clearer understanding of potential barriers (both conceptual and practical) that may detract from the broader employment of gender-transformative health promotion as a mainstream programming approach. Specific recommendations, based on the findings of this review, are made in an effort to further the operationalization of gender-transformative health promotion as a mainstream health promotion approach, globally.

Keywords: health promotion, gender-transformative, scoping review, global

Introduction

Gender-based health inequity is an issue of significance that negatively impacts global public health (1). An increasing number of studies highlight the widespread implications of socially constructed gender norms on the actions, decisions, and experiences that impact men's and women's health outcomes (2,3). Though culturally embedded, the fact that gender norms are socially constructed implies that they are amenable to change (3). The focus of health promotion on helping people to increase control over their health and related environmental determinants positions it as a fundamental vehicle for minimizing gender-based health inequities and improving related public health outcomes (4,5). Unfortunately, traditional approaches to health promotion that target specific health behaviors in *individuals* may not contain the necessary elements to additionally transform the *social* schemas that manifest and reinforce gendered values and norms (4). To effectively address gender-based health inequities, critical shifts are needed to broaden and extend the scope of health promotion practice to transform the socially accepted gendered values and norms that otherwise circumscribe men and women in their ability to adopt and maintain transformed lifestyle behaviors that are good for their health (5).

Promoting gender-equitable health and care

Health promotion programming varies in the degree to which it attempts to alter broader societal attitudes and values related to gender (6). Failure to

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address the socio-cultural contexts (e.g. social relations, power imbalances, social stigmas, social rewards) that shape and reinforce gender-normative lifestyle behaviors and health experiences, could result in health promotion efforts that do not alter the conditions that regulate and fortify gender inequities. Thus, significantly abating the effectiveness and overall relevancy of health promotion efforts (3–5).

Most health promotion programming is gender neutral and fails to acknowledge the distinct social contexts that shape gendered health issues (6). For instance, a campaign that emphasizes the harmful effects of smoking, may not acknowledge the disparate social conditions that motivate and reinforce men's and women's differential tobacco use (7). Those health promotion efforts that do adopt a gender-sensitive approach recognize the diverse social contexts that shape gendered health and lifestyle choices but *do not* attempt to *modify* the social contexts that contribute to and influence the choices of individual men and women (6). Take, for example, an initiative that encourages pregnant mothers to avoid alcohol by appealing to their desire to be viewed as 'good mothers'. This initiative acknowledges the impact of gendered values and norms on behavior. Yet, it does not alter the social realities that contribute to the feelings of stress and isolation that impact on women's alcohol use choices (8). Few initiatives adopt a gender-transformative approach to actively examine and challenge the *socio-cultural* power dynamics and structures that create and reinforce gender-based health inequities (9). A health promotion campaign that engages men in household and parenting responsibilities to enable women to gain access to education and employment is an example of gender-transformative health promotion (GTHP) programming (9). This form of programming seeks to actively transform social constructions of gender that narrow the range of acceptable lifestyle behaviors afforded to men and women to close healthcare gaps (4,6). Although implemented less broadly than contemporary approaches (e.g. gender neutral, gender sensitive), an evaluation of GTHP initiatives demonstrates that it is the more effective approach for transforming socio-cultural gender-based values and norms (10).

Advancing gender-transformative health promotion programming

GTHP addresses the reciprocal transactions between individuals (i.e. individual agency) and the broader environment (i.e. structured sources of advantage and disadvantage) (11). As a bottom-up programming approach, GTHP reframes how we conceptualize the scope, goals, methods and desired outcomes associated with health improvement (4–6). Bottom-up programming begins with the perceptions, ideas, and experiences of individuals (e.g. inductive) and moves toward sensing large-scale patterns to enable holistic planning and intervention. Such programming contrasts with the top-down approach more commonly used in Westernized health promotion (4,5). Bottom-up approaches are considered to be particularly advantageous for addressing complex interrelated social and health issues (4,5). Such an approach is increasingly vital given the growing prevalence of complex, integrated social, mental, and physical health issues globally. Current health promotion efforts should aim to transform the everyday lifestyle and health behaviors of men and women that put their health at risk. Because gender operates foremost at cultural and societal levels, its power lies in the ability to induce health and lifestyle patterns across and between communities of men and women, overruling the values, preferences and capacities of individuals (4,5,12). Approaches that intervene at the nexus where socio-cultural environments and individual actions converge are needed to transform the socially organized values and attitudes that construct gender-inequitable patterns of thinking and doing.

Although GTHP appears to be a promising strategy, its application in mainstream health programming has been remarkably limited (5,11). Given the heightened global concern over the influence of gender norms in reinforcing and maintaining inequities across a myriad of health issues (2,3,5,10), it is puzzling why this approach has not been applied more broadly. The lack of uptake of GTHP as a mainstream approach may simply constitute a lack of knowledge about *what* it means to apply a gender-transformative lens, and specifically *how* it can be operationalized as a mainstream programming approach. Or perhaps there are conceptual and practical barriers that circumscribe the broader application of this approach. It seems prudent at this juncture to examine more closely the application of GTHP principles and interventions within the global health promotion context. The current paper is a scoping review of GTHP frameworks and health promotion interventions that apply GTHP principles in practice. The aim of the review was to i) highlight the circumstances under which GTHP is applied in practice and ii) critically assess potential barriers (both conceptual and practical) that may detract from the broader employment of GTHP as a mainstream programming approach. Specific recommendations are made in an effort to further the operationalization of GTHP globally.

Current study

An interpretive scoping review was conducted to (a) explicate the key principles and assumptions underlying GTHP frameworks and (b) identify the specific practices, processes, and structures used to operationalize GTHP principles in practice. The literature review was global in context and cut across a variety of health areas.

Scoping review objectives

The specific objectives of the review were to:

- synthesize existing theoretical frameworks related to GTHP;
- identify and describe different types of GTHP interventions; and
- provide a meta-synthesis of the operationalization of GTHP principles across interventions.

Methods

Study design

The review was based on the approach described by Arksey and O'Malley (13) and consisted of the following steps: (a) identifying the research question; (b) searching for relevant studies; (c) selecting studies; (d) charting the data; and (e) collating, summarizing, interpreting, and reporting the results.

(a) Identifying the research question

The specific research question guiding the review was 'What is known in the academic and gray literature about GTHP and its application in practice?'

(b) Identifying relevant studies

Eight electronic databases were searched: PubMed, CLINAHL, Academic Search Complete, Gender Studies Database, ERIC, Cochrane, OvidSP (Medline), and PsycINFO. Database searches were conducted between January and March 2017. The primary concept of 'gender-transformative health promotion' was cross-referenced with the following combinations of keywords: 'gender equity', 'masculinities', 'femininities', 'gender norms', 'gender'. Secondary search terms were generated by identifying keywords cited in relevant articles. No methodological limits were employed.

Reference lists of key articles were also scanned for relevant references. A search of the gray literature was conducted using Google and Google Scholar, using the above search terms. The websites of specific interventions identified in relevant articles were scanned for descriptions and evaluation results.

(c) Study selection

Studies were selected into the review in two stages:

- Stage 1: first, the documents had to meet the following criteria:
  - a) be written in English;
  - b) be published between 2000 and 2017 (GTHP is a relatively new concept first coined by Gupta (11), thus, our review included publications from 2000 onward. It is possible that initiatives following the principles of GTHP, but not named as such, may have existed prior to 2000, and thus would not be captured by this review);
  - c) be peer-reviewed (for publications retrieved from electronic databases) OR demonstrating evaluative evidence (for descriptions of programs found through Internet websites and other gray literature); and

  d) explicitly identify (or describe) GTHP as a key theory or approach.
- Stage 2: of the documents selected in Stage 1, those that met the following additional criteria were included in the final analysis:
  e) provide a detailed description of a GTHP framework or intervention.

Titles and abstracts were screened to select documents that met Stage 1 criteria. The documents were then read in their entirety to confirm their inclusion in Stage 1. At this point, articles not meeting Stage 1 criteria were excluded. The remaining documents were re-read to determine whether they met Stage 2 criteria. At this point, articles not meeting Stage 2 criteria were excluded. Multiple reviewers (S-PC, SH, TT) reviewed selected Stage 1 and Stage 2 documents to ensure consistency in interpreting the inclusion and exclusion criteria.

(d) Charting the data

The following data were extracted from all documents meeting Stage 2 criteria: general citation information; study purpose, primary construct; study context; description of study population; description of underlying framework/theory; methodology; key findings.

(e) Collating, summarizing, interpreting, and reporting the results

The documents were separated into two groups for analysis purposes: GTHP frameworks and GTHP interventions.

- GTHP frameworks: the reviewers read, collated, and summarized documents that described GTHP frameworks. A thematic synthesis explored commonalities in the concepts underlying the frameworks and their alignment with key principles of GTHP.
- GTHP interventions: the reviewers read, collated and summarized documents that described and examined GTHP interventions. A content analysis identified key practices, processes, and structures used to operationalize GTHP principles.

Search results

The search resulted in an 300 initial hits. A total of 260 of these were excluded in Stage 1. Another 25 articles were excluded in Stage 2. A total of 285 peer-reviewed articles were eliminated from the review (including duplicates and previous capture), leaving a total of 15 documents eligible for review (see Figure 1).

Findings

Gender-transformative health promotion frameworks

Five articles met the inclusion criteria for GTHP frameworks (5,9,14–16). These frameworks cut across multiple health promotion areas including gender-based violence; sexual and reproductive health; maternal, newborn and child health; cardiovascular disease; tobacco control; and diabetes. Six common principles were identified across the five frameworks: gender-transformation (GT), empowerment, social action, intersectionality, and systems thinking and GT-specific evaluation.

Gender-transformation

GT is the recognition of gender as a critical factor accounting for men's and women's differential experiences of health, combined with efforts to actively modify the gendered values and beliefs of individuals (4). The frameworks in this review highlight the conceptual linkages between socio-cultural constructions of gender, lifestyle behaviors, and the impact on health. An emphasis is placed on the adoption of strategic interventions to reshape gendered values and norms. For instance, Pease (16) makes the point that understanding men's interests is an essential step in altering their resistance to changing negative health behaviors.

Empowerment

A key assumption of empowerment is actively engaging individuals through mutual participation and collaboration to foster individual and community agency (3). The reviewed frameworks demonstrated a conceptual association between empowerment and men's and women's co-participation in designing and

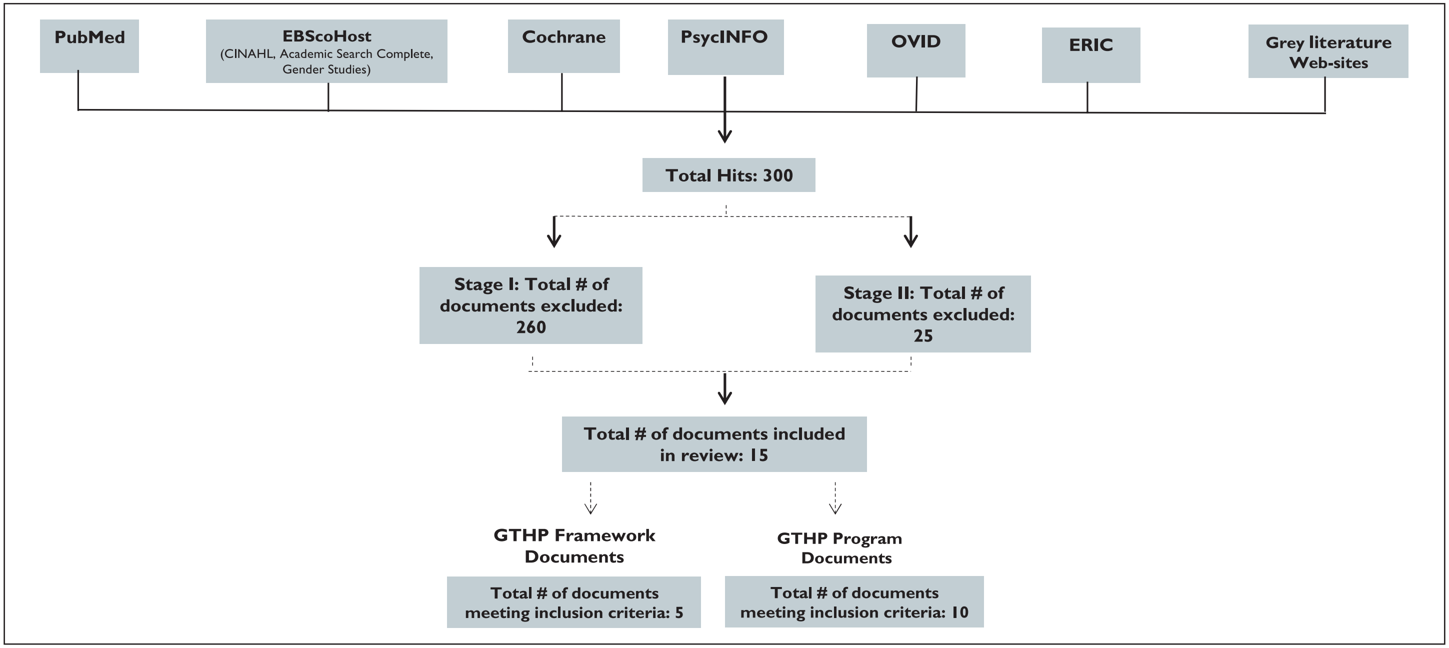

Figure 1. Study selection process.

implementing (as well as participating in) health and social interventions. By illustration, Pederson *et al.* (5) call for efforts to position women as 'agents in their own lives'.

Social action

Social action refers to the strategic application of knowledge to mobilize a social agenda for change. In our review, social action involved actively reconstructing the social contexts that shape health inequalities (14,15). A case in point is the need for interventions that offer equitable roles for women to actively improve women's access to resources (5).

Intersectionality

Intersectionality acknowledges the intersection of the gendered experiences of men and women to create and sustain interconnected oppressing and marginalizing conditions that result in health inequities for both. Most frameworks emphasized the notion that changes in perceptions of men's and women's gender-normative behaviors are required to enable change in the interconnected social relations that foster and reinforce gender-based health inequities (14,15). To illustrate, Kaufman (15) discusses the need to encourage men to work to legitimize healthier lifestyles to benefit both their own and women's health.

Systems thinking

To be sustainable, social change programs must concurrently intervene at person, community and societal levels (10). The frameworks in this review emphasized the need to simultaneously target change across micro (e.g., attitudes, values, behaviours, knowledge and skills), meso (e.g., organizational and program guidelines, organizational funding, resource distribution), and macro (e.g., health and social policy, legislation, social institutions) levels. As an exemplar, Hillenbrand *et al.* (9) encouraged the use of social change models that foster whole community involvement.

GT-specific evaluation

GT-specific evaluation measures the impact of GTHP principles in practice at individual, group, and community levels (9). GT-specific outcomes of interest include measurable changes in knowledge and attitudes, individual agency, social relations, adherence to traditional social norms and values, institutional policies and practices, and population-level health outcomes (9).

Gender-transformative health promotion interventions

Ten articles met the inclusion criteria for GTHP interventions (10,11,17–24). Out of these articles, 63 interventions were identified. Most (n = 46; 73%) of the 63 initiatives reviewed aimed to benefit the health outcomes of women by changing the values and norms associated with either masculinity (n = 14; 22%) or femininity (n = 20; 32%). Fewer (n = 29; 46%) programs aimed to benefit the health of both men and women simultaneously by either shifting the values and norms associated solely with masculinity (n = 16; 25%), or femininity (n = 6; 10%), or by simultaneously addressing interrelated masculine and feminine norms (n = 7; 11%). No programs targeted feminine values and norms to benefit the health of men. Likewise, no programs targeted shifts in masculine values to solely benefit men's health outcomes. In a majority of cases, either professional healthcare providers (n = 29; 46%) and/or educators (n = 21;33%) served as group facilitators. Few programs enabled leadership opportunities for members of the target population (n = 18; 29%) or community members (n = 19; 30%). The following is a description of the ways in which various initiatives implemented in both low- and middle-income countries (LMCI) (i.e., gross national income (GNI) per capita less than U.S. $ 12,375) and high-income countries (HIC) (i.e., GNI per capita more than U.S. $12,376) operationalized GTHP principles (25).

Gender-transformation

All (n = 63; 100%) of the GTHP interventions provided dedicated time for reflection on the impact of socially accepted gendered values and norms on behavior and the impact on health outcomes. The view that gendered values and norms are amenable to change, was also stressed. In most instances (n = 48; 76%), this element was operationalized through small-group educational sessions. Many programs (n = 27; 43%) additionally encouraged participants to actively adopt gender neutral or opposite gender roles to instill new perceptions and behaviors. Fifty-six percent (*n* = 35) sought to enable a broader understanding of the connections between socio-cultural ideals and adverse health impacts. However, 80% (*n* = 28) of these initiatives were based in LMICs.

Empowerment

Empowerment was primarily operationalized through small-group education sessions (*n* = 48; 76%) that sought to provide knowledge and awareness of the impact of gender on the determinants of health. Sixty-seven percent (*n* = 42) aimed to increase the capacity of individuals, while 56% (*n*=35) aimed to create access to valued resources. Fewer (*n* = 27; 43%) incorporated peer leadership opportunities.

Social action

Several initiatives (*n* = 22; 35%) incorporated a public awareness component in which participants actively communicated with the broader community to change cultural perceptions of gender. Thirty-five percent (*n* = 22) of programs incorporated small-group mobilization tactics (meso level) as a way of instigating social action. A smaller number of initiatives (*n* = 17; 27%) incorporated community-wide action initiatives (e.g. public debates, public awareness campaigns) to operationalize social action at a macro level (e.g. linkages with community leaders) and to modify existing social structures (e.g. policy change, resource incentives).

Intersectionality

Intersectionality was operationalized in a majority of programs (*n* = 48; 76%) through interpersonal and group dialogue that aimed to foster an awareness of the interconnected impact of gendered values and roles on the health of men and women. A minority of interventions engaged both men and women in the planning (*n* = 7; 11%) and delivery (*n* = 15; 24%) of program interventions. Other applications of this principle in practice included the creation of mixed-gender collective action groups and the provision of separate and mixed-gender spaces.

Systems thinking

Most initiatives primarily targeted individual-level change. Many programs (*n* = 55; 87%), for instance, incorporated interpersonal and group education as a means of operationalizing GTHP principles. Fewer attempted to actively address change at meso levels by advocating for more or alternative services (*n* = 18; 29%) or program policy change (*n* = 21; 33%). Of these, the majority were implemented in LMICs (*n* = 18; 29%). Although many programs did advocate for changes at the macro level in terms of changed socio-cultural values and ideologies (*n* = 35; 56%), very few of these initiatives (*n* = 14; 25%) were based in HICs.

GT-specific evaluation

A majority of programs (*n* = 32; 52%) used quantitative (i.e. deductive) methods (e.g. closed-ended questionnaires and scales) to evaluate program outcomes. Fewer initiatives used qualitative (i.e. inductive) methods (e.g. focus groups, in-depth interviews) (*n* = 15; 24%) and mixed (i.e. a combination of deductive and inductive) methods (*n* = 6; 10%) to evaluate processes in addition to outcomes. Twenty-four percent of initiatives reported descriptive outcomes (*n* = 15), 30% (*n* = 19) included a pre–post design and 13% (*n* = 8) included a control group. Forty-nine percent (*n* = 31) incorporated some GT-specific evaluation indicators. Of these, 61% (*n* = 19) focused primarily on changed knowledge and attitudes. Thirty-one percent (n=49) attempted to measure meso-level indicators such as joint decision-making, community action, and linkages to services. No initiatives attempted to measure macro-level change.

Operationalization of GTHP: a global lens

Low- and middle-income countries

A little over half (*n* = 35; 56%) of the programs in this review were implemented in LMICs with low-income groups. The primary target health issues of initiatives instituted in LMICs were sexual health/HIV (*n* = 16; 46%), gender-based violence (*n* = 11; 31%), and maternal health (*n* = 8; 23%). A majority of these initiatives targeted changes in the values and beliefs associated with masculinity and the behavior of men to improve the health of women.

Several initiatives also targeted changes in the values and beliefs associated with femininity and the behavior of women to improve women's health. The primary forms of intervention included group education, community development, and peer leaders. These initiatives were most likely to employ health providers, members of the target population, and community leaders as program facilitators.

High-income countries

Slightly less than half (n = 28; 44%) of the programs were implemented in HICs. Of these, 89% (n = 25) targeted low-income populations. The target health issues of the initiatives implemented in HICs were sexual health/HIV (n = 16; 57%), maternal health (n = 6; 21%), and substance abuse (n = 6; 21%). A majority of initiatives targeted changes in the values and beliefs associated with femininity and the behaviors of women to improve women's health. Many initiatives also targeted changes in the values and beliefs associated with masculinity and men's behaviors to concurrently benefit the health of both men and women. Initiatives implemented in HICs were most likely to utilize group education, interpersonal and group counseling, and media as their primary forms of intervention. They were also most likely to employ educators and health providers as program facilitators.

Limitations

This review was exploratory and the results must be viewed with some caution. One limitation was the difficulty in locating detailed descriptions and evaluation data of GTHP programs. By extension, an analysis to compare outcomes associated with varying degrees of implementation was not feasible. Despite these limitations, the current study was able to identify key GTHP frameworks and interventions from which to explicate the connections between the theoretical principles underlying GTHP and their operationalization in practice. A further potential limitation lies with the Westernized understandings of gender possessed by the authors, which may have unduly influenced the selection and interpretation process. Furthermore, the nature of gender itself poses difficulty with respect to interpretation and analysis. Although widespread patterns of behavior within and across countries indicate generalized gender-based meaning-making, at its core, the assimilation and expression of gender transpires at the level of the individual within local contexts. It is difficult from the standpoint of a scoping review to truly capture and understand the localized perceptions and applications of gender that may have shaped the responses of the individual participants in these studies.

Discussion

The review of GTHP frameworks reveals the conceptual connections between and within micro, meso, and macro contexts integral to the transformation of socio-cultural conditions into individual lifestyle and health behaviors. Several key findings stand out with respect to GTHP interventions. Our findings indicate that a majority of GTHP programs have been implemented in LMICs and that those conducted in HICs are primarily implemented with low socio-economic groups. Our findings also revealed that GTHP interventions are commonly used to address the health issues of socially and economically marginalized groups and less likely to be used to address mainstream health issues. This implies that GTHP may be *viewed* as a niche approach primarily applicable to the health needs of socially and economically marginalized groups.

An absence of focus on modifying women's behaviors to benefit the health of men was also noted. Few initiatives attempted to change interwoven masculine and feminine behaviors to mutually benefit the health of men and women. These trends contrast with recent calls for health promotion efforts to recognize and address the reciprocal intersectionality of gender norms on health and the increased focus on the gender-based determinants of men's health (2,22).

These findings also revealed a lack of inclusion of program participants as leaders and co-designers of GTHP initiatives, particularly in HICs. This may indicate a lack of recognition of the potential for bottom-up programming approaches to mobilize and empower target populations.

Most interventions aimed to address individual-level health outcomes, while fewer aimed to foster community- and societal-level outcomes. The hesitancy to adopt an ecological approach to GTHP programming represents a significant omission, as transformed actions on the part of individuals cannot be sustained in the face of limited socio-cultural support. Furthermore, most GTHP interventions were evaluated using indicators of change in individual-level health outcomes. Without the application of methods and approaches capable of assessing community- and societal-level change, it is difficult to demonstrate the success in relation to the unique aims of GTHP.

Finally, GTHP interventions may be conceptualized and operationalized differently in LMICs versus HICs. The majority of interventions implemented in LMICs were multifaceted and conceptually innovative in their application. They were more likely, for instance, to incorporate social constructionist, community development and systems thinking. Conversely, most programs implemented in HICs constituted single-focused interventions with the intent to change the knowledge, skills and opportunities of individuals. These interventions were also less likely to incorporate community mobilization efforts, a factor that may indicate a limited recognition of gendered attitudes and values as constituting a population-level health issue.

Conclusion

This review suggests that the principles associated with GTHP position it outside of the realm of traditional health promotion programming. GTHP reaches beyond the actions of individuals to engage with the socio-cultural contexts that organize and sustain structured disadvantage for men and women, creating supportive environments for the eradication of gender-based health inequities. Yet, to draw on and learn from GTHP, its use must expand beyond issues of violence against women and maternal and child health in developing nations. It must be used instead as a mechanism for grappling with a myriad of health issues, such as cardiovascular disease, diabetes, cancer, depression, and healthcare utilization. It must also be disentangled as a mechanism for primarily addressing the health issues of those who are socially, economically and politically marginalized. Moreover, the operationalization of GTHP must employ the full range of GTHP principles, as without an intentional effort to do so, efforts to change the socio-cultural values and attitudes that support and sustain the current health experiences of individuals will be diluted. More light must be shed on the role of gender in configuring specific health disadvantages for men, as hegemonic masculine norms disadvantage men's health outcomes in a variety of areas (2,6,13,22). Finally, GTHP initiatives must incorporate novel methods (e.g. qualitative, mixed-methods, participatory and action research, and evaluation methods) to evaluate expanded social and health outcomes (e.g. stigma reduction, community capacity, gender-equitable relationships, policy change).

Positivism is a force that shapes prevailing approaches to health promotion in Western nations.

This worldview advances the ideals of rationalism and deductive thinking, contrasting with the naturalistic and inductive thinking indicative of Eastern and Middle Eastern worldviews. It is important to note that the philosophical orientation of GTHP is more in keeping with the latter (13). Thus, the bottom-up, inductive and holistic orientation of GTHP has likely resulted in its subversion as a *viable* approach to mainstream health promotion in Westernized HICs. By extension, it has found a place on the margins of public health programming in these countries, where it is used to intervene in the health issues of socio-economically marginalized groups (e.g. women, low income) but is dismissed as a bona fide option to address the mainstream health issues of dominant social groups (e.g. men, high income).

This review suggests that even when GTHP is applied to niche health issues in Western cultures, its implementation is altered to correspond with positivistic ideals. Take, for example, the finding that a majority of GTHP interventions implemented in HICs do not actively engage participants in the design and implementation process. Consider as well, the tendency to rely on indicators of individual-level health outcomes, versus those that would reveal broader socio-cultural values and beliefs. Both cases demonstrate the modification of key GTHP principles to suit positivist ideals as a way of reconciling the conflict between otherwise incommensurable constructs (e.g. objectivity vs. subjectivity; micro vs. macro). The discrepancy between the principles of GTHP and positivism also impact on the operationalization of GTHP in non-Western countries. This is evidenced by the dominant and uniform use of deductive methodologies and tools to evaluate the impact of GTHP interventions despite the fact that these measures are not well designed to assess transformations in lived experience and socio-cultural ideologies. This is likely a result of the introduction of evaluation (both in its conceptualization and application) to non-Western nations via Westernized institutions, and thus its reflection of Westernized forms of thinking.

The incongruence between GTHP's orientation and the positivist ideals that dominate Western society may well account for the limited and modified application of these interventions to mainstream health issues in HICs. To truly address issues of gender inequity globally, particularly within Western nations, it will be necessary to shift the approach to mainstream health promotion. Greater adherence to the congruence between the theoretical orientation of GTHP and its operationalization in practice is imperative, as is the adoption of new methodologies and tools to capture and interpret both the subjective impact of transformed perceptions of gender, as well as the impact at socio-cultural levels. Most importantly, an increased profile and acceptability of inductive and holistic approaches to health programming (within Western nations) and evaluation (globally) is required.

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Declaration of conflicting interest

The authors declare that there is no conflict of interest.

Research ethics

This study received approval from the Queen's University Health Sciences & Affiliated Teaching Hospitals Research Ethics Board #6020365.

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Intersectoral oral health promotion interventions for schoolchildren living in remote rural Andean communities: a realist evaluation

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Abstract:

Background: Intersectoral oral health promotion entails the participation of local communities. IOHP interventions were introduced in Peru in primary schools in 2013 but oral health among schoolchildren living in rural Andean communities remains suboptimal.

Objectives: To understand the contextual elements and the underlying mechanisms associated with intersectoral oral health promotion interventions' current effects on schoolchildren living in remote rural Andean communities.

Method: A realist evaluation was carried out in three rural Andean communities where intersectoral oral health promotion interventions aimed at schoolchildren have been implemented. Following an evaluation of the effects among schoolchildren, contextual elements and mechanisms were explored with various stakeholders involved in intersectoral oral health promotion through focus groups and semi-structured interviews. Subsequently, an iterative data analysis and a validation process resulted in the identification of context-mechanism configurations.

Results: Previous positive experiences of collaboration, a focus on communication, feelings of being respected and considered, and development of leadership and trust among stakeholders involved in intersectoral oral health promotion were elements of configurations that positively influence intersectoral oral health promotion. On the other hand, unfavorable physical, social and political environments, previous negative health experiences, feelings of not being respected or considered, demotivation, development of mistrust and insufficient leadership were shown to negatively influence outcomes.

Conclusion: This research highlights the complexity associated with the deployment of intersectoral oral health promotion interventions in rural communities. Local stakeholders should be further involved to build trust, to facilitate coordination processes among remote rural communities and oral health professionals, and to optimize deployment of intersectoral oral health promotion interventions.

Keywords: oral health promotion, schoolchildren, rural communities, realist evaluation

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Introduction

The prevalence of oral health (OH) diseases among schoolchildren remain significant in Latin America (1,2) and in Peru (3–5), mainly among those living in rural (1), marginalized (3,4), or low-economic status communities (1–5). In Peru, as in many middle-income countries, current OH inequities in health are related to the social determinants of health (3,4,6,7).

To ensure sustainable change (6–9) and strive for more equity, social determinants must be addressed through 'the implementation of effective and appropriate OH policies and interventions' (7) such as intersectoral oral health promotion (IOHP). Intersectoral actions involving local stakeholders can address the social and economic structural factors contributing to a problem (10). To implement these actions, intersectoral collaboration, defined as a collective action where several stakeholders from different sectors with a relationship of trust (11,12) and a common goal take on different roles (11–13), is essential (13). Intersectoral collaboration is unfortunately not always present in practice (13,14), and intersectoral actions are often poorly evaluated (15,16), making continuous quality improvement changes difficult to identify and to implement (15).

In Peru, the Ministry of Health developed an IOHP initiative in 2007 (17). In 2013, this initiative was integrated into the national health plan for schools. According to the plan, OH professionals should perform various IOHP interventions in schools: 1) workshops on OH, 2) toothbrushing and flossing demonstrations, 3) distribution of toothbrushes and fluoride-containing toothpaste, and 4) the application of fluoride and sealants (18). Teachers are also involved in IOHP by performing daily promotion of toothbrushing and by ensuring that every child has a toothbrush and fluoride-containing toothpaste available at school (18–20).

The Peruvian IOHP is the responsibility of OH professionals working in public health centers. However, their actual deployment is uneven across the country (21), particularly in the remote rural Andean areas (22), and the form and level of involvement of community stakeholders are not clear. Certain factors partially explain this situation, including the shortage of OH professionals (23), the low involvement of other health professionals in IOHP (24), and the fragmentation of the Peruvian health system where policies are developed by the Ministry of Health while implementation is managed at regional and local levels (25).

Considering the suboptimal deployment of IOHP interventions in remote rural Andean communities, it is important to understand how such interventions work in depth (9). To do so, we must understand which contextual elements and underlying mechanisms underpin deployment of interventions and the level of collaboration among local stakeholders. This process could facilitate the adaptation of IOHP interventions to local circumstances and optimize intersectoral collaboration. The aim of this research was to understand the contextual elements and the underlying mechanisms explaining IOHP outcomes on schoolchildren living in remote rural Andean communities.

Methods

Design

This article describes the third phase of a project that aims to evaluate, with a realist evaluation (RE), the deployment of IOHP interventions carried out for schoolchildren in remote rural Andean communities (26). RE is theory-driven and allows exploration and understanding of the influences of context and the underlying mechanisms on intervention outcomes (27). RE is iterative and consists of four steps: initial program theory development; a mixed data collection process; data analysis and development of context-mechanism-outcomes configurations (CMOC) that highlight relationships among context, mechanisms, and outcomes; and the refinement and validation process of CMOC (28).

In the first phase, potential contextual elements and underlying mechanisms that might influence the implementation of intersectoral health promotion interventions in schools were mapped (29) and an initial program theory of the Peruvian IOHP interventions in rural communities was developed (30). In the second phase, IOHP outcomes were documented in schoolchildren, using quantitative measures including dental examinations and validated questionnaires (31). In the subsequent phase, focus groups and semi-structured interviews with various stakeholders involved in IOHP were conducted; they were presented with measured outcomes, and by inference explored contextual elements and mechanisms (28) to identify which mechanisms were triggered in the given predetermined contexts. This process was intended to lead to a better understanding of the causal pathway (28,32).

Ethical considerations

This research project was approved by the Comité d'éthique de la recherche en santé chez l'humain du Centre hospitalier universitaire de Sherbrooke (project #2016-1344). Participants were informed that research data would remain confidential and anonymity would be preserved.

Participants

Stakeholders were recruited according to theoretical sampling (33), so that all types of stakeholders involved in IOHP would be represented: 1) OH professionals, 2) teachers, 3) parents, 4) education managers, 5) health managers, and 6) other community stakeholders. Teachers, parents, and other community stakeholders were recruited in three remote rural communities where the second phase of this project was conducted (31). OH professionals were recruited in the health center that provides coverage to the participating remote rural communities. Education and health managers were recruited from local and regional authorities involved. They were identified and approached by a research assistant who spoke both Spanish and Quechua to inform them of the research project and to gather their formal consent to participate. Participants volunteered to participate.

Data collection

Focus groups were conducted with each of the types of stakeholders (except for OH professionals and education and health managers) in each community (when possible) to further analyze how IOHP interventions work and to identify the different contextual elements and mechanisms involved (28,32). Each focus group had between 4 and 10 participants. The open interview grid used (34) respected the principles of realist interviews (35), and was developed from the potential contextual elements and mechanisms identified in the first phase of this project (29).

To gain a more in-depth understanding of the various emerging themes, semi-structured interviews were conducted with representatives of each type of stakeholder involved in IOHP and of each of the participating communities. Interviews were conducted in the living or working environment of participants with a similar interview grid enhanced by focus group data. When agreed and available, some stakeholders who had participated in focus groups also participated in interviews.

Focus groups and interviews were performed by the same research assistant in Spanish or Quechua according to the language commonly used by participants; they were recorded (34) and transcribed verbatim (33) in Spanish by the research team.

Data analysis

Data was coded with NVivo 11 with a directed content approach (36) adapted for RE. Co-coding was performed by the principal investigator (DAB) and a research assistant from the Spanish version (37) to ensure credibility (38). Then, matrix queries were used to explore recurring patterns in data (39), to identify connections (40), and develop CMOC. Memos related to the identification of connections among concepts were written during the coding process and compared with the CMOC generated through matrix queries (41). Final CMOC were revised by co-investigators (LRT and IG), and were validated during a focus group with stakeholders involved in the research.

Results

A total of 59 stakeholders participated in the third phase of this project, comprising eight focus groups and 28 semi-structured interviews. Stakeholder characteristics are summarized in Table 1 (online supplemental file).

CMOC presented in Figure 1 are categorized according to two different levels: 1) contexts and mechanisms (CM) external to remote rural communities, and 2) CM internal to remote rural communities. Each external and internal CM includes contextual elements: situational mechanisms that 'operate at the macro-to-micro level' (42); and transformational mechanisms that 'operate at the micro-to-macro level and show how a number of individuals, through their actions and interactions,

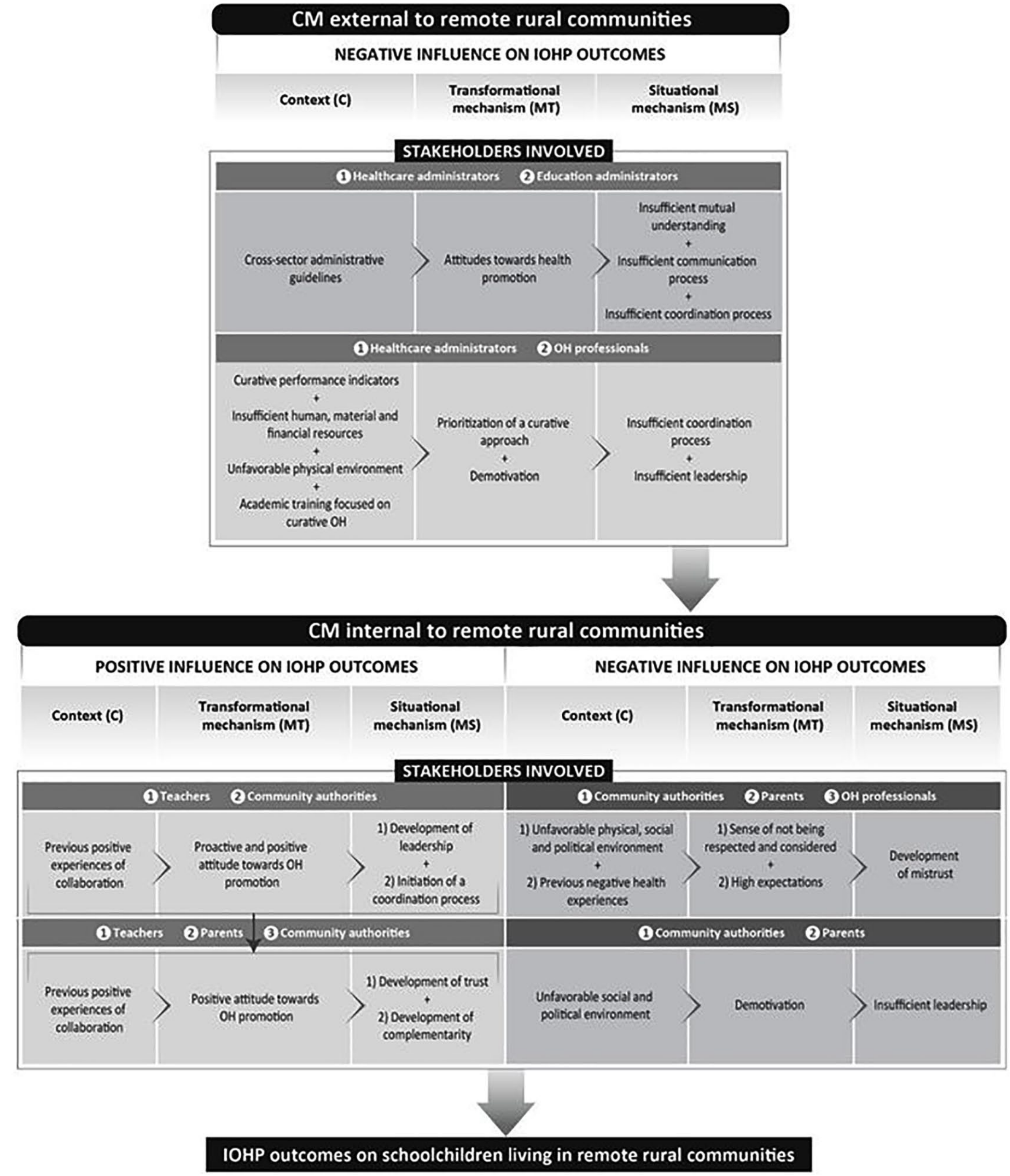

Figure 1. Context-mechanism-outcomes configurations for OHP interventions with schoolchildren living in remote rural Andean communities.

generate macro-level outcomes' (42). CM are also categorized according to their influence on the effects of IOHP interventions as either a positive or negative influence. As will be described, two external and two internal CM exerted a negative influence, while only two internal CM exerted a positive influence on OHP outcomes. IOHP intervention effects related to CM configurations are not presented in this manuscript; these positive and negative outcomes on schoolchildren are being published in another article (31).

External CM with negative influences on OH outcomes

- External CM 1

Intersectoral administrative guidelines had previously been developed by the Regional Directorate of Education and Regional Directorate of Health, on the deployment of health promotion interventions in primary schools (context). When deploying IOHP interventions, the health and education administrators did not have the same attitude toward the aforementioned health promotion activities (transformational mechanism 1) and there was insufficient mutual understanding of the deployment process of IOHP interventions (situational mechanism 1). Inadequate communication channels (situational mechanism 2) and deficient coordination processes (situational mechanism 3) between the two sectors also emerged. Some elements of this external CM are illustrated by a health administrator talking about the intersectoral agreement between the regional directorates of education and health:

> Therefore, one way or another, we must ally with them because although the goal is health development, it is combined with education. Therefore, yes, there is articulated work, but this is at different levels [regional administration, local administrations and schools]. There is not always an operative plan; there are difficulties, we have seen it. Nevertheless, the agreement has been helping us in some way, with these problems, to open the doors of institutions (Regional health administrator 1).

Another health administrator added to discussion on intersectoral agreement:

> Look, in the region, we handle the health promotion area. It is the area specifically in charge of coordinating with the UGEL [local education management unit]. There are annual coordination meetings where we all participate in a round table. It is at this round table that we make agreements, propose road maps and program the activities for the coming year. . . . What does this mean? That the UGEL is committed to incorporate these themes in their class topics. [The education sector] should do this; however, it did not happen as planned last year (Regional health administrator 3).

- External CM 2

The lack of human, material, and financial resources (context 1), the academic training of OH professionals who are trained principally for curative rather than OH preventive care (context 2), and the presence of performance indicators focusing on curative care (context 3) have contributed to the prioritization of the curative approach at the expense of IOHP (transformational mechanism 1). These contextual elements, in addition to the geographical remoteness of rural communities (context 4), have also contributed to demotivating OH professionals (transformational mechanism 2), and have affected both their leadership (situational mechanism 1) and the coordination process of IOHP interventions (situational mechanism 2). These words of an OH professional regarding the work in schools and at the health center illustrate the limits of capacity and of this external CM overall:

> We have goals [of dental restorations to achieve], therefore it is a little bit difficult, because, let's say, I go to schools, I attend to [schoolchildren]. I come back here to the health center [in the district capital] and there are other people waiting for me to attend to them [for curative OH care]. I sometimes feel tired, because I have done my work, I have completed my shift and all, but I arrive and there they are waiting for me. It is therefore difficult sometimes for me to attend to all [children and adults living in rural communities and in the district capital]. That is the problem (OH professional, district capital).

Related to this configuration, a health administrator expressed:

> There is quite a wide gap in human resources for this sector. Is this the main weakness? . . . And also our colleagues from the universities, where professionals are trained in a purely curative approach (Regional health administrator 1).

Internal CM with negative influence on OH outcomes

- Internal CM 1

Most rural community stakeholders and parents have had negative experiences with health professionals in the past (context). Additionally, these rural community members reported feeling geographically, socially, and politically isolated. The social environment (including the traditional lifestyle and practices) in remote rural communities was also identified by several stakeholders (context). These contextual elements have contributed to the development of a feeling of not being considered or respected by health professionals (transformational mechanism). When IOHP interventions were introduced, parents and rural community stakeholders also had high expectations (transformational mechanism). The conjunction of these contextual elements and transformational mechanisms has contributed to the development of mistrust toward health professionals including OH professionals (situational mechanism). A few elements of this internal CM are illustrated by the remarks of a health administrator:

> Then, many parents or teachers feel that they have been misled, because, as they say: ‘you told us that you would provide for us and you have not delivered. Therefore, why should we participate if you do not comply?’ (Regional health administrator 3).

- Internal CM 2

In some rural communities, there have been previous social and political tensions among some community members (context). This situation led to the demotivation of stakeholders in IOHP interventions (transformational mechanism) and affected their ability to assume leadership within the community (situational mechanism). A local authority talking about the level of involvement of some community members said:

> When we talk to the people of the community about these things, they don’t want to listen. This is why, as authorities, we do not participate much in these activities; we sometimes talk to [community members] about something important and they act as if they do not want to listen. They say they are in a rush, or they began to talk among themselves. This demotivates us from continuing with the awareness program (Local authority 2, Community 2).

Internal CM with positive influence on outcomes

- Internal CM 3

Some teachers have positive lived experiences of collaboration with parents and community members (context). Considering the impact of poor OH on the children’s learning process, teachers have developed a proactive attitude toward promoting OH (transformational mechanism). Some teachers have developed leadership in the communities related to IOHP (situational mechanism 1), and initiated a coordination process with some communities’ stakeholders (situational mechanism 2). This internal CM configuration fostered the emergence of the following configuration (internal CM 4). As one teacher expressed:

> We talk to [health professionals]; well, this can be done, for sure. However, as my colleagues say, it does not go as far as planning. Therefore, we must be there, get involved in the preparation of material and carry on a campaign together with the nurse, so that the parents also get involved in this. . . . We are doing it because the children are always with toothaches. Because we are concerned, we will always keep on this work about oral health (Teacher 2, Community 3).

- Internal CM 4

Previous positive experiences of collaboration with teachers within communities (context) combined with the positive attitudes of some parents and community stakeholders toward OH (transformational mechanism) have fostered the development of a relationship of trust (situational mechanism 1) and complementarity (situational mechanism 2) among community stakeholders involved in IOHP. A parent pointed out various elements included in internal CM 3 and 4:

> Yes, [teachers] involve [parents and community members]; they inform us about on-going activities, because there is a communal agreement. It is a verbal agreement with the communal president and the whole community. It would not be right if they did not inform us. As service users, we must also participate in the agreement and the activities (Parent 5, Community 3).

Two mothers shared details about their involvement in IOHP and in other community activities:

> If we, as steering committee, or as parents, did not support the teachers, they would no longer feel like keeping on with the work; this is why we always do what they ask us (Parent 2, Community 1).

> As I now know how to care, I have to put it in practice. I don't want my children to be like me, I make them brush and take care of their little teeth. When children do not have all their teeth, it disfigures their face and they look as if they were older. Some time ago, a health professional came over and taught us how to care for ourselves. So, I also take care of my little one, because I don't want him to be like me (Parent 4, Community 1).

Discussion

Using an RE, this study highlights the complexity associated with the deployment of IOHP in remote rural settings. A cascade of dynamics among contextual elements and mechanisms external and internal to remote rural communities trigger mainly negative 'ripple effects' on the deployment of IOHP and the development of collaboration between OH professionals and other stakeholders. This process decreases IOHP benefits for schoolchildren.

Complexity in health community interventions, the impact of the system-level on the community-level (43), and the concept of a ripple effect in community-based interventions (44) have been discussed previously, but this is the first study to describe and discuss these elements within IOHP and to highlight the presence of negative ripple effects. Through the use of focus groups and interviews with various stakeholders concerned with IOHP, this research allows a broader understanding of the perspectives of different stakeholders (15). This can in turn improve the effectiveness and sustainability of an initiative (44), particularly for the development of intersectoral collaboration in IOHP.

One of the key elements to consider in the deployment of IOHP is the management of financial and material resources in the developmental stage (8,45–47). As this project and other scholars have shown, the lack of stable financial resources affects both the deployment and monitoring of IOHP interventions (12,48), particularly in remote areas considering the costs associated with remoteness (49). The Peruvian health system faces several other health priorities, particularly in rural areas (25), which may explain the limited resources deployed in OH.

Emphasis must also be placed on human resource management (50). In Peru, as in many other countries, there is currently a lack of OH professionals working in rural settings (23,50,51). The workload of OH professionals working in these regions is heavy, their recruitment is difficult (23,50), and most are not well prepared to execute this particular role (20,50). In rural settings, OH professionals must often work in a culture different from theirs, and must collaborate with various stakeholders to carry out IOHP, despite being poorly trained or even untrained for these tasks (50,51). Building relationships with parents is another crucial element, because the existence of previous negative experiences in relation to OH might affect the development of trust with OH professionals (52,53). Therefore, themes related to cultural competency (51), the humanist approach (8,23), OH promotion (8,52), and interprofessional (47,51) and intersectoral collaboration (8) should be addressed in more depth in OH professionals' academic and continued training. These skills would enable OH professionals to be more responsive to the needs and particularities of disadvantaged communities (6,20).

Other key elements to be aware of are the social and physical environments where a program is implemented, particularly in rural settings (54). Program implementers should rapidly identify the challenges (geographical remoteness, social isolation, poverty, limited access to health services, etc.) (50,54,55) and assets (social relationships, existing physical infrastructure, volunteering) (54) present in rural areas where a program is being deployed. Afterwards, it is essential to identify and put in place ways to minimize the identified challenges (50,54) and to maximize the use of existing assets (54).

There is a need to rethink IOHP as it is currently implemented in Peru in order 'to develop context-specific strategies' for local communities (6). OH education, which is an important component of current IOHP interventions, cannot alone produce lasting change among schoolchildren (56,57). To increase access to IOHP interventions and data about their impact, it would be necessary to extend OH promotion initiatives to other health professionals such as nurses (9,24,47,51,52) and to involve more local stakeholders such as teachers, parents, and community members (communal assemblies, school parent associations, local health promoters, community shopkeepers) in the development, implementation, and deployment of interventions (8,45,50,51). The development of collaboration with communities' stakeholders and other health professionals would enable the identification of local challenges and assets (54), which could lead to interventions to improve socio-economic conditions in rural communities (7). Intersectoral collaboration could subsequently facilitate the adaptation of IOHP interventions to local circumstances, increase their adoption by the local population, and ensure future sustainability (8,51). In addition, the involvement of parents in IOHP predisposes them to have a more favorable attitude toward OH, which might contribute to increased toothbrushing frequency and other positive OH behaviors for their children (58).

Unfortunately, a top-down approach, (46) as used for the implementation of the IOHP initiative in Peru, and the short-term vision of authorities have hindered or even stopped (in certain communities) collaboration with local stakeholders (45). To foster the emergence and sustainability of collaboration, emphasis must be placed on the coordination (45,47) and communication processes (including the development of a common language) both at the management and community levels (12,46), and also between these levels (46,59). This will help to better comprehend the perspectives of the members involved (15,46), and facilitate the development of trust and a common vision on OH promotion among partners (12,59).

Limitations

The major issues encountered during this project were language and cultural barriers, which could have influenced the interpretation of data (37,60). However, the translation process used before data analysis (37) and the presence of a local bilingual research team (which included an anthropologist) limited the impact of these barriers on the analytical processes. Furthermore, although efforts were made to include a broad range of perspectives throughout this research, elite bias may be present. Triangulation of sources and methods, and examination of multiple cases and the final validation with a group of stakeholders would serve to mitigate the impact of such bias (33).

This research provides a better understanding of key elements that have led to suboptimal IOHP outcomes on schoolchildren, and how IOHP interventions actually impact remote Andean rural communities. These results will contribute to discussions on how to reorient IOHP interventions in remote rural areas and to improve intersectoral collaboration among various local stakeholders.

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Under-the-Mango-Tree: a theatre-based male EMTCT engagement intervention in post-conflict northern Uganda

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Abstract: Male involvement in human immunodeficiency virus (HIV) care cascades is identified as a critical prerequisite for the successful elimination of mother-to-child transfer of HIV. Scant evidence exists on efficacious culturally appropriate and male-inclusive elimination of mother-to-child transfer interventions. This reflection-in-action paper highlights field notes and observations of the development of Under-the- Mango-Tree, a theatre-based male-inclusive intervention pilot tested in northern Uganda. The intervention included: (a) traditional drama, dances and songs and (b) expert testimonies and group dialogue. Observations in this pilot showed that a theatre-based intervention was suitable for social persuasion; role modelling and moderating mastery of experience through effectively combining simple songs, dances and drama; testimonies of successful adherence by expert clients; and through reflective group discussions. These observations have implications for male-inclusive elimination of mother-to-child transfer intervention development.

Keywords: male participation, EMTCT, adherence, theatre-based intervention, masculinity

Introduction

Male involvement in HIV care cascades is identified as a critical prerequisite for the successful elimination of mother-to-child transfer (EMTCT) of HIV (1). The World Health Organization's (WHO) guidance on couple HIV-testing and counselling highlights several benefits of couples' involvement in the HIV cascades (1). Male involvement is associated with high male HIV-testing compliance, and enhanced incidence of antenatal care (ANC) visits in the first trimester (2). Other benefits include improved maternal health outcomes, lowered risk of preterm birth, higher birth weight, less fetal growth restriction, and lower maternal and infant mortality (3, 4). Although there is emerging knowledge on male involvement in HIV treatment cascades in sub-Saharan Africa (5, 6), evidence on efficacious culturally appropriate and male-inclusive EMTCT interventions to prevent the chain of transmission of HIV to infants in post-conflict settings is lacking (7). Current findings identify certain positive masculinity factors (8) and a reluctance on the part of women to influence men's participation in ANC (9). Furthermore, existing interventions either targeted women as at-risk or have women invite their male partners to attend ANC for HIV testing (5).

Furthermore, socioecological factors associated with HIV in post-conflict settings increase HIV vulnerability (10–12). At the individual level, women's health-seeking decision-making is subordinated to the male heads of their families owing to factors such as traditional gender roles and low literacy rates (13). At the interpersonal level, domestic violence, fear of abandonment and men's low self-efficacy may account for the low male participation in EMTCT; stigma and chronic poverty are identified as structural-level factors that undermine women's

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ability to seek EMTCT services (14, 15). Therefore, there is increased need for male-integrated EMTCT interventions to increase uptake of HIV services at all socioecological levels (13).

Northern Uganda in context

Uganda achieved a national average EMTCT enrolment rate of 86% among HIV positive pregnant mothers by 2015 and this number rose to 97% by 2016 (16). However, by 2016 the proportion of men who are testing for HIV and know their HIV status is considerably lower than women. The 2016 Uganda Demographic and Health Survey estimated that men between the ages of 15 and 49 were about two times less likely to receive an HIV test compared to their female counterparts (17). Another study found that only 17% of pregnant women initiated ANC visits on their own, and only 47% completed the four WHO-recommended ANC visits without a partner (18). The support of male heads of family remains an important catalyst for timely antenatal visits.

In northern Uganda, a region recovering from over two decades (1986–2006) of armed conflict, HIV rates remain high. The 2011 Uganda AIDS Indicator Survey (19) estimated that northern Uganda had an HIV prevalence rate of 8.3%, above the national average of 7.3%, although the 2016 Uganda health survey indicated a slight reduction (17). Northern Uganda's situation is made more complex due to problems such as chronic poverty, chronic alcoholism and undiagnosed mental illnesses among others, which have lowered the self-efficacy of men and render them unresourceful (20). Post-conflict health interventions are suited to rebuilding individual capacities to cope, mobilising resilience, empowering survivors to navigate resources for health, nurturing social capital and individual self-efficacy to enable actions towards positive healthy decisions, demystifying violence through dialogue and participating in safe disclosure (21, 22). We developed the 'Under-the-Mango-Tree' intervention to increase male involvement in EMTCT in three complex post-conflict hard-to-reach rural districts of northern Uganda (Pader, Kitgum and Lamwo) in response to identified gaps. The intervention explored men as vulnerable and at-risk for HIV who could benefit from HIV services together with their spouses.

Intervention design

Guided by social cognitive theory (SCT) (23), this intervention was designed and pilot tested to harness designed and pilot tested an intervention aimed at harnessing human agency to build self-efficacy among post-conflict males towards embracing HIV testing and treatment. The SCT spans socioecological levels in which personal behaviours are influenced by interactions between individual factors (self-efficacy) and environmental factors. Bandura defined self-efficacy as: 'belief in one's capabilities to organise and execute the courses of action required to manage prospective situations' (24). The use of SCT underscores the motivational and self-regulatory mechanisms required to elevate self-efficacy among males in post-conflict northern Uganda. Self-efficacy is a relevant interpersonal asset, especially for serostatus disclosure and adherence to treatment (25). Evidence indicates that individuals with high self-efficacy are more motivated to perform a task (e.g. disclosure) positively than their counterparts with low self-efficacy (26). We hypothesised that increasing self-efficacy among post-conflict men would improve couple's communication and serostatus disclosure, and enable men to embrace integrated HIV services leading to better EMTCT outcomes. In post-conflict northern Uganda, interventions rooted in culturally familiar activities such as theatre may offer the best way to operationalise enactment attainment (mastery), vicarious experience (modelling), and social persuasion that build self-efficacy (see Table 1). This intervention recognised cultural and interpersonal situations through which disclosures could be helpful or harmful especially to young mothers.

The culturally appropriate activities included drama, traditional songs, dances, expert testimonies and group dialogue organised as theatre-based interventions (TBI). TBIs are emerging in health promotion and are associated with social justice, control over the production and dissemination of knowledge, and have led to empowerment over sexual health matters (27). The benefits of TBIs are numerous: they are enjoyable, offer opportunities for interaction between gender roles, and provide a rich variety of effective communication modes that are also evocative (28–30). Music, dance and drama (theatricals) are cornerstones of healing processes and cultural modes of communicating past, present and future events, and

Table 1. Activities logframe for Under-The-Mango-Tree pilot intervention.

Intervention principles	*Activities*	*Objective(s)*	*Expected outcomes*	*Indicators*
Mastery Modeling Social persuasion Physiological factors	Testimonies from 4 Expert Clients Theatre group – Courtship Dances, Songs, Plays Group Discussion/ Reflections	Increased Male Self-Efficacy	Increased male attendance, Improved couple dialogue, Increased disclosures & adherence, Improved social & Interpersonal relationships.	**Increased #:** Couple in MCH/ PMTCT Clinics, Men in ART & EMTCT, Men in adherence counseling, Serostatus Awareness. **Reduced:** Reporting of GBV, abandonment & divorce

Maternal child Health (MCH); Prevention of Mother to Child of Tranmission of HIV (PMTCT); Gender Based Violence (GBV)

are typical among the Acholi of northern Uganda (31). Drama, songs and traditional dances transmit inter- and intra-generational messages that transcend time, politics and health (32). Thus, TBI remains a reliable, medium for disseminating HIV/AIDS health promotion and prevention messages given the male custodianship over cultural modes of communication, including Acholi traditional dance, drama and music.

Developing the intervention

We conducted a half-day staff capacity training to introduce the socioecological framework (33), intervention mapping (34) and SCT (23). The socioecological framework allowed the staff to appreciate the multiple contexts in which couples living with HIV interact to shape their health-seeking decisions. Staff were trained in taking field notes, assessment and asset mapping to understand the magnitude of the intervention. The New Life Medical Center (NLMC) administration offered financial and logistical support. The intervention team conducted a two-week community assessment reaching out to NLMC registered clients. Analysis of field notes affirmed SCT as appropriate to address male knowledge deficits (cognitive), motivation and risk perceptions associated with ANC visits. The staff participated in selecting activities and organising the event. Intervention design was evaluated for cultural appropriateness and linked to Uganda's HIV and AIDS control, treatment and prevention guidelines (35). The intervention title included the mango tree, which is seen as protector (canopy) and provider (nutritious fruits) in the Acholi culture.

Method

This reflection-in-action paper highlights field notes and observations of the intervention development and implementation process (36). Observations and field notes are reliable tools of information gathering during community needs assessment and in clinical settings (37). The intervention was developed and delivered at the NLMC, in Kitgum Municipality (for Uganda's healthcare structure, refer to 'Second National Health Policy') (38). The NLMC is a specialised non-profit organisation offering com-prehensive HIV treatment across the lifespan. NLMC implements community-based interventions using the facility-community model. In this model, healthcare providers collaborate with community health workers to reach community members.

Members of the community are then invited to the healthcare facilities to receive more specialised care. Since this was a highly vulnerable population, the author was advised not to record or report any information from the participants verbatim. Instead, the author took field notes, and reflected on the process to guide further iterations of the intervention. Incentives in the form of farming seeds for participation were helpful since our intervention was at the beginning of the farming season and it was difficult to attract men from their farm preparations. The NLMC provided the regular child support of cornmeal (posho), soy flour, cooking oil, sugar, powdered milk and tablets of soap to participants.

Intervention population

The intervention targeted all 819 registered HIV service users at NLMC, of which 36% were men and 64% women, all aged between 16 and 49 years. However, due to low monthly client attendance, we attracted 63 participants in February and 84 participants in March. The number of male participants increased from three in February to 38 in March of 2014.

Intervention components and activities

The following intervention components integrated the three SCT self-efficacy principles of mastery of experience, modelling and social persuasion.

Expert testimonies

Four expert clients (change agents) delivered personal testimonies of living positively with HIV, and voluntarily adhering to antiretroviral therapy (ART) and prevention of mother-to-child transmission (PMTCT) of HIV. Testimonies focused on couple disclosure and adherence to lifelong ART experiences. Expert clients were selected according to the following criteria: a) voluntary participation, b) completed couple serostatus disclosures, c) self-reported good couple communication (remained supportive couples), d) had child(ren) from the PMTCT services, and e) minimum 5 years of consistent or undisrupted adherence to HIV treatment at the facility. Expert clients modelled behaviour (modelling and mastery) and acted as agents of influence over the social environment that in turn could potentially influence social change in the functioning and life circumstances of others (social persuasion) (39). Each expert client delivered a testimony in 10 min. There were 3–4 min in between each testimony to allow counsellors to check in with participants for emotional support or clarification. An additional 10 min was allocated at the end of the testimonies for questions and answers.

Drama, dance and songs

We allocated more time to the drama, dance and songs. These activities highlighted different scenarios of positive behaviours, while discouraging the negative behaviours common among couples living with HIV/AIDS. These performances combined the concepts of modelling and social persuasion through stories of achievement, determination, endurance and progress. The combination of traditional dance, drama and songs highlighted gender-inclusive interactions typical in the local/cultural setting. Among the Acholi, the role of men in society is prominent in all spheres of life, including music composition and instrumentation. Women dance and perform the songs. This intervention component's strength was its gender inclusivity, allowing for dialogue that transmitted key EMTCT messages.

Traditional courtship dances

Two courtship dances were selected: the *Apiti* dance, traditionally tailored for young women to display their readiness to enter into marriage (courtship, dating), and the drum dance, *Larakaraka* (Myel Orak), a physical (vigorous) courtship dance performed by both men and women. Courtship dances were chosen to highlight the critical intersection of sexual health education and social activities for promoting EMTCT services.

Songs/choir

The choir songs incorporated various themes relevant to family planning, couple disclosure, prevention of domestic violence and tolerance. Other societal challenges emphasised in the songs reiterated and repeated the relevance of adherence, social support, and the challenges of post-conflict maladjustments such as chronic alcoholism. The song lyrics were consistent with key health education components of EMTCT in the Ministry of Health Guidelines (40).

The drama/play

The drama was in six scenes, highlighting typical post-conflict men's uncooperativeness by depicting the tricks men use to evade accompanying their wives to ante-natal clinic appointments, and repeated messages about the value of men's participation.

Group dialogue

EMTCT nurses facilitated this phase of the intervention to enable participants to reflect, validate, verbalise without fear and discuss a way forward. First, the EMTCT nurse read a statement of confidentiality, emphasising participant autonomy and respect for diversity in opinion and experience. Prior to the group dialogue, participants were informed of their right to leave if/when necessary or to seek counselling. By relating their own experiences to the scenarios and messages they heard, participants were able to validate their personal behaviours and experiences with the environmental influencers as described in SCT. Two qualified HIV counsellors were on standby for psychosocial support.

Observation

Reflecting on the intervention process

The above description of the intervention shows the connection between the intervention components and the theories behind the design. Observing the participants in both intervention sessions and talking with the staff led to reflections on the levels of engagement the participants had with the intervention. Some changes in thinking were immediately visible, as were some of the factors that contributed to the success of the intervention. Due to confidentiality and ethical issues, the author was limited to observing only.

Observations about levels of engagement

The first step in the success of an intervention focused on behaviour change, like Under-the-Mango-Tree, is to ascertain whether the intervention engaged the participants.

Energetic dances and simple repetition compelled attention to the messages

The intervention kicked off with a famous traditional courtship dance called *Apiti* that lasted 40 min. When the dance formation (men and women) appeared on stage in their traditional dance attire, participants chanted. The second dance, the *Larakaraka*, a courtship dance, came with strong drum rhythms, whistles and calabashes hit with spokes to signify the heartbeat rhythms of experiencing first love, and having identified a potential marriage partner. The male dancers exuded high confidence that portrayed masculinity, maturity and a readiness to court; the dancers called upon the men to stand up to the challenge of HIV/AIDS like warriors would fight an enemy. I observed that the participants actively joined the dancers and the songs, probably because the songs were in the local language, were culturally familiar, very simple and repetitive.

In the song, the repetition of the chorus was effective in drawing the attention of the men to the key messages of caution, and the call to test for serostatus. Many of the men appeared frozen in place, as they listened intently. The men had a chilling moment when the women advised them on the importance of testing for HIV before courting a woman. When the dance drums fell silent, the place was also silent for about 4 min. This was a clear indication of the power of the moment and the attention the songs received.

Drama gave women an opportunity to address men directly about issues that would elicit violence at home

During scene transitions in the drama, there were disruptions from participants when they agreed or disagreed with scene content. Feedback from participants on the drama commended the composers for being succinct in representing familiar occurrences in homes identified by the women as 'our usual routines'. The women participants were active, analytical and reflective about the acts and characters in the scenes. The women participants validated many of the controversies in the drama based on their own experiences at the dialogue session. The drama scenes provided a basis for women to address the men directly on issues that would elicit violence if discussed at home. The men were receptive and acknowledged their limitations within the cultural and traditional role confusions around pregnancy. The younger women participants voiced their misgivings about a drunken husband tagging along who is unwilling to seek HIV/AIDS tests and treatment services. When prompted to state the role of husbands in EMTCT, the women participants recognised that their husbands were useful in organising means of transportation and mobilising the necessary health resources. However, the influence of chronic alcoholism caused men to resist HIV treatment. The women said that responsible husbands accompanied their wives to ANC and EMTCT services.

Observations of changes in thinking

During the dialogue sessions, there were examples of participants who stated that they had had a change of thinking about the role of men in EMTCT.

Expert testimonies encouraged self-disclosure

During the group dialogue, the participants praised the expert testimonies as encouraging, and as concrete individual experiences from which they could draw inspiration. Participants said they appreciated the confidence with which the expert clients shared their personal life stories – successes and ongoing challenges. Later, some participants reported that they felt encouraged to self-disclose their HIV status to their partner but still lacked the confidence. Other participants said that their fear to disclose was reduced upon hearing the success stories of the expert clients, and appreciating the necessity of disclosure. Participants requested more testimonies in subsequent events. The participants highlighted that they had learned about the benefits of active male roles in EMTCT cascades and about continued partner support from the expert testimonies. The expert client testimonies described the concrete benefits of couple adherence to EMTCT as a requisite for restoring HIV-free children.

Dialogue enabled men and women to discuss roles

The author observed that men found their voices in the dialogue process as well. The facilitators made it explicit that any views and statements made in Under-the-Mango-Tree were for service improvement. Participants were encouraged to reflect in depth, speak without fear, and be respectful of each other's experiences and views during the process. The participants endorsed the principles and spirit of the group norms through consensus, which demonstrated a sense of solidarity. The clinic staff were included in the group dialogue to address point-of-care service gaps. Male participants appeared agreeable to their expected roles in EMTCT after learning about the benefits, the efforts made to accommodate men at ANC, and the available male-tailored resources. During the dialogue, men attributed their reluctance to participate in the EMTCT process to three main reasons: 1) assigned cultural privileges that protected them from being accountable to their wives, 2) polyamorous desires, and 3) unrecognised mental health challenges leading to negative health behaviours. The men identified a dual role for themselves: as both a factor and actor in facilitating EMTCT adherence. The men conceded that the rapidly changing times now require women to take proactive roles in health-related decision-making at a household level. The expert testimonies highlighted that being accountable to partners brought harmony to the household and strengthened the social support following an HIV diagnosis in the family.

Factors contributing to the success of the intervention

Staff relations with the community members were found to allay fears. NLMC staff were members of the post-conflict communities and had established prior care relationships with the clients. Thus, they were instrumental in seamlessly adapting the principles of the intervention theory into the local setting. Staff demonstrated their resourcefulness when choosing intervention activities and packaging the health information to maximise its reach and impact. Participants were at first fearful of the process when invited to take part in an intervention. However, the staff informed participants verbally that there would be no audio or video recording: a declaration that guaranteed confidentiality and encouraged inclusiveness.

Limitations and recommendations

This intervention was part of the clinical care continuum in the EMTCT stream at NLMC, therefore, it was neither a systematic study nor an evaluation. This report is based on observations supported by reflections from field notes. The HIV treatment project itself was designed as a research pilot project in an existing HIV treatment programme. As there was no ethics approval or systematic data collection from participants, this report about the Under-the-Mango-Tree intervention can only indicate that this intervention is worthy of a full evaluation in the future. Upon reflecting deeply on this intervention, it was necessary to develop measures for variables included in this study, such as the couple dialogues. The small number of unique participants (98 of a potential 819) was also a limitation, most of whom came to both intervention events. With such a small number, we may have observed a limited range of reactions to the pilot intervention. It may be that a larger study would yield different conclusions. This is very much an initial exploration of the potential of this type of action.

Insights and conclusions

By observing participants' engagement in this pilot study, a theatre-based intervention guided by SCT seemed suitable for operationalising social persuasion, role modelling and moderating mastery of experience. The TBI effectively combined simple songs, dances, drama and testimonies from successful EMTCT couples. These expert clients' testimonies were a great asset for social persuasion, as observed during group dialogues. The dance and song activities reproduced a culturally appropriate context allowing for cultural modes of creative sharing of health information. The emphasis on adopting a male-focused theatre-based activity in this remote post-conflict community highlighted men's role as a determinant of EMTCT service consumption.

Men in these post-conflict communities have been disadvantaged by exposure to prolonged violence, traumatic events, poverty, and least supported by the broken health infrastructure. The dances, songs, drama and expert client testimonies integrated social persuasion to capture moments where the traditional male role is prominent. As such, men could see a positive role for themselves in the prenatal period without losing touch with their traditional masculinity. Incorporating role models who shared their real experiences offered concrete ideas of how men and women could collaborate during a pregnancy. Moderating mastery of experience was observed when couples reflected, negotiated and agreed to cooperate, thereby recognising certain behaviours and decisions that prevented women from accessing EMTCT services. For post-conflict men, the combination of social persuasion, role modelling and moderation of mastery could be effective in promoting self-efficacy as a relevant interpersonal asset, especially for serostatus disclosure and adherence to treatment.

The post-conflict northern Uganda community demonstrated their commitment to rebuilding their lives. EMTCT services offer a valuable opportunity to deliver HIV-free children. Building self-efficacy among couples living with HIV to encourage adherence to EMTCT cascades is critical for this aspiration to materialise. This participatory intervention could be effective in a low literacy rural community where cultural values, sex education and, morality are coded in songs and theatricals. For HIV/AIDS treatment, health education delivered in participatory activities narrows the gender gap. This gives individuals a chance to disclose their serostatus safely and share treatment adherence challenges without fear of and without the retaliation that one might expect at home. The Acholi males held traditional roles in these participatory activities, upon which their masculine state was mobilised. This enabled collaborative discussion of new responsibilities and the proposition of desired changes in the face of changing gender roles in HIV treatment.

In sum, this pilot intervention attempted to fill a gap in interventions that address male participation in HIV treatment and health facility-based barriers to male participation. We observed that when men modelled health-seeking behaviours in a culturally familiar setting, positive responses towards EMTCT were inspired, and dialogue between couples was facilitated. The interaction with HIV prevention and treatment adherence messages reinforced male roles; hearing directly from the women about what is expected of men seemed motivating. It appears that when men's authority and masculinity are recognised as a health asset, this can facilitate men's role in EMTCT. Therefore, future studies developing and implementing interventions in post-conflict areas could consider 1) use of arts-based components to foster active participation in the interactions, 2) including both women and men into the intervention within a shared-cultural context, and 3) use of expert testimonies of individuals from the target community to foster trust, effectiveness and reduce stigma.

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Impact of a sex education programme in terms of knowledge, attitudes and sexual behaviour among adolescents in Asturias (Spain)

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Abstract: Sex education in schools is an adolescents' right, and can have health benefits, such as improved knowledge or increased condom use. In Asturias, a secondary school programme called Neither Ogres Nor Princesses educates pupils for four years with trained teaching staff and external workshops. This study examined whether this programme (a) improved adolescents' sexuality knowledge, attitudes and skills, and (b) increased condoms use. A quasi-experimental survey was conducted, with comparison arm, with a pre-test in the first year of secondary school (12- to 13-year-olds), and two post-tests: after the intervention (15- to 16-year-olds) and two years later (17- to 18-year-olds). A questionnaire with socio-demographic, knowledge, attitude, skill and sexual behaviour variables was used. The impact was evaluated with 'difference-indifferences' analyses. There was a greater increase of knowledge in the intervention arm in both post-tests, and an increase in skills in the first post-test. Girls in the intervention arm reported less practices with penetration and greater condom use the first time, this also among boys. However, the impact was limited in time. Interventions that aim to increase sex education in curricula with quality and fidelity are a priority to guarantee children's rights and their health.

Keywords: sexuality, adolescents, evaluation, behaviour change

Introduction

Sexual health, as defined by the World Health Organisation (WHO), is 'a state of physical, mental and social well-being in relation to sexuality', with 'a positive and respectful approach, as well as the possibility of having pleasurable and safe sexual experiences' (1). Additionally, sexual health among adolescents is crucial for their wellbeing and for global health. Globally, young people are at elevated risk of sexually transmitted infections (STIs) and unintended pregnancy through unprotected sexual intercourse (1); for example, worldwide, young people aged 15–24 represent nearly 20% of new HIV infections (2). In Spain, the highest incidence rates of HIV cases are found in 25- to 29-year-olds (3) and abortion occurs more commonly in women around 20–24 years of age (4). In light of this situation, there are effective interventions to reduce these risks (5, 6), such as sex education (7), which is a sexual right, recognized by international organisations (7, 8).

There is strong evidence to support that school sex education programmes can delay first intercourse and/or increase the use of condoms and other contraceptive methods, which as a result reduces STIs and unintended pregnancies (5–7, 9–11).

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Sex education with a 'rights and gender' approach, which presents sexuality as a positive human value and source of pleasure, and with a gender and empowering perspective (7,12–14), is internationally recognized as being effective (7, 12–15).

At the same time, the United Nations Sustainable Development Goals (SDGs) prioritise sex education as a strategy to promote gender equity and sexual and reproductive health (16). The SDGs, signed by 193 countries in 2015, set 169 goals for 2030, some related to sex education, and which all the signatory countries, including Spain, should fulfil. There is, therefore, a commitment to the implementation, evaluation and extension of sex education programmes, adapted to each context, contributing to the fulfilment of the SDGs.

In Spain, this commitment has a legal framework (17), which establishes sex education in schools. However, several studies show that this is not effectively or universally incorporated (18–20). Proposals for its implementation are based on voluntary and external work (no mandatory job), and most of them eventually disappear (19). As an example, in our country, only 14% of schools have given their teachers training in sex education during the last 3 years (21).

In Asturias, since 2008, the Regional Ministry of Health promotes a sex education programme called *Neither Ogres Nor Princesses* (*NONP*) (22). Based on a rights and gender approach (13), this intervention seeks to generate conditions for people to make autonomous responsible decisions, and promotes that they can exercise their rights, fulfill their responsibilities and respect the rights of others. The program addresses knowledge, attitudes of respect and training of social and specific skills in relation to sexuality, in order to promote healthy and respectful behaviors. This programme was designed based on other effective programmes (7, 14) and targets pupils aged 12 through 16 who receive sessions taught by their teachers during compulsory secondary education (from 1st year to 4th year). Teachers receive 12 h of training beforehand and have the support of a didactical guide, with participative and active sessions to work in classroom (debates, role-playing, training techniques, etc.). The contents are organized into five thematic blocks: social skills (communication, emotion management, decision making, etc.), affectivity (self-esteem, friendship, family, love, etc.), anatomy and physiology (changes in puberty, menstruation, reproduction, etc.), pleasure and health (sexual practices, consent, prevention, etc.) and identities (gender, feminism, sexual diversity, etc.). The participating teachers assumed the commitment to teach at least 5 h in the classroom for each school year on these contents. Teaching is complemented with 2 h of external workshops per year, except in 4th year, where two students per classroom, previously trained, taught a 3-h workshop to their classmates ('peers methodology').

After 1 year of implementation, a process evaluation was conducted pointing out that it was a novel intervention, with a high level of execution, as well as a high level of participation, satisfaction and usefulness perceived both by pupils and teachers (23).

NONP is intended to improve the health and well-being of adolescents, increase self-esteem and personal autonomy, promote freedom of choice through knowledge, and ensure equality between women and men and respect for sexual diversity. Key objectives related to sexuality include increasing facilitators' knowledge as well as developing positive attitudes and social skills. This aims at the acquisition of pleasurable, healthy, safe and responsible sexual behaviour adopted by young people, which will contribute to reducing STIs and unintended pregnancies.

Research questions

Does NONP (a) improve adolescents' sexuality knowledge, attitudes and skills; and (b) increase condom use at first and last intercourse?

Methods

Study design

A quasi-experimental study was conducted with pupils who participated in the NONP programme and a comparison arm, using a pre-test, a post-test at the end of the intervention and a post-test in the medium term (2 years later) design.

Sample size was determined for 80% statistical power and bilateral significance of 5%, assuming a 50% prevalence of condom use in the comparison arm in the post-test and minimum significant differences of 10% in the intervention group.

Sampling was by cluster, and intervention schools were selected randomly until the established sample size was reached. In total, there were five secondary schools (out of 21 total with the programme), for which all their 1st year pupils participated. In order

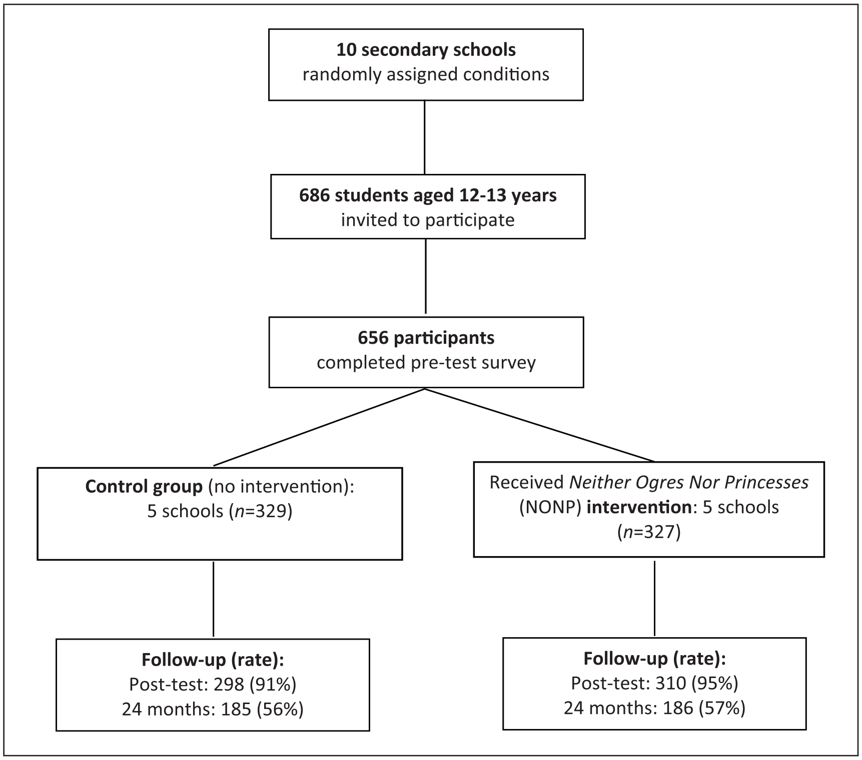

Figure 1. Flowchart for group-randomised, controlled design.

to choose controls, comparability was sought in the same context: for each intervention school, another school in the same geographical area that did not participate in NONP or any other sex education programme was randomly selected.

Data collection

Before the intervention (pre-test), the 1st year pupils (12- and 13-year-olds) completed an auto-administered and anonymous survey, previously piloted in four classrooms. Two post-intervention surveys were undertaken by an external team: at the end of the intervention, when the pupils were in 4th year (15- and 16-year-olds); and again in May 2016, 24 months after the intervention, when they were in 2nd baccalaureate year (17- and 18-year-olds). This study was not paired, for reasons of participation, organization and anonymity, and we assumed that the pupils would be the same, with minimal changes. For this reason, in post-tests, pupils who had not previously completed the four grades of secondary school in the same centre were excluded.

Ethical considerations

Ethical approval was granted by the Ministries of Education and Health, and with the consent of the centres' management teams. Families and pupils were informed of the study and both gave their consent to participate.

Participants

The pre-test included 656 pupils (327 in the intervention and 329 in the control group). For the first post-test, the number of participants was 608 (310 intervention and 298 control) and 371 for the second post-test (186 intervention and 185 control). Response rates for pre-test and post-tests were 96%, 92% and 81%, respectively, with no differences by arm (Figure 1). Non-responses were due mainly to absences. Surveys poorly answered (no response or inconsistencies), which were less than 1% in each arm and at each time, were excluded.

The interventions

Teachers in the NONP programme taught 20.7h of sex education to their pupils during the 4years of intervention. In those schools, workshops made up another 7.5h. In total, pupils received an average of 28.1h (range: 24–34) of intervention. In control schools, activities during those 4years accounted for 4.2h on average, all external (range: 2–8). The information was gathered annually with the collaboration of each school. Sex education included in the curricular contents was not taken into account; it was also assumed that there were no differences by arm.

Outcome measures

The variables were classified in five categories: socio-demographic, knowledge, attitudes, skills (ability to do), and sexual behaviour.

The socio-demographic consisted of gender, age and birth country. The average age of the participants at each intervention phase was 12, 16 and 17.5 years, respectively, with no differences by arm. There were no differences between the intervention and the control arm in relation to the participants' sex and country of birth.

For the rest of the categories, questions that appeared in other studies were used (24, 25), with 15 items for knowledge (with a choice of a true/false), for attitudes (using a Likert-type scale) and for skills (using frequency scale or 'yes/no').

Following the pattern of other studies (26, 27), a total score (out of 10) for knowledge, attitudes and skills was obtained, with the sum of correct/desired responses regarding the following topics: sexuality, equity, sexual diversity, pregnancies and STIs.

Lastly, sexual behaviour variables were: sexual intercourse with penetration (penis in vagina/anus), condom use at first intercourse and condom use at last intercourse (responses 'yes/no'). These aspects were not investigated in the pre-test, assuming that sexual activity is unusual at that age (24). On sexual behaviour, a declaration of sexual orientation ('heterosexual', 'bisexual', 'homosexual', 'I don't know') was also included.

Analysis

A descriptive analysis was used, with the average and standard deviation for the quantitative variables and the distribution of absolute and relative frequencies for the qualitative variables.

Difference-in-differences (dif-in-difs) analyses were conducted to evaluate the impact of the intervention. Using a dif-in-difs analysis allowed us to simultaneously compare the difference between pre-test and post-tests in the intervention group versus the control group. The differences between the pre- and the post-tests in each group were expressed in terms of odds ratio (OR) and their confidence intervals at 95% (95% CI) obtained in the previous models. The modification of the difference between pre- and post-tests due to the intervention (interaction) was assessed using the difference in coefficients of the time between the groups, and was reported in terms of ratio of OR (ROR) at 95% CI.

In the same way, the global extent of the effect on each category using linear regression models was analysed, using the total score for each category as the dependent variable and the intervention group and time (pre-test or post-tests) in the control group and the intervention group as independent variables. Beta coefficients and their 95% CI were reported as a measure of the differences in the mean for each group, and the differences of these coefficients as a modification of the difference due to the intervention.

Values of $p<0.05$ were considered to be statistically significant in all comparisons. The analysis was performed with the statistical software Stata version 14.

Results

Knowledge

There was an increase in knowledge: from 4.8 to 7.0 and 7.8 in the control group, and from 4.1 to 6.8 and 7.7 in the intervention group (Table 1). This increase was greater in the intervention group, with a difference between the groups at the limit of significance in the first post-test ($p=0.053$) and significant in the second post-test ($p=0.022$).

In the analysis by sex, girls in the intervention group started from the lowest average score in the

Table 1. Knowledge, attitudes and skills.

	Control Group			*Intervention Group*			*Dif-in-difs*	*p*
	Mean score (SD)	*Difference vs. pre-test (IC95%)*	*p*	*Mean score (SD)*	*Difference vs. pre-test (IC95%)*	*p*		
Knowledge								
Pretest	**4.8** (0.12)	–		**4.1** (0.12)	–		–	
–**Girls**	4.8 (0.18)			3.9 (0.18)				
–**Boys**	4.7 (0.18)			4.1 (0.17)				
Post-test 1	**7.0** (0.13)	**2.25** (1.89, 2.60)	**< 0.01**	**6.8** (0.12)	**2.74** (2.39, 3.09)	**< 0.01**	**0.49** (–.01, 0.99)	**0.053**
–**Girls**	7.4 (0.16)	2.65 (2.18, 3.11)	< 0.01	7.0 (0.15)	3.12 (2.64, 3.59)	< 0.01	0.47 (–.19, 1.14)	0.166
–**Boys**	6.6 (0.21)	1.85 (1.32, 2.38)	< 0.01	6.5 (0.19)	2.38 (1.87, 2.88)	< 0.01	0.53 (–.20, 1.26)	0.157
Post-test 2 (24 months later)	**7.8** (0.14)	**1.54** (1.34, 1.73)	**< 0.01**	**7.7** (0.14)	**1.86** (1.67, 2.06)	**< 0.01**	**0.32** (0.04, 0.60)	**<0.05**
–**Girls**	7.9 (0.19)	1.56 (1.28, 1.83)	< 0.01	8.1 (0.18)	2.09 (1.82, 2.37)	< 0.01	0.54 (0.15, 0.93)	<0.01
–**Boys**	7.8 (0.20)	1.53 (1.25, 1.80)	< 0.01	7.4 (0.22)	1.61 (1.33, 1.88)	< 0.01	0.08 (–.32, 0.47)	0.698
Attitudes								
Pretest	**6.2** (0.13)	–		**5.9** (0.13)	–		–	
–**Girls**	6.4 (0.17)	–		6.1 (0.18)	–		–	
–**Boys**	6.1 (0.19)	–		5.7 (0.18)	–		–	
Post-test 1	**8.0** (0.12)	**1.77** (1.41, 2.13)	**< 0.01**	**7.8** (0.14)	**1.93** (1.58, 2.29)	**< 0.01**	**0.16** (–.33, 0.67)	**0.520**
–**Girls**	8.8 (0.13)	2.42 (1.98, 2.85)	< 0.01	8.7 (0.14)	2.57 (2.12, 3.01)	< 0.01	0.15 (–.47, 0.77)	0.629
–**Boys**	7.2 (0.19)	1.14 (0.60, 1.68)	< 0.01	7.0 (0.21)	1.31 (0.79, 1.83)	< 0.01	0.17 (–.58, 0.92)	0.662
Post-test 2 (24 months later)	**8.5** (0.14)	**1.14** (0.94, 1.33)	**< 0.01**	**8.3** (0.15)	**1.23** (1.03, 1.42)	**< 0.01**	**0.09** (–.18, 0.37)	**0.509**
–**Girls**	9.1 (0.15)	1.36 (1.10, 1.60)	< 0.01	9.1 (0.13)	1.48 (1.23, 1.73)	< 0.01	0.12 (–.23, 0.47)	0.473
–**Boys**	7.9 (0.22)	0.94 (0.65, 1.23)	< 0.01	7.5 (0.26)	1.48 (0.61, 1.21)	< 0.01	0.03 (–.33, 0.39)	0.877
Skills								
Pretest	**6.1** (0.13)	–		**5.8** (0.12)	–		–	
–**Girls**	6.3 (0.16)	–		6.1 (0.17)	–		–	
–**Boys**	5.9 (0.20)	–		5.4 (0.16)	–		–	
Post-test 1	**6.5** (0.13)	**0.42** (0.08, 0.77)	**< 0.05**	**6.7** (0.13)	**0.96** (0.62, 1.31)	**< 0.01**	**0.54** (0.04, 1.03)	**0.031**
–**Girls**	6.9 (0.16)	0.66 (0.22, 1.11)	< 0.01	7.5 (0.15)	1.32 (0.87, 1.77)	< 0.01	0.66 (0.21, 1.29)	0.043
–**Boys**	6.1 (0.19)	0.21 (–.31, 0.73)	0.424	6.0 (0.18)	0.59 (0.09, 1.09)	< 0.05	0.38 (–.33, 1.09)	0.294
Post-test 2 (24 months later)	**7.1** (0.15)	**0.51** (0.31, 0.71)	**< 0.01**	**7.1** (0.16)	**0.65** (0.45, 0.85)	**< 0.01**	**0.13** (–.14, 0.41)	0.349
–Girls	7.5 (0.19)	0.64 (0.37, 0.90)	< 0.01	7.6 (0.19)	0.69 (0.43, 0.95)	< 0.01	0.05 (–.32, 0.42)	0.772
–Boys	6.7 (0.23)	0.42 (0.13, 0.71)	< 0.01	6.5 (0.25)	0.55 (0.25, 0.84)	< 0.01	0.13 (–.28, 0.55)	0.538

Table 2. Sexual behaviour.

	Pre-test (12- to 13-year-olds)				*Post-test 1 (15- to 16-year-olds)*				*Post-test 2 (17- to 18-year-olds)*			
	Control		*Intervention*		*Control*		*Intervention*		*Control*		*Intervention*	
	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*
Homosexual	**0.6**	2	**0.9**	3	**0.7**	2	**1.6**	5	**1.6**	3	**1.6**	3
Heterosexual	**97.0**	319	**96.0**	314	**97.0**	289	**93.9**	291	**95.2**	176	**94.6**	176
Bisexual	**0.9**	3	**0**	0	**1.0**	3	**2.9**	9	**1.1**	2	**2.7**	5
I don't know	**1.5**	5	**2.5**	8	**1.0**	3	**1.6**	5	**21.6**	3	**1.1**	2
No answer	**0.0**	0	**0.6**	2	**0.3**	1	**0.0**	0	**0.5**	1	**0.0**	0
Sexual intercourse												
Total	–	–	–	–	**40.6**	121	**34.8**	108	**63.8**	118	**55.9**	104
▪ **Girls**	–	–	–	–	**50.3***	75	**34.9***	53	**70.0***	63	**56.0***	56
▪ **Boys**	–	–	–	–	**30.9**	46	**34.8**	55	**57.9**	55	**55.8**	48
Condom use												
First time	–	–	–	–	**77.7***	94	**92.6***	100	**87.3**	103	**91.4**	95
▪ **Girls**	–	–	–	–	**78.7***	59	**94.3***	50	**84.1**	53	**89.3**	50
▪ **Boys**	–	–	–	–	**76.1***	35	**90.9***	50	**90.9**	50	**93.8**	45
Last time	–	–	–	–	**72.7**	88	**80.6**	87	**77.1**	91	**82.7**	86
▪ **Girls**	–	–	–	–	**72.0**	54	**83.0**	44	**69.8***	44	**85.7***	48
▪ **Boys**	–	–	–	–	**73.9**	34	**78.2**	43	**85.5**	47	**79.2**	38

* $p < 0.05$.

pre-test (3.9) and obtained the highest in the second post-test (8.1), while boys from the same group started from a similar situation (4.1) but reached a lower final score (7.4). In the control group, there were no differences between boys and girls.

Attitudes

There were significant increases in the total score: 6.2 to 8 and 8.5 in the control group; 5.9 to 7.8 and 8.3 in the intervention group (Table 1). This evolution was similar in both groups, without significant differences.

The starting situation was similar in boys and girls, but girls evolved better in both groups, with an average of 9.1 in the second post-test vs. 7.9 for boys in the control group and 7.5 for boys in the intervention group.

Skills

The total score increased in both arms: 6.1 to 6.5 and 7.1 in the control group and 5.8 to 6.7 and 7.1 in the intervention group (Table 1). This increase was greater in the intervention group in the first post-test ($p = 0.031$).

Boys in the intervention group started with the lowest average (5.4 vs. close to 6.2 for the girls in both groups and 5.9 for boys in the control group) and also obtained the lowest final score: 6.5 in the second post-test vs. 7.6 of the girls in their group (6.7 and 7.5 in the control group, respectively).

Sexual behaviour

Declared sexual orientation was similar in both intervention and control groups at the different times of the study: around 95% of the pupils declared themselves to be heterosexual (Table 2).

Sexual intercourse was more frequent in the control group (41 vs. 35% in the intervention group in the first post-test) and also in the second post-test (64 vs. 56%), but without statistical significance. In the analysis by sex, there were significant differences among girls, with lower rates in the intervention group.

Among those, condom use at first intercourse was significantly higher in the intervention group, among both girls and boys, at more than 90% compared with 78% in the control group. These differences disappeared in the second post-test where condom use increased in the control group up to 89%, while remaining at 91% in the intervention group.

Condom use at last intercourse was greater in the intervention group: 81 vs. 73% in the first post-test, and 83 vs. 77% in the second post-test, but without statistical significance. There were significant differences among girls in the analysis by sex: 70% in the control group vs. 86% in the intervention group in the second post-test.

Discussion

Boys and girls, in both arms, improved in sexuality knowledge, attitudes and skills. However, the intervention group experienced a significantly greater increase in knowledge and in skills (in the first post-test). There was also an impact on sexual behaviour: reduced sexual intercourse with penetration, with statistical significance in girls, and greater condom use at first intercourse in both sexes after the intervention. In the medium term, girls also declared greater condom use in their most recent sexual intercourse.

At the same time, the intervention had no impact on attitudes: variables evolved positively but without differences between the groups. These findings were similar to the results obtained by other sex education programmes (7, 26–28). This fact may have several explanations; for instance, the limited influence of schools (29, 30) in a context in which pupils are influenced on a massive scale, primarily through the media, which presents a model of sexuality based on gender stereotypes (29). This reality makes it extremely difficult for these interventions to achieve health outcomes and highlights the urgent need for action from different fields beyond school (6, 30).

These results are consistent with those found in other Spanish studies, which reported improvements in knowledge and skills, and sometimes in sexual behaviour (19, 25, 28). However, they should be interpreted wisely, taking into account the limitations of this investigation. On the one hand, the hours of intervention were within the recommendations (7, 14), it was superior even to other rigorously designed and evaluated programmes (25–28, 31), and the teachers fulfilled their commitment. But, on the other hand, the quality of the intervention relies on teachers and their experience, training and fidelity with the scheduled sessions, which are key aspects in these kinds of interventions (7, 32), yet were not controlled. Another possible bias could be the pupils' socioeconomic, cultural and religious status, a non-collected variable, which could influence extracurricular sexual education, but which was sought to be controlled in the way in which similar centres in the same geographical area were selected. Finally, the sample size in the second post-test was smaller than expected, because absences were higher than initially expected, which decreased its statistical power.

Regarding sexual behaviour, note that data from this study is consistent with others recently conducted in Asturian young people. Specifically, the HBSC-2014 study (33) found that 59% of Asturian adolescents aged 17–18 had sexual intercourse with penetration (vs. 60% in the average of both groups of our study), 84% of whom used a condom at last intercourse (vs. 80% of our study). Compared with other regions (33), Asturias was one of the communities with safer practices at last intercourse (with 10 percentage points above the national average for condom use). Condom use at last intercourse declined by 4% in adolescent Asturians aged 17–18 in relation to HBSC-2006 study data (24), although there was a fall of 12% in the national average. According to the data obtained, we could say that the intervention, with 50% coverage from the 2012–2013 academic year, has perhaps helped to maintain the Asturian figures of condom use.

The findings of this study are also comparable to others recently conducted in Spain within young people (29, 34, 35), in which girls declared more practices with penetration and reduced condom use, which also occurred in the control group. This ties in with the fact that the impact of the intervention on sexual behaviour occurred mostly among girls: penetration was less frequent thanks to them, and girls also used more condoms. These differences seem to indicate that girls are more receptive to these kinds of interventions (9, 25, 28).

Therefore, it can be concluded that the NONP programme had a positive impact. In relation to the research questions, it increased condom use and improved knowledge and skills, although in a limited way, and more notably among girls. These findings are important because, despite the noted effects of sex education (5–7), not all studies have been able to find an impact on sexual behaviour (7, 19, 26–28, 32), which may have to do with the duration and quantity of this intervention (four school years, with almost 30 h). It would obviously be necessary to repeat this investigation in the future to demonstrate its validity.

Meanwhile, this intervention may be a good starting point to making sex education universal through compulsory education, as is internationally recommended and as is done in other countries (7, 10, 12, 14). In extending sex education, there are two key aspects to strengthen: teacher training (7–14), which would have an impact on commitment and quality of the intervention (7, 32); and the setting of a minimum curricular content, fully integrated into the school curriculum (7, 12). For example, in Estonia, with a sex education programme in curricula throughout 3 years, the improvement in youth sexual indicators since 2000 has been impressive. Such improvements include an unprecedented reduction in STIs and HIV infections rates and also sizeable downward trends in abortion and teenage birth rates due to a sharp increase in condom and contraceptive use among young people (10).

To improve the impact on sexual health goals, complementary interventions, involving families, media, and health services, are also essential, while taking into account social inequities as well as the huge influence of the internet's social networks and pornography (5, 6, 10, 36–38). Thus, sex education is recommended from health services (in revisions programmed in childhood and adolescence), recreational actions at the community level (cinema, etc.) and free distribution of quality condoms (5, 6, 12, 39–40).

These are key aspects to fully achieve the rights of adolescents, the United Nations SDGs and, above all, improve the welfare, health and education of adolescents.

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Declaration of Conflicting Interest

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Observational physical activity in public open spaces: environmental determinants of physical activity intensity levels in Iran

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Abstract: Public open spaces play an important role in promoting physical activity (PA). This study aimed to describe user characteristics of public open spaces (POSs) given the type of location and levels of PA. The study also evaluated the relationship between the environmental determinants of POSs and PA intensity. The study used observational data to measure environmental determinants and obtain information on users and their activity levels in the POSs of Darab in Iran. Out of 13,342 individuals observed, the proportion of men was slightly higher than that of women. More than half of the users observed in the community parks performed vigorous activities. Children and teenagers were found more often than other age groups doing vigorous activities. Most of the observed users performed vigorous activities in the evening and sedentary activities during weekends. Seniors were more sedentary than the other groups. Greater size, and better facilities and aesthetics of POSs increased the odds of being more active. However, a higher number of incivilities was associated with a greater chance of walking and lower odds of performing vigorous activities. As the quality of POSs contributes to PA levels, stakeholders should consider the quality of such spaces to improve retrofitting and designing POSs to maximize activity levels.

Keywords: physical activity, observational study, park, built environment, public health

Introduction

Despite the known benefits of physical activity (PA), many Iranian people are not active enough, which results in overweight (1). In addition, a previous study conducted in Iran showed that almost all pedestrian activities seemed to be due to an obligation, such as business or essential shopping, while low propensity existed for optional activities such as going to parks (2).

Public open spaces (POSs), including parks, have been identified as environmental supports for leisure activities that help promote physical health, psychological health, and social well-being (3–6). Consequently, providing high quality parks may increase park usage or the amount of PA (7–9). However, the rapid growth of cities and urban areas, especially in developing countries, has reduced the amount of POS (e.g. parks) in recent decades, causing these spaces to shrink, or turn into left over spaces, as a result of such rapid growth (10).

POSs were originally designed for recreation, leisure, and increasing connection to nature rather than specifically for enhancing PA levels (11). The increasingly high levels of inactivity, and its association with many diseases such as diabetes, heart disease, blood pressure, and cancer (12,13), underscore the importance of reconsidering POSs and their potential

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for promoting health. Thus, it is important to know exactly how POSs contribute to PA, and to determine the degree to which POSs are managed or designed to optimize PA among all age groups and sexes in communities, especially in developing countries.

Direct observation using the System for Observing Play Recreation in Communities (SOPARC) can help understand PA levels and user demographic characteristics (14). As studies using this system have confirmed the effect of open spaces on PA (15), they have been conducted mostly in large cities or rural areas in America, and thus the findings from systematic observations are limited to that region and cannot be generalized to different communities. Within this paradigm, systematic observation has not been done in Iran, and the association of open spaces with PA levels is unknown in Iranian communities.

Based on prior studies conducted in Iran, parks, based on their size and facilities, have been categorized into different types, including pocket parks, neighborhood parks, community parks, city parks, and regional parks (16,17). Therefore, a square is known as a plaza or pocket park when equipped with multiple diverse facilities that provide opportunities for PA (16,17).

Although there is a growing body of literature about PA in parks (15,18), to the best of our knowledge this body of works has some gaps. Previous researchers have indicated that PA levels differ based on user demographic variables, but most of these studies are local and have limited generalizability (15), suggesting the need to perform park observations in a variety of communities. In addition, few researchers have examined the association between PA and user characteristics according to type of location (19,20). In addition, despite the knowledge that park use is influenced by environmental characteristics (21), few researchers have considered its influence on PA intensity (22,23). In order to gain a comprehensive understanding about park users and PA, the current study was designed to investigate environmental determinants with regard to PA intensity in POSs in the city of Darab, Iran.

Methods

Setting

Darab, a small city and capital of Darab County, is located in Fars Province, Iran, and has a population of approximately 100,000 inhabitants. The POSs in the city can be categorized as community parks, neighborhood parks, and squares. Currently, there are three community parks, two neighborhood parks, and five squares as POSs inside the city. All of these areas were investigated in this study. To ensure that all the POSs were used for various types of PA, each POS was visited initially three times per day (morning, afternoon, evening) on two different days (one weekday and one weekend) by two trained graduate students. The initial observation indicated that, in two of the squares, fewer than 15 total users were observed. Thus, these two squares were eliminated from the remainder of the research.

POS measurement

To understand their use, POSs should be audited for their features and qualities. The POSs were assessed by the authors using the Community Park Audit Tool (CPAT) in June 2018. The CPAT is a comprehensive, yet user-friendly, instrument that has demonstrated excellent inter-rater reliability with 80–90% agreement for the vast majority of items (24). The CPAT system of observation has provided comprehensive information about 14 facilities and 25 amenities. A total of 13 facilities and 9 amenities of the CPAT instrument that were available in studied POSs were considered for this study (Table 1). The facilities were defined as areas that could be used for any PA, such as fitness equipment or sport fields, while amenities referred to features that might support PA participation, such as benches or drinking fountains (25). All usable features in the POSs in Darab were audited and dichotomized into having or not having a specific feature. In addition, the CPAT was also used to audit incivility and aesthetic features of parks and squares. Incivility was defined as signs of unsociable behavior such as vandalism, presence of noticeable amounts of trash or broken glass, or any safety concerns such as dangerous spots in the park. Incivility was measured based on eight items, while aesthetics refer to beautiful features that were presented in the POSs, such as evidence of landscaping, presence of trees throughout the parks, or water features. Aesthetics were determined by assessing seven items (25). The full list of incivilities and aesthetic items are listed in Table 2. Each park and square was observed separately by the authors,

Table 1. List of facilities and amenities investigated in the POSs.

Facilities		*Amenities*	
1. Playground	8. Volleyball Court	1. Restroom	8. Park monitored
2. Sport Field	9. Trail	2. Drinking fountain	9. Rules posted about animals
3. Baseball Field	10. Fitness Equipment	3. Bench	
4. Swimming Pool	11. Skate Park	4. Picnic table	
5. Splash Pad	12. Open space	5. Trash cans	
6. Basketball Court	13. Lake	6. Food machine	
7. Tennis Court		7. Any emergency devices	

Table 2. List of incivilities and aesthetic features investigated in the POSs.

Incivilities	*Aesthetics*
1. Graffiti *(e.g. markings or paintings that reduce the visual quality of the area)*	1. Evidence of landscaping *(e.g. flower beds, pruned bushes)*
2. Vandalism *(e.g. damaged signs, buildings, equipment, etc.)*	2. Artistic feature *(e.g. statue, sculpture, gazebo, fountain)*
3. Excessive litter *(e.g. noticeable amounts of trash, broken glass, etc.)*	3. Historical or educational feature *(e.g. monument, nature display, educational signs, etc.)*
4. Excessive animal waste *(e.g. noticeable amounts of dog waste)*	4. Wooded area *(e.g. thick woods or dense trees)*
5. Excessive noise *(e.g. noticeable sounds that are unpleasant or annoying)*	5. Trees throughout the park *(e.g. scattered trees)*
6. Poor maintenance	6. Water feature *(e.g. lake, stream, pond)*
7. Evidence of threatening persons or behaviors	7. Meadow *(e.g. natural, tall grassy area)*
8. Dangerous spots in the park	

and 96–100% agreement was achieved between the observers. In addition, information about the size of each open space was gathered from the local authority of the town.

Physical activity measurement

Before data collection, all POSs were divided into small, observable segments by the research team. Summer is known as the most desirable time and weather for outdoor recreational PAs in Darab city. Hence, data collection was conducted between July and August 2018 using SOPARC to observe POSs. The SOPARC direct observation instrument was used to obtain comprehensive information about POS users and PA levels (14). The validity of this system has been confirmed based on heart-rate monitoring studies (26,27). The observations were conducted by four observers (the second author and three trained undergraduate students) for 6 weeks, on all weekend days (Thursday and Friday are known as weekend in Iran) and two randomly selected weekdays. Before data collection, observer training was performed in a 2-day workshop specifically for the classification of PA and age group of POS users. On the second day of the workshop, field-based observations at three times of day were performed to ensure the quality and validity of observations by each observer.

The observations generally took less than 1 h to cover all targets of the parks and squares. Previous researchers have indicated that 12 observations at different times of the day and on different days were sufficient for reliably estimating weekly park use (28,29). Accordingly, each park and square was observed three times per day (8.00 a.m., 11.00 a.m., and 6.00 p.m.) on two weekdays and two weekends by paired observers. Therefore, a total of 228 scans (19 target areas) were conducted to observe activities in the studied areas. All target areas were scanned visually from left to right following SOPARC checklist guidelines. As activity areas were scanned by a pair of observers, the average count of observed users was considered to raise the reliability of the number of users and prevent observing multiple people at the same time. The same weather conditions (sunny and fair conditions) were reported when the observations were undertaken. In addition, to ensure the quality of data collection, unannounced visits were made by the first author.

Each park or square user was categorized according to the sex (female, male), age group including children (12 years or younger), teenagers (13–18 years), adults (19–59), and seniors (60 years or over), and PA levels including sedentary (lying down, sitting, or standing), walking (light walking or moving), and vigorous (moderate or vigorous walking, running, and strength activities). The age groups were estimated based on their appearance and age group codes during observation suggested by McKenzie *et al.* (30) Cohen's kappa coefficients for paired observers ranged from 0.78 to 0.98, suggesting acceptable range for inter-observer agreement (31).

Data analysis

Data were analyzed using SPSS version 22. Descriptive statistics were used to show the individual characteristics of users (sex, age group), which were analyzed based on PA levels and type of POS (community park, neighborhood park, and squares). Chi-square test considering 5% significance was used to discover if there is an association between categorical variables. In addition, the associations between PA levels and environmental determinants of POSs including size, facilities, amenities, incivilities, and aesthetics were assessed using a multinomial logistic regression model. Sedentary activity was used as the reference category.

Results

The average size of community parks, neighborhood parks, and squares was 2.47 (SD 0.42, range 2.40–2.50), 1.40 (SD 0.13, range 1.20–1.50), and 1.45 (SD 0.81, range 0.60–2.50), respectively. Each community park contained at least six facilities and nine amenities followed by eight facilities and nine amenities in the neighborhood parks, and three facilities and three amenities in squares. Playgrounds and open spaces were the most common facilities in all parks and squares. In addition, a low number of incivilities (range 0–2) was observed in all POSs, with all locations receiving an average mark for aesthetic features (range 3–4) (Table 3).

As shown in Table 4, a total of 13,342 males and females were observed (51.4 % men) including 7812 in community parks (49.6% men), 2219 in neighborhood parks (47.9% men), and 3311 in squares (58.2% men). Users were more vigorously active in the neighborhood parks, followed by more vigorous activity in community parks than in squares. More men were observed in the subcategories of walking (51.5%) and vigorous activities (55.9) than women.

Overall, we observed more children and teenagers (55.3%) engaged in vigorous activities (90.3) compared with adults and older people. Seniors were the least active group (3.9% in walking, 0.6% in vigorous activity). The majority of individuals were observed in the evening (54%) during weekends (60.2%). Adults were less sedentary in the morning (1.2%) and did more walking (58.3%) and vigorous activity (47.9%) on weekend evenings.

A multinomial regression model was used to assess PA levels. The results indicated that the greater the size of the park, the more walking activity (OR 1.44, CI 1.35–1.55) and vigorous PA (OR 1.20, CI 1.12–1.27) increased when compared with a sedentary state. A higher number of facilities was associated with greater levels of PA such as walking (OR 1.18, CI 1.14–1.21) and vigorous activity (OR 1.88, CI 1.82–1.98). In addition, a higher number of amenities increased the odds of walking (OR 10.6, CI 1.05–1.08) compared with a sedentary state. A greater number of aesthetic features in parks and squares increased the chance of observing walking (OR 1.71, CI 1.52–1.92) and vigorous activity (OR 1.22, CI 1.10–1.36). Finally, a greater number of incivilities was associated with decreased odds of walking (OR 0.76, CI 0.71–0.82) and increased odds of vigorous activity (OR 1.16, CI 1.08–1.25). The results of all variables are detailed in Table 5.

Discussion

The findings indicate that there were differences in users' demographic variables, times of day, day of

Table 3. Characteristics of parks and squares.

	Community park 1	*Community park 2*	*Community park 3*	*Neighborhood park 1*
Size (ha)	2.5	2.4	2.5	1.2
Incivilities (n)	1	1	0	2
Aesthetics (n)	3	3	4	3
Facilities (n)	Playground, sport field, volleyball court, fitness equipment, open space (12)	Playground, sport field, open space (6)	Playground, sport field, volleyball court, fitness equipment, open space (11)	Playground, Fitness equipment, Open space (8)
Amenities (n)	Restroom, drinking fountain, bench, picnic table, trash can, food machines (15)	Drinking fountain, bench, trash can, food machines (9)	Restroom, Drinking foundation, Bench, Trash can, Food machine (13)	Restroom, picnic table, bench, trash can (9)

	Neighborhood park 2	*Square 1*	*Square 2*	*Square 3*
Size (ha)	1.5	0.9	2.5	0.6
Incivilities (n)	2	1	1	2
Aesthetics (n)	3	3	3	4
Facilities	Playground, Fitness equipment, Open space (8)	Playground, open space (3)	Playground, open space (3)	Tennis table, Open space (4)
Amenities	Restrooms, picnic tables, bench, trash can (11)	Trash can (3)	Bench, trash can (7)	Restrooms, drinking fountain, bench, trash can (8)

the week, and PA levels based on location type. More than half of users were observed in community parks doing different levels of PA. This may be due to the presence of more facilities and amenities in these spaces compared with neighborhood parks and squares, thus attracting a higher number of users for various purposes (8,32). In general, more men were observed in POSs than women, while less men were observed compared with women in parks.

There have been inconsistent findings in this matter. Although many researchers have indicated a higher percentage of men in parks compared with women (1,33), some researchers have reported a higher percentage of women compared with men in parks (34,35). Older people comprised the smallest percentage of users across all parks and squares. In addition, supporting previous studies (36–38), older people were observed to be less active compared with other age groups. This finding suggests that there is an opportunity to enhance PA and using POSs among older adults.

More than half of the users were children and teenagers who were frequently observed in community parks engaging in vigorous activities (36). Most adults were observed in community parks doing sedentary activities. This may be due to greater presence of children while adults were watching them playing or engaging in other sport activities. To increase the PA level of adults, organized/unorganized activities should be provided around playgrounds where children play or do other sport activities.

Our results suggested that the most frequent PA was vigorous activity, which is contrary to the findings reported in some previous studies (39,40). This may be due to the higher number of children and teenage groups who were observed to be frequently engaged in vigorous activities. Supporting Scott (41), who found users' patterns vary depending on the time of day, our findings revealed that users were more frequently observed during weekend evenings engaging in higher PA levels. Because data collection was performed in the summer, the evening is the most preferred weather for engaging in outdoor activities.

The most interesting finding of the study was the association between the park and square characteristics and PA levels. We found that the

Table 4. User's demographic characteristics.

	Total n=13,342 n(%)	*Community parks n=7812 n(%)*	*Neighborhood parks n=2219 n(%)*	*Squares n=3311 n(%)*	X^2	*p*
Sex					82.80	<0.001*
Female	6480(48.6)	3939(50.4)	1157(52.1)	1384(41.8)		
Male	6862(51.4)	3873(49.6)	10.62(47.9)	1927(58.2)		
Age					140.42	<0.001*
Child	4711(35.3)	2903(37.2)	728(32.8)	1080(32.6)		
Teen	2666(20)	1555(19.9)	403(18.2)	708(21.4)		
Adult	4116(30.8)	2166(27.7)	870(39.2)	1080(32.6)		
Seen	1849(13.9)	1188(15.2)	218(9.8)	443(13.4)		
PA					236.83	<0.001*
Sedentary	4363(32.7)	3112(35.4)	431(18.6)	820(37.1)		
Walking	1868(14.0)	894(10.1)	528(22.8)	446(20.2)		
Vigorous	7111(53.3)	4806(54.5)	1360(58.6)	945(42.7)		
Time of Day					187.16	<0.001*
Morning	1685(12.6)	1094(14)	87(3.9)	504(15.2)		
Afternoon	4452(33.4)	2589(33.1)	796(35.9)	1067(32.2)		
Evening	7205(54)	4129(52.9)	1336(60.2)	1740(52.6)		
Day of the week					11.30	0.004*
Weekday	5312(39.8)	3053(39.1)	859(38.7)	1400(42.3)		
Weekend	8030(60.2)	4759(60.9)	1360(61.3)	1911(57.7)		
	Total n=13,342 n(%)	*Sedentary*	*Walking*	*Vigorous*	X^2	*p*
Gender					61.36	<0.001*
Female	6480(48.6)	3617(50.6)	1437(48.5)	1426(44.1)		
Male	6862(51.4)	3532(49.4)	1523(51.5)	1807(55.9)		
Age					9939.86	<0.001*
Child	4711(35.3)	16(0.4)	210(11.2)	4485(63.1)		
Teen	2666(20.0)	89(2.0)	646(34.6)	1931(27.2)		
Adult	4116(30.8)	2525(57.9)	940(50.3)	651(9.2)		
Seen	1849(13.9)	1733(39.7)	72(3.9)	44(0.6)		
Time of Day					114636	<0.001*
Morning	1685(12.6)	54(1.2)	90(4.8)	1541(21.7)		
Afternoon	4452(33.4)	1602(36.7)	689(36.9)	2161(30.4)		
Evening	7205(54.0)	2707(62.0)	1089(58.3)	3409(47.9)		
Day of the week					7.61	0.02*
Weekday	5312(39.8)	1017(40.7)	1125(37.3)	3170(40.4)		
Weekend	8030(60.2)	1482(59.3)	1863(62.3)	4685(59.6)		

*Indicates significance at $p<0.05$.

larger the size of the park or square, and higher the number of facilities in these areas, the higher the odds of increased PA levels. This finding is supported by many previous studies, which revealed that greater size of parks and having more facilities available enhances the use of parks for PA (8,42,43).

Table 5. Multinomial regression results of physical activity intensity in public open spaces.

	OR	*p value*	*95 % CI*
Walking versus sedentary			
Size	1.44	<0.001*	1.35–1.55
Facilities	1.18	<0.001*	1.14–1.21
Amenities	1.06	<0.001*	1.05–1.08
Incivilities	0.76	<0.001*	0.71–0.82
Aesthetics	1.71	<0.001*	1.52–1.92
Vigorous versus sedentary			
Size	1.20	<0.001*	1.12–1.27
Facilities	1.88	0.01*	1.82–1.98
Amenities	0.99	0.47	0.98–1.00
Incivilities	1.16	<0.001*	1.08–1.25
Aesthetics	1.22	<0.001*	1.10–1.36

*Indicates significance at $p<0.05$.

Within this paradigm, the presence of a higher number of amenities increases the odds of users engaging in walking compared with sedentary activities. Thus, it is reasonable to state that an understanding of amenities and facilities could result in maximal use of POSs for greater PA.

Higher numbers of incivilities were associated with lower incidence of walking activity, but higher odds of vigorous activities. These findings are difficult to explain, as the association between incivilities and PA is inconsistent in the literature (44). Incivility was measured objectively in the study, which may differ from users' perceptions. Alternatively, the increased presence of incivilities may indicate higher use by people, which in turn increases the likelihood of vigorous activities (22). In addition, in line with previous studies, we found that greater aesthetic features of POSs enhances the odds of higher PA intensity (45,46).

Strengths and limitations of the study

This study was limited in several ways. The cross-sectional study on POSs may have limited generalizability. In addition, the study was performed in summer, yet it is essential to examine POS utilization in other seasons to better understand seasonal PA patterns and to identify environmental constraints to participating in PA. Although valid and reliable objective measurements were used, causal inferences cannot be made for the correlation between PA and individual characteristics. The POSs in Darab city have been observed in the current study, which represent their own environmental, cultural, political, and social characteristics. Finally, systematic observation was conducted at specific intervals of the day for PA in POSs, which may not represent the PA of users during their entire stay.

The current study contributes to a small, but growing, body of literature by using the SOPARC direct observation instrument, which has been used and validated in studies in America and Europe. The findings of the study present PA levels in parks and squares in Iranian communities. Understanding the influence of the type of POS and socio-demographic variables on use of POSs can be useful in retrofitting and designing such spaces to maximize activity levels. Eventually, maximized PA can lead to diminished obesity and enhanced health conditions among all age groups. In addition, the findings of the study provide new insights into the association between the characteristics of parks and squares and the intensity of PA. To the best of our knowledge, few studies have examined the association between environmental characteristics of POS and PA intensity. Our study provided evidence of the utility of SOPARC as a means of measuring PA in parks and squares. Furthermore, the findings of the study contribute to the literature in that limited research has objectively examined the association between open spaces and PA in developing countries.

Conclusion

This study has provided objective information about the environmental characteristics of POSs and their usage in Darab city, which may be used by urban planners and park designers for making possible policy changes in Darab parks and squares. Clear differences in use and levels of PA were observed in parks and squares on different days and at different times. The squares were used less compared with neighborhood and community parks, while these spaces have the opportunity to be improved and retrofitted for greater utilization, and increased visitation may result in enhanced PA in communities. According to the evidence obtained from the parks and squares observed in this study, there is a need for facilities that promote PA among older adults. Furthermore, social activities should be organized to enhance the presence of adults and improve opportunities for vigorous activity among them. To enhance and promote higher PA levels for all users, the time and day of the week should be considered when implementing programs.

Future research is required to investigate the association between specific characteristics of parks and squares for specific age groups. Knowing what kinds of facilities are most conducive to PA would be useful in helping developers and urban planners maintain facilities that provide opportunities for greater PA levels. In addition, longitudinal studies are required to support findings of studies about open spaces and PA. We suggest that future research should combine direct observational data with subjective measurement regarding perceived environmental characteristics to achieve a more comprehensive understanding of open spaces in relation to PA. Finally, policy makers, urban planners, and health professionals should collaborate to achieve an effective way of exploiting the environmental features of parks and squares to promote PA.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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Appreciation for food, an important concept in mindful eating: association with home and school education, attitude, behavior, and health status in Japanese elementary school children

Yui Kawasaki and Rie Akamatsu

Abstract:
Background: Appreciating food is an important concept in mindful eating, mentioned by advocates of an expanded model of mindful eating in 2016. With the exception of Japan, this concept is not common in many countries.
Objective: We aimed to describe the role that appreciation for food has in the health of children from two perspectives: 1) association between children's appreciation for food and their backgrounds, such as home and school educational experiences related to food, and 2) association between their appreciation for food and outcomes, such as attitude toward food, eating behaviors, and health status.
Design: Cross-sectional.
Methods: Data were obtained from self-administered anonymous questionnaires sent to 2070 elementary school students in Tokyo, Japan, during October and December 2006. They contained several question items pertaining to the characteristics of participants: home and school educational experiences related to food, attitudes towards food (including level of appreciation for food), eating behaviors, and health status. *T*-test, Pearson's correlation coefficient, and simple and multiple linear regression analyses were used to compare the total score of appreciation for food with other factors.
Results: Surveys were completed by 1994 children (response rate: 96.3%) and significant correlations were indicated by gender, educational experiences at home and school, attitudes toward healthy food, recommended food preferences, breakfast consumption, and body mass index.
Conclusions: We concluded that appreciation for food plays an important role in children's health.

Keywords: mindful eating, appreciation for food, children, English, attitude, nutrition education

Introduction

Much attention is paid to mindful eating by practitioners and researchers in the field of nutrition and dietetics. Mindful eating is defined as the 'non-judgmental awareness of internal and external cues influencing the desire to eat, food choice, and quality of consumption' (1). It is associated with eating good food with enjoyment and focus, which positively impacts individual and environmental health by preventing obesity and minimizing food loss. This definition was created by applying mindfulness in psychological therapy (1). According to several cross-sectional studies, mindful eaters choose and consume food in a way that positively affects their body mass index (BMI), portion sizes, emotional eating, and mental wellbeing (2–5). In addition, intervention studies promoting mindful eating in

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healthy individuals and patients with non-communicable diseases (e.g. obesity, diabetes, and chronic kidney disease) have had positive impacts such as decreased body weight and improved quality of food choices (6–11).

Appreciation for food is an important concept in mindful eating. Fung *et al.* also refer to appreciation for food in their promotion of an expanded model of mindful eating (12). It is necessary for mindful eaters to be aware of the relationship between food and their body, feelings, mind, and the interconnectedness of all that is around them (1). Scales measuring mindful eating often include question items pertaining to this concept (13–16). However, the importance of appreciation for food, and the relationship with nutrition and health, has been researched very little, and this practice is less common in many developed countries, except for Japan.

Appreciation for food is intrinsic to Japanese culture and has ethical value. For instance, it is customary to express appreciation before and after meals for the people involved in preparing the meal (from those who grew, picked, or fished for the food to those who cooked and served the meal) and for the lives of the animals and plants that were given for the meal (it is believed that even vegetables and fruits have a life). For many centuries, Japanese people have been taught at school, and at home, how to appreciate food. Although little historical research has been documented around this pervasive practice, one study reported that Japanese mothers taught their children to appreciate food and to eat healthily (17). Appreciation for food is stipulated in the Shokuiku Basic Act (2005), the law pertaining to the education of food and nutrition in Japan (18). It is implied that eating behaviors were more positive because the law mentioned that children should finish all their meals as a sign of appreciation for food. Based on the law, many teachers promote the appreciation for food in classroom lectures and after-school activities such as gardening-based interventions (19). This educational practice is popular not only in Japan, but in other countries. The positive effects of teaching using gardening-based interventions have been observed in the form of decreased BMIs and less frequency of fast food consumption by students (20–22).

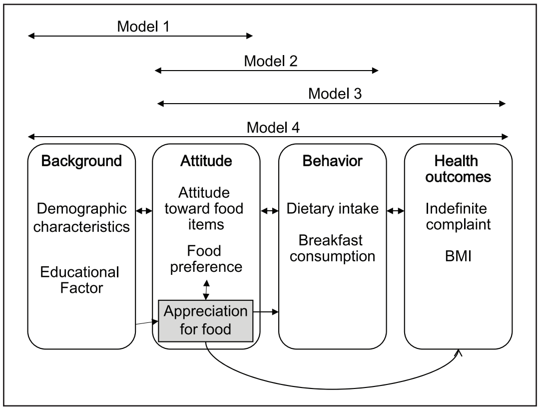

Figure 1. Our hypotheses and analytical plan.
Note: All models were adjusted by demographic characteristics.

Given the emphasis on appreciation for food learned at home and at school, Japanese children are expected to have healthy attitudes and behaviors around food. However, little quantitative research has been conducted to validate this. Appreciation for food may be associated with attitude, because it reflects an individual's sense of value. A vast number of studies on lifestyles, habits, and health report that attitude is emphasized through education and is associated with behavior (23–25). According to Fung *et al.*, this also applies to suggestions on mindful eating, such as appreciation for food, which implies an awareness of the relationship between food, the blessings of nature, the lives of animals and plants, and one's body. Describing these associations is important to understand how appreciation for food is integral to mindful eating (12).

In this study, we developed the hypothesis that appreciation for food, instilled at home and at school, influences children's attitude towards food, eating behaviors, and health status (Figure 1). Along with these hypotheses, we aimed to describe the role of appreciation for food in children's health from two perspectives: 1) the association between children's appreciation for food and their backgrounds, such as educational experiences regarding food at home and at school, and 2) the association between their appreciation for food and outcomes, such as attitude toward food, eating behaviors, and health status.

Table 1. Scores of 'Gratitude for food' scale ($\alpha = 0.78$, $n = 1994$).

	Mean (SD)
Total	24.9 (4.31)
Cognitive factors ($\alpha = 0.80$)	15.79 (3.07)
I appreciate food because plants and animals gave their lives so that I can eat.	3.18 (0.83)
I can eat every meal because someone procures the ingredients for me.	2.91 (0.86)
I appreciate farmers for providing food for my meals.	3.11 (0.82)
I think that our meals are based on creative ancient wisdoms.	3.18 (0.74)
I eat every meal as I appreciate the fact that someone has cooked it for me.	3.39 (0.74)
Behavioral factors ($\alpha = 0.72$)	9.07 (2.15)
I always finish all my meals.	3.11 (0.82)
I am not picky about food.	2.73 (0.99)
I don't leave any food behind on my plate.	3.23 (0.87)

1: Strongly disagree; 2: Disagree; 3: Agree; 4: Strongly agree.

Materials and method

Study design

We used secondary data from cross-sectional research for the development of a 'gratitude for food' scale (Table 1) (26). The sample comprised 2070 elementary school students in grades five and six from 20 public elementary schools in Kita-ku, Tokyo, Japan. Self-administered anonymous questionnaires were distributed to the students during October and December 2006. To minimize social desirability bias, participants were assured that nobody, especially their teachers and parents, would see their responses to the anonymous questionnaire. A power analysis calculation indicated that to obtain a medium effect size (0.15) using Cohen's ES index for a multiple regression, power of 0.8 and 12 independent variables, at least 184 participants would be required (27).

Approval for the research was granted by Ochanomizu University's Research Ethics Board.

Questionnaire

The questionnaire comprised items designed to elicit information about the characteristics of participants, their educational experiences at home and school regarding food, their attitudes toward food, including appreciation for food, their eating behaviors, and health status.

Question items regarding the characteristics of participants included grade and gender. Seven questions pertaining to educational experiences about food at home were developed for this research using four Likert scales (1: Never to 4: Always, $\alpha = 0.70$); each item is described in Table 2. Two items were related to school education: 'School teaches me how to grow vegetables, fruits, and rice' and 'I have experience growing vegetables, fruits, and rice as part of my after-school activities' (1: Never to 4: Always).

Questions related to this theme centered on aspects such as appreciation for food, attitude toward healthy food items, and food preferences. Appreciation for food was measured by the 'gratitude for food' scale, which we developed in our previous study using data (reliability and validity was confirmed) (26). The scale is composed of eight items and two subscales (cognitive factors: five items; behavioral factors: three items) and uses four Likert scales (1: Strongly disagree to 4: Strongly agree). Cronbach's α of this scale was 0.78, and that of the subscales was 0.80 for the cognitive factors and 0.72 for the behavioral factors. Each item is described in Table 1.

Attitudes toward healthy food items and food preferences were measured through several questions developed for this research. Healthy food items included vegetables, fruits, and rice. Participants were asked about their attitude toward these three food groups through six items such as: 'Eating vegetables is important for me to prevent many diseases,' 'Eating fruit is important for me to keep healthy,' and 'Eating rice is important for me to have the energy to be active' (1: Strongly disagree to 4: Strongly agree, $\alpha = 0.79$). These six items were

Table 2. The correlation between education at home about nutrition with appreciation for food items ($n = 1994$).

	Correlation with appreciation for food		
	All items	*Cognitive factor*	*Behavioral factor*
I generally eat meals at set mealtimes.	0.23**	0.19**	0.19**
My entire family says 'itadakimasu' (let's eat) and 'gochiso-sama' (thank you for the meal)[a].	0.29**	0.25**	0.22**
I actively help prepare and clean up the dishes before and after a meal.	0.36**	0.32**	0.27**
My parents say that I should not leave food on my plate because it will make the farmers who grow the food sad.	0.29**	0.31**	0.13**
My parents say that I should eat everything on my plate because it is nourishing and healthy.	0.31**	0.29**	0.19**
My parents say that it is not good to have a bad posture when I eat a meal.	0.20**	0.18**	0.16**
My family and I turn the television off at mealtimes.	0.16**	0.15**	0.11**

1: Never to 4: Always.

Pearson's correlation coefficient, $^{**}p < 0.01$.

[a] These phrases mean an eater appreciates and gives thanks for the lives given by animals and plants.

developed based on a Dietary Instructions Guide published by the Japanese Ministry of Education, Culture, Sports, Science and Technology (28). Participants were asked about their preferences for eight kinds of food: vegetables, mushrooms, potatoes, beans, fruits, rice, sweetened drinks, and snacks (1: I dislike all of them to 5: I like all of them, except for rice; 1: I dislike it to 5: I prefer it).

Eating behavior was determined by asking questions about dietary intake and breakfast consumption. Dietary intake was ascertained by the frequency that the aforementioned eight food items were eaten: (1: Never to 3: Almost every day). Frequency of breakfast consumption was asked by the question: 'How often do you have breakfast?' (1: Never to 4: Almost every day).

We used general malaise and BMI as representative of health status. With regards to general malaise, participants were asked: 'Do you feel sluggish and/or tired?' (Yes/No). BMI was calculated based on self-reported height and weight.

Analysis

We calculated the total scores for each scale: gratitude for food, home and school educational experiences, attitude towards healthy food items, food preferences, and dietary intake. Food preference and intake were calculated by distinguishing recommended foods such as vegetables, mushrooms, potatoes, beans, fruits, and rice from non-recommended food, such as sweetened drinks and snacks. We used mean and standard deviation (SD) to describe these total scores. Score ranges are indicated in Table 3.

T-test and Pearson's correlation coefficient were used to compare the total score for appreciation for food with other factors. Pearson's correlation was also used to examine the correlation of appreciation for food with each item pertaining to home educational experiences.

Additionally, in line with the two perspectives of this study, we used a four-model multiple linear-regression analysis to describe the association of appreciation for food with participants' characteristics, home and school educational experiences, attitudes, behaviors, and health status, adjusting for each factor. The total score of the gratitude for food scale, representative of appreciation for food, was the dependent variable (Figure 1).

Model 1 aimed to describe the association of appreciation for food with educational factors by

Table 3. Characteristics of participants correlated with appreciation for food (n = 1994).

	n (%) / mean (SD)	*Mean (SD) total score of appreciation for food / r*
Demographic data		
Gender		
Boys	945 (47.4)	25.0 (4.5)[c]
Girls	940 (47.1)	24.8 (4.2)[c]
Non-respondents	109 (5.5)	-
Grade		
Fifth	930 (46.6)	25.0 (4.3)
Six	967 (48.5)	24.8 (4.3)
Non-respondents	97 (4.9)	-
Education		
Home		
Total score (7–28)	20.1 (4.1)	0.44**
School		
Total score (4–8)	4.7 (1.2)	0.20**
Attitude		
Attitude towards healthy food (6–24)	20.6 (3.1)	0.57**
Recommended food preference[a] (6–30)	23.7 (3.9)	0.49**
Non-recommended food preference[b] (2–10)	7.8 (1.7)	0.02
Behavior		
Recommended food intake[a] (6–18)	14.1 (2.1)	0.37**
Non-recommended food intake[b] (2–6)	4.0 (1.2)	–0.09**
Breakfast consumption (1–4)	3.7 (0.7)	0.17**
Health status		
General malaise		
Yes	995 (49.9)	24.2 (4.4)[c]
No	963 (48.3)	25.6 (4.1)[c]
Non-respondents	36 (1.8)	-
BMI	17.9 (3.3)	0.04*

Pearson's correlation coefficient, *<0.05, ** $p < 0.01$.

[a] Vegetables, mushrooms, potatoes, beans, fruits and rice were included in recommended food.

[b] Sweetened drinks and snacks were included in non-recommended food.

[c] A significant difference was found by the t-test.

adjusting participants' characteristics such as demographic data (gender and grade) with the total score of home and school educational experiences.

We aimed to describe the association of appreciation for food with health-related outcomes in Models 2–4. Model 2 consists of demographic data, total scores of attitude towards healthy food items, food preferences, and behavioral factors, such as dietary intake and breakfast consumption as independent variables without educational experiences. Models 2 and 3 will be compared to Model 4 (the final model) to evaluate the influence of home and school educational experiences. We examined the association with eating behavior, considering interaction with attitude. In Model 3 we used demographic data, attitudes other than appreciation for food, behavioral factors, and health status (general malaise and BMI.) The final model consisted of all factors to comprehensively examine the association with participants' background, attitude, eating behavior, and health status. Forced entry method was used with the demographic data, and a stepwise method was used with other factors.

We removed missing data from each analysis and the results were considered statistically significant if p values were less than 0.05. All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) for Windows (version 20, SPSS Inc.).

Results

Participants' characteristics correlated with appreciation for food

Surveys were completed by 1994 children (response rate: 96.3%). The mean (SD) of the total score of appreciation for food was 24.9 (4.31, Table 1). Table 3 describes characteristics of the participants and the correlation with appreciation for food. Approximately half of the participants were boys (47.4%) in grade six (48.5%). Boys had significantly higher total scores of appreciation for food, with small differences. No significant differences were found in terms of grade. The proportion of children categorized as obese, based on guidelines from The Japanese Society for Pediatric Endocrinology, was 6.2% (29).

Home and school educational experiences, attitude towards healthy food items, recommended food preferences, recommended food intake, breakfast consumption, and BMI were significantly correlated to the total score of appreciation for food, although the correlation coefficient with BMI was low ($r = 0.04, p < 0.05$). In contrast, non-recommended food intake was significantly inversely correlated with the total score of appreciation for food, although the correlation coefficient was also low ($r = -0.09, p < 0.01$). In addition, the total score for appreciation for food was significantly different to that of general malaise. Therefore, participants who had higher scores for appreciation for food, more home and school educational experiences, a better attitude towards healthy food items and recommended food preferences as well as a good BMI more frequently consumed recommended foods and breakfast, and consumed non-recommended foods less frequently.

Correlation between appreciation for food, and dietary education at home

The correlation between appreciation for food with each question item pertaining to educational experiences regarding food and meals at home is described in Table 2. All question items were significantly correlated with appreciation for food scores and both subscales relating to cognitive and behavioral factors, although correlation coefficients were low. Asking to help prepare and clean up dishes before and after a meal ($r = 0.36, p < 0.01$), and to eat everything on respondents' plates ($r = 0.31, p < 0.01$) had a higher correlation with the total score of appreciation for food.

Linear regression analysis for appreciation for food

Table 4 describes the results of linear regression analysis from the analysis of appreciation for food score. Simple regression analysis showed the following variables were associated with the total score of appreciation for food: home ($\beta = 0.44, p < 0.01$) and school ($\beta = 0.20, p < 0.01$) educational experiences, attitudes towards healthy food items ($\beta = 0.57, p < 0.01$), recommended food preferences ($\beta = 0.49, p < 0.01$), recommended food intake ($\beta = 0.36, p < 0.01$), non-recommended food intake ($\beta = -0.09, p < 0.01$), breakfast consumption ($\beta = 0.17, p < 0.01$), and general malaise ($\beta = 0.16, p < 0.01$). In Model 1, for multiple regression, gender ($\beta=-0.07, p < 0.01$) and home ($\beta = 0.42, p < 0.01$) and school ($\beta = 0.12, p < 0.01$) educational experiences were associated with the total score of appreciation for food. Male participants with significant home and school educational experiences were independently associated with a higher total score of appreciation for food. In Model 2, gender ($\beta = -0.94, p < 0.01$), attitude towards healthy food ($\beta = 0.44, p < 0.01$), recommended food preferences ($\beta = 0.28, p < 0.01$), non-recommended food preferences ($\beta = -0.05, p < 0.01$), recommended food intake ($\beta = 0.08, p < 0.01$), and breakfast consumption ($\beta = 0.08, p < 0.01$) were associated with appreciation for food. Added to these factors (except for non-recommended food preference), general malaise ($\beta = 0.06, p < 0.01$) and BMI ($\beta = 0.05, p < 0.01$) were also associated in Model 3. Finally, in all factor analysis, significant association was indicated by gender ($\beta = -0.80, p < 0.01$), home ($\beta = 0.19, p < 0.01$) and school ($\beta = 0.05$ $p < 0.01$) educational experiences, attitudes toward healthy food ($\beta = 0.39, p < 0.01$), recommended food preferences ($\beta = 0.27, p < 0.01$), breakfast consumption ($\beta = 0.05, p < 0.01$), and BMI ($\beta = 0.07, p < 0.01$) in Model 4. Model 4 explains 45.4% of the variation in appreciation for food.

Table 4. Results of linear regression analysis for total score of appreciation for food ($n = 1994$).

	n	*Simple*			*Multiple*[a]											
					Model 1			*Model 2*			*Model 3*			*Model 4*		
		β	*t*	*p value*	β	*t*	*p value*	β	*t*	*p value*	β	*t*	*p value*	β	*t*	*p value*
Demographic data																
Gender (1: boys, 2: girls)	1885	–0.02	–0.95	0.34	–0.07	–3.23	<0.01	–0.94	–5.01	<0.01	–0.08	–4.18	<0.01	–0.8	–4.03	<0.01
Grade (5–6)	1897	–0.02	–0.71	0.48	<0.01	0.06	0.95	<–0.01	–0.17	0.87	<0.01	0.05	0.96	0.01	0.28	0.78
Education																
Home (7 –28)	1990	0.44	20.6	<0.01	0.42	19.2	<0.01							0.19	8.6	<0.01
School (4–8)	1873	0.2	8.72	<0.01	0.12	5.33	<0.01							0.05	2.71	0.01
Attitude																
Attitude toward healthy food (6–24)	1935	0.57	29.9	<0.01				0.44	21.15	<0.01	0.43	19.74	<0.01	0.39	17.23	<0.01
Recommended food preference (6–30)	1904	0.49	24	<0.01				0.28	12.15	<0.01	0.27	11.49	<0.01	0.27	12.35	<0.01
Non-recommended food preference (2–10)	1933	0.02	0.89	0.37				–0.05	–2.52	<0.01	–0.04	–1.91	0.06	-		
Behavior																
Recommended food intake (6–18)	1909	0.36	16.8	<0.01				0.08	3.75	<0.01	0.09	4.03	<0.01	-		
Non-recommended food intake (2–6)	1945	–0.09	–4	<0.01				-			-			-		
Breakfast consumption (1–4)	1956	0.17	7.61	<0.01				0.08	4.34	<0.01	0.07	3.52	<0.01	0.05	2.69	0.01
Health status																
General malaise (1: yes, 2: no)	1958	0.16	7.12	<0.01							0.06	3.1	<0.01	-		
BMI	1798	0.04	1.63	0.1							0.05	2.61	0.01	0.07	3.54	<0.01

[a] The forced entry method was used for the demographic data and the stepwise method was used for other factors.
$p < 0.05$.

Discussion

This study aimed to describe the role that appreciation for food has in the health of children, and we found it was independently associated with participants' gender, educational experiences around food and diet at home and school, attitudes towards food, eating behaviors, and health status. All question items asking about home nutrition education were significantly correlated with appreciation for food scores and both subscales relating to cognitive and behavioral factors, even though not all items directly asked about appreciation for food. Therefore, appreciation for food plays an important role in children's health.

Our results suggest the possibility that education and level of appreciation for food affect participants' eating behaviors and health status. We could interpret our data as a validation of our earlier hypotheses given that appreciation for food was found to be influenced by dietary education at home and school, attitude towards healthy food, eating behaviors, and health status. This result is consistent with several previous studies that examined the association between nutrition education and health-related behavior, and attitude toward food and health-related behavior (30,31). Furthermore, many previous studies reported that nutrition education intervention improved children's attitude toward consumption of fruits and vegetables (23–25). Appreciation for food is included in measures of attitude so that, in further research, we can examine the possibility that the level of children's appreciation for food is increased by intervention, and that appreciation for food can contribute to children's health.

In addition, home and school educational experiences around food and diet were associated with appreciation for food in two linear-regression models, and β values decreased from Model 1 to Model 4. Furthermore, eating behaviors, such as recommended food intake and breakfast consumption as well as health status, such as general malaise and BMI, were associated with appreciation for food in Model 3. Although we cannot establish causality as we used a cross-sectional design in our study, the results indicate the possible influence of educational experiences (including appreciation for food) because many schools set appreciation for food as a goal.

However, practitioners and parents must be attentive to excessive consumption when emphasizing appreciation for food in their education on nutrition because of the emphasis placed on finishing food without leftovers. As a result, children may feel compelled to do the same with non-recommended food. Our results showed no significant association between appreciation for food and a preference for non-recommended food, as a result of educational experiences promoting the completion of meals at home. We can interpret these results as meaning that some participants, in addition to finishing meals of recommended food items without leftovers, do the same with non-recommended food (i.e. eat a whole plate of chips, rather than a small portion). However, BMI had very low β values in our data, although it was significantly associated with appreciation for food. This suggests that children who participated in our research could gain health benefits in terms of appreciation for food. Appreciation contributed to children's attitude toward food and eating behavior without large weight gain. Additionally, given that advocates of the expanded model of mindful eating also recommend that attention be given to appropriate portion sizes for the health of the individual as well as that of the environment, it is essential to teach appropriate portion size together with an appreciation for food (12).

This study has several limitations. First, we could not consider socioeconomic factors in our analysis because we applied secondary data. However, given that data were collected from public schools in a particular city in Tokyo, we believe the socioeconomic discrepancy is not wide. Second, all data were based on self-evaluation so there is the potential for social desirability bias. However, this bias was minimized because participants were assured that nobody, especially their teachers and parents, would see their responses to the anonymous questionnaire. Finally, as the study used a cross-sectional design, we were unable to establish causal relationships.

Despite these limitations, we focused primarily on the associations that appreciation for food has with many factors from participants' backgrounds as well as the health outcomes. Appreciation for food had not been focused on by researchers, despite it being an important concept for mindful eating and that many scales measuring mindful eating included the concept of appreciation. Our results contribute to an understanding of the role that the concept, appreciation for food, has in mindful eating. Further research should examine whether attitudes, eating behaviors, and the health status of children in Japan improve through the emphasis on appreciation for food, and in other countries with different cultural backgrounds.

Conclusions

This study aimed to describe the role that appreciation for food has in the health of children. The results showed that gender, home, and school educational experiences as well as participants' backgrounds are associated with the total score of appreciation for food. Furthermore, attitudes toward healthy food, recommended food preferences, recommended food intake, breakfast consumption, general malaise, and BMI were also associated with appreciation for food. All question items asking about home nutrition education were significantly correlated with appreciation for food scores and both subscales relating to cognitive and behavioral factors, even though not all items directly asked about appreciation for food. This is the first study to examine appreciation for food in a comprehensive way, and our data contribute towards understanding the role that the concept of appreciation for food has in mindful eating.

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Author contributions

RA collected the data. YK wrote the first draft with contributions from RA. All authors reviewed and commented on subsequent drafts of the manuscript.

Declaration of conflicting interests

The authors declare that there is no conflict of interest.

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Re-thinking health literacy: using a capabilities approach perspective towards realising social justice goals

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Abstract: Health literacy has gained popularity as a useful concept to promote and protect health. Even though health literacy research has been prolific it has also been fragmented, facing challenges in achieving its empowerment and social justice-related aims. Crucial limitations make the application of its principles to the health of vulnerable and underrepresented groups problematic, even though these groups are disproportionately affected by ill health. Efforts to refine and make the concept more relevant have tended to expand health literacy models and situate health literacy 'in context' to reflect environmental and social factors shaping health literacy. Context-related factors however, have not been consistently embedded in operationalisation and measurement efforts.

This paper argues for health literacy to be re-conceptualised through a capabilities approach lens. It proposes that the capabilities approach can uniquely address the conceptual and methodological criticisms applied to health literacy, whilst encompassing its critical conceptual understandings of health. The advantage of this approach over and above other developments in health literacy theory and practice is its focus on both people's opportunities or freedoms to achieve desired health-related aims, and their ability to do so. It enables shifting the focus away from health literacy as individual skills and competencies and towards the enabling or inhibiting factors shaping health literacy. A participatory approach is seen as essential for realising this conceptual shift.

Keywords: critical health literacy, community health literacy, migrant and minority ethnic health, health capability, capabilities approach, participatory approaches, social justice, empowerment

Introduction

Health promotion and healthcare delivery are informed by patient-centred concepts emphasising the role of the individual in their own health and care. Health literacy is one such concept capturing skills and abilities that enable positive health choices and patient participation during shared decision-making (1, 2). There are currently multiple health literacy models and no single agreed definition of health literacy (3). Research has also highlighted the challenges faced by health literacy interventions to result in positive outcomes (4), achieve social justice objectives (5, 6) and capture the needs and realities of vulnerable and underrepresented groups of the population (7). There is a need for a coherent, unified understanding of what health literacy is and how to achieve it.

This paper proposes a resolution to this discussion by re-conceptualising health literacy using a capabilities approach perspective. In order to do so, it will discuss the limitations in current conceptualisations and applications of health literacy and use research findings to explore how the capabilities approach can inform

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critical health literacy research and practice, and embed social justice in health literacy applications.

The paper is structured as follows: Firstly, an overview of the health literacy literature and debates within is provided, with examples from research to illustrate the limitations in addressing the needs of vulnerable and underrepresented groups with emphasis on migrant and minority ethnic (MME) health. It will then provide an overview of the capabilities approach to introduce its principles and discuss how it has been applied to health and healthcare. Finally, it will discuss the idea for a health literacy capability, and the advantages of such a conceptualisation.

Current debates in health literacy

Health literacy captures skills and abilities determining one's motivation and ability to access, understand and use information to promote and maintain health (2). Health literacy conceptualisations encompass several components, and often there are inconsistencies in the way it is conceptualised and operationalised. In a review trying to bring together the literature, Sørensen and colleagues (3) identified 17 definitions and 12 conceptual health literacy models.

Broadly however, health literacy conceptualisations fall within three groups: functional, interactive, and critical health literacies (8). These are distinguished by how much they acknowledge the role of care providers, health systems and broader social factors in individuals' health literacy levels. Functional health literacy relates to paternalistic understandings of the individual's relationship with the health system and medical profession and focuses on the individuals' ability to understand factual information. Interactive health literacy refers to the ability to not only understand the information given but also being motivated and self-confident to use this information independently, for example through discussing concerns and values with healthcare professionals and interacting more effectively in a healthcare setting. Both understandings emphasise literacy and numeracy as necessary health literacy competencies. Critical health literacy adopts an emancipatory, empowerment-led understanding, where people are cognisant of social, economic and environmental determinants of health and are able to tackle these through community action.

When it comes to the settings in which health literacy has been used, Pleasant *et al.* (9) talk about 'a tale of two health literacies', one grounded in a clinical setting and focusing on individual information management skills, that is, literacy and numeracy, and one grounded within a public health setting and focusing on individual and community empowerment (e.g. 10, 11). When operationalising health literacy, both have adopted skills-based measures, focusing on aspects of functional and interactive health literacy (12, 13), despite calls for multidimensional measures within public health (14).

In both settings, the focus on individual skills and competencies played out in 'context-neutral' situations is narrow, and masks individual needs (15) and the contexts within which health literacy is enacted (16–18). It fails to situate individual health literacy in relation to the individuals' social networks, or acknowledge social inequities and inequalities, key components of critical health literacy (18, 19). At the same time, the distinction emphasised by some between clinical- and public health literacies (20) only reinforces the narrative of 'two health literacies' and fails to unite this field of study.

When looking at the health and care experiences of vulnerable individuals and communities, research has highlighted the challenges faced by current – even critical – health literacy approaches to meet the needs and realities of vulnerable groups such as MME groups (7, 21). MME groups have been consistently found to have lower levels of health literacy, (7), poorer health outcomes and face inequalities in quality of care and barriers to healthcare access (4, 22). Research has highlighted the role of migratory factors, ethnicity and cultural identity (23, 24) as well as the quality of interactions with health providers (22, 25) in shaping expectations and perceptions of care. Clinician attitudes and biases towards patients have been found to impact in negative ways on quality of care (22, 26).

Health-related decisions and behaviours are in part the result of knowledge, literacy, help-seeking skills, motivation, and self-efficacy, but ultimately shaped and compounded by societal factors, including discrimination, oppressive immigration and employment policies, over which individuals have little or no control (22). In addition, people's ability to engage with what is going on during the clinical consultation is not only the result of literacy levels, but also of more complex psychosocial processes beyond the care context (22, 27). For example, research looking into access to breast screening services has found health literacy non-predictive of screening participation for women from minority ethnic backgrounds; emotional barriers such as fear and anxiety were central to participation (21).

Despite these findings, health education interventions tend to focus on factual information, targeting functional health literacy (22, 27, 28), rather than addressing the role of contextual and psychosocial factors in health and well-being promoting action (29). Perhaps because of the limited focus of health literacy interventions, they have yet to consistently prove their usefulness in promoting health (4, 30).

To address the robustness of the health literacy construct, authors writing from a public health perspective have elaborated on health literacy conceptual models to represent more holistic, biopsychosocial understandings of health literacy (e.g. 3, 31, 32), and more clearly define critical health literacy (e.g. 6, 33). Social determinants of health and health inequities become prominent (34) in these expanded health literacy models, and situate (critical) health literacy 'in context' (16, 17). The role of environmental, social as well as personal factors in shaping individuals' ability to navigate health and care choices are acknowledged. Individuals who are highly health literate in one setting, can be less so in another making health literacy context- and setting-specific (8).

This body of work emerging out of public health has resulted in useful insights into health literacy social and environmental facilitators. Sykes and colleagues describe critical health literacy to entail assets as well as competencies present in individuals and communities (5), taking into consideration the role of the individual and the social environment in the creation of health (6). Rowland and colleagues' bottom-up health literacy model is grounded in the health inequalities discourse, and encompasses family history, and ethnicity and culture, rather than individual competencies. This work emphasises the importance of family, community, and societal factors in shaping individual actions, and highlights the limitations when focusing on individual skills, abilities and motivations (35). The key role of social networks and community is echoed by de Wit and colleagues' description of critical health literacy, where social support and collaborative learning are seen as components of health literacy (33). Similarly, McCormack and colleagues (32) address the need to include individuals, populations, health professionals and health systems, and to go beyond patient-level outcomes in health literacy research; they propose a social ecological health literacy perspective resulting in multilevel interventions addressing not only the individual, but also the context in which they reside.

What is evident is a conceptual shift emphasising critical aspects of health literacy and its determinants, over previously favoured narrow and paternalistic understandings. This is an important step to addressing the social justice goals of health literacy, but there is still a gap between theory and the application of health literacy in both public health and clinical settings.

An important reason for this is the lack of theoretical clarity and the absence of a unifying thread among the multiple conceptualisations and applications of health literacy (6). Even though, theoretically, context has become more prominent in health literacy discussions, in interventions and measurement, narrow understandings of health literacy are still the focus of attention (5, 13, 14, 18), whilst even outcomes that attempt to measure aspects of critical health literacy fail to capture broader determinants encompassed by critical health literacy models (19, 36). There is a challenge in creating a concise, conceptually distinct and robust theorisation of health literacy (6, 37, 38), and a robust evaluation of interventions (13) that moves away from individual skills to capture the barriers and opportunities that shape health literacy.

This paper proposes that the capabilities approach can uniquely address the conceptual and methodological issues raised so far, whilst encompassing health literacy's critical conceptual aspects. The capabilities approach is a normative framework emphasising one's freedom or capability to achieve desired states, and provides the theoretical tools to conceptualise and evaluate phenomena specific to poverty, inequality or well-being; it can also inform policymaking and resource allocation (39–41), in a way that other health literacy approaches cannot.

The advantage of this approach over and above other developments in health literacy theory and practice is its focus on both people's opportunities and freedoms to achieve desired aims, and their actual achievement. In this way it can differentiate between people's preferences and abilities, and draw attention to the barriers and facilitators of health literacy (39).

What follows is a brief overview of the capabilities approach and its application in the area of health and care, in order to illustrate the advantages of this approach and also how it can help address problems of social justice in health literacy theory, policy and empirical research.

The capabilities approach

The capabilities approach was developed by Amartya Sen as an alternative to welfarism, the dominant normative economic evaluation framework (42, 43). This approach to the design and evaluation of policies and interventions is based on the premise that:

> assessments of the well-being or quality of life of a person, and judgements about equality or justice, or the level of development of a community or country, should not primarily focus on resources, or on people's mental states, but on the effective opportunities or freedoms people have to lead the lives they have reason to value (39, p. 351).

These 'substantive freedoms' are what Sen has termed their Capabilities and form the broader context people reside in, that is, opportunities to access education, healthcare, live in a healthy or health-promoting environment.

This approach has three central ideas (44):

1. People should be or do what they value and have reason to value, for example, a healthy lifestyle, a concept he termed Functioning;
2. People should have the freedom to enjoy various functionings to be or do things contributing to their well-being, that is, having the opportunities to engage in actions that enable them to be healthy, termed as Capability; and
3. Whether a person has the ability to pursue and realise goals they value and have reasons to value, that is, their Agency.

Sen sees capability as reflecting an individual's freedom to act as an agent in choosing between different opportunities and thus achieving functionings, that is, valued states of being (45). He argues for an evaluative system that 'focuses on substantive freedoms', that is, capabilities, instead of income and wealth (46) or in the case of healthcare delivery, moves away from unidimensional health-related outcomes (47).

In the case of health literacy, being health literate can be understood as a functioning, but whereas health literacy frameworks would focus on levels of health literacy as the measure of interest, the capabilities approach allows for directing attention towards people's opportunities to be(come) health literate either as the target of intervention or measure of interest. Applications of the capabilities approach have focused on both functionings and capabilities (39).

The emphasis on capabilities rather than functionings is anti-paternalistic (39), and necessitates a participatory approach to intervention design and delivery in order to understand what people value, as well as to understand barriers and facilitators to achieving desired functionings and capabilities, for example, accessing and using information in ways that are compatible with individuals' goals. Participatory approaches and critical consciousness principles, therefore, which have been linked to critical health literacy (48), fit comfortably within the capabilities approach.

Even though the capabilities approach has faced criticism for its unspecified nature (39, 49), Robeyns points out the capabilities approach is a 'framework of thought' rather than a prescriptive theory, as Amartya Sen does not specify which capabilities should be used to assess individual well-being (50). Robeyns has argued different capabilities should be chosen reflecting different scenarios, recommending a participatory methodological process to identify what capabilities are necessary to enable individuals to achieve given functionings (39, 50, 51).

Taking a more prescriptive stance in identifying fundamental capabilities, Martha Nussbaum has proposed 10 basic capabilities that all individuals should achieve as a minimum, including capability to have good health (40, 51). Jennifer Ruger has further developed the idea of a health capability, in a process of operationalising a 'right to health' (52). Ruger describes health capabilities as one's confidence and ability to be effective in achieving optimal health, shaped by health agency, that is, the individual's ability to achieve the health goals they value and act as agents of their own health and health functionings (i.e. a healthy state) (52). Ruger places health capability at the intersection of micro-, mezzo- and macro biopsychosocial forces, whereby individual health capability is shaped by: biological forces (e.g. genetics, personality); socio-cultural forces (e.g. social networks, culture and norms, life circumstances); public health and healthcare systems; and the broader social, economic, political and economic environment.

Health literacy is one component of such a health capability. Ruger however comments that existing approaches, including health literacy, are only marginally successful in improving health because of their limited focus on either outcomes or process. In this way, they fail to take into consideration the barriers and facilitators on all levels that shape health and people's ability to make healthy choices, that is, both structural and agency-related factors (53). As Ruger states: 'health capability enables us to understand the conditions that facilitate and barriers that impede health and the ability to make health choices. It offers a more accurate evaluation of the aims and success of social policies and change' (53, p. 42). This is not possible within current health literacy approaches, which emphasise individual ability.

The capabilities approach therefore offers a health justice-based (41) theoretical lens through which health literacy can be re-conceptualised. Embedding social justice principles in health evaluation and measurement is especially pertinent in the context of recent political developments where the rights of migrants, and especially the right to healthcare access, are being curtailed (54). The capabilities approach offers distinct advantages in informing health education interventions and measurement, policy and resource allocation, because of its flexibility in focusing on both capabilities and functioning, unlike other evaluative frameworks, for example cost-benefit analysis, which does not capture context and its impact on individual outcomes, or make equity considerations (55).

The following section will examine in more detail how conceptualising health literacy as a capability can help the health literacy field through: (1) allowing for principles of social justice to become ingrained in health and care research and decision making at a time of persistent health inequalities; (2) grounding health literacy in a normative framework that could unite the disparate understandings and applications of health literacy under a social justice-based approach; and (3) allowing for more robust operationalisations of the construct through the utilisation of methodologies already used by capability approach researchers to design patient-reported outcome measures (49).

Towards a health literacy capability

Embedding principles of social justice

The key contribution to be made by thinking of health literacy as a capability, is that it allows for equity considerations to become ingrained within health literacy discourses. Those health literacy models that address contextual and socio-ecological aspects of health literacy (17), do so with a focus on: 'reducing the situational demands and complexity in which an individual makes a health decision' (17, p. 1). Critical health literacy is where social justice discussions have taken place, but there has been limited interest in promoting psychosocial dimensions of critical health literacy through interventions (6), whilst achieving broader social justice objectives through these interventions has been problematic (5).

Sykes *et al*. (6) point out that even though initial conceptualisations of health literacy adopted principles of empowerment, and social and political action – all components of a social justice approach – recent representations of the concept have marginalised these aims, in turn representing health literacy as a higher-order cognitive individual skill. The same authors also point out the challenges in designing interventions that actually achieve these aims within the critical health literacy framework (5). Capability approach discourses provide useful theoretical and methodological insights, primarily through an emphasis on the constraints on individual freedoms rather than process or outcome (53).

Uniting health literacy concepts

Re-thinking health literacy through a capabilities approach perspective allows for uniting the disparate conceptualisations and applications of health literacy under one robust social justice framework. Capability approach applications in health, including health capability (53) and health justice (41), offer conceptualisations that address multiple aspects of health literacy, and the opportunity to consider interventions or policies focusing on capabilities rather than skills. Capability approach-informed evaluation has as a starting point the capabilities people value, and assessment focuses on intervention and policy capability-enhancing properties, rather than on the health literacy levels or choices people actually make. For example, Nikiema and colleagues focused on individuals' ability to overcome barriers that obstruct their access to needed care (56). In this way intervention and evaluation are more aligned with social justice principles.

The objective is to situate (critical) health literacy alongside other health-promoting capabilities, and understand it in relation to health literacy-promoting capabilities, for example, enabling environments, access to social support, literacy-enhancing opportunities, and so forth. This results in a multidimensional understanding of health literacy, both in conceptual, and operationalisation terms (10), one that encompasses literacy and numeracy but which does not weigh them more highly than, for example, community networks. In changing the focus from a health literacy to a health literacy capability, there is a shift away from individual skills towards factors enabling individuals to act in specific ways, while at the same time providing a common thread, that is, social justice, between theorising and operationalising health literacy. The health capability focus therefore better captures the factors affecting an individual's health literacy, while accommodating a social justice perspective that current health literacy approaches neglect.

Adopting capability approach methodologies

Finally, the capabilities approach has been operationalised within health services research through the design of capability-based outcome measures (47, 57). These methodologies allow researchers to go beyond end-point outcomes, that is, skills and competencies, the outcomes of interest within current health literacy approaches, to capture the capabilities of value that allow individuals and communities to be health literate (see Robeyn's methodological process: 39, 49). Research that explores what individuals and communities consider important components of health literacy (5, 33, 48, 58), and emphasises the roles of social support, learning within social groups, culture, and social networks (33, 48) can provide insights into what capabilities are important to inform the design of interventions, and into the capabilities that should be assessed when considering the success of interventions. For example, interventions could be assessed not on whether they result in social and political action, but on whether individuals feel able to engage in such actions, should they wish to do so.

Participatory community approaches therefore are a good way to bring together the capabilities approach and health literacy fields as both have successfully utilised these methods. Critical health literacy researchers have placed community participatory approaches at the centre of health literacy research and implementation. For example, Suzie Sykes and colleagues (11) discuss the links between community development processes and critical health-literacy-building interventions, whereas capability approach authors have discussed the complementary nature of community participatory approaches to the capabilities approach (59). The use of participatory approaches in health literacy research, grounded in a capability approach perspective, can not only inform community and individual health-literacy-building initiatives, but also help identify health literacy capabilities important to individuals and guide the design of capability-based measures (47, 57, 60). Participatory approaches are also now recognised to be of value to intervention implementation (61) and translational research (62).

Conclusions and directions for future research

Health literacy research has been prolific but fragmented, facing challenges in achieving its empowerment and social justice-related aims. Health literacy models have attempted to provide distinct and coherent conceptualisations of the concept, whilst applications have been divided between those that focus on individual information management skills, and community-based research emphasising empowerment and emancipation. Health literacy applications, including measurement, have been critiqued for focusing on narrow competency-related goals, which do not address the needs of vulnerable and underrepresented groups disproportionately affected by ill health (7).

This paper presented the capabilities approach as a useful framework to enable health literacy to address social justice objectives and unify the disparate ways it has been conceptualised and operationalised so far. Looking at health literacy through a capabilities approach lens allows for conceptually situating health literacy within current applications of the capability approach in health and care, for example developments looking at people's abilities to achieve health states of value, in what Ruger has termed a 'health capability' (53). This could be a useful starting point for further conceptual juxtaposition of these two concepts.

As a way forward, findings from community-based heath literacy research exploring community understandings of health literacy, communities' values, beliefs and preferences (5, 33) can be reinterpreted through a capabilities approach lens. This could be a first step to understanding the capabilities considered important for people to achieve health literate states and allow for illuminating possible differences or similarities between different groups of the population in terms of their health literacy needs or preferences. Further involving communities in understanding the barriers and facilitators to making health-promoting and health-maintaining choices could help design interventions and services relevant to people's needs, focusing on enabling rather than imparting health literacy.

Using the capabilities approach to conceptualise health literacy allows for interventions, evaluation and policy to address the opportunities or abilities of people to be(come) health literate (their capabilities), instead of focusing on people's competencies, that is, health literacy levels (their functionings). In this way, understandings of health literacy as context- and setting-specific, and critical health-literacy-enhancing factors that have been highlighted by health literacy researchers can more meaningfully be operationalised within intervention and policy design.

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Adaptation of the event history calendar for Ugandan adolescents

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Abstract: Adolescent and emerging adult risk behavior is a concern globally. Discussing health promotive and risk behaviors with adolescents and young adults can be challenging regardless of the country of data collection and dominant culture. In the United States, event history calendars have been used in both research and clinical settings to identify healthy and risky behaviors among adolescents and emerging adults, and contextual factors that may influence their behavior. After an unsuccessful attempt to employ a particular event history calendar on family life, negative and positive events, sexual behavior and substance use in data collection in rural fishing villages in Western Uganda, the current study aimed to modify the United States validated event history calendar for use with adolescents in Uganda, as a first step to cultural adaptation. Focus groups with 24 college students provided information about ways to modify the event history calendar for Ugandan youth. This paper discusses the modifications of the event history calendar for Ugandan young people.

Keywords: Uganda, adolescent, event history calendar, sexual health

Introduction

Adolescent risk and emerging adult behavior are of great importance globally. Improving health includes an effort to identify clusters of risks and health seeking behaviors and integrating that knowledge to support adolescent growth and development (1). From an ecological perspective, adolescents and emerging adults are impacted by individuals, family, communities, institutions and structures (2). In Uganda, the family and community are central to children and adolescents (3) and play a critical role in supporting healthy growth and development.

However, risks still remain for Ugandan adolescents and emerging adults. In Uganda, 11% of adolescents have had sex by age 15. By age 18, 64% of Ugandan adolescents report sexual activity (4). This is particularly important given Uganda's classification as a high burden HIV country and that one quarter of its young people aged 15 to 24 report engaging in risky sexual behavior (5). Nationally, HIV prevalence among adults aged 15 to 49 years is 8.3%. Among young people aged 15 to 24, HIV prevalence is 3.2% for females and 1.9% for males (6). Additionally, alcohol consumption is common for Ugandan adolescents and subsequently linked to other behaviors that can impact health including sexual risk behaviors (7, 8). Seeley *et al.* (9) found that being young (age 13–24) and participating in other risky behaviors (alcohol use, cigarette smoking) was associated with increased prevalence of HIV infection in Uganda.

Discussing both risk and health promotive behaviors with adolescents and emerging adults can be challenging regardless of the country of data collection and dominant culture. Martyn and others (10, 11) developed an event history calendar (EHC) to assess protective factors and risk behaviors in an attempt to better analyze patterns of behavior over

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time and elicit information that may not be uncovered in the course of other data collection methods. Research on the EHC with adolescents and emerging adults indicated that it facilitates recall, report, and communication about risk behavior and protective behaviors as well as contextual factors informing the young person's life (11, 12). It is particularly useful in facilitating discussion about sensitive topics including sexual behaviors (10).

In the United States, the EHC has been used in multiple research studies with diverse groups in various geographic locations. Using Bronfenbrenner's Ecological Model (2) as a framework, the EHC supports data collection related to the protective, risk, and other contextual factors that have an impact youth. Researchers in the United States have used the EHC to support data collection efforts with African-American (13), Arab American (14), Asian-American (15), Caucasian (13, 16, 17), Latin-American (12), and Native American (18) adolescents and emerging adults aged 13 to 23. The EHC has also been adapted for pregnancy (19) and eating and activity patterns for families (20). Finally, the EHC was tested against the Guidelines for Adolescent Preventive Services assessment in a randomized control trial in the clinical setting, demonstrating its clinical and research efficacy (17, 21).

Study background

The current study aimed to modify the United States validated EHC for use with adolescents and emerging adults in Uganda. In May 2017, a cross-cultural research team traveled to Western Uganda for data collection exploring adolescent risk behaviors in rural Ugandan fishing villages. This effort included survey data collection and completion of the EHC by youth aged 13 to 19. The EHC was offered to participants in English and the local language, Runyankore. A bilingual university linguist who previously participated in translation of tools for other research studies completed translation of the tool including translation and back-translation. After translation, the tool was reviewed by a group of faculty members at the Ugandan university to ensure readability and appropriate translation. However, during data collection in the field, it became quickly apparent that the calendar was not eliciting the same results with the young Ugandan participants despite its translation into the local language and interpreters and researchers available to assist with completion. This data collection issue aligned with Sperber and colleagues' (22) discussion of semantic inconsistencies and methodological issues with translating valid tools. Although advanced planning was conducted as recommended by Sperber, the subtleties between US youth culture and Ugandan youth culture did not make a direct translation useable. After the second day of data collection, the decision was made by the research team to omit the EHC from data collection in the remaining villages and focus on the larger survey.

Given the success of the EHC in United States settings, the research team decided to follow up in a second inquiry to determine whether the EHC was modifiable as a useful tool for data collection. This manuscript describes that process and the recommended modifications to the EHC, stemming from feedback from young people in Uganda.

Methods

Setting and sample

Although the EHC was initially administered to Ugandan youth aged 13 to 19 in the field, the research team intentionally chose to gather feedback from emerging adults to gain more insight into ways to modify the EHC. The World Health Organization (23) defines adolescence as from 10 to 19 years; yet, emerging adults (age 20–25) share many of the same characteristics of adolescence (24). Additionally, 'there is a growing international recognition that modern adolescence extends into the early 20s' (25). Given the overlap and fluidity between the two age groups, research with young people has expanded to include a wider range of youth, particularly those aged 16 to 25 (5, 14, 26–28). Given this fluidity, the research team decided to recruit emerging adults enrolled in a university health science program to participate in the study.

The setting of this qualitative study was a large university in Kampala, Uganda, with over 35,000 undergraduate students and 3,000 graduate students. Kampala is the capital city with over 1.5 million people. Uganda has one of the youngest populations globally, with approximately 49% of the total population under the age of 24 (29). The university houses multiple health science programs including

Table 1. Focus group participant demographics. (n = 24 Makerere nursing students).

	n (%)
Age [*M(SD)*]	23.4 (2.3)
min-max	21–30
Gender	
Male	12 (50%)
Female	12 (50%)
Year of Study	
2nd	11 (45.8%)
4th	13 (54.2%)
Type of housing	
Campus	16 (66.7%)
Hostel	4 (16.7%)
Home	3 (12.5%)
Rental	1 (4.2%)
Religion	
Christian	20 (83.3%)
Muslim	2 (8.3%)
Other	2 (8.3%)
Sponsorship status	
Government	18 (75.0%)
Self-sponsored	5 (20.8%)
Other scholarship	1 (4.2%)
Number of family members [*M(SD)*]	7.4 (2.6)
min-max	3–12
Family home location	
Rural	20 (83.3%)
Urban	4 (16.7%)

veterinary science, nursing and medicine. Participants (n = 24) were purposively recruited from the University's nursing program. All participants were enrolled in their second or fourth year of the bachelor of nursing program.

A Makerere faculty member approached nursing students during their regular courses and described the research study. Those interested were asked to participate in focus groups divided by year in school and gender. Half of the students were male and 46% of the students were in their second year of study (see Table 1). The majority of students identified as Christian, had received government sponsorship to attend Makerere University, and identified their permanent address as rural. All participants spoke English.

Focus group procedures

Respective Internal Review Boards at the University of Minnesota and Makerere University approved this study. The focus groups began with the two American facilitators describing the project, asking the participants to fill out a demographic form, and posing general questions to the students about their schooling. After initial rapport was established, the female facilitators asked about larger themes of traditional Ugandan life, student perceptions of adolescent activities, and commonly celebrated life events. Eventually as participants began to make statements that indicated more comfort, deeper questions regarding Ugandan cultural norms around sexual behaviors and risk and promotive behaviors were asked. It is important to note that gender norms in Uganda may influence behavior. Vu *et al.* found that inequitable norms between males and females can influence sexual risk behavior, intimate partner violence and negative health outcomes (30). Therefore, given the cultural gender gap and variations between the sexes, participants were divided into same-sex focus groups to eliminate gender-based power dynamics.

After this discussion of Ugandan cultural norms, students were asked to complete the EHC as though they were a typical adolescent aged 13 to 19 (i.e. a 'younger brother or sister or cousin'). Researchers asked students to think about the life of a friend or family member and consider the factors that influenced their behavior. We intentionally asked the participants to consider other people's life stories so that they were not divulging personal information about themselves. An example EHC was given to participants to help them understand what a completed EHC looked like (see Figure 1). Participants were given 30 minutes to complete the EHC and encouraged to ask questions during the process. After the allotted time, a second discussion followed regarding the student's perceptions of the EHC and suggested improvements to make it more applicable to Ugandan adolescents and emerging adults. Facilitators elicited student responses regarding structure of the EHC, including subtitles and examples, typical responses for each section, and cultural events that were not previously included as examples. Specifically, the researchers wanted to know what structural changes to make to each

Year →	2016	2017	2018	2019
What is your Age?	14	15	16	17
What is your year in school (any failed classes, school changes, & if dropped out)?	9th	10th	11th	12th
What are your Activities (Jobs/Church/Family Responsibilities.)?	Soccer, church choir, babysit brother, clean room	Soccer, church choir, babysit brother, clean room, grocery store job	Soccer, babysit brother, grocery store job	Work grocery store
Who do you live with and where?	Mom, Dad, brother	Mom, Dad, brother	Mom, brother	Mom, brother
What Positive Events have you had or What are your Goals?	Made varsity team for soccer, made honor roll	Won state title for soccer, honor roll	Honor roll, won employee of the month award	none
What Negative Events or Losses have you had (Accidents, Deaths, Violence experiences)?	Grandma diagnosed with cancer	Grandma died	Parents divorced	Kicked off soccer team, failed first quarter of science
What was/is your Sexual Activity? 1. Partner(s) (use initials) and partner's age 2. When? (month/s) 3. Type of sexual activity? 4. Contraception Used? Type? 5. Reason for having sex? (pleasure/forced/for money)	none	none	PV Oct/Nov Oral None pleasure	LM-Jan-Mar Oral/Vaginal IUD Pleasure LM-Jan-Mar Oral/Vaginal IUD pleasure
Have you engaged in any of these behaviors? Smoking, Alcohol, Drugs, Others?	None	none	Alcohol on weekends at parties	Weekend drinking Smoked weed a few times a month

Figure 1. Event history calendar – United States.
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category of the EHC that were applicable to Ugandan adolescents. During these discussions, facilitators took notes regarding participant statements and the sample EHCs were collected on completion of the group. Each focus group lasted approximately two hours, including time to complete the sample EHC. After completion of the focus groups, participants received 20,000 Ugandan Shillings (approximately USD 5.50) as an honorarium for their time and participation.

Analysis

The research team took notes within a Microsoft Word file and by hand during the four focus groups conducted with second-year females, second-year males, fourth-year females, and fourth-year males. Each original EHC category was noted on the Word file and when questions related to the EHC category were discussed, detailed notes were taken about participant responses as well as information about how students reacted to the wording of the category and examples.

After the focus groups, the notes between facilitators were discussed, compared and synthesized into one document for each focus group. These documents were analyzed using qualitative description and qualitative content analysis (31, 32). Two authors independently and inductively coded the meaning of the participants' responses and information inputted on the sample EHC including the number of times a specific example was given. The authors reviewed the coding and subcategories and achieved consensus in data analysis. Within each EHC category, items were organized into subcategories that should be considered when adapting the EHC for Ugandan adolescents. Credibility of the analysis was achieved by one additional author reviewing the analysis for congruence with the original data.

Results

Ugandan college students advocated for more culturally relevant examples within the EHC. They also desired a more structured EHC format with explicit instructions. Structural feedback included asking fewer open-ended questions, including check-off boxes and the use of standard abbreviations and symbols (e.g. N/A).

EHC categories

Age

Participants noted that age is a difficult metric for some Ugandan adolescents. People who are born in rural villages or outside a clinic/hospital may not have a birth certificate or know the year they were born. Therefore, it is often difficult to know a person's true age. One focus group in particular expressed concern that rural-dwelling youth may be unable to answer a question about age and that year in school may be a better indicator regarding stage of development.

Year in school

Year in school was considered a good indicator of developmental age for those who attended school. In Uganda, universal primary education is available to every young person. There are seven years of primary school and six years of secondary school. The first four years are lower or ordinary secondary, and the last two years are the upper or advanced secondary school. However, once the seven years of primary education are complete, families are generally responsible for paying tuition and school fees for the secondary levels. In some areas, universal secondary education is available; however, the program is inadequately funded nationally (33). Therefore, some young people, particularly poor and rural youth, are unable to continue their education. Participants recommended identifying on the EHC whether the adolescent was in primary or secondary school and the numerical level. For example, P-4 would mean primary school, year 4 whereas S-6 would mean upper secondary school, year 6.

Additionally, participants said it would be important to ask youth about failing or repeating levels or having to drop-out of school. In particular, the second-year males stated that including a section about dropping out of either day school or boarding school might be an indicator of risk behavior.

Both fourth-year males and females mentioned that it is important to differentiate between attending boarding school and day school as this distinction may indicate the family's financial situation and the risk of substance use. Specifically, students who attend boarding schools typically come from wealthier families who can afford the tuition and school fees. Students may have to switch from boarding school to day school if their parents' financial situation changes; thus, the type of school attended can be a proxy for socioeconomic status. Participants also noted that drugs and alcohol are more common among students who attend day school because the substances are more easily accessible.

Activities

Participants identified common hobbies or activities that they participated in as an adolescent including church activities, playing instruments, family activities, jobs, holiday work, house work, sports, other games, gambling, and leadership roles. Participants requested explicit examples of these culturally relevant hobbies in the sample EHC.

The majority of nursing students recommended that the activities section be broken up into smaller sections to ensure that researchers gained a more comprehensive picture of Ugandan youth and protective factors in their lives. These sections could include activities such as athletics and household chores, as well as a section asking, 'What do you do for money?' Additionally, special events should be considered for Ugandan youth. Examples included the traditional introduction ceremony (an engagement celebration), passing school exams or leaving school (e.g. Primary Leaving Examination, Uganda Certificate of Education, Uganda Advanced Certificate of Education), sporting achievements, or religious rites of passage such as confirmation. Participants noted that extracurricular activities, special events and eliciting responses regarding adolescents' income were important for a holistic understanding of Ugandan youth.

Living situation

This section was not considered problematic by the participants. However, the overwhelming majority recommended two separate questions, 'Where do you live?' and 'Who do you live with?' in each column year as they believed this would encourage participants to answer both questions.

Positive events and goals

All groups stated that positive events and goals should be asked about separately in the EHC due to the differences in their meaning and the nuances between positive events and future goals. The second-year females identified different goals to use in the example EHC. For example, they mentioned goals such as getting married (a rich boyfriend with a car was especially desirable), wanting to go to university, and wanting to leave the rural villages to move to the city.

The fourth-year females wanted to structure the goal section to empower adolescents. They felt that this was an opportunity for adolescents to consider their career and life goals. Examples from the group included being a doctor or a nun, getting good grades, a good job, or moving to the city. Throughout the focus groups, female students emphasized a wealthy husband as desirable. The fourth-year males believed that positive events and goals should focus on what the adolescents wanted to 'become in the future.' Regardless of sex, the positive events identified by fourth-year participants included surprise parties, a romantic interest, a first hug from their mother, earning a leadership position, winning a race or school award, and being awarded a scholarship or bursary.

Negative events

Neither of the second-year groups had any suggestions for changing or adding to the negative events section of the EHC. The fourth-year students wanted the inclusion of having a child and substance use as examples of negative life events. Themes that emerged during student sample EHCs included bullying, household moves, deaths, violence, involvement with the justice system, financial troubles, and abandonment by parents.

Sexual activity

The focus groups identified many areas for improvement in the discussion of sexual activity and the EHC. Students recommended asking only about the number of partners rather than the initials of each partner as it may be hard to recall or the young person may feel uncomfortable sharing this information. Subsequently, several participants recommended the addition of check boxes for ease of completing the section. The checkboxes were recommended for the type of sex (i.e. oral, vaginal, anal) and the type of contraception used during intercourse. The students stated that the most common method of birth control and STI prevention was condoms, due to their wide-spread availability and low cost. However, hormonal injections, intrauterine devices, abstinence, the morning-after pill, and herbs were also prevalent. The fourth-year males stated that condoms are mostly a man's responsibility and that 'a woman is not trustworthy if she has a condom.' This is important information to know when researchers are interviewing young women; they may use condoms but not feel empowered to purchase them. The fourth-year females mentioned the inclusion of rape, forced sex and transactional sex (e.g. exchanging sex for money or goods) as reasons for having sex.

Risk behaviors

Students in all focus groups identified risk behaviors that were culturally specific outside of the examples listed in the EHC. With regard to alcohol, they included the addition of 'local brew' as an example. Second-year students advocated for the inclusion of gambling and discos as possible examples. Similar to sexual risk, check boxes were encouraged to make the section easier to complete. They also mentioned that there should be a check box for how frequently the person is engaging in this behavior (daily, weekly, monthly); males, in particular, said that if a person is using a form of alcohol, the frequency of use is very important to determine their addiction risk.

Completion of the EHC

Participants provided feedback regarding administration of the EHC to Ugandan youth. All four focus groups discussed reducing the number of years covered in the EHC, stating that four years was confusing and it took too much time to fill out the form. One focus group suggested decreasing the number of years to three, and another stated that two years would be ideal. Participants concluded that the addition of checkboxes or abbreviations would make the EHC easier to fill out and less time consuming.

The appropriate age of EHC administration was an area of deep discussion for participants. Although the EHC provides information on protective and risk factors, the discussion largely focused on the sexual behavior section of the EHC. Osingada and colleagues (34) noted that 80% of sexually active adolescents in Uganda reported sexual debut at younger than age 16. Most students acknowledged that there were girls who were sexually active by 13 or 14, but believed this was too young to complete the EHC. Participants tended to agree that younger adolescents would not know specific names of genitals and contraceptives. The second-year groups suggested that the most appropriate age was between 16 and 19. However, given the data available, younger audiences (age 13+) may be considered appropriate for completing the EHC.

Moreover, there were varying opinions regarding whether the EHC should be self-administered or administered in a one-on-one discussion format with a facilitator. All groups agreed that if the EHC was facilitator-administered, then the facilitator should be a person who was from outside the local community. Participants felt that the information was too personal to divulge to a person from the same village or region. Some students believed that a younger facilitator would be better, while others stated that an older facilitator may make them feel less judged. Additionally, there was a variety of reactions to whether the facilitator should be a person from Uganda, or a non-African researcher who may seem more novel and less judgmental. Regardless of age or sex, most participants felt that the facilitator should be the same sex as the young person filling out the EHC.

Overwhelmingly, participants agreed that an example EHC was helpful for them when completing the data collection tool. The student nurses indicated that in much of their secondary education they had filled out forms and memorized information, but rarely filled out a tool with open-ended questions. The participants also felt a strong aversion to leaving spaces blank and were often frustrated with the limited amount of time provided to fill out the sample EHC. Many students found this to be a barrier to filling out the tool, and believed that the addition of the example made them more efficient and helped them determine what the question was asking so they did not have to leave anything blank.

Discussion

Useful information was gained from talking with young people about the data collection tool. Undergraduate nursing students identified many culturally specific adaptations to the EHC that would make it more applicable to Ugandan adolescents. Several structural changes were recommended, such as decreasing the number of years and adding check boxes that would guide participants through the EHC in a manner congruent with the way Ugandan children and adolescents are educated. The focus group participants all preferred closed options instead of open-ended questions and agreed that it was very difficult for them to leave blank spaces while filling out the EHC. The EHC was updated to reflect this feedback from participants (see Figure 2).

Adaptation

The first structural change to the EHC was to reduce the number of years from four to three. Check boxes and closed responses were added to multiple categories to facilitate ease of completion. In terms of substantive changes, age was changed to 'what is your age (if known)' to accommodate rural Ugandans who may not know their birth year. Grade was changed to 'what is your year in school' in order to account for the differences in schooling structure between American and Ugandan students.

To address specific activities important to the Ugandan context, a new section was added, titled 'What do you do for money?' after the focus groups mentioned that it would be beneficial to explore what activities Ugandan adolescents participate in outside of school. 'Where do you live?' and 'Who do you live with?' remained nearly unchanged except that the questions were separated in both the prompt and within each year. In the Ugandan adaptation, examples were included (mother/father, grandparents, siblings, cousins) based on rural Ugandan living structure that often includes extended family members (35).

The Ugandan adaptation of the EHC separated 'What are your goals?' and 'What positive events have you had?' in accordance with focus group recommendations. The addition of goals may help researchers assess positive aspects of Ugandan adolescent development. As mentioned previously, the females in the study often brought up wealthy husbands or a boyfriend with a nice car as a goal whereas the males focused on individual goals and family achievements. Kemigisha *et al.* (36) found that as adolescents in Uganda age, they have lower gender equity scores. The EHC may be useful in identifying gender inequity in the goals section and could support intervention if goals are relationship attainment rather than individual attainment.

The section on sexual activity was adapted in order to be more attuned to Ugandan norms. The partners' initials and months were removed and were replaced with number of partners. Check boxes were included for type of sexual activity (oral, vaginal, anal), and type of contraceptive. The check boxes included Ugandan specific contraceptive methods like Injectaplan and herbs. Finally, the risk behaviors section was also adapted to reflect common Ugandan risk-taking behaviors. Check boxes were added and a separate section for how often they participated in those risk behaviors was also added and included never, daily, weekly, monthly, and every few months.

Conclusions and future research

Limitations to this small exploratory study include limited generalizability with regard to the type and age of participants. Focus groups consisted of English-speaking, emerging adults older than the specific age range intended to be the target for the EHC. Although this sample selection was purposeful given students' perspectives as emerging adults and their likely interactions with, and knowledge of, family members and friends who met the age range intended for the EHC, it could impact on adaptation/modification of the tool. Our participants were from various Ugandan communities, which strengthens the generalizability of study findings. However, given that all participants had completed secondary education and continued to university, their baseline socioeconomic status was likely higher than those for whom the tool was developed.

The EHC used in the US does not meet the needs of Ugandan youth; this study aimed to modify the tool for the Ugandan adolescent context. The tool was modified based on feedback from university students who noted that the tool could be employed with youth living in Uganda and may be an efficient way to collect data about sensitive topics. Future research should include piloting the updated tool in both rural and urban areas. Additionally, further feedback from youth aged 13 to 19 would be useful to ensure that the EHC is collecting accurate information to add context to research studies focused on describing the protective and risk factors in the lives of Ugandan young people.

Year	2017	2018	2019
What is your age (if known)			
What is your year in school?	Year in School: Primary ___/ Secondary ____ ☐ Boarding School ☐ Day School Did you pass?	Year in School: Primary ___/ Secondary ____ ☐ Boarding School ☐ Day School Did you pass?	Year in School: Primary ___/ Secondary ____ ☐ Boarding School ☐ Day School Did you pass?
What are your activities? (Examples: Church, choir, football, netball, house work, leadership role)			
What special events did you celebrate? (Examples: Introduction Ceremony, national examination, engagement, graduation)			
What do you do for money?			
Where do you live? Who do you live with? (Examples: Mother/Father, Grandparents, Siblings, Cousins, friends)	Where do you live: Who do you live with?	Where do you live: Who do you live with?	Where do you live: Who do you live with?
What are your goals? (Examples: marriage, school, career, grades)			

Figure 2. *(Continued)*

Year	**2017**	**2018**	**2019**
What Positive Events have you had? (Examples: birthday party, boyfriend, leadership positions, winning a sport, awards)			
What Negative Events have you had? (Examples: accidents, loss, violence, death, financial problems)			
What was/is your Sexual Activity? 1. Number of partners 2. Type of Sexual Activity 3. Contraception Used 4. Reason for having sex (pleasure/rape/for money)	Number of partners: _________ What type of Sexual Activity? ☐ Oral ☐☐ Vaginal ☐ Anal What type of Contraception? ☐ Abstinence ☐ None ☐ Withdrawal ☐ Herbs ☐ Condoms ☐ Pills ☐ Injectaplan ☐ IUD Reason for having sex?	Number of partners: _________ What type of Sexual Activity? ☐Oral ☐☐ Vaginal ☐ Anal What type of Contraception? ☐ Abstinence ☐ None ☐ Withdrawal ☐ Herbs ☐ Condoms ☐ Pills ☐ Injectaplan ☐ IUD Reason for having sex?	Number of partners: _________ What type of Sexual Activity? ☐Oral ☐ Vaginal ☐ Anal What type of Contraception? ☐ Abstinence ☐ None ☐ Withdrawal ☐ Herbs ☐ Condoms ☐ Pills ☐ Injectaplan ☐ IUD Reason for having sex?
Have you engaged in any of these behaviors? -Smoking, alcohol, drugs (kuber, khat), disco, gambling, local brew How often do you engage in those behaviors?	☐ Smoking (1) ☐ Alcohol (4) ☐ Drugs (2) ☐ Disco (5) ☐ Gambling (3) ☐ Other (6): _________ How often do you engage in those behaviors? (Mark number from above next to behavior) ☐ Never ☐ Daily ☐ Weekly ☐ Monthly ☐ Every few months	☐ Smoking (1) ☐ Alcohol (4) ☐ Drugs (2) ☐ Disco (5) ☐ Gambling (3) ☐ Other (6): _________ How often do you engage in those behaviors? (Mark number from above next to behavior) ☐ Never ☐ Daily ☐ Weekly ☐ Monthly ☐ Every few months	☐ Smoking (1) ☐ Alcohol (4) ☐ Drugs (2) ☐ Disco (5) ☐ Gambling (3) ☐ Other (6): _________ How often do you engage in those behaviors? (Mark number from above next to behavior) ☐ Never ☐ Daily ☐ Weekly ☐ Monthly ☐ Every few months

Figure 2. Event history calendar – Uganda.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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The South American Physical Activity and Sedentary Behavior Network (SAPASEN)

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Abstract: The present article describes the South American Physical Activity and Sedentary Behavior Network, which was designed to provide ongoing transnational empirical evidence about physical activity and sedentary behavior in South America. The first goal of this initiative was to form a representative body of researchers and policy makers from all South American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela) to establish priorities and targets for the short, medium and long term. Examples are given of connecting physical activity and sedentary data from existing surveys in several of the partner countries. The main objective of the South American Physical Activity and Sedentary Behavior Network will be to impact policies on physical activity and sedentary behavior in South America according to the singularities of each country or region. By encouraging an inclusive and collaborative effort, we expect that the South American Physical Activity and Sedentary Behavior Network will support the connection between researchers from South America as well as provide a better comprehension of the epidemiology of physical activity and sedentary behavior regionally.

Keywords: Exercise, adults, sedentary lifestyle

Introduction

Physical activity, defined as any bodily movement produced by skeletal muscles that requires energy expenditure (1), is well established as a major protective factor for health. It is estimated that physical inactivity, which is the lack of sufficient levels of physical activity according to recommendations from the World Health Organization (2), is responsible for 7.1% of coronary heart diseases, 8.7% of type 2 diabetes and 11.4% of all-cause mortality among Latin Americans. Thus, if we eliminate physical inactivity, life expectancy would increase by 0.8 years (3). Unfortunately, physical inactivity is still highly

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prevalent worldwide (4). Specifically, in South America, estimates revealed that physical inactivity is around 31% (4), generating additional costs to national health plans. Similarly, an independent dimension of human behavior, sedentary behavior (5) is receiving increasing attention due to its impact on metabolic, cardiovascular and mental health (6,7). It is estimated that sedentary behavior, defined as any waking behavior characterized by energy expenditure ≤1.5 metabolic equivalents while in a sitting or reclining posture (5), is responsible for about 3.2% of all-cause mortality in Latin America (6).

International initiatives for physical activity and sedentary behavior surveillance

In the face of these public health concerns, several transnational actions are being developed, aiming to stimulate physical activity, but not to directly decrease sedentary behavior, worldwide. The World Health Organization has provided recommendations for physical activity practice since 2010 and recently launched '*The global action plan on physical activity 2018 – 2030*', which includes milestones for the reduction of physical inactivity around the world (8). Moreover, *The Lancet* launched two physical activity series (2012 and 2016) and the *Lancet Physical Activity Observatory*, which aims to assess physical activity worldwide (9). In order to create the '*Global Observatory for Physical Activity* (GoPA!) (Derived from Lancet Physical Activity Observatory), country report cards' with the prevalence of physical activity within each country, as well as the number of active researchers, existence of physical activity national plans and periodic national surveillance of physical activity, are required (10). Concerning sedentary behavior, the scenario is different. As the study of sedentary behavior is newer than physical activity, global plans are not well developed. Globally, the *Sedentary Behavior Research Network* is the world's greatest plan, which primarily focuses on the creation of a final consensus of terminologies about sedentary behavior (5) as well as the dissemination of scientific evidence in this field. However, to the best of our knowledge, there are no specific global plans aiming at sedentary behavior surveillance to help combat this negative exposure. Recently, GoPA! also started an effort for the inclusion of sedentary behavior indicators in the report cards, but it still in initial phase.

South American initiatives for physical activity and sedentary behavior

In South America, which hosts 0.9 billion people and has different cultures and different patterns of disease across and within countries, there are two major projects aiming to promote physical activity. The first, the 'AGITA' program, was created to promote the recommendation of physical activity, with repercussions inside Brazil as well as globally, including other countries in South America. The 'Red de Actividad Física de las Américas' (RAFA/PANA), for example, was derived from AGITA, also to promote physical activity in South America, through conferences, dissemination of evidence and integrating research to policy actions. The second, the 'GUIA project', aimed to promote physical activity in Latin America (11), specifically in Colombia and Brazil. GUIA evaluated two interventions in Brazil, provided systematic reviews and stimulated the interlocution between research and policy (12). Even with the above-mentioned actions in Latin America, there is no transnational initiative aiming to provide surveillance of physical activity and sedentary behavior and their determinants. Given the social, cultural and economic diversity between and within Latin American countries, it is also expected that different correlates and determinants of physical activity and sedentary behavior are present. Thus, effective interventions aiming to promote health behaviors could vary widely.

The SAPASEN project

The South American Physical Activity and Sedentary Behavior Network (SAPASEN) was designed to provide ongoing transnational empirical evidence about physical activity and sedentary behavior in South America, by evaluating the prevalence, distribution and correlates/determinants of these behaviors. The first step in setting up the network was to form a representative body of researchers and policy makers from all South American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela) in order to collectively establish priorities and short, medium and long-term goals.

In the short term, SAPASEN will explore epidemiological data on physical activity and sedentary behavior using national representative datasets from South American countries and describe the prevalence of each behavior, sociodemographic distribution, possible determinants of these behaviors as well as possible consequences, such as chronic diseases and mental health. SAPASEN also aims to investigate the methods of data collection in each country.

After the first period, the medium-term priority will be to standardize the collecting methods in the national health surveys, including physical activity and sedentary behavior questionnaires, stimulating the communication with national health agencies of each country. Therefore, SAPASEN aims to provide continuous information on physical activity and sedentary behavior prevalence over the years, as well as to stimulate community interventions, considering regional specificities. For this, national surveys with information on physical activity and sedentary behavior (including total sitting time and screen time measures), as well as sociodemographic factors, environmental and negative health outcomes (including chronic diseases such as hypertension, type 2 diabetes and mental health) conducted among adults between 18 and 59 years from South American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela) will be analyzed. Finally, by also exploring data on sitting time and screen time, including TV viewing as part of national surveys from South American countries, SAPASEN will aim to fill the gap of missing surveillance data on sedentary behavior from a transnational and regional level.

Barriers and supporting factors for SAPASEN

One of the greatest barriers for SAPASEN will be to initiate communication with each government in South America and enlighten them about the importance of standardization of physical activity / sedentary behavior collection methods, especially among countries passing through economic and/or political crisis and consequently promoting priorities other than public health. Political transitions and changes will also present challenges for the SAPASEN actions.

Specifically, given the initial aim of SAPASEN, the first barrier will be to harmonize data from different countries, considering the inclusion of different data collection methods adopted in different countries. Similarly, another challenge will be the sensitization of each country regarding the adoption of standardized methods in their national health surveys, especially concerning physical activity and sedentary behavior. SAPASEN will look for funding opportunities aiming to perpetuate continuous surveillance in South America. It is our hope that the collaboration of researchers and policy makers combined in SAPASEN as well as the appeal for the surveillance of risk/protective behaviors should reduce these barriers.

Preliminary data

To begin addressing SAPASEN objectives, we conducted analyses of physical activity and sedentary behavior prevalence using already existing nationally representative datasets. National surveys from Argentina (Encuesta Nacional de Factores de Riesgo 2013), Brazil (Pesquisa Nacional de Saúde 2013), Chile (Encuesta Nacional de Salud 2009–2010), Ecuador (Encuesta Nacional de Salud y Nutrición 2012), Peru (Encuesta Nacional de Hogares, Módulo de Mediciones Antropométricas, 2011), and Suriname (The Suriname Health Study, 2013) were harmonized for a prevalence analysis. In the initial phase of SAPASEN, we also identified that Colombia, Paraguay and Venezuela have national surveys with physical activity data. However, Paraguay and Venezuela did not provide data and Colombia did not reply on the invitation to be part of SAPASEN. All samples were calculated through complex sampling. Data of physical activity and sedentary behavior of 117,014 adults (Argentina = 26,932; Brazil = 52,490; Chile = 3719; Ecuador = 19,883; Peru = 8820; Suriname = 5170) were analyzed using sampling weights for each country.

National surveys adopted different questionnaires to assess the physical activity and sedentary behavior. For the current study, we analyzed total physical activity (sum of leisure, transportation and occupational domains) and two indicators of sedentary behavior (TV viewing and sitting time). Surveys from Argentina and Ecuador did not include occupational physical activity, and surveys from Ecuador and Brazil did not include sitting time. The Brazilian survey included total TV viewing instead of sitting time.

Figure 1 shows the prevalence of more than 150 minutes of moderate-to-vigorous physical

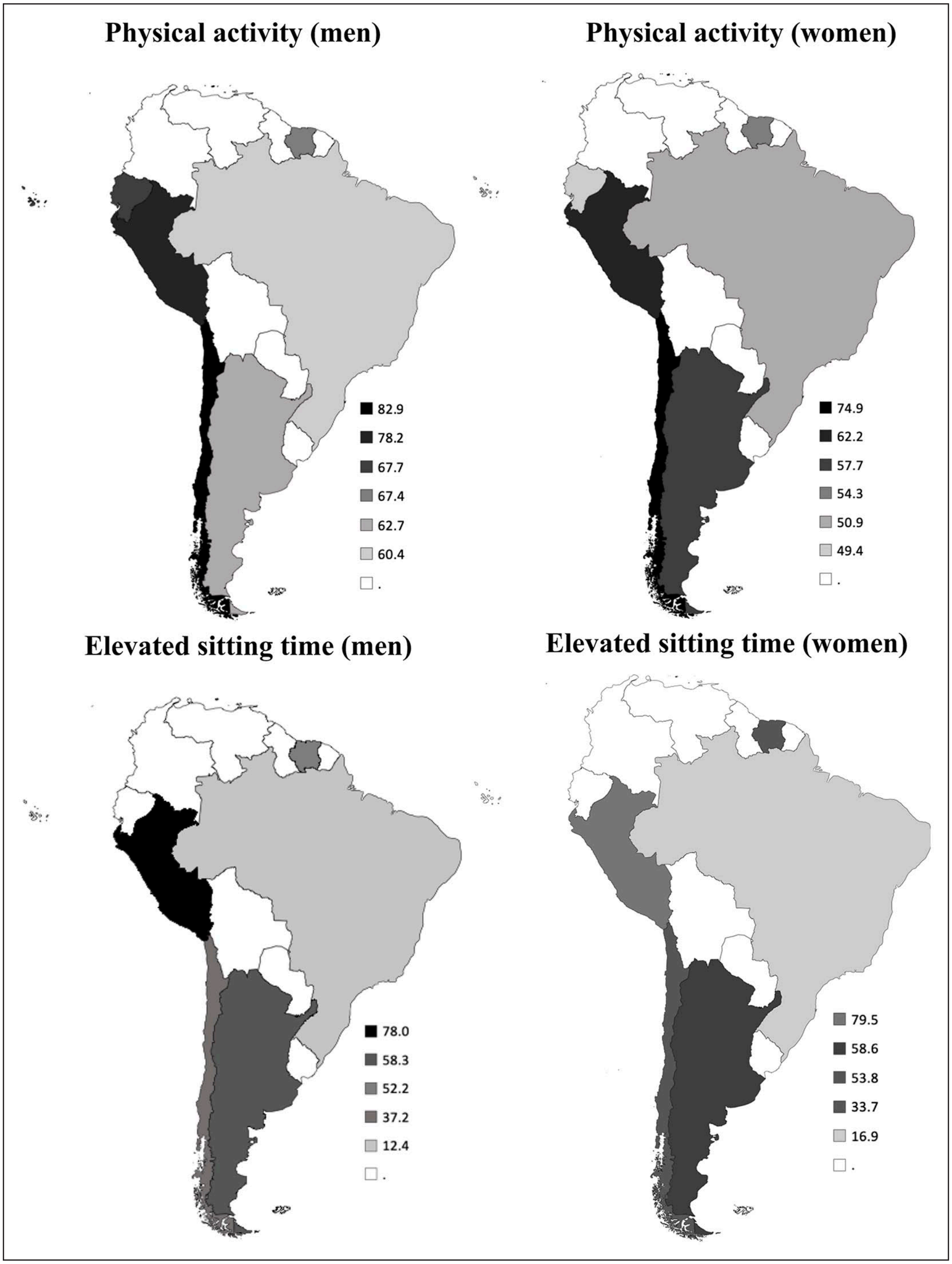

Figure 1. Prevalence of at least 150 min/week of habitual physical activity and more than 4 h/day of sitting time in males and females from SAPASEN.

Note: Data are presented using frequencies.

activity per week and more than 4 hours/day of sedentary behavior by sex and country. The prevalence of physical activity ranged between 60.4% (95%CI: 59.3 to 61.5) (Brazil) and 82.9% (95%CI: 79.7 to 85.7) (Chile) among men, and between 49.4% (95%CI: 47.7 to 51.0) (Ecuador) and 74.9% (95%CI: 71.7 to 77.7) (Chile) among women. Regarding sitting time, prevalence of more than 4 hours/day ranged between 78.0% (95%CI: 76.3 to 79.6) (Peru) and 37.2% (95%CI: 33.3 to 41.3) (Chile) among men, and between 79.5% (95%CI: 78.0 to 80.9) (Peru) and 33.7 % (95%CI: 30.6 to 37.1) (Chile). In Brazil, 12.4% (95%CI: 11.7 to 13.1) of men and 16.9% (95%CI: 16.2 to 17.7) of women reported more than 4 h/day in TV viewing.

The value of the SAPASEN approach is illustrated through these preliminary results, and already indicate potential priority areas for interventions in Brazil and Ecuador for physical activity, and in Peru for sitting time. The next steps of SAPASEN can help to further clarify potential determinants of both behaviors and how they can vary across South American countries. These efforts also signal to the need for a standardized physical activity collection method for South American countries.

Once a solid empirical base is established, SAPASEN hopes to provide information to impact policies on physical activity and sedentary behavior in South America according to the specificities of each country or region. We also expect that SAPASEN can encourage an inclusive and collaborative international effort by supporting the connection between researchers from South America, as well as providing a better comprehension of the epidemiology of physical activity and sedentary behavior regionally.

SAPASEN collaborators

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Authors' contributions

AOW and DRS: literature search, study design, and writing. SB, JJM and OI: study design and revision of the first draft.

Ethics committee approval

Not applicable.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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Book Review

R Labonté and A Ruckert, *Health equity in a globalizing era: past challenges, future prospects*, Oxford University Press: Oxford, UK, 2019. 464 pp, paperback £42.99 ($55.00 USD). ISBN: 9780198835356.

Health equity in a globalizing era is a comprehensive synthesis of conceptual and empirical evidence tracing how globalization processes affect health and health equity. Using a political economy approach, the book draws particular attention to the neoliberal forces operating at the supra-national level, positioning globalization as a 'determinant of the determinants of health'.

The authors begin by defining and situating the concept of globalization within its historical context (from the 1500s to the present day), highlighting the influences of imperialism, mercantilism, Western dominance and industrialization (to name but a few). Taken together, these early influences are further explored throughout the book as cross-cutting themes, including the 'movement of people, trade and commerce, wealth, state involvement, conquest and colonization and the diffusion of knowledge (p. 13)'. This analytic approach helps to contextualize and justify the inevitability of health as an object of globalization.

While much has been written on globalization and its links to health and/or health equity, this book makes a unique contribution through its extensive and detailed analysis across different literatures, issues and geographies. Through the use of complex case examples, the authors interrogate some of globalization's *leitmotifs* and effects – for example the pursuit of profits at all cost achieved through the commodification of human capital resulting in precarious work, the perpetuation of gender inequities resulting from the maldistribution of resources and 'practices of power'; the consequences of neglecting non-communicable diseases in favour of individually oriented lifestyle solutions and the deregulation/lack of regulation of unhealthy commodities; the effects of globalization on health systems, including health worker migration; and the appropriation of natural resources and its impact on the planet's sustainability. They also tackle the lasting effects of trade agreements and macroeconomic policies on poorer nations, and the messy literature on global governance and power asymmetries between global actors 'governing' the global arena, while reflecting on the normative potential of the Sustainable Development Goals and development of an international human rights framework.

The authors are unapologetic for citing evidence that is predominantly critical of contemporary globalization, but also openly invite readers to engage with and critique their interpretations. The book may leave readers interested in coming away with a list of 'effective solutions' to health and health equity somewhat unsatisfied; however, part of the dilemma results from the "paucity of workable strategies towards achieving greater equity in sustainable global health, which is the outcome of seeking solutions from within belief systems and cognitive biases that cannot offer solutions (1)". There is room for some optimism illustrated through examples of policy measures and civil society activism aimed at curtailing the neoliberal effects of globalization. These may inspire health promotion practitioners and others to demand greater systemic change in the current global economic order – now more than ever in the context of the COVID-19 pandemic, which has served to further illuminate persistent structural inequities.

The book will be of interest to senior undergraduate and graduate students in the health, social and environmental sciences, including health promotion students. Faculty may also find the book useful in their teaching and research.

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Abstracts

The development of sustainable, inter-organisational collaboration in health promotion: a process analysis

A-M. Corriveau and Y. Dufour

Because of the range, diversity, and complexity of the determinants of health, the benefits sought by promotional efforts cannot generally be generated without the collaboration of several organizations. However, developing sustainable collaboration is not easy. This article is the result of an empirical research on sustainable collaboration in health promotion. The data were collected as part of a longitudinal study that examines the main events that have marked collaboration over a period of twenty years. The analysis shows that inter-organizational collaboration is a complex phenomenon worthy of its reputation, and it invites researchers and practitioners to distinguish the challenges related to collaboration on specific projects and those related to what we call sustainable collaboration. (Global Health Promotion, 2020; 27(3): 184–192)

Health Assets in Family Caregivers of People with Alzheimer's: Development of Health Assets Mapping

J.N. Agulló-Cantos, J. García-Alandete, J.J. Paredes-Carbonell

Alzheimer's, a progressive neurodegenerative disease, is the most prevalent disease in people over 65 years old. Care for people with Alzheimer's depends, in most cases, on the nuclear family unit, and it is these family members that suffer the consequences of providing care. Traditionally, the study and analysis of caregivers has been carried out from the perspectives of shortages or problems. This study introduces the salutogenic and health assets model. It attempts to comprehend the positive value of care and the overcoming of adverse circumstances by means of those abilities or resources, whether of the caregiver or the environment, that aid in confronting this disease in a positive manner.

The participants in this study were family caregivers (*n*=45) from three different adult daycare centers for people with Alzheimer's, where they were interviewed in groups (of 5 to 13 participants per interview) and recorded in audio, for subsequent transcription and thematic analysis.

The results show that family caregivers, despite living with a source of stress, can nevertheless achieve positive outcomes in the care experience; they are capable of identifying health assets, both internal and external, that help them improve and/or maintain their health as caregivers. (Global Health Promotion, 2020; 27(3): 209–216)

Care Trajectories of Mayan People with Type 2 Diabetes in Mexico

C. Juárez-Ramírez, F.L. Théodore, A.L. Villalobos, A.L. Sauceda, S. Treviño, and B. Allen-Leigh

Purpose: to show how patients from indigenous backgrounds (Mayans) who suffer from type 2 diabetes manage resources from different models of care to treat their disease.

Materials and methods: the design of the study used sequential mixed methods; it included a questionnaire (*n*=195), short interviews (*n*=103), and 20 in-depth interviews with a population of Mayan origin diagnosed with type 2 diabetes, all of whom were users of public health services in three Mexican states: Chiapas, Yucatan, and Quintana Roo.

Results: trajectories of care were oriented in accordance with beliefs about the origin of the disease. The route followed can start with public health services, private medicine (including traditional or alternative), or in the context of religious beliefs; but, at some point, it will pass through all these resources. The utilization of public health institutional resources depends on the patients' assessment of the health system's efficacy as well as on the causes of the disease, frequently emotional ones: *susto* (trauma/fear), anger, and/or worries.

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Conclusions: participants actively looked to treat their disease by various means; this implies that care trajectories include mixed models, resources, and medications, in part due to conditions of poverty. This evidence can be used to adjust health education programs, following the health promotion proposal of encouraging people to have greater control over their own health. (Global Health Promotion, 2020; 27(3): 217–226)

"To Get Sick Here is a Luxury": Practices and Perspectives on the Treatment of Diseases among Yucatecan Immigrants in Southern California

A.R. Valdez Tah

This study focuses on how a group of immigrants, originating from the Mexican state of Yucatan and now living in Southern California, manage the health conditions that afflict them and how they articulate their care practices vis-à-vis their socioeconomic conditions, migratory status, and access to institutional health services. This study used qualitative methodologies, including interviews. Ethnographic data were analyzed with the MAXQDA12 software. The modalities of care-seeking trajectories are complex, being articulations by which the study participants confront structural barriers to access health services, and at the same time constitute a dynamic synthesis of scientific knowledge and popular wisdom. Structural limitations are largely prevalent from the secondary care level and up, and are most profound among undocumented participants. This work reflects on the structural impact of public policy on health and migration policy on modalities of care, on the health conditions of the participants, and on the implications of its findings for health promotion strategies in the context of international migration. (Global Health Promotion, 2020; 27(3): 227–235)

Developing a Sense of Community: a Proposal for Health Promoting Universities

P. Pérez-Wilson, C. Álvarez-Dardet, M.T. Ruiz Cantero, J.R. Martínez-Riera, and M. Carrasco-Portiño

Health Promoting Universities (HPUs) encourage people to mobilize their resources to participate in and influence the decisions that affect them, creating opportunities to develop the continual improvement of health and wellbeing on campus. The search for conditions that generate health is the basis of salutogenesis. Using the health assets model, the university can be visualized as a resource that strengthens the capacity of its members to keep themselves healthy. We propose to more explicitly incorporate developing a sense of community into the HPU framework as a key element that would, both individually and collectively, help people to feel part of a university community, to take charge of this initiative, and to actively participate in it. This would be a valuable element for revitalizing the HPU strategy. (Global Health Promotion, 2020; 27(3): 236–239)

Une approche disparate de l'égalité de genre affaiblit les ODD : le temps d'une action transversale

Rosemary Morgan[1], Roopa Dhatt[2], Chandani Kharel[3] et Kui Muraya[4]

Le chemin vers la réalisation des droits des femmes et des filles a été long. Nous avons, en 2020, marqué le 25ème anniversaire de la Déclaration de Beijing, nous nous sommes engagés à atteindre les Objectifs du millénaire pour le développement (OMD) en l'an 2000 et nous avons renouvelé notre engagement en 2015 avec les Objectifs de développement durable (ODD). Il faut utiliser le Programme de développement durable à l'horizon 2030 comme un outil de plaidoyer pour lancer des actions et tenir les États membres des Nations Unies responsables (1–3). Cinq ans après le lancement de l'agenda 2030, il est clair que de nombreux pays ne sont pas sur la bonne voie pour atteindre certains des ODD et certaines des cibles. Il est à craindre également que la pandémie de COVID-19 ne se traduise par des reculs et une certaine complaisance de la part des gouvernements à l'égard des engagements déjà pris. Afin de réaliser les droits des femmes et des filles, une action concertée en faveur de l'égalité des sexes dans l'ensemble des ODD est nécessaire.

L'omnipresence de l'inégalité entre les sexes et ses liens avec les ODD

Les objectifs d'égalité entre les sexes sont intégrés dans 11 des 17 objectifs (à des degrés différents), dont un qui traite explicitement de l'égalité entre les sexes (ODD 5 : Parvenir à l'égalité des sexes et autonomiser toutes les femmes et les filles) (3). Cela témoigne de l'omniprésence de l'inégalité entre les sexes et de ses liens avec d'autres formes d'inégalité. L'inégalité entre les sexes est l'une des formes d'inégalité les plus répandues parce qu'elle désavantage les femmes et les filles, quelle que soit leur position sociale, et où qu'elles soient dans le monde, les interventions liées à la santé, à l'éducation, ou à d'autres secteurs étant mises en œuvre dans des contextes très sexospécifiques.

Pour démontrer l'importance de l'égalité entre les sexes en lien avec tous les aspects de la santé et du bien-être (ODD 3 : Permettre à tous de vivre en bonne santé et promouvoir le bien-être de tous à tout âge), nous discutons de la relation entre le genre et deux ODD sans cibles ou indicateurs liés au genre : alimentation en eau et assainissement (ODD 6) et énergie (ODD 7).

Dans de nombreuses communautés, les femmes et les filles sont accablées par la collecte et l'entretien de l'eau. De ce fait, elles sont plus exposées à différentes maladies, souffrent de lésions musculosquelettiques et subissent un stress permanent (4). L'eau potable, l'assainissement et l'hygiène sont essentiels au bien-être des femmes et des filles. Sans ces installations là où elles habitent, au travail ou à l'école, les femmes et les filles courent de façon disproportionnée des risques accrus de maladie, de violence et de harcèlement, car elles doivent se déplacer pour avoir accès à l'eau (4). Le problème est encore plus aigu pour les femmes et les filles des milieux ruraux et/ou socioéconomiques défavorisés. Une étude menée en Inde, par exemple, a révélé qu'une femme d'une caste inférieure avait un plus grand risque de mourir qu'une femme d'une caste supérieure, en raison de facteurs tels que de mauvaises conditions d'hygiène et un manque d'eau et de soins de santé (5).

La pollution de l'air intérieur, un aspect essentiel de l'ODD 7, est devenue une préoccupation majeure

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pour la santé environnementale car elle est la cause de maladies non transmissibles, y compris de maladies pulmonaires obstructives chroniques, de cancers du poumon et de maladies cardiaques. La pollution de l'air dans les habitations causée par des combustibles de cuisine polluants a causé 4,3 millions de décès prématurés dans le monde, dont 60 % sont des femmes et des filles (6). L'utilisation de combustibles de cuisine polluants a eu une incidence sur la santé des femmes en milieu rural dans les pays en développement (7). Elle a également encore davantage plongé les femmes dans la pauvreté en raison de l'augmentation des dépenses de santé (8). Étant donné la nature intégrale de l'égalité entre les sexes dans les domaines de l'eau et de l'assainissement, de l'énergie et de la santé, l'omission d'objectifs et d'indicateurs spécifiques en matière d'égalité entre les sexes dans le cadre des ODD 6 et 7 est problématique.

Un soulagement temporaire pour un problème endemique

Les praticiens, les décideurs et les chercheurs ayant le sentiment qu'il existe bien un lien indirect en matière d'égalité entre les sexes avec d'autres objectifs, elle n'est régulièrement pas priorisée ou elle n'est tout simplement pas prise en compte. Les efforts visant à promouvoir l'égalité entre les sexes sont perçus comme étant à part ou différents des efforts visant à lutter contre les inégalités en santé, sociales ou économiques – par exemple, les intérêts de la santé ne doivent pas forcément également contenir des efforts visant à promouvoir l'autonomisation des femmes. Cela étant, le fait que les questions de genre et les ODD sont objectivement indissociables, montre bien qu'il faut consolider les efforts pour à la fois aborder l'inégalité entre les sexes dans un ODD distinct et intégrer une perspective de genre dans tous les secteurs et domaines du développement durable. Si l'on ne fait pas explicitement attention à l'égalité des genres, celle-ci est souvent ignorée, soit parce qu'on ne sait pas vraiment comment l'aborder, ou parce qu'elle ne fait plus intrinsèquement partie des priorités. Il faut non seulement faire attention à l'Objectif dédié à l'égalité des genres tout en déployant des efforts pour intégrer l'égalité des genres dans tous les ODD. Sans intégration, l'égalité des sexes et les besoins uniques des femmes et des filles demeureront une priorité distincte et continueront d'être relégués aux mains de spécialistes ou de défenseurs de l'égalité des sexes, plutôt que d'être abordés de façon holistique dans tous les domaines du développement durable. En ne s'attaquant pas aux systèmes et aux structures d'oppression et aux causes sous-jacentes des mauvais résultats sociaux, économiques et sanitaires – comme l'inégalité de genre – nos interventions ne sont qu'un soulagement provisoire pour un problème endémique.

Nous nous maintenons dans un cycle constant, répondant continuellement aux résultats inéquitables qui découlent de structures et de processus plus profonds d'inégalité et d'exclusion – ce qui nous prépare à un travail sans fin. Si notre but est simplement de garder notre emploi, alors cette stratégie fonctionne. Cependant, si nous voulons vraiment nous attaquer aux inégalités, nous devons chercher à transformer les systèmes et les structures qui perpétuent la marginalisation et l'exclusion et qui se manifestent par une mauvaise santé et d'autres formes d'inégalité.

Que faut-il faire lorsqu'on est praticien, décideur politique ou chercheur pour aller de l'avant ?

Les interventions qui visent à lutter contre les inégalités entre les sexes, comprenant entre autres l'accroissement de l'autonomie des femmes, le leadership, l'accès aux ressources ou la redistribution du travail, auront un effet positif sur les résultats des autres ODD. Pour cela il faut des politiques et des actions transformatives ayant trait au genre. Cela ne suffit pas de simplement attirer l'attention sur un problème; il faut qu'il y ait des dispositifs mis en place pour permettre que les questions soient abordées et les obstacles systémiques remis en cause. Avant tout, l'égalité entre les sexes doit être considérée comme l'affaire de tous, et non comme un intérêt particulier ni seulement réservé aux femmes. L'agenda des ODD doit être réalisé en considérant le genre comme un aspect transversal et donc intégré dans la conception, les ressources, la mise en œuvre et l'évaluation. Les stratégies sexospécifiques doivent être conçues avec des gains à court et à long terme, et des politiques qui ont fait leurs preuves doivent être amplifiées et mises en œuvre. Les actions spécifiques comprennent :

1) **Le leadership politique et l'élaboration de politiques guidées par des données probantes :** il faut maintenir les engagements concernant les droits des femmes et des filles, y compris l'accès à une éducation sexuelle intégrale, à des services et à une planification de qualité en matière de santé sexuelle et reproductive, à l'avortement sans risque et aux soins maternels et néonataux.
2) **L'allocation des ressources et une budgétisation considérant les genres :** il faut fournir des ressources et assurer un suivi à l'aide d'un marqueur d'égalité entre les sexes (9) pour garantir une allocation appropriée des ressources.
3) **Une perspective intersectionnelle :** il faut réfléchir à la façon dont le genre se recoupe avec d'autres stratifications sociales, car les réalités varient au-delà du sexe, y compris en fonction de la race, de la géographie, de la caste, du statut socioéconomique, de l'éducation, de la religion, du handicap, de l'âge et de la sexualité, etc.
4) **Des données :** il faut recueillir et analyser les données sur le sexe et le genre. Ces données sont nécessaires pour comprendre le contexte et mesurer les avancées. Cela comprend les données quantitatives et qualitatives sur le genre, les indicateurs sexospécifiques et l'utilisation d'indicateurs de substitution. Il faut passer à la recherche sur la mise en œuvre.
5) **Une approche sensible au genre :** il faut utiliser une approche favorisant l'égalité de genre dans tous les domaines de la santé et du bien-être, ce qui comprend l'analyse des déterminants de la santé liés au genre et la conception de systèmes de santé qui répondent aux besoins uniques des filles et des femmes, des garçons et des hommes et de tous les autres genres.
6) **Un changement de normes:** il faut changer les normes en changeant le discours sur la façon dont les filles et les femmes sont perçues. Au lieu de populations vulnérables elles doivent maintenant être vues comme des moteurs de santé et de bien-être dans leurs sociétés et des leaders dans leurs communautés et dans la société.
7) **L'accès au pouvoir :** il faut mettre le pouvoir dans les mains des filles et des femmes en renforçant le leadership politique, en formalisant leur participation au marché du travail et en leur assurant un travail décent.

À l'ère des ODD, l'interconnexion entre le développement durable et l'égalité des sexes est bien établie. La réalisation de l'égalité des sexes doit être absolument complète si nous voulons progresser et atteindre tous les ODD. En revanche, si nous ne mettons pas en place des mesures pour parvenir à l'égalité entre les sexes dans l'ensemble des ODD, il faudra au moins 100 ans pour combler l'écart entre les hommes et les femmes, et plus spécifiquement 257 ans en ce qui concerne l'écart économique entre les sexes (10). L'urgence d'accorder la priorité à l'égalité des sexes est encore démontrée par la pandémie de COVID-19. Nous sommes témoins de grandes inégalités fondées sur la race, le sexe, la situation socioéconomique et la géographie. À mesure que nous nous reconstruisons, il est impératif de prendre des mesures pour respecter les engagements pris en matière d'égalité entre les sexes.

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Article Original

Le développement d’une collaboration inter organisationelle durable en promotion de la santé : une analyse processuelle

Anne-Marie Corriveau et Yvon Dufour

Résumé : En raison de l’éventail, de la diversité et de la complexité des déterminants de la santé, les bénéfices recherchés par les efforts de promotion ne peuvent généralement être générés sans la collaboration de plusieurs organisations. Toutefois, le développement d’une collaboration durable n’est pas facile. Cet article est le fruit d’une recherche empirique portant sur une collaboration durable en promotion de la santé. Les données ont été recueillies dans le cadre d’une étude longitudinale qui examine les principaux évènements qui ont marqué la collaboration au cours d’une période de vingt ans. L’analyse montre que la collaboration inter organisationnelle est un phénomène complexe digne de sa réputation, et elle invite les chercheurs comme les praticiens à distinguer les enjeux de la collaboration autour de projets spécifiques et ceux liés à ce que nous appelons la collaboration durable.

Mots-clés : collaboration inter organisationnelle, analyse processuelle, collaboration durable, étude longitudinale, promotion de la santé

Introduction

En raison de la diversité et de la complexité des déterminants de la santé, les bénéfices recherchés par les initiatives de promotion de la santé nécessitent souvent la collaboration entre plusieurs organisations (1–4). Toutefois, les défis que pose ce type de collaboration sont nombreux (3–6), ce qui amène certains experts à en dresser un bilan peu reluisant (7,8). Pourtant, les facteurs de réussite de la collaboration inter organisationnelle ont déjà fait l’objet de nombreuses études (7,9–11), qui laissent à penser que les conditions idéales d’une collaboration réussie peuvent être mises en place dès le départ, et que les actions des partenaires sont ordonnées afin d’atteindre un objectif commun explicite et accepté de tous (11,12). Pour une majorité de praticiens, cette description est toutefois étrangère à l’expérience vécue. Pourtant, depuis l’avènement de la Nouvelle Gouvernance Publique (13), la collaboration inter organisationnelle semble être devenue incontournable pour les responsables de la formulation et de la mise en œuvre des politiques publiques (5), notamment en matière d’éducation et de promotion de la santé.

Cet article présente les résultats d’une étude longitudinale qui retrace l’évolution — au cours d’une période de vingt ans — d’une initiative de collaboration inter organisationnelle durable en promotion de la santé qui s’adresse à la population d’une municipalité canadienne de taille moyenne. La principale question est : comment se développe et évolue, au cours d’une période relativement longue, la collaboration entre des organisations à vocations diverses ? L’objectif général poursuivi est de mieux comprendre le processus vécu par une collaboration durable au fil du temps. Les objectifs spécifiques sont d’identifier les phases de la collaboration et d’en dégager le rythme de l’évolution de manière à offrir certains repères aux partenaires et aux dirigeants de telles initiatives.

La recherche sur le processus de collaboration

La collaboration est un processus à travers lequel des acteurs créent, au fil de leurs interactions, des

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règles et des structures leur permettant d'agir sur les enjeux les ayant réunis (14). Les formes que prennent ces collaborations sont multiples (7). En tant que processus, la collaboration est complexe (7,15) puisqu'elle ne se limite pas à une suite d'activités : elle implique une dynamique entre des individus et des organisations (15).

Témoins de cette complexité, Bryson et al. (7) ont résumé en 22 propositions les conditions de succès de la collaboration, et précisent qu'elles sont interreliées soit directement ou de manière intermédiaire. Leurs impacts les unes sur les autres sont ainsi infinis et impossibles à mesurer. Certains auteurs (5–7,9) ont fait l'effort de traduire la dynamique de la collaboration en modélisant leurs principales composantes. Parmi celles-ci, on retrouve l'environnement, la structure et le mode de gouvernance (7), la motivation des partenaires, les principes d'engagement, la capacité d'action conjointe (6,9), une culture d'apprentissage collectif (6). Ces modèles ne s'attardent toutefois pas à l'évolution du processus au fil des ans (7,15). Le temps façonnerait pourtant l'évolution d'une collaboration, de sorte que sa capacité d'adaptation, sa flexibilité serait le meilleur gage de sa pérennité (6,7,15). Deux contributions majeures se distinguent sur les plans théorique et empirique. Il s'agit des travaux précurseurs de Gray (10,16), et ceux plus récents de Huxham (8,11,17) et Vangen (18–20).

Gray (10) divise le processus de développement de la collaboration inter organisationnelle en trois grandes étapes. Au cours de la première étape de démarrage, les promoteurs identifient l'objet de la collaboration, invitent les partenaires potentiels à s'engager, et identifient les ressources requises. On prend bien soin de mettre en lumière le potentiel de synergie dans les actions des partenaires en raison de leur interdépendance dans le développement et l'amélioration de la situation qui fait l'objet de l'initiative de collaboration. La deuxième étape, d'orientation, voit la formulation d'un objectif commun et la mise en place d'une direction, l'élaboration des règles de la collaboration, de l'agenda et de l'organisation du travail. La troisième étape, la structuration, est témoin de l'addition d'objectifs spécifiques, de la définition plus formelle des tâches, de la mise en œuvre du programme d'action et de l'évaluation de sa performance.

Pour leur part, Huxham et Vangen conçoivent le processus de développement de la collaboration comme émergeant de l'équilibre éphémère de tensions diverses entre plusieurs forces (8). Celles-ci mettent en vedette les différents paradoxes qui sont simultanément source de satisfaction et de frustration chez les partenaires. Le point de départ de l'analyse est que la collaboration inter organisationnelle n'a de véritable raison d'être que si chacune des organisations participantes peut apporter une contribution significative, distinctive et synergique au groupe dans la création d'un « avantage collaboratif » (11) c'est-à-dire d'un avantage majeur qui ne pourrait être généré isolément par les partenaires. Toutefois, ces différences sont également à la source des difficultés qui amènent les partenaires à qualifier de lent et tortueux le processus, le rythme de décisions et d'actions des initiatives de collaboration. Les organisations participantes doivent donc livrer bataille à l'« inertie collaborative » (8), c'est-à-dire à la propension qu'ont les initiatives de collaboration à produire des résultats plutôt maigres en proportion des efforts investis.

Les paradoxes qui retiennent particulièrement notre attention sont: 1) la conviction des partenaires de la nécessité d'un objectif commun non équivoque, alors que la diversité du partenariat pousse plutôt vers un ensemble d'objectifs variés plus ou moins ambigus ; 2) l'adéquation implicite dans l'esprit des partenaires entre collaboration et processus démocratique, alors que le pouvoir réel de décision appartient souvent à ceux qui contrôlent les cordons de la bourse ; 3) l'exercice du leadership, qui échappe souvent au contrôle des partenaires, et qui requière à la fois fermeté et douceur.

Méthodologie

Cet article est le fruit d'une recherche inductive (21). Une stratégie de recherche longitudinale historique (22) a été retenue afin d'analyser un cas sur une période de vingt ans (23). Ce cas est une instance de collaboration mise en place à la fin des années 1980, conjointement par le réseau de la santé et le conseil municipal d'une ville canadienne de grosseur moyenne dans la foulée du mouvement international de « Villes et villages en santé » (2). Cette initiative vise à promouvoir une synergie multisectorielle afin de relever les défis touchant la

Tableau 1. Portrait de l'évolution des partenaires pour la période de 1987 à 2007.

Partenaire	*Secteur et type d'activités*	*Palier d'intervention*	*Année d'intégration de la collaboration*	*Année de départ*
La municipalité	Gouvernement local : Gestion de territoire et services publics	Municipal	An 1	
Centre hospitalier (1)	Santé : Prestation services de santé	Régional	Promoteur initial	
Centre de santé et de services sociaux (1)	Santé : Prévention, promotion et services de 1^{ère} ligne en santé et services sociaux	Local	Promoteur initial	
L'agence régionale de santé	Santé : Coordination des acteurs et programmes en santé et services sociaux	Régional	An 1	
Établissements d'enseignement supérieur (4)	Éducation : Universités et collèges	Régional	An 3 An 4	
Commissions scolaires (2)	Éducation : Écoles primaires et secondaires	Régional	An 2	An 3 pour une CS
Chambres de commerce (2)	Affaires : Défense des intérêts des gens d'affaire	Local	An 2	
La Fédération des Caisses Desjardins	Affaires : Services financiers	Régional	An 9	
Emploi-Québec	Employabilité : Programmes employabilité	Provincial	An 9	
Services Canada	Employabilité : Programmes employabilité	Fédéral	An 3	
Le diocèse	Spirituel : Gestion des paroisses	Local	An 9	
Société de transport municipal	Mobilité urbaine : services de transports publics	Municipal	An 4	
Citoyen (1)	–	Municipal	An 3	An 5

santé et la qualité de vie de la population du territoire. Cette collaboration, constituée en OBNL en 1990, réunit les dirigeants d'organisations qui reconnaissent la nécessité d'interagir pour le mieux-être de la population qu'ils desservent (tableau 1) au sein d'un conseil d'administration (CA) présidé par le maire de la municipalité. Ce CA, qui se réunit toutes les six à huit semaines, est au cœur de cette collaboration. C'est lui qui fait l'objet de la présente étude.

Rares sont les collaborations qui se développent pour l'ensemble d'un territoire autour d'un enjeu général, et ce, pour une durée indéterminée. C'est le cas de l'initiative retenue pour cette étude, ce qui la rend particulièrement intéressante. Ce cas a été retenu en raison de la richesse et de l'accès à l'information, et non pas en fonction d'un cadre théorique déterminé *a priori* (24). L'accès à des archives complètes et aux individus ayant contribué à la collaboration au cours de cette période ont fait en sorte de concentrer l'attention sur les vingt premières années d'activité.

Le processus de cueillette des données comprenait trois principales activités, toutes réalisées par les chercheurs principaux de cette étude. D'abord, le dépouillement des archives avait pour but d'élaborer une chronologie détaillée des principaux évènements qui ont marqué le développement de la collaboration. L'objectif secondaire de cette étape était également d'identifier les personnes clés qui y avaient contribué et qui devaient être interviewées. Plus de 225 documents de travail, comptes-rendus de réunions, correspondances, rapports de projets et rapports annuels ont permis de réécrire l'histoire de cette collaboration (dates clés, évolution des membres, remises en question, contexte, décisions, évaluations, etc.), dans un récit faisant plus de 70 pages (25). Ensuite, une série d'entrevues semi-dirigées (le schéma d'entrevue peut être consulté dans Corriveau, 2009) ont été réalisées avec 19 informateurs clés identifiés lors de l'étape précédente (membres fondateurs, anciens membres et membres actifs lors de la collecte). Cette étape visait à compléter les informations issues du dépouillement des archives, et à fournir une meilleure compréhension de la vision de ses membres quant à son fonctionnement et à son évolution.

Finalement, l'observation non-participante de toutes les rencontres du CA de l'instance de collaboration pour les deux dernières années couvrant la période étudiée, pour un total de dix rencontres d'une durée de deux heures chacune, a été effectuée. Ces rencontres ont permis de constater *de visu* les interactions entre les membres, la dynamique en cours et les conditions dans lesquelles évolue l'instance de collaboration. Cette étape a aussi constitué une source utile pour valider certaines données recueillies par les entrevues ou la documentation, notamment concernant la présence et la nature des échanges (26). Afin d'organiser, d'analyser et de codifier l'importante masse de données générée par cette collecte, le logiciel ATLAS. TI 7.5.15 (27) a été utilisé.

L'analyse des données a été réalisée à l'aide de deux stratégies éprouvées d'étude des données longitudinales historiques. La première a pris la forme d'une narration chronologique des évènements comme méthode initiale d'ordonnancement des données (28,29). Ce récit a ensuite été validé par les informateurs clés lors d'un groupe de discussion et est devenu le principal document de référence pour les étapes subséquentes d'analyse (30). La seconde stratégie, la décomposition temporelle (28) de la narration en sept périodes chronologiques, puis, en trois grandes phases issues de l'identification d'événements critiques ayant menacé la pérennité de la collaboration, a permis de mettre en évidence les principales dimensions de son évolution.

Les résultats

Les sept périodes du cas étudié sont résumées au tableau 2.

La durée de chaque période a fluctué de façon importante au cours du processus, variant d'un à cinq ans. À deux occasions particulières (à la fin de la deuxième période et au cours de la sixième période), la pérennité, et donc le statut durable de l'initiative, s'est vue menacée de façon importante.

Tableau 2. Résumé des sept périodes du cas étudié.

#	*durée*	*Principales décisions et actions*
Période 1	2 ans	Initiation par le réseau de la santé; Mise en commun des informations quant aux activités et enjeux de « promotion de la santé » des participants.
Période 2	3 ans	Développement d'activités conjointes et formalisation des rôles et structures (OSBL).
Période 3	1 an	Remise en question de la pertinence de la collaboration par nouveaux leaders municipaux : devient une table de concertation où les enjeux municipaux prennent le dessus sur la santé.
Période 4	3 ans	Table des décideurs (DGs) autour des projets/plans stratégiques des participants; Évaluation de la collaboration.
Période 5	4 ans	Réseau de solidarité : coalition pour sauver un hôpital de la fermeture. Période de grande mobilisation.
Période 6	2 ans	Contexte de restructurations chez tous les membres : baisse marquée de la participation, peu de projets communs. S'apparente à un réseau professionnel.
Période 7	5 ans	Partenariat autour des saines habitudes de vie : union autour d'un thème d'intérêt commun porté par chaque partenaire dans son organisation et dans des projets communs.

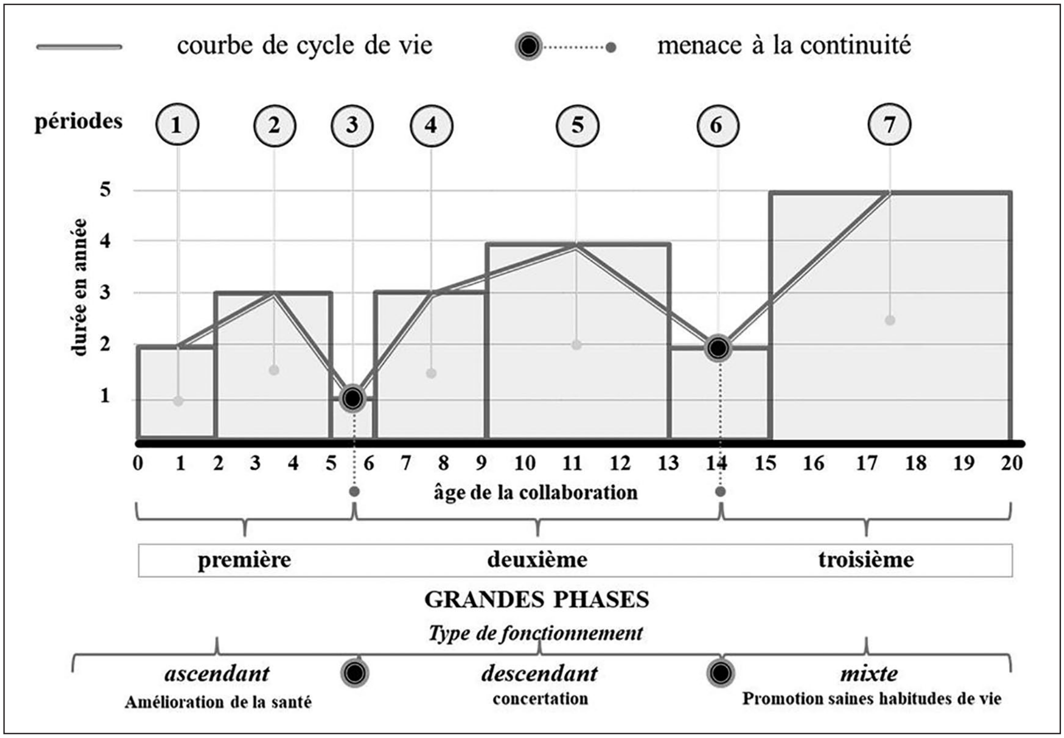

Figure 1. Les trois phases dans le devéloppement de l'intiative de collaboration inter organisationnelle.

Ces deux moments critiques suggèrent un nouveau découpage des données en trois phases (Figure 1) qui mettent en lumière la dynamique de la continuité et du changement dans l'histoire de cette collaboration. L'abscisse montre les vingt années d'existence de la collaboration, et l'ordonnée illustre l'importance relative de chaque période en nombre d'années.

La première phase conviait les partenaires autour de l'amélioration de la santé des citoyens. À une époque où les organisations des secteurs public et privé du domaine ne collaboraient pas entre elles, cette initiative les invitait à mettre en commun leurs compétences, ressources et activités ayant un impact sur les déterminants de la santé, suivant une conception plutôt large de la signification du concept de santé inspirée de la définition de l'Organisation mondiale de la Santé (31). Ainsi la plantation d'arbres, la prévention du vandalisme, la collecte de produits toxique sont devenues, dans le cadre de la collaboration, des activités légitimes d'amélioration de la santé des citoyens. L'intention était de créer une synergie entre ces activités qui génèrerait de meilleurs résultats pour la population. Au cours de cette phase, le modèle de collaboration est ascendant (32), c'est-à-dire que les partenaires, réunis au sein d'un groupe de travail plutôt informel, construisent progressivement leur modèle de collaboration à travers les projets ponctuels qu'ils développent conjointement.

La deuxième phase s'amorce sur fond de crise à la suite de l'élection d'un nouveau maire et la nomination d'un nouveau directeur général de la municipalité qui menacent de s'en retirer. S'ensuit une forte mobilisation des membres et une négociation sur le rôle que devrait jouer la collaboration. À partir de cet événement, la préoccupation initiale de l'amélioration de la santé des citoyens se retrouve à l'arrière-plan. Les projets déjà en place continuent, sous la supervision de la coordonnatrice qui en est responsable depuis la création de l'initiative, mais ne sont plus à l'agenda des discussions du CA. Sous la pression du nouveau maire, qui en devient président, ce ne sont plus des représentants des organisations partenaires, mais leur direction générale qui doit siéger au CA. C'est d'ailleurs le maire lui-même qui les invite (et qui le fera par la suite chaque fois qu'un nouveau DG sera nommé chez un partenaire). À partir de ce moment, bien que la collaboration demeure volontaire, le modèle de collaboration est plutôt de type descendant, le maire influençant significativement son orientation. L'essentiel de cette période est donc consacré à soutenir la remobilisation des partenaires, à redéfinir les règles de collaboration, à formaliser le déroulement des rencontres, à prendre connaissance et à discuter des projets et plans stratégiques de chacun des partenaires. On explore les sujets d'intérêt commun, sans limitation aux enjeux de santé, sans aller au-delà du partage d'informations. À ce stade, la collaboration devient une fin en soi et les membres sont désormais réunis autour d'un large éventail d'enjeux stratégiques qui interpellent plus d'un membre, mais rarement tous les membres à la fois. Seule exception : la menace de fermeture par les autorités gouvernementales d'un des petits hôpitaux locaux offre une opportunité de solidarité et le succès de la campagne pour sauver l'hôpital fait précédent. Malgré ce succès, après presque dix ans, la collaboration, dont les résultats restent mitigés, s'essouffle. Ce ralentissement menace à nouveau la pérennité de la collaboration. Il survient dans un contexte économique qui force les partenaires à rationaliser leurs ressources et à se concentrer sur leurs services respectifs à la population, ce qui se traduit par une baisse marquée des présences aux rencontres.

La vague de réorganisations étant terminée pour les partenaires, la troisième phase renoue avec la convocation originale des membres autour des enjeux de la santé de la population. La collaboration priorise un projet de promotion des saines habitudes de vie. Autour de ce thème, la collaboration donne naissance à des activités qui s'adressent non seulement à la population du territoire, mais également aux employés des organisations membres de l'initiative de collaboration. Cette phase est fortement marquée par le leadership du maire, ancien éducateur physique, qui jouit d'une grande crédibilité auprès des partenaires. Cette influence est toutefois moins formelle que lors de la phase précédente, les partenaires s'appropriant davantage la démarche. Le modèle de collaboration combine maintenant à la fois le type ascendant et le type descendant. Au terme de cette période, un bilan est réalisé. Peu de résultats concrets et directement associés à la collaboration émergent de cet exercice. Les membres y associent plutôt des « effets collatéraux », mais néanmoins souvent structurants pour la population, en nommant de multiples exemples de problèmes qu'ils ont résolu ou de partenariats qu'ils ont établis en marge de l'instance même, mais qui n'auraient pas été possibles s'ils n'en avaient pas fait partie. Cette incapacité à évaluer concrètement les impacts de cette collaboration ne refroidit en rien leur engagement : au-delà du désir de s'unir au bénéfice de la population, le fait de discuter de sujets variés, d'entendre des points du vue différents, de se développer professionnellement au contact de leurs pairs ou la possibilité d'identifier des opportunités pour leur organisation sont au nombre des bénéfices que retirent les membres et qui motivent leur choix de demeurer actif au sein de cette instance de collaboration.

Discussion

L'examen des principaux événements ayant marqué l'évolution de cette initiative de collaboration au cours d'une période de vingt ans montre que la collaboration s'est développée en dents de scie, révélant ainsi deux dynamiques majeures. D'une part, il révèle l'existence de trois longues périodes d'activités convergentes marquées par un petit nombre de changements mineurs destinés à améliorer l'efficience et l'efficacité des activités de la collaboration. D'autre part, il montre de courtes périodes marquées par des changements majeurs et rapides qui président à la redéfinition, à la réorientation et à la relance des activités de la collaboration. La dynamique de développement de la collaboration durable ne se développe donc pas de façon linéaire, suivant une logique de croissance continue, mais semble avoir été influencée par son contexte et son environnement immédiats, qui l'ont parfois obligée à se redéfinir. Ainsi, si les travaux de Gray (10,16) décrivent bien les activités réalisées lors des étapes initiales d'une initiative de collaboration, les étapes subséquentes de ce modèle suggèrent une linéarité dans son évolution qui ne traduit pas la réalité observée dans le cas présenté ici.

C'est là que les travaux de Huxham (8,11,17) et Vangen (18–20) jettent un éclairage utile. Les trois principaux paradoxes énoncés précédemment sont ici mis en lumière. Le premier concerne les tensions entre l'idée reçue qu'un objectif commun non équivoque est une condition essentielle au bon fonctionnement d'une collaboration, tout en reconnaissant que les membres sont porteurs d'objectifs variés. Les données montrent que les partenaires ont non seulement des objectifs variés, mais aussi des motivations changeantes de participer à cette collaboration. Dans la première phase, le désir de mettre en commun des ressources afin d'accroître l'efficience et la synergie pour améliorer la santé de la population révèle une motivation d'ordre organisationnel à s'allier à d'autres partenaires. Dans la deuxième phase, une nouvelle motivation – plus micro, d'ordre individuel – prend le dessus : l'accès régulier et privilégié à l'information et aux individus en position de pouvoir, dont le nouveau maire de la municipalité. Dans la troisième phase, avec la thématique des saines habitudes de vie, c'est la recherche – plus macro – d'un « impact collectif » (6), plus grand sur la population visée que la somme des impacts de chaque membre de la collaboration. En somme, les motivations des partenaires ne sont pas uniquement en regard des activités de la collaboration. Elles sont aussi individuelles et organisationnelles (15), et évoluent selon leurs besoins ainsi que selon les opportunités offertes par la collaboration. Le niveau élevé d'abstraction de l'objectif de la collaboration étudiée semble avoir contribué à générer un contexte réceptif aux transitions qui ont marqué les trois grandes phases, donnant à la collaboration la flexibilité nécessaire afin que chacun y trouve son compte et maintienne son engagement (6,15).

Les deux autres paradoxes illustrés par ce cas concernent le pouvoir et le leadership. L'évolution du modèle de collaboration, d'abord ascendant, puis descendant et finalement mixte, illustre les changements de pouvoir et d'influence selon les orientations dictées par les bailleurs de fonds, mais aussi en fonction de leur légitimité telle que perçue par les partenaires. Le fait que les partenaires aient négocié et réorienté la collaboration pour répondre à la vision d'un nouveau maire, et l'influence qu'a celui-ci tout au long de sa présidence, illustrent que, même si la collaboration se veut volontaire et non hiérarchique, les partenaires s'attendent à ce qu'un leadership soit exercé. Dans ce cas, la légitimité de l'organisation, la Ville, mais aussi celle associée à la fonction de maire, ont joué un rôle important dans la pérennité de cette instance. L'exercice de ce leadership témoigne de la nécessaire combinaison de fonctions officielles (ex. : présidence), d'une fermeté dans les intentions des leaders, tout en ayant suffisamment de doigté pour mobiliser les partenaires à long terme (6) et leur permettre d'influencer eux aussi la suite afin qu'ils rencontrent leurs propres attentes. À cet égard, le leadership est apparu comme un des piliers importants de cette instance de collaboration, et non comme un simple élément de soutien comme le suggèrent Ansell et al. (5).

Cette évolution en dents de scie de la collaboration soulève une autre question : s'agit-il d'une seule collaboration, qui peut être qualifiée de durable en raison de sa longévité, ou d'une suite de projets indépendants successifs dans le temps ? En effet la mise en commun des activités par les partenaires et le développement de nouvelles activités (première phase) n'avait que très peu à voir avec l'effort de développement de réseaux entre les décideurs locaux (deuxième phase), qui elle-même n'avait que très peu à voir avec les efforts de promotion de saines habitudes de vie (troisième phase). Cette question nous amène à réfléchir sur le changement manifeste dans la pratique de la collaboration inter organisationnelle au cours de la période de la recherche. Pendant de nombreuses années, la collaboration a été entendue comme un moyen d'arriver à une fin spécifique, de réaliser un projet commun et d'atteindre un objectif particulier. Toutefois, dans le contexte actuel où les problèmes de santé publique apparaissent dans toute leur complexité, ne serait-ce que par la multitude de facteurs qui les causent, la collaboration semble devenir non plus un instrument au service de la réalisation d'un projet spécifique, mais un mode de vie, une pratique quotidienne entre organisations, une solution en quête de problème à résoudre. C'est de cette nouvelle réalité du divorce entre la collaboration et un projet spécifique dont témoignent les données de notre étude longitudinale. Au gré des changements de contexte, de l'arrivée de nouveaux membres et de la diversification des préoccupations, les objectifs sont appelés à changer et les projets à se diversifier. Du point de vue des organisations partenaires, il s'agit bien d'une seule initiative de collaboration, qui peut être qualifiée de durable en raison de sa longévité, même si les projets réalisés se sont révélés plus éphémères.

Pour les praticiens, ces longues périodes de continuité ponctuées de courtes périodes de changement les invitent à accepter, voire à anticiper ces périodes de rupture, et à envisager le processus de développement comme étant lui-même un objet de collaboration. Bien que les périodes de ralentissement ou de remises en question puissent paraître comme des menaces à la pérennité, elles peuvent également être perçues comme des opportunités de réaligner l'initiative de collaboration avec un environnement changeant. En effet, dans la mesure où la collaboration a une certaine flexibilité (6), elle n'est pas à la merci de son environnement et de son contexte immédiats, mais bien capable de s'adapter et de poursuivre son effort (7).

Il peut s'avérer contrariant, pour les représentants des organisations de santé, de voir les activités dévier des efforts de promotion de la santé pour une période relativement longue. Toutefois, les données indiquent que non seulement plusieurs activités en matière de santé publique ont été réalisées, mais que cette collaboration est devenue durable précisément en raison du fait que tous les membres y ont également trouvé leur compte à un moment ou à une autre (6,8,11). Pour les praticiens en promotion de la santé, les données de la présente recherche sont un rappel que le succès est un chemin que non seulement les efforts, mais également la patience rendent accessible (15).

Conclusion

Les organisations impliquées dans la promotion de la santé ne peuvent faire l'économie de la collaboration inter organisationnelle et ce, malgré ses hauts et ses bas. La description de l'évolution d'une collaboration sur une période de vingt ans illustre qu'une collaboration peut être pérenne, dans la mesure où elle s'adapte à son contexte et aux attentes de ses partenaires, dont les motivations varient au fil du temps.

En outre, cette analyse suggère l'existence d'une collaboration durable, dont le processus doit faire l'objet d'une relance et ce, en naviguant à travers les paradoxes qui marquent son parcours. Dans cette perspective, la collaboration n'est plus une activité ad hoc, mais devient le prolongement de chaque organisation partenaire.

Une limite de cette recherche découle du fait que les sources de données disponibles dans une recherche historique ne permettent pas de retracer les enjeux politiques et la gestion des conflits qui ont pu émerger en cours de route. L'accès à ces éléments aurait pu permettre d'approfondir la dynamique de la collaboration à l'étude.

L'analyse précédente nous a conduits à suggérer qu'il serait intéressant, tant pour les académiciens que pour les praticiens, de distinguer la collaboration inter organisationnelle mise en œuvre pour la réalisation de projets spécifiques de la collaboration inter organisationnelle durable. Cette proposition repose sur l'étude d'un seul cas, et mériterait certainement d'être approfondie par d'autres études similaires. Néanmoins, la collaboration durable est une idée pratique intéressante pour tous ceux qui sont impliqués dans la résolution de problématiques complexes, dont la promotion de la santé, et qui souhaitent jeter les bases d'une gouvernance dite collaborative (9).

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Résumés

Adaptation d'un programme d'éducation en eau, assainissement et hygiène basé sur des images en République dominicaine

J. Nordhauser et J. Rosenfeld

Les problématiques relatives à l'eau, à l'assainissement et à l'hygiène constituent des obstacles à la santé dans les milieux ruraux en République dominicaine. L'accès limité à des ressources appropriées en eau, assainissement et hygiène s'accompagne d'une prévalence de maladies liées à ces problématiques. Afin d'aborder ces questions, un programme d'éducation et de changement comportemental faisant appel à des associations de santé communautaires a été adapté pour des zones à haut risque de transmission de maladies liées à l'eau, à l'assainissement et à l'hygiène. Pour soutenir cette initiative, un protocole a été créé afin d'évaluer 147 images provenant d'une trousse à outils conçue par les associations de santé communautaires à destination des communautés agricoles dominicaines, ou « bateyes », pour déterminer la compréhension des images et leur adéquation culturelle, de même que les variables démographiques associées à la littératie visuelle. Au total, 112 entretiens ont été complétés à travers sept bateyes situés près de la ville de La Romana ; 60 images ont été retenues comme nécessitant une adaptation supplémentaire. Des analyses approfondies ont démontré que l'âge et le niveau d'études étaient associés de manière significative à une plus grande littératie visuelle. Ces résultats renforcent l'idée selon laquelle il convient d'évaluer l'adéquation culturelle des soutiens pédagogiques visuels et la nécessité, à l'avenir, de mener des recherches pour examiner les facteurs qui contribuent à la littératie visuelle. (Global Health Promotion, 2020; 27(3): 6–14)

Un examen systématique de la portée des approches fondées sur les atouts pour promouvoir la santé dans les communautés : développement d'un cadre de référence

V. Cassetti, K. Powell, A. Barnes et T. Sanders

Les approches fondées sur les atouts de la promotion de la santé sont de plus en plus populaires comme moyen de lutter contre les inégalités de santé en habilitant les personnes qui vivent dans des communautés défavorisées afin qu'elles utilisent les ressources locales et qu'elles accroissent le contrôle qu'elles ont sur leur santé et sur ses déterminants. Cependant, des questions subsistent quant à la manière dont elles fonctionnent dans la pratique. Cet article présente les résultats d'un examen systématique de la portée (systematic scoping review) de la littérature empirique relative aux approches fondées sur les atouts dans les communautés. Le but était d'identifier les éléments clés des approches fondées sur les atouts, de même que la manière dont elles sont mises en œuvre dans le cadre d'interventions visant à promouvoir la santé et à réduire les inégalités dans les communautés locales. Quatre bases de données ont été explorées (Medline, PsycINFO, CINAHL, ASSIA) ; les articles étaient inclus s'ils décrivaient des interventions ayant explicitement adopté une approche fondée sur les atouts, mais étaient exclus s'ils se limitaient à l'identification des atouts. Trente articles ont été inclus dans cette analyse. Des données ont été extraites concernant le type des atouts sur lesquels l'intervention s'appuyait, la manière dont les atouts étaient mobilisés, les résultats attendus et les méthodes d'évaluation. Un cadre de référence est présenté ; il synthétise les caractéristiques clés des interventions fondées sur les atouts pour promouvoir la santé dans les communautés. Trois approches principales de la mobilisation des atouts ont été identifiées dans la littérature : (A) connecter les atouts, (B) sensibiliser aux atouts, et (C) permettre aux atouts de se développer. Les approches fondées sur les atouts de la promotion de la santé ont la réputation de prendre une grande diversité de formes, ce qui rend difficile l'anticipation de leurs résultats et l'évaluation des interventions. Le cadre de référence présenté ici peut être utilisé pour mieux comprendre les processus par lesquels les approches fondées sur les atouts fonctionnent dans la pratique pour promouvoir la santé et réduire les inégalités. (Global Health Promotion, 2020; 27(3): 15–23)

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L'impact d'une intervention autour du sevrage tabagique sur l'adhésion aux lignes directrices pour le traitement du tabagisme parmi les agents de santé de village au Vietnam

N. Nguyen, T. Nguyen, V. Truong, K. Dang, N. Siman et D. Shelley

Les agents de santé communautaires (appelés « agents de santé de village » au Vietnam) ont le potentiel de jouer un rôle essentiel dans l'élargissement de l'accès au traitement du tabagisme basé sur des données probantes. Nous avons mené un essai randomisé contrôlé par grappes dans des centres de santé communautaires au Vietnam pour comparer l'effet des conseils et de l'aide au sevrage dispensés par un prestataire de soins de santé (c.-à-d. des conseils brefs et du matériel pédagogique à l'usage des patients) [BC] par rapport à BC + trois séances de conseils dispensés en présence par un agent de santé de village [BC + R] sur l'adhésion des prestataires et des agents de santé de village aux lignes directrices pour le traitement du tabagisme. Tous les agents de santé de village et les prestataires de soins de santé ont reçu une formation. Cet article présente des données concernant l'effet de l'intervention sur l'adhésion des agents de santé de village aux lignes directrices pour le traitement du tabagisme, notamment le fait d'interroger quant au tabagisme, de conseiller aux fumeurs d'arrêter de fumer, de proposer une assistance, ainsi que leurs attitudes, normes, et auto-efficacité par rapport au traitement du tabagisme. Nous avons examiné les changements de l'adhésion aux lignes directrices pour le traitement du tabagisme avant l'intervention et 12 mois après, parmi 89 agents de santé de village dans les 13 centres de santé communautaires recrutés dans la partie de l'étude BC + R. L'adhésion des agents de santé de village aux lignes directrices pour le traitement du tabagisme augmentait de manière significative. Les agents de santé de village étaient plus susceptibles d'interroger quant au tabagisme (3,4 % avant l'intervention, 32,6 % à 12 mois), de proposer des conseils pour arrêter (4,5 % contre 48,3 %), et de proposer une assistance (1,1 % contre 38,2 %). Les obstacles perçus au traitement du tabagisme diminuaient de manière significative. L'auto-efficacité et les attitudes par rapport au traitement du tabagisme s'amélioraient de manière significative. Une adhésion accrue aux lignes directrices pour le traitement du tabagisme était associée à des attitudes positives par rapport à leur rôle pour proposer un traitement du tabagisme et pour sensibiliser à la politique antitabac du centre de santé communautaire. Les résultats suggèrent qu'avec une formation et des systèmes de soutien, les agents de santé de village peuvent élargir leur rôle pour y inclure des services d'aide au sevrage tabagique. Cette main d'œuvre pourrait constituer une ressource durable pour soutenir les fumeurs qui souhaitent arrêter de fumer. (Global Health Promotion, 2020; 27(3): 24–33)

« Personne ne nous l'a jamais demandé »: une étude de faisabilité évaluant la création conjointe d'un programme pour l'activité physique avec des adolescentes

M. Corr et E. Murtagh

Contexte : Le faible niveau d'activité des adolescentes à travers le monde est une préoccupation de santé publique. Peu de recherches ont impliqué des adolescentes dans la conception des interventions. Cette étude a évalué la faisabilité d'impliquer des jeunes filles dans la création conjointe d'un programme pour l'activité physique.

Méthodes : Trente et une lycéennes (âgées de 15 à 17 ans) ont été recrutées dans un établissement d'enseignement secondaire. La roue du changement comportemental (Behaviour Change Wheel) a orienté la conception de l'intervention, en fournissant un aperçu des capacités, des opportunités et de la motivation des participantes face au changement. Le nombre de pas et les niveaux d'activité physique auto-rapportés ont été consignés avant et après l'intervention. Des points de référence de faisabilité ont évalué le recrutement, la collecte des données, l'acceptabilité et l'adhésion.

Résultats : Des séances pédagogiques et d'activité ont été dispensées pendant six semaines lors de cours d'éducation physique. La participation moyenne était de 87 % (point de référence = 80 %). L'éligibilité était de 61 % (point de référence = 60 %). On notait un taux de rétention de 100 % (point de référence = 90 %). Toutes les participantes (n = 31) se sont prêtées aux mesures de référence et 71 % (n = 22) se sont prêtées aux mesures réalisées après l'intervention ; 54 % (n = 17) des élèves ont réalisé les mesures par podomètre, avec 32 % (n = 10) ayant présenté des données complètes. Le nombre de pas moyen par jour était de 13.121 avant l'intervention et de 14.128 après l'intervention ($p > 0{,}05$). La collecte des données était faisable, avec un score moyen > 4/5 (point de référence > 3,5/5).
Conclusions : La roue du changement comportemental peut être utilisée pour créer un programme d'activité conjointement avec des adolescentes. À l'exception des enregistrements par podomètre, les points de référence prédéterminés ont été atteints ou dépassés, ce qui prouve la nécessité d'un essai randomisé contrôlé pour tester l'efficacité. (Global Health Promotion, 2020; 27(3): 34–43)

Développement de la version coréenne du Questionnaire mondial sur la pratique d'activités physiques : étude de fiabilité et de validité

J. Lee, C. Lee, J. Min, D-W. Kang, Ji-Y. Kim, H.I. Yang, J. Park, M-K. Lee, M-Y. Lee, I. Park, S.Y. Jae, Y. Jekal, S.H. Jee et J. Y. Jeon

L'objectif de cette étude était de développer une version coréenne du Questionnaire mondial sur la pratique d'activités physiques (Global Physical Activity Questionnaire) (le K-GPAQ), et d'examiner sa fiabilité et sa validité. La version en langue anglaise du GPAQ a été traduite en coréen, K-GPAQ, à travers un processus comprenant également une contre-traduction. La fiabilité du K-GPAQ a été évaluée à l'aide d'une méthode de test-retest à une semaine d'intervalle auprès de 115 individus. La validité du K-GPAQ selon les critères a été examinée auprès de 199 participants à l'aide d'accéléromètres. Le coefficient kappa de Cohen et le coefficient de corrélation de Spearman ont été utilisés pour mesurer la fiabilité et la validité lors du premier et du second test, respectivement. Une analyse Bland–Altman a été utilisée afin d'évaluer la concordance entre les niveaux d'activité physique (AP) mesurés à l'aide du K-GPAQ et de l'accéléromètre. Les coefficients pour la fiabilité du K-GPAQ ont montré une concordance modérée pour l'AP de loisir et une concordance légère pour l'AP liée au travail (kappa de Cohen : 0,60–0,67 pour l'AP de loisir et 0,30–0,38 pour l'AP liée au travail ; et rhô de Spearman : 0,27–0,47 pour l'AP liée au travail et 0,53–0,70 pour l'AP de loisir). La validité selon les critères de la quantité totale d'AP, telle que mesurée par le K-GPAQ et l'accéléromètre, montrait une corrélation faible mais significative ($r = 0{,}34$; $p < 0{,}01$). Bien qu'il ait surestimé les niveaux d'AP, le K-GPAQ est un questionnaire fiable et valide pour mesurer l'AP. (Global Health Promotion, 2020; 27(3): 44–55)

Utilisation d'un comité consultatif communautaire sur le VIH comme agent d'action communautaire et de promotion de la santé dans un contexte à faibles ressources : une étude de cas issue de Nova Iguaçu, à Rio de Janeiro, au Brésil

J.R. Milnor, C. Silva Santana, A.J. Martos, J. H. Pilotto et C.T. Viera de Souza

Introduction : Au Brésil, le fardeau du VIH a beaucoup augmenté au cours de la dernière décennie, en particulier pour les groupes socialement marginalisés et vulnérables tels que les adolescents, les femmes, et les hommes ayant des relations sexuelles avec des hommes. Les raisons qui expliquent l'aggravation des résultats du VIH sont complexes, mais des crises économiques et politiques continues ont fait peser des fardeaux opérationnels et financiers extrêmes à la fois sur le système de santé publique et sur la société civile impliquée dans le VIH, ce qui affecte les efforts déployés à la fois pour le traitement et la prévention, et leur mise en œuvre.

Contexte : Malgré ces difficultés, des activités communautaires de promotion de la santé liées au VIH ont continué à avoir lieu à Nova Iguaçu, à Rio de Janeiro. Ces efforts ont été menés par un comité consultatif communautaire semi-indépendant et un groupe de participation basé à l'Hôpital Geral de Nova Iguaçu, avec le soutien des chercheurs de la Fondation Oswaldo Cruz.
Méthodes : L'équipe de recherche a soutenu, documenté, et participé à diverses activités menées par le comité consultatif communautaire et un groupe de participation à partir de 2017-2018, notamment à des rencontres, à des ateliers/conférences communautaires, à la production de matériel de promotion de la santé, et à la diffusion des résultats de recherche.
Résultats : L'équipe de recherche a utilisé les concepts de savoirs vernaculaires et de pédagogie critique pour décrire et documenter les efforts continus, dirigés par la communauté avec une approche ascendante, du comité consultatif communautaire et du groupe de participation. Nous avons plus particulièrement décrit le processus d'engagement des parties prenantes, de popularisation des résultats de recherche, et de partage des ressources dirigé par le comité consultatif communautaire de Nova Iguaçu.
Conclusion : Le comité consultatif communautaire démontre à quel point les efforts dirigés par la communauté sont essentiels aux efforts destinés à faire face au VIH et au SIDA compte tenu de l'aggravation des fardeaux du VIH et des changements mondiaux en faveur de la biomédicalisation. Leurs activités liées au VIH reposent sur les réseaux et les ressources communautaires existants avec un soutien secondaire de la part d'une équipe de recherche. Ceci illustre un point d'intervention clé entre la recherche traditionnelle et une mobilisation communautaire stimulante susceptible de documenter des efforts similaires dans d'autres contextes à faibles ressources. (Global Health Promotion, 2020; 27(3): 56–64)

Comprendre l'énigme du rapport entre bidonvilles et santé en Afrique subsaharienne : une proposition pour une approche de la promotion de la santé basée sur les droits dans les bidonvilles

D.A. Alaazi et G.A.M. Aganah

L'Afrique subsaharienne est la région la moins urbanisée du monde, mais paradoxalement, elle est aussi la région qui compte la plus grande proportion de personnes habitant dans des bidonvilles. Cependant, notre compréhension de l'impact des bidonvilles sur la santé dans cette région est limitée. Pour aborder cette lacune dans nos connaissances, nous avons mené une recherche systématique à travers PubMed, Google et Google Scholar afin d'identifier et d'examiner des études qui se sont penchées sur la relation entre les bidonvilles et la santé dans les villes d'Afrique subsaharienne. Nous avons ensuite réalisé une analyse thématique de 40 études pour identifier des thèmes qui expliquent l'impact des bidonvilles en termes de santé dans la région. La majorité des études caractérisent les bidonvilles comme des milieux préjudiciables pour la santé, dans lesquels la pauvreté et les conditions environnementales défavorables constituent des menaces pour la santé publique et la sécurité. Seule une poignée d'études suggèrent une relation bénéfique entre les bidonvilles et la santé, dans des domaines tels que la constitution de logements abordables, la génération d'emplois, et la cohésion de la communauté. Nous soutenons que l'accent mis de manière insistante par la littérature sur les risques environnementaux des bidonvilles alimente l'ordre du jour néolibéral urbain qui cherche à éliminer les bidonvilles au détriment de leurs contributions bénéfiques à la santé. Par conséquent, nous plaidons en faveur d'un changement du discours politique, afin qu'il passe de la caractérisation statique des bidonvilles comme risques pour la santé à un ordre du jour de promotion de la santé qui mette l'accent sur les droits au logement et aux services des populations des bidonvilles. (Global Health Promotion, 2020; 27(3): 65–72)

FoodSee : une nouvelle méthode pour étudier l'environnement des magasins d'alimentation à l'aide de caméras portables

C. McKerchar, M. Smith, J. Stanley, M. Barr, T. Chambers, G. Abel, C. Lacey, R. Gage, C.N. Mhurchu et L. Signal

Introduction : Les environnements alimentaires déterminent les comportements alimentaires et sont impliqués dans l'augmentation des taux d'obésité à travers le monde. La mesure des interactions des personnes avec les magasins d'alimentation est importante pour faire progresser la compréhension des associations qui existent entre l'environnement alimentaire et les comportements dans les magasins. Cet article décrit une nouvelle méthode appelée « Food Store Environment Examination » (FoodSee) – Examen de l'environnement des magasins alimentaires –, destinée à mesurer les interactions des personnes avec l'environnement des magasins d'alimentation, dans une étude de faisabilité axée sur les magasins de proximité et les enfants.
Méthodes : Dans 16 écoles sélectionnées de manière aléatoire à Wellington, en Nouvelle-Zélande, 168 enfants (âgés de 11 à 13 ans) ont été sélectionnés de manière aléatoire et ont utilisé pendant 4 jours des caméras portables qui enregistraient des images toutes les 7 secondes. L'étude a été menée entre le mois de juillet 2014 et le mois de juin 2015. Toutes les images des magasins de proximité et des stations-service, ainsi qu'un échantillon d'images issues de supermarchés, ont fait l'objet d'un examen afin de déterminer s'il était faisable d'évaluer la disponibilité des aliments et leur commercialisation. Les résultats d'intérêt évalués étaient : la disponibilité des produits alimentaires, leur placement, leur emballage, leur étiquetage, leurs prix promotionnels, leurs achats et leur consommation.
Résultats : Trente-sept enfants (22 %) ont visité un magasin de proximité ou une station-service au moins une fois au cours de la période de l'étude. Au total, il y a eu 65 visites dans 34 magasins différents. Sept cent dix-neuf images ont révélé l'environnement à l'intérieur des magasins. Parmi elles, 86,1 % ont pu être utilisées et analysées pour rechercher les résultats d'intérêt.
Conclusions : La méthodologie FoodSee constitue une nouvelle méthode prometteuse pour étudier les interactions des personnes avec l'environnement alimentaire à l'intérieur des magasins. Les données probantes générées seront précieuses pour comprendre et améliorer l'environnement des magasins alimentaires au sein desquels les personnes font leurs courses, et contribueront aux efforts déployés à travers le monde pour aborder l'obésité. (Global Health Promotion, 2020; 27(3): 73–81)

Un programme culturellement adapté pour la prévention des complications affectant les membres inférieurs chez les personnes diabétiques en Inde du Sud

A. Peacock, L. Skemp, S. Seetharam, R. Shanmukha, M. Prasad et M.R. Seetharam

Contexte : La fréquence du diabète et de ses complications est en augmentation à travers le monde. Les complications qui affectent les membres inférieurs génèrent un risque élevé en termes de morbidité et de mortalité, bien qu'elles soient largement évitables grâce à l'éducation et à l'autosurveillance. En Inde, les zones rurales ont un accès limité à l'éducation, aux soins et aux traitements. Malgré l'existence de programmes basés sur des données probantes pour réduire les complications liées au diabète qui affectent les membres inférieurs dans les zones aux ressources limitées, le manque d'adaptation au contexte culturel local peut entraver leur assimilation et leur durabilité.
Objectifs : Pour aborder de telles lacunes, cette étude a utilisé le processus infirmier appelé « Culturally Informed Healthy Aging » (Vieillissement en santé culturellement adapté) afin de développer un programme de prévention des complications affectant les membres inférieurs dans un village rural. L'article décrit les résultats d'une évaluation des besoins en santé communautaire menée sur une base annuelle entre 2009 et 2014, et le test pilote réalisé ensuite d'une intervention qui intégrait ces résultats.

Méthodes : Le processus de Vieillissement en santé culturellement adapté est une méthode naturaliste et inductive utilisée pour identifier et aborder les besoins en termes de santé. Ses composants incluent le partenariat communautaire, l'évaluation communautaire, la planification de programmes, la sélection des priorités de santé, la formation de groupes de travail et la traduction des données probantes, et l'évaluation des résultats des programmes. La programmation est soumise à une évaluation de processus, ce qui permet le suivi et la modification du programme en continu.
Résultats : L'évaluation communautaire a révélé plusieurs valeurs, croyances et pratiques liées aux soins et à l'évaluation des pieds dans l'Inde du Sud rurale. Celles-ci ont été intégrées au programme culturellement adapté et les protocoles basés sur des données probantes ont été adaptés pour être utilisés dans le contexte local. Le programme a donné lieu à une plus grande capacité communautaire pour la prévention des complications qui affectent les membres inférieurs, à un dépistage accessible auprès de la population, et à une éducation aux soins des pieds culturellement adaptée. (Global Health Promotion, 2020; 27(3): 82–91)

Examiner plus attentivement les programmes de promotion de la santé transformatrice des valeurs fondées sur le genre comme moyens d'aborder les inégalités fondées sur le genre dans le domaine de la santé et des soins

S.A. Horgan, S-P. Chen, T. Tuininga et H. Stuart

La promotion de la santé transformatrice des valeurs fondées sur le genre aborde les échanges réciproques entre les contextes socioculturels qui déterminent les valeurs fondées sur le genre et les comportements normatifs par rapport au genre ainsi que les expériences des individus en termes de santé. Un examen de la portée de la littérature (scoping review) a été mené afin de (a) mettre en évidence comment, quand et dans quelles circonstances la promotion de la santé transformatrice des valeurs fondées sur le genre est appliquée dans la pratique, et (b) évaluer de façon critique la concrétisation dans la pratique des principes de la promotion de la santé transformatrice des valeurs fondées sur le genre pour développer une compréhension plus claire des obstacles potentiels (à la fois conceptuels et pratiques) susceptibles d'entraver l'utilisation plus large de la promotion de la santé transformatrice des valeurs fondées sur le genre comme approche principale des programmes. Des recommandations spécifiques, basées sur les résultats de cet examen, sont formulées dans le but de faire progresser l'opérationnalisation de la promotion de la santé transformatrice des valeurs fondées sur le genre comme une approche principale de promotion de la santé à l'échelle mondiale. (Global Health Promotion, 2020; 27(3): 92–102)

Des interventions de promotion intersectorielle de la santé bucco-dentaire destinées aux enfants scolarisés de communautés andines rurales : une évaluation réaliste

D.A. Bergeron, L.R. Talbot et I. Gaboury

Contexte : La promotion intersectorielle de la santé bucco-dentaire implique la participation des communautés locales. Au Pérou, les interventions de promotion intersectorielle de la santé bucco-dentaire ont été introduites dans les écoles primaires en 2013, mais la santé bucco-dentaire des enfants scolarisés qui vivent dans des communautés andines rurales reste sous-optimale.
Objectifs : Comprendre les éléments contextuels et les mécanismes sous-jacents associés aux effets actuels des interventions de promotion intersectorielle de la santé-bucco-dentaire sur les enfants scolarisés qui vivent dans des communautés rurales isolées dans les Andes.
Méthode : Une évaluation réaliste a été menée dans trois communautés andines rurales où des interventions de promotion intersectorielle de la santé bucco-dentaire destinées aux enfants scolarisés ont été mises en

œuvre. À la suite d’une évaluation des effets chez les enfants scolarisés, les éléments contextuels et les mécanismes ont été examinés avec différentes parties prenantes impliquées dans la promotion intersectorielle de la santé bucco-dentaire, à travers des groupes thématiques et des entretiens semi-structurés. Ensuite, une analyse itérative des données et un processus de validation ont permis d'identifier les configurations contexte-mécanisme.

Résultats : Des expériences positives de collaboration par le passé, un accent mis sur la communication, le sentiment d'être respecté et considéré, et le développement du leadership et de la confiance parmi les parties prenantes impliquées dans la promotion intersectorielle de la santé bucco-dentaire étaient des éléments des configurations qui influençaient de manière positive la promotion intersectorielle de la santé bucco-dentaire. D'un autre côté, des environnements défavorables sur le plan physique, social et politique, des expériences de santé négatives par le passé, le sentiment de ne pas être respecté ou considéré, la démotivation, le développement d'une méfiance et un leadership insuffisant s'avéraient influencer les résultats de manière négative.

Conclusion : Ces recherches ont mis en lumière la complexité associée au recours à des interventions de promotion intersectorielle de la santé bucco-dentaire dans les communautés rurales. Les parties prenantes locales devraient être davantage impliquées pour développer la confiance, faciliter les processus de coordination parmi les communautés rurales isolées et les professionnels de la santé bucco-dentaire, et optimiser le recours à des interventions de promotion intersectorielle de la santé bucco-dentaire. (Global Health Promotion, 2020; 27(3): 103–112)

Sous le manguier : une intervention basée sur le théâtre pour l'engagement des hommes vis-à-vis de la PTME dans le contexte post-conflit de l'Ouganda du Nord

M.D.C. Komakech

L'implication des hommes dans les cascades de soins du virus de l'immunodéficience humaine (VIH) est identifiée comme un prérequis essentiel pour réussir à prévenir la transmission mère-enfant du VIH. Des données insuffisantes existent concernant des interventions de prévention de la transmission mère-enfant qui soient à la fois efficaces, culturellement adaptées, et qui impliquent les hommes. Cet article de recherche-action met en évidence des notes et des observations de terrain sur le développement d'une initiative appelée « Under-the-Mango-Tree » (Sous le manguier), une intervention pilote basée sur le théâtre et impliquant les hommes qui est testée en Ouganda du Nord. L'intervention comprenait : (a) une pièce de théâtre, des danses et des chants traditionnels, et (b) les témoignages d'agents de changement ainsi qu’un dialogue en groupe. Les observations réalisées durant ce pilote ont montré qu'une intervention basée sur le théâtre était appropriée pour la persuasion sociale ; le modèle de rôle et la modération de la maîtrise d'expérience en combinant efficacement des chants, des danses et des pièces de théâtre faciles d'accès ; les témoignages de bonne adhésion au traitement par des agents de changements ; et par le biais de discussions de réflexion en groupe. Ces observations ont des implications pour le développement d'interventions de prévention de la transmission mère-enfant qui impliquent les hommes. (Global Health Promotion, 2020; 27(3): 113–121)

Impact d'un programme d'éducation sexuelle en termes de connaissances, d'attitudes et de comportements sexuels chez les adolescents dans les Asturies (Espagne)

J. García-Vázquez, L. Quintó, E. Agulló-Tomás

L'éducation sexuelle à l'école est un droit des adolescents et peut avoir des bénéfices en termes de santé, tels que des connaissances améliorées ou un usage accru du préservatif. Dans les Asturies, un programme d'enseignement secondaire appelé « Ni ogres, ni princesses » éduque les élèves pendant quatre ans avec un personnel enseignant qualifié et des ateliers externes. Cette étude a examiné si ce programme (a) améliorait les connaissances, les attitudes et les compétences des adolescents en termes de sexualité, et (b) s'il augmentait l'utilisation du préservatif. Une enquête quasi-expérimentale a été menée, avec un bras de comparaison ; elle comprenait un pré-test au cours de la première année d'enseignement secondaire (élèves âgés de 12 à 13 ans), et deux post-tests : l'un après l'intervention (élèves âgés de 15 à 16 ans), l'autre deux ans plus tard (élèves âgés de 17 à 18 ans). Un questionnaire incluant des variables socio-démographiques et relatives aux connaissances, aux attitudes, aux compétences et aux comportements sexuels a été utilisé. L'impact a été évalué à l'aide d'analyses des doubles différences. On observait une augmentation plus importante des connaissances dans le bras d'intervention lors des deux post-tests, ainsi qu'une augmentation des compétences dans le premier post-test. Les filles du bras d'intervention rapportaient moins de pratiques avec pénétration et une plus grande utilisation du préservatif la première fois ; la même chose s'observait aussi chez les garçons. Cependant, l'impact était limité dans le temps. Les interventions qui visent à accroître l'éducation sexuelle dans les programmes scolaires avec qualité et régularité sont une priorité pour garantir les droits des enfants et leur santé. (Global Health Promotion, 2020; 27(3): 122–130)

Activité physique observationnelle en espaces publics ouverts : les déterminants environnementaux des niveaux d'intensité de l'activité physique en Iran

Z. Aliyas, et K. Jafari

Les espaces publics ouverts jouent un rôle important dans la promotion de l'activité physique (AP). Cette étude visait à décrire les caractéristiques des utilisateurs des espaces publics ouverts (EPO) en fonction de leur type de localisation et des niveaux d'AP. L'étude a également évalué la relation entre les déterminants environnementaux des EPO et l'intensité de l'AP. L'étude a utilisé des données observationnelles pour mesurer les déterminants environnementaux et obtenir des informations sur les utilisateurs et leurs niveaux d'activité dans les EPO de Darab, en Iran. Sur 13.342 individus observés, la proportion des hommes était légèrement plus élevée que celle des femmes. Plus de la moitié des utilisateurs observés dans les parcs communautaires pratiquaient des activités vigoureuses. Les enfants et les adolescents étaient plus souvent observés que les autres tranches d'âge en train de pratiquer des activités vigoureuses. La plupart des utilisateurs observés pratiquaient des activités vigoureuses le soir et des activités sédentaires durant les week-ends. Les seniors étaient plus sédentaires que les autres groupes. La taille plus importante, et de meilleurs aménagements et aspects esthétiques des EPO augmentaient la probabilité d'être plus actif. Cependant, un nombre plus important d'incivilités était associé à une plus grande chance de marcher et à une plus faible probabilité de pratiquer des activités vigoureuses. Dans la mesure où la qualité des EPO contribue aux niveaux d'AP, les parties prenantes devraient considérer la qualité de ces espaces pour améliorer leur modernisation et concevoir des EPO de manière à maximiser les niveaux d'activité. (Global Health Promotion, 2020; 27(3): 131–139)

L'appréciation des aliments, un concept important de l'alimentation en pleine conscience : mise en relation avec l'éducation à la maison et à l'école, les attitudes, les comportements et l'état de santé chez des élèves de l'enseignement primaire au Japon

Y. Kawasaki et R. Akamatsu

Contexte : Le fait d'apprécier les aliments est un concept important de l'alimentation en pleine conscience, cité par les défenseurs d'un modèle étendu d'alimentation en pleine conscience en 2016. À l'exception du Japon, ce concept est peu fréquent dans de nombreux pays.

Objectif : Nous avions pour but de décrire le rôle joué par l'appréciation des aliments dans la santé des

enfants depuis deux perspectives : 1) l'association entre l'appréciation des aliments par les enfants et leurs contextes, tels que les expériences pédagogiques liées à l'alimentation à la maison et à l'école, et 2) l'association entre leur appréciation des aliments et leurs résultats, tels que leur attitude vis-à-vis de l'alimentation, leurs comportements alimentaires, et leur état de santé.
Conception : Intersectorielle.
Méthodes : Les données ont été obtenues à partir de questionnaires anonymes auto-administrés envoyés à 2070 élèves d'écoles primaires de Tokyo, au Japon, durant les mois d'octobre et de décembre 2016. Ceux-ci contenaient plusieurs éléments de question concernant les caractéristiques des participants : les expériences pédagogiques liées à l'alimentation à la maison et à l'école, les attitudes vis-à-vis de la nourriture (y compris le niveau d'appréciation des aliments), les comportements alimentaires, et l'état de santé. Un test T, un coefficient de corrélation de Pearson, et des analyses de régression linéaire simple et multiple ont été utilisés pour comparer le score total d'appréciation des aliments avec d'autres facteurs.
Résultats : Les enquêtes ont été complétées par 1994 enfants (taux de réponse : 96,3 %) et des corrélations significatives étaient indiquées en fonction du genre, des expériences pédagogiques à la maison et à l'école, des attitudes vis-à-vis des aliments sains, des préférences alimentaires recommandées, de la consommation d'un petit-déjeuner, et de l'indice de masse corporelle.
Conclusions : Nous avons conclu que l'appréciation des aliments jouait un rôle important dans la santé des enfants. (Global Health Promotion, 2020; 27(3): 140–149)

Repenser la littératie en santé : utiliser une perspective d'approche des capacités afin d'atteindre des objectifs de justice sociale

C. Pithara

La littératie en santé a gagné en popularité en tant que concept utile pour promouvoir et préserver la santé. Les recherches portant sur la littératie en santé ont été abondantes, cependant, elles ont aussi été fragmentaires, et confrontées à des difficultés pour atteindre leurs objectifs en matière de responsabilisation et de justice sociale. Des limites très importantes ont compliqué l'application de ses principes à la santé des groupes vulnérables et sous-représentés, même si ces groupes sont affectés de manière très importante par la mauvaise santé. Les efforts réalisés pour rendre ce concept plus pertinent ont eu tendance à étendre les modèles de littératie en santé et à replacer la littératie en santé « en contexte » pour refléter les facteurs environnementaux et sociaux qui déterminent la littératie en santé. Cependant, les facteurs liés au contexte n'ont pas toujours été inscrits dans les efforts de mise en œuvre et de mesure.

Cet article soutient que la littératie en santé doit être conceptualisée à nouveau dans une optique d'approche des capacités. Il suggère que l'approche des capacités peut aborder de manière unique les critiques conceptuelles et méthodologiques appliquées à la littératie en santé, tout en englobant sa compréhension conceptuelle essentielle de la santé. L'avantage de cette approche par rapport aux autres développements de la théorie et de la pratique de la littératie en santé est l'accent qu'elle met à la fois sur les opportunités ou les libertés pour les personnes d'atteindre des objectifs déterminés en termes de santé, et sur leurs capacités à le faire. Cela permet de déplacer l'accent mis sur la littératie en santé en tant que compétences individuelles vers les facteurs favorables ou défavorables qui déterminent la littératie en santé. Une approche participative est considérée comme essentielle pour réaliser ce changement conceptuel. (Global Health Promotion, 2020; 27(3): 150–158)

Adaptation d'un calendrier de suivi des événements pour les adolescents ougandais

M. Saftner, M. Thompson, T.D. Ngabirano et B. J. McMorris

Les comportements à risque des adolescents et des jeunes adultes sont une préoccupation mondiale. Il peut être difficile de parler des comportements à risque et des comportements promoteurs de santé avec des adolescents et de jeunes adultes, indépendamment du pays où les données sont recueillies et de la culture dominante. Aux États-Unis, des calendriers de suivi des événements ont été utilisés dans des contextes à la fois scientifiques et cliniques, afin d'identifier les comportements favorables à la santé et les comportements à risque chez les adolescents et les jeunes adultes, ainsi que les facteurs contextuels susceptibles d'influencer ces comportements. Après avoir essayé sans succès d'utiliser un calendrier de suivi des événements qui portait sur la vie de famille, les événements négatifs et positifs, les comportements sexuels et la consommation de substances nocives pour recueillir des données dans des villages de pécheurs de l'Ouganda occidental, l'étude en cours a eu pour but de modifier le calendrier de suivi des événements validé aux États-Unis pour l'utiliser auprès d'adolescents ougandais, comme première étape d'une adaptation culturelle. Des groupes de discussion avec 24 étudiants ont fourni des informations sur les manières de modifier le calendrier de suivi des événements pour les jeunes ougandais. Cet article discute des modifications du calendrier de suivi des événements à l'usage des jeunes gens en Ouganda. (Global Health Promotion, 2020; 27(3): 159–170)

Le Réseau sud-américain sur l'activité physique et les comportements sédentaires (SAPASEN)

A.O. Werneck, S-S. Baldew, J. J. Miranda, Ó. Incarbone et D.R. Silva

Le présent article décrit le Réseau sud-américain sur l'activité physique et les comportements sédentaires, qui a été conçu pour fournir de manière continue des données probantes empiriques transnationales concernant l'activité physique et les comportements sédentaires en Amérique du Sud. L'objectif premier de cette initiative était de constituer un organisme représentatif de chercheurs et de responsables politiques issus de l'ensemble des pays d'Amérique du Sud (Argentine, Bolivie, Brésil, Chili, Colombie, Équateur, Guyane, Paraguay, Pérou, Surinam, Uruguay et Venezuela) pour établir des priorités et des cibles à court, moyen et long terme. Des exemples sont présentés concernant le fait de relier entre elles les données sur l'activité physique et la sédentarité issues d'enquêtes existantes dans plusieurs pays partenaires. L'objectif principal du Réseau sud-américain sur l'activité physique et les comportements sédentaires sera d'impacter les politiques en matière d'activité physique et de comportements sédentaires en Amérique du Sud en fonction des singularités de chaque pays ou région. En encourageant un effort d'inclusion et de collaboration, nous nous attendons à ce que le Réseau sud-américain sur l'activité physique et les comportements sédentaires soutienne la connexion entre les chercheurs sud-américains, et fournisse également une meilleure compréhension de l'épidémiologie de l'activité physique et des comportements sédentaires à l'échelle régionale. (Global Health Promotion, 2020; 27(3): 171–176)

Atouts favorisant la santé chez les soignants familiaux des malades d'Alzheimer : cartographie de ces atouts

J.M. Agulló-Cantos, J. García-Alandete et J.J. Paredes-Carbonell

Alzheimer est la maladie la plus répandue chez les personnes de plus de 65 ans. Il s'agit d'une maladie neurodégénérative progressive. La prise en charge de ces personnes malades est, dans la plupart des cas, assurée par le noyau familial qui en subit les conséquences. Traditionnellement, l'étude et l'analyse des personnes soignantes ont été réalisées sous des angles négatifs en insistant sur les déficits. La présente étude présente le modèle salutogène et la notion des atouts favorisant la santé, en essayant de comprendre la valeur positive du soin et la capacité à surmonter les circonstances défavorables, grâce aux compétences ou ressources du soignant ou de son entourage qui l'aident à faire face de façon positive à cette maladie.

L'étude a impliqué des soignants familiaux (*n*=45) de trois Centres de Séjours de Jour pour différents malades d'Alzheimer, où ils ont été interviewés en groupes (de 5 à 13 participants par entrevue) et enregistrés en audio, pour transcription ultérieure et analyse de contenu thématique.

Les résultats montrent que, même s'ils sont exposés à une source de stress, l'expérience du soin chez les aidants familiaux peut avoir des effets positifs, en étant capables d'identifier des atouts favorables à la santé, à la fois internes et externes, qui les aident à améliorer et/ou maintenir leur santé en tant que soignant. (Global Health Promotion, 2020; 27(3): 209–216)

Parcours de soins chez les Mayas du Mexique qui souffrent de diabète de type 2

C. Juárez-Ramírez, F.L. Théodore, A.L. Villalobos, A.L. Sauceda, S.Treviño et B. Allen-Leigh

Objectif : Montrer comment des patients de populations autochtones (Mayas) souffrant de diabète de type 2 utilisent les ressources de différents modèles de soins pour traiter leur maladie.
Matériel et méthodes : L'étude a été conçue à partir de méthodes mixtes de type séquentiel ; elle comprenait un questionnaire ($n = 195$), de courtes interviews qualitatives ($n = 103$) et 20 entretiens approfondis parmi la population d'origine Maya diagnostiquée avec un diabète de type 2, auprès d'usagers des services de santé publique dans trois États du Mexique : Chiapas, Yucatán et Quintana Roo.
Résultats : Les parcours de soins ont été orientés en fonction des croyances sur l'origine de la maladie. Celui-ci peut commencer par les services publics de santé, la médecine privée, traditionnelle ou alternative, ou à partir des croyances religieuses, mais à un moment donné, toutes ces ressources sont utilisées. L'utilisation des ressources institutionnelles des soins de santé publique dépend de l'appréciation des patients sur l'efficacité du système de santé et des causes de la maladie, souvent émotionnelles : peurs, colères et/ou préoccupations.
Conclusions : Les participants ont activement cherché à prendre en charge leur santé par divers moyens, ce qui implique que les modèles, les ressources et les médicaments sont mélangés dans le parcours de soins, en partie en raison des conditions de pauvreté. Les preuves peuvent être utilisées pour ajuster les programmes d'éducation pour la santé, en suivant la proposition de la promotion de la santé qui consiste à inciter les personnes à avoir un plus grand contrôle sur leur propre santé. (Global Health Promotion, 2020; 27(3): 217–226)

"Tomber malade ici est un luxe" : pratiques et perspectives dans la prise en charge des maladies parmi les immigrants du Yucatán dans le sud de la Californie

A.R. Valdez Tah

Cette étude se concentre sur la façon dont un groupe d'immigrants originaires de l'État du Yucatán, au Mexique, qui vivent dans le sud de la Californie, prennent en charge les maladies qui les touchent et comment ils articulent leurs pratiques de soins avec leurs conditions socio-économiques, leur statut de migrant et l'accès aux services de santé institutionnels. La méthodologie choisie est de nature qualitative. Des données ethnographiques ont été recueillies au moyen d'entretiens et analysées à l'aide du logiciel MAXQDA12. Les modalités des parcours à la recherche de soins sont complexes, parce que d'une part les personnes interrogées sont confrontées à des obstacles structurels pour accéder aux services médicaux, et en même temps elles constituent une synthèse dynamique des systèmes de connaissance scientifique et du savoir populaire. Les contraintes structurelles prévalent surtout dans l'accès aux services médicaux à partir du deuxième niveau et sont plus profondes chez les participants sans papiers. Cette étude réfléchit sur l'impact structurel de la politique publique de santé et de la politique migratoire sur les modalités de soins, sur les conditions de santé des participants, et sur les implications des résultats dans les stratégies de promotion de la santé dans le contexte des migrations internationales. (Global Health Promotion, 2020; 27(3): 227–235)

Développement du sens communautaire : une proposition pour les Universités promotrices de santé

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Les Universités promotrices de santé (UPS) encouragent les personnes à mobiliser leurs ressources pour participer aux décisions qui les concernent et les influencer, en créant des opportunités de développement pour améliorer de façon continue la santé et le bien-être sur le campus. La recherche des conditions qui vont générer de la santé est la base de la salutogénèse. En se fondant sur le modèle des atouts favorables à la santé, la communauté universitaire pourrait être vue comme une ressource qui renforce la capacité de ses membres à rester en bonne santé. Il est proposé d'intégrer de manière plus explicite dans les lignes directrices des UPS le développement du sens communautaire en tant qu'élément clé qui agirait de manière synergique, individuellement et collectivement, en aidant les personnes à se sentir comme faisant partie de la communauté universitaire, à s'approprier cette initiative et à y participer activement, ce qui pourrait être un élément distinctif qui contribuerait à revitaliser la stratégie des UPS. (Global Health Promotion, 2020; 27(3): 236–239)

Un enfoque parcial de la igualdad de género debilita a los ODS: es hora de una acción transversal

Rosemary Morgan[1], Roopa Dhatt[2], Chandani Kharel[3] y Kui Muraya[4]

El camino hacia la reivindicación de los derechos de las mujeres y las niñas ha sido largo. Señalamos los 25 Años de la Declaración de Beijing en este 2020, nos comprometimos con los Objetivos de Desarrollo del Milenio del 2000 (ODM) y en el 2015 renovamos este compromiso con los Objetivos de Desarrollo Sostenible (ODS). La Agenda 2030 para el Desarrollo Sostenible debería ser utilizada como un instrumento para iniciar una acción y exigir responsabilidades a los Estados Miembros de las Naciones Unidas (1–3). Después de cinco años de trabajo hacia la Agenda 2030, es claro que muchos países todavía no están en condiciones de cumplir algunos de los ODS ni las metas anunciadas. A esto se le agrega el temor de que la pandemia de la COVID-19 ocasione retrocesos y haga que los gobiernos abandonen los compromisos adquiridos previamente. Con el fin de reivindicar los derechos de las mujeres y las niñas, se necesita una acción concertada con relación a la igualdad de género a través de todos los ODS.

La ubicuidad de la desigualdad de género y su relación con los ODS

Las metas sobre la igualdad de género están integradas en 11 de los 17 objetivos (en diferentes niveles) y uno de ellos aborda explícitamente la igualdad de género (ODS 5: Lograr la igualdad entre los géneros y empoderar a todas las mujeres y las niñas) (3). Esta es una evidencia de la naturaleza omnipresente de la desigualdad de género y su relación con otras formas de inequidad. La desigualdad de género es una de las formas más generalizadas de inequidad, pues pone a las mujeres y a las niñas en desventaja independientemente de su posición social, y en cualquier lugar del mundo las intervenciones relacionadas con la salud, la educación o con otros sectores se desarrollan en contextos altamente sexistas.

Para demostrar la importancia de la equidad de género en relación con todos los aspectos de la salud y el bienestar (ODS 3: Garantizar una vida sana y promover el bienestar para todos en todas las edades), analizamos la relación de género en dos ODS sin metas o indicadores relacionados con el género: agua limpia y saneamiento (ODS 6) y energía (ODS 7). En muchas comunidades, las mujeres y las niñas deben encargarse de recoger y mantener el agua limpia, y por tanto están más expuestas a diferentes enfermedades, a sufrir lesiones musculoesqueléticas y a padecer de estrés crónico (4). Instalaciones seguras de agua potable, saneamiento e higiene son indispensables para el bienestar de las mujeres y las niñas, pues la carencia de estos servicios en el hogar, el sitio de trabajo o en la escuela, hace que ellas estén expuestas de manera desproporcionada a un aumento de enfermedades, violencia y acoso, en la medida en que deben desplazarse para acceder al agua potable (4). La situación es aún más delicada para las mujeres y las niñas que viven en entornos rurales o de bajo nivel socioeconómico. Un estudio en India, por ejemplo, reveló que una mujer de una casta baja tiene mayor riesgo de morir en comparación con otra de una casta superior, debido a factores como la falta de

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saneamiento y un inadecuado abastecimiento de agua potable y de asistencia médica (5).

La contaminación del aire interior, un aspecto importante del ODS 7, se ha convertido en un grave problema de salud ambiental, pues causa enfermedades no transmisibles como la enfermedad pulmonar obstructiva crónica, cáncer de pulmón o enfermedades del corazón. La contaminación del aire interior, causada por el uso de combustibles sólidos para cocinar, ha ocasionado 4,3 millones de muertes prematuras en el mundo, de las cuales el 60% son mujeres y niñas (6). El uso de combustibles sólidos para cocinar afecta la salud de las mujeres rurales en los países de bajos y medianos ingresos (7). Esta práctica, además, las ha llevado a la pobreza debido al incremento del gasto en salud (8).

Dada la naturaleza integral de la igualdad de género relacionada con el agua y el saneamiento, la energía y la salud, resulta problemática la falta de metas e indicadores específicos de género en los ODS 6 y 7.

Un alivio temporal para un problema endémico

La manera como los profesionales, legisladores e investigadores perciben la relación indirecta entre la equidad de género y los otros objetivos, significa que con frecuencia esta no es una prioridad o que simplemente se evita por completo. Los esfuerzos para promover la igualdad de género se ven tan separados o diferentes de aquellos para abordar las inequidades sociales, económicas o en salud, que los intereses de la salud, por ejemplo, no deberían contener también los esfuerzos para promover el empoderamiento de la mujer.

Sin embargo, la interrelación objetiva de género y los ODS refleja la necesidad de esfuerzos consolidados para abordar la inequidad de género como un ODS específico y para incorporar la perspectiva de género a través de todos los sectores y áreas del desarrollo sostenible. Sin una atención explícita a la equidad de género, esta es generalmente ignorada – debido ya sea a la confusión sobre cómo abordar la desigualdad de género – o se le resta prioridad de manera intrínseca. No se le debería prestar atención a la equidad de género por separado, sin los esfuerzos para integrarla a través de cada ODS. Sin la integración, la equidad de género y las necesidades únicas de las mujeres y las niñas se mantendrán como una prioridad separada y relegada para los especialistas de género o los abogados, en lugar de ser consideradas de manera holística en todas las áreas del desarrollo sostenible.

Al no abordar los sistemas y estructuras de opresión, y subrayar las causas subyacentes de los pobres resultados sociales, económicos y en salud – como la desigualdad de género – nuestras intervenciones actúan como un alivio temporal para un problema endémico. Nos quedamos en un ciclo constante, respondiendo continuamente a los resultados desiguales que se derivan de estructuras y procesos más profundos de desigualdad y exclusión, los cuales nos preparan para un trabajo interminable. Si nuestro propósito es simplemente mantenernos empleados, entonces la estrategia está funcionando. Sin embargo, si verdaderamente queremos abordar las desigualdades, debemos transformar los sistemas y estructuras que perpetúan la marginalización y la exclusión y que se manifiestan como problemas de salud y otras formas de desigualdad.

El camino por seguir: ¿qué deberían hacer profesionales, legisladores e investigadores?

Las intervenciones que intencionalmente abordan la desigualdad de género, incluyendo un incremento en la autonomía, el liderazgo, el acceso a los recursos de las mujeres o la redistribución del trabajo de manera menos sexista, tendrán un efecto positivo en los resultados para alcanzar otros ODS. Como consecuencia, se necesitan políticas y acciones relacionadas con el género. No es suficiente con solo llamar la atención sobre un asunto, es necesario establecer mecanismos para garantizar que este se aborde y que se enfrenten los obstáculos sistémicos. Lo más importante es que la equidad de género debe ser vista como un tema de todos, no como un interés especial y no solo para que las mujeres luchen por ella. La agenda de los ODS tiene que actuar con el género como un aspecto transversal y, por lo tanto, integrado en el diseño, los recursos, la implementación, las medidas y la evaluación. Las estrategias de género deberían ser diseñadas con beneficios a corto y largo plazo y las políticas con un historial comprobado deben ser ampliadas e implementadas. Entre las acciones específicas están:

1) **Liderazgo político y legislación guiada por la evidencia:** mantener el compromiso con la agenda de los derechos de las mujeres y las niñas, incluyendo el acceso a una educación sexual completa, servicios de calidad de salud sexual reproductiva y planificación, aborto seguro y atención materna y neonatal.
2) **Asignación de recursos y presupuesto relacionado con el género:** proporcionar recursos y seguimiento mediante el uso de un marcador de equidad de género (9) para garantizar una asignación de recursos apropiada.
3) **Perspectiva interseccional:** pensar en cómo el género se entrecruza con otras variables demográficas sociales, ya que las realidades van más allá del género, como las que están basadas en la raza, en la geografía, las castas, el estatus socioeconómico, la educación, la religión, la discapacidad, la edad y la sexualidad.
4) **Datos:** recolectar y analizar los datos relacionados con el género y el sexo. Estos datos se necesitan para comprender el contexto y medir el progreso. Aquí se incluyen los datos cuantitativos y cualitativos de género, indicadores específicos de género y el uso de indicadores proxy. Debería haber un cambio hacia la investigación aplicada.
5) **Enfoque con perspectiva de género:** utilizar un enfoque que tenga en cuenta las cuestiones de género para todas las áreas de la salud y el bienestar, lo cual incluye analizar los determinantes de género de la salud y diseñar los sistemas de salud para abordar las necesidades únicas de niñas y mujeres, niños y hombres, y todos los otros géneros.
6) **Cambiar las normas:** modificar las normas a través de un cambio en la narrativa sobre cómo las mujeres y las niñas son vistas de población vulnerable a líderes y conductoras de salud y bienestar en sus comunidades y en la sociedad.
7) **Acceso al poder:** poner el poder en manos de mujeres y niñas mediante el incremento del liderazgo político, formalizando su participación en el mercado laboral y garantizándoles un trabajo decente.

En la era de los ODS, la interconexión entre el desarrollo sostenible y la equidad de género está bien establecida. La equidad de género debe ser integral si queremos avanzar y lograr todos los ODS. Sin embargo, si no se implementa una acción sobre la equidad de género a través de los ODS, cerrar la brecha tomará al menos cien años y, más específicamente, 257 años para la brecha económica de género (10). La urgencia para darle prioridad a la equidad de género ha sido ampliamente demostrada durante la pandemia de la COVID-19. Somos testigos de las grandes desigualdades basadas en la raza, el género, el nivel socioeconómico y la geografía. A medida que reconstruimos y avanzamos de mejor manera, es imperativo actuar de acuerdo con los compromisos hechos sobre la equidad de género.

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Activos para la salud en cuidadores familiares de enfermos de Alzheimer: desarrollo de un mapa de activos para la salud

José Manuel Agulló-Cantos[1,5], Joaquín García-Alandete[1]
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Resumen: El Alzheimer es la enfermedad más prevalente en mayores de 65 años, siendo una enfermedad neurodegenerativa progresiva. El cuidado de estas personas enfermas se sustenta, en la mayoría de los casos, desde el núcleo familiar, siendo éste quien sufre las consecuencias del cuidado. Tradicionalmente, el estudio y análisis de las personas cuidadoras se ha realizado desde perspectivas de déficit o negativas. El presente estudio introduce el modelo salutogénico y de activos para la salud, e intenta comprender el valor positivo del cuidado y la superación de las circunstancias adversas, a través de aquellas habilidades o recursos del cuidador o de su entorno que le ayudan a afrontar de forma positiva esta enfermedad.

En el estudio participaron cuidadores familiares (*n*=45) de tres Centros de Estancias Diurnas para enfermos de Alzheimer diferentes, donde fueron entrevistados en grupos (de 5 a 13 participantes por entrevista) y grabados en audio, para su posterior trascripción y análisis de contenido temático.

Los resultados muestran que los cuidadores familiares a pesar de vivir bajo una fuente de estrés, también pueden obtener consecuencias positivas de la experiencia del cuidado, siendo capaces de identificar activos para la salud, tanto internos como externos, que les ayudan a mejorar y/o mantener su salud como cuidador.

Palabras clave: cuidadores, enfermedad de Alzheimer, promoción de la salud / en

Introducción

La enfermedad de Alzheimer (EA) es la causa más común de demencia a partir de los 65 años de edad (1). Se trata de una enfermedad neurodegenerativa progresiva e incapacitante y con pocas posibilidades de tratamiento (2). El curso de la enfermedad es lento y variable, entre 7 y 15 años, llegando en algunos casos hasta los 20 años (3). La familia es la institución que, en la mayoría de los casos, sustenta el cuidado de las personas con Alzheimer (4). A los miembros que ocupan la máxima responsabilidad en el cuidado se les denomina "cuidadores". Se ha definido al cuidador como "aquella persona que asiste o cuida a otra afectada de cualquier tipo de discapacidad, minusvalía o incapacidad que le dificulta o impide el desarrollo normal de sus actividades vitales o de sus relaciones sociales" (5).

La persona cuidadora es considerada como "enferma silente", al acumular una serie de malestares, producidos por la carga del cuidado, que son enmascarados detrás del alto nivel de exigencia

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del familiar enfermo, obviando la necesidad de su auto-cuidado (6). Se ha hallado que el estrés que vive la persona cuidadora depende más de variables propias (recursos personales de afrontamiento) o ambientales (apoyo social, relación con la persona que cuida), que de las características propias de la enfermedad que padece el familiar enfermo (7). La problemática familiar, el aumento de la dependencia de la persona con EA, así como la sintomatología conductual y psicológica adversa, las dificultades económicas, la falta de ayuda o apoyos externos son fuentes de estrés para el cuidador generando una sobrecarga que afecta negativamente en las capacidades de cuidado y bienestar propio (8).

Tradicionalmente, la perspectiva y análisis dada a la EA y su dimensión en el cuidado se ha realizado únicamente bajo modelos basados en déficits y factores de riesgo (9). Sin embargo, la teoría de la salutogénesis propuesta por Antonovsky pone el foco de atención en aquellos recursos de las personas y comunidades que mejoran la salud (10,11). Desde esta visión positiva, se reconoce que todas las personas poseen capacidades que pueden utilizar en beneficio de su salud (12). Los activos para la salud son "factores o recursos que potencian las capacidades de individuos, grupos, comunidades, poblaciones, sistemas sociales y/o instituciones para mantener y sostener la salud y el bienestar, y ayudar a reducir las desigualdades en salud" (13,14). El inventario de estos activos, así como sus interconexiones, permite desarrollar mapas de activos que revelan las fortalezas de toda la comunidad (15). En los últimos años, como desarrollo de la promoción de la salud, se está incorporando la perspectiva salutogénica y el modelo de activos en el abordaje de diferentes ámbitos de intervención, como el de jóvenes en instituciones cerradas (15), salud mental (16) y, como es el caso de nuestro estudio, familiares cuidadores de personas con EA en el contexto de los Centros de Estancias Diurnas (CED).

Objetivo

El objetivo del presente estudio consistió en describir el proceso de elaboración de un mapa en el que los familiares cuidadores de personas con EA identificaran aquellos activos para la salud que en su día a día les generan salud y bienestar.

Tabla 1. Tipo de parentesco con la persona enferma de Alzheimer.

Parentesco	*n*	%
Esposo/a	11	24.4
Hijo/a	31	68.9
Nuera/o	3	6.7

Métodos

Se trata de un estudio cualitativo descriptivo mediante entrevistas grupales y análisis de contenido temático (17) dirigido a elaborar mapas de activos para la salud en cuidadores familiares de personas con EA.

Participaron 36 mujeres y 9 hombres, pertenecientes a los Centros de Estancias Diurnas (CED) de poblaciones españolas: Caudete (Albacete) $n = 32$; Almansa (Albacete) $n = 8$; Yecla (Murcia) $n = 5$. Estos CED fueron elegidos por su proximidad geográfica y similitud en su estructura y funcionamiento, tanto en lo relativo a su gestión como a la atención socio-sanitaria ofrecida. Ello es debido a que los CED son gestionados por las Asociaciones de Familiares de enfermos de Alzheimer (AFA), las cuales ofrecen talleres grupales e individuales de estimulación física y cognitiva dirigidos a personas con EA, en horario de 9:00 a 19:00 horas, con servicio de comedor incluido.

Para la selección de los participantes se consideró como criterio de inclusión ser familiar y cuidador de usuarios del CED de la AFA de los municipios incluidos en el trabajo (Tabla 1). Se obtuvo, pues, una muestra oportunista: la captación de las personas participantes se realizó desde la coordinación de los propios centros invitándoles a participar de forma voluntaria en las entrevistas concertadas en diferentes horarios para facilitar la asistencia del mayor número de personas.

El estudio se llevó a cabo durante los meses de diciembre de 2013 a febrero de 2014, consistiendo en la realización de 5 entrevistas grupales (Figura 1) (de 5 a 13 participantes por entrevista), con una duración media de 90 minutos (Tabla 2). Todas las entrevistas fueron grabadas en audio y transcritas posteriormente.

Tras su trascripción se procedió a un análisis de contenido temático y por categorías a través de cinco lecturas consecutivas (18,19). En cada lectura, se hacía una identificación de temas relevantes y agrupación de éstos a partir de

1. ¿Qué cosas buenas, positivas… tengo **yo mismo/a** y son importantes para mejorar **mi salud**? ¿Por qué?
2. ¿Qué cosas buenas, positivas… tengo **yo mismo/a** y son importantes para mejorar **la salud de mi familiar enfermo**? ¿Por qué?
3. ¿Qué cosas buenas, positivas… tiene **mi familia** y son importantes para mejorar **mi salud**? ¿Por qué?
4. ¿Qué cosas buenas, positivas… tiene **mi familia** y son importantes para mejorar **la salud de mi familiar enfermo**? ¿Por qué?
5. ¿Qué **personas, grupos y lugares** conoces que por lo que piensan, hacen… son buenos, positivos, importantes… para **tu salud**? ¿Por qué?

Figura 1. Preguntas que se realizaron en las entrevistas grupales a las personas cuidadoras de familiares con Alzheimer.

Tabla 2. Participantes por entrevista y población.

Población	*n° entrevistas*	*n° participantes*	*Hombres*	*Mujeres*
Caudete	3	13	3	10
		11	1	10
		8	0	8
Almansa	1	8	3	5
Yecla	1	5	2	3

categorías de clasificación de activos (20,21). Se consideraron activos internos aquellos recursos que posee uno mismo, dirigidos a mejorar su propia salud y aquellos que tiene en función de mejorar la salud de la persona con EA. Los activos internos se clasificaron en "prácticas y habilidades", "actitudes" y "activos que mejoran la salud del enfermo cuidado". Por otra parte, se consideraron activos externos, los recursos que aporta la familia, así como las personas, grupos informales y/o asociaciones, instituciones, servicios e infraestructuras para mejorar la salud del cuidador familiar. Se codificaron y clasificaron las respuestas y se identificaron coincidencias y diferencias en los relatos comparando las respuestas de los participantes (20,21), haciendo uso, también, de fragmentos del discurso que explicaban el por-qué se consideran activos para la salud.

Esta investigación obtuvo la autorización del Comité Ético de Investigación del Complejo Hospitalario Universitario de Albacete y cumplió con lo establecido en el artículo 21 de la declaración de Helsinki (22) y la Ley Orgánica 15/1999 del 13 de diciembre, de Protección de Datos de Carácter Personal (23) en lo referente a la protección de datos.

Resultados

La Figura 2 muestra los activos internos que los familiares cuidadores de enfermos de Alzheimer identificaron que poseían para mejorar su propia salud y la de sus familiares enfermos, así como los activos externos en su entorno familiar y en la comunidad organizados por categorías.

Los familiares de personas con EA mencionaron como activos internos relacionados con prácticas, la actividad física y las relaciones sociales, porque ambos les proporcionaban una vía de entretenimiento y distracción respecto a su rol de cuidador, incluyendo también actividades y personas con las que disfrutar.

> andar o hacer yoga hace que me sienta activa (mujer familiar Almansa (MFA)).
> poder salir con las amigas o con las vecinas son momentos en los que me distraigo (mujer familiar Caudete (MFC)).

Destacaron prácticas como andar, comer sano, hacer deporte, etc., ya que son actividades que les hacen sentirse mejor y más activos. También mencionaron

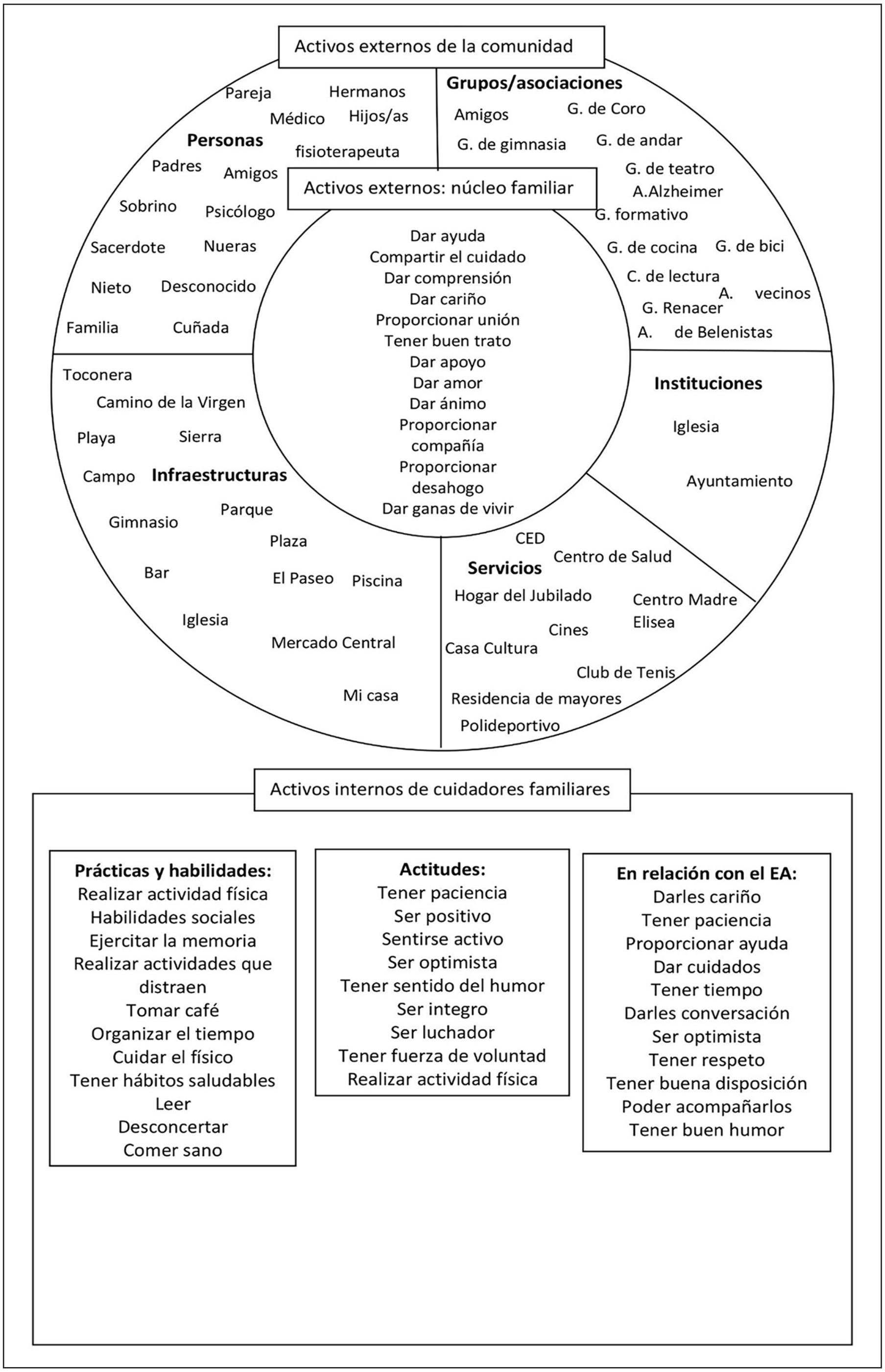

Figura 2. Mapa de Activos para la Salud de cuidadores familiares.

ejercitar la memoria o la mente, mediante actividades de lectura, costura o incluso la oración. Nombraron estas actividades no sólo como actividades de ocio, sino que las relacionaron con la prevención de la EA, por miedo a desarrollarla en un futuro.

> comer sano es muy importante me hace sentir bien (MFA).
> voy al taller de memoria, es que esta enfermedad es muy mala (MFA).

Algunos activos internos para la salud identificados por los familiares de personas con EA categorizados como actitudes, guardaban relación con la paciencia y ser positivo, para afrontar las demandas del cuidado, principalmente aquellas alteraciones conductuales propias de la EA. También identificaron el humor, la fuerza de voluntad o el ser luchador como activos importantes para afrontar, día a día, la enfermedad.

> yo he luchado mucho en esta vida, pero aún sigo luchando mucho más y me da mucho ánimo (Mujer Familiar Yecla (MFY)).
> mucha voluntad de seguir hacia adelante y mucha paciencia (MFC).

Los activos internos que mejoran la salud del enfermo de Alzheimer más mencionados por los familiares fueron los vinculados a la calidad del cuidado: el cariño y la paciencia. Además, mencionaron acciones como: ayudar al enfermo, cuidarlo, dedicarle tiempo, hablarle, tener un contacto físico y otras similares. Asimismo, incluyeron el respeto en la realización de las tareas de cuidado y el tener empatía con el enfermo, porque el "feed-back" que percibe el familiar es siempre positivo:

> hablarles con mucho cuidado y tener mucha paciencia con ella (hombre familiar Yecla (HFY)).
> y ahora [refiriéndose al familiar con EA] besa a diestro y siniestro, pero no ha sido nunca cariñosa. Sin embargo, ahora sí que te lo pide (MFA).

En cuanto a los activos externos en relación a lo que aporta la familia al propio cuidador/a, se identificaron aspectos muy concretos como la ayuda diaria que reciben de sus familiares para levantar al enfermo de la cama, vestirlo, darle de comer, ducharlo, etc. Asimismo, informaron de la importancia de repartir las cargas del cuidado y los tiempos de descanso entre todos los miembros de la familia.

> ofrecerle apoyo y hacernos cargo de nuestro familiar, porque es el familiar de todos (MFA).

En relación a los activos externos identificados como personas de la comunidad, identificaron personas del entorno familiar, principalmente, los hijos y la pareja, porque proporcionan ayuda y apoyo. Asimismo se repitieron los activos anteriormente nombrados y las razones por las cuáles les proporcionan salud. Por otro lado, señalaron a los profesionales ya que ayudan a dar pautas y apoyo en situaciones puntuales.

> la pareja, mi hijo, una amiga con quien puedes contarle algo, desahogarte. Hablo con mi marido y me ayuda a tranquilizarme (MFA).
> el psicólogo del centro que nos ayuda a conocer la enfermedad (MFC).

En cuanto a los activos externos considerados como grupos informales y/o asociaciones de la comunidad, el grupo más destacado fue el de los amigos, que ofrecen momentos lúdicos y de descanso, o apoyo y ayuda según se necesiten. El resto de grupos estaban relacionados con la práctica deportiva.

> voy a bailes de salón y luego las parejas nos juntamos a cenar y charramos un rato (MFY).
> los compañeros que montan en bici, porque hablas con ellos, compartes aficiones y después de eso, te encuentras mejor, más relajado (Hombre Familiar Caudete (HFC)).

En relación a las instituciones, identificaron al ayuntamiento por los servicios que ofrece, entre ellos el CED, y a la Iglesia, como institución que acoge.

> el Ayuntamiento porque gestiona servicios como los que ofrece las escuelas deportivas (MFC).

En cuanto a servicios, identificaron el CED como activo, porque les permitía tener un tiempo de descanso en el cuidado del enfermo. El Centro de Salud también fue nombrado como activo, por sus atenciones y la seguridad que les proporcionaba. El resto de activos estaban relacionados con la actividad física, el ocio y la cultura.

> el CED por el desahogo que nos hace falta para hacer nuestros quehaceres del día a día (MFA).

Los lugares identificados como activos para la salud relacionados con infraestructuras, estaban vinculados a la naturaleza, ya que eran diferentes entornos que invitaban a descansar, desconectar y realizar actividad física.

> ir al campo con los nietos, distraerse los fines de semana (MFC).
> andar, pasear por el campo (MFY).

Discusión

El presente estudio muestra que los cuidadores familiares de personas con EA son capaces de identificar activos para la salud, tanto internos como externos, tanto en ellos mismos como en su entorno familiar y comunitario. Estos resultados responden a la creciente opinión de distintos autores (24) que advierten que, del mismo modo en que el cuidado es una notable fuente de estrés, también puede ser una experiencia que dé lugar a consecuencias positivas para el cuidador. La posibilidad de ayudar al familiar que lo necesita durante la evolución de la enfermedad, incluyendo el acompañarle en los últimos momentos de su vida, puede ser percibido por el cuidador como una oportunidad para su propio desarrollo personal, traduciéndose en resiliencia (25,26).

Los resultados obtenidos en este estudio son coincidentes con las variables que contribuyen, según otros estudios (24,27), a fortalecer la resiliencia del cuidador. De este modo, se destaca que los recursos individuales, familiares y comunitarios, como han sido identificados en este estudio, son variables que contribuyen al desarrollo de elevados niveles de resiliencia; el apoyo social recibido por el cuidador de parte de familiares, amigos y personas cercanas a la persona con EA, servicios comunitarios como el CED o los llamados recursos intrapsíquicos como la autoeficacia, autoestima, habilidades del cuidador, etc., también se asocian con mayor intensidad al fortalecimiento de la resiliencia (28).

Los activos para la salud enumerados presentan similitudes con otros estudios en salutogénesis. Asociaciones, agentes de salud, personas próximas como familiares, amistades, vecinos, representantes de asociaciones o diferentes profesionales, son también identificados como activos para la salud en otros estudios realizados en diferentes contextos (13, 29). Igualmente, se consideran activos para la salud los recursos relacionados con la práctica de actividad física, el ocio y el contacto con la naturaleza (30).

A diferencia de estudios precedentes sobre la EA, su abordaje y cuidado, que hacen hincapié en la parte más negativa de la enfermedad, tales como, burnout, estrés, fatiga, etc. (31), el estudio presente no aborda los problemas o factores de riesgo de los cuidadores familiares, lo cual no sugiere que no puedan co-existir aquellos aspectos negativos con los positivos de la experiencia del cuidado. No obstante, el enfoque salutogénico o de salud positiva consiste en identificar qué genera salud, y es esta perspectiva la usada en el presente estudio para abordar una problemática actual en la que se vive bajo una alta exigencia constante de cuidados y adaptación, al querer atender a un familiar con EA (32). La perspectiva salutogénica no sólo es complementaria a los abordajes tradicionales de promoción de salud y autocuidado en cuidadores familiares de personas con EA, sino necesaria para poder dar un punto de vista positivo a dichos planteamientos en salud y su promoción.

Por ello, hay que asumir que los cuidadores de personas con EA experimentan en ocasiones estrés, fatiga o burnout, y que no por el hecho de explorar, planificar e intervenir sobre sus experiencias plasmadas en los mapas de activos esta realidad va a desaparecer, pero sí podría afirmarse que es un enfoque mucho más positivo, alegre e incluso práctico, donde son los propios cuidadores los protagonistas de la creación de los mapas de activos para la salud,los cuales no sólo contribuyen a la promoción de la salud del familiar cuidador, sino también de la persona con EA cuidada, otros familiares, AFAs y comunidad en general, a ser activos interconectados.

En esta línea, la formación e información que se viene proporcionando a familiares cuidadores de EA hasta día de hoy está mayoritariamente enmarcada desde la perspectiva del déficit, intentando prevenir, paliar, reducir o manejar estados de estrés, fatiga o burnout que pueden haber aparecido durante el cuidado (33,34). En contraposición, y como línea de futuro, bajo el enfoque salutogénico, los activos identificados, podrían ser conectados y dinamizados a través del diseño de un programa de promoción de la salud y del autocuidado dirigido a cuidadores familiares de personas con EA, donde los protagonistas sean los propios cuidadores, quienes ofrecerían la información necesaria para el diseño del programa a través de los mapas de activos.

En función de los resultados hallados en este estudio, las principales áreas de actuación de este programa consistirían en:

1. Abordar la consciencia de la necesidad del propio autocuidado como un elemento esencial para poder seguir ejerciendo el rol de cuidador.
2. Fortalecer lazos sociales entre familiares, amigos o personas cercanas al cuidado de la persona con EA, creando una red de apoyo que reduzca la carga del cuidador principal.
3. Organizar y compatibilizar los tiempos del cuidado de la persona enferma con los del autocuidado del cuidador.
4. Fomentar la realización de actividades significativas fuera del tiempo dedicado al cuidado.

Declaración de conflicto de intereses

Ningún conflicto declarado.

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Trayectorias de atención en Mayas de México que padecen diabetes tipo 2

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Resumen

Objetivo: mostrar cómo pacientes de pueblos originarios (Mayas) que padecen diabetes tipo 2 manejan recursos de los diferentes modelos de atención para atender su enfermedad.

Material y métodos: el diseño del estudio fue de métodos mixtos de tipo secuencial; incluyó un cuestionario (*n*=195), entrevistas cualitativas cortas (*n*=103) y 20 entrevistas a profundidad entre población originaria Maya diagnosticada con diabetes tipo 2, usuarios de servicios de atención pública para la salud en tres estados de México: Chiapas, Yucatán y Quintana Roo.

Resultados: las trayectorias de atención se orientaron de acuerdo con las creencias sobre el origen de la enfermedad. La ruta seguida puede iniciar en los servicios públicos de salud, la medicina privada, tradicional o alternativa, o en el ámbito de las creencias religiosas; pero en algún punto se transita por todos estos recursos. La utilización de los recursos institucionales de la atención pública en salud depende de la apreciación de los pacientes sobre la eficacia del sistema de salud y las causas de la enfermedad, frecuentemente emocionales: sustos, enojos y/o preocupaciones.

Conclusiones: las y los participantes buscaron activamente atender su salud por varios medios; esto implica que en la trayectoria de atención se mezclan modelos, recursos y medicamentos, en parte debido a las condiciones de pobreza. La evidencia puede ser usada para ajustar los programas de educación para la salud, siguiendo la propuesta de la promoción de la salud sobre impulsar que las personas tengan mayor control de su propia salud.

Palabras clave: determinantes de la salud, salud indígena, diabetes.

Introducción

Actualmente la diabetes representa la principal carga de la enfermedad en México (1). Evidencia reciente sobre la tendencia que han seguido las enfermedades crónicas durante los últimos 15 años en este país, vincula el aumento de las cifras de diabetes a las desigualdades sociales que existen. Por ejemplo, la falta de diagnóstico oportuno está relacionada con la condición étnica (2); 80% de la

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población originaria en México vive en extrema pobreza (3); contraen más enfermedades infecto contagiosas que otras poblaciones en el país y mueren más por padecimientos crónico degenerativos (3). Esto como producto de la transición epidemiológica y la persistencia de vulnerabilidad social a pesar de la inversión del Estado en programas sociales de abate a la pobreza desde el año 1922. La pobreza también está asociada con obesidad y con desnutrición (4), ambas condiciones presentes entre la población originaria que a su vez son dos de los principales factores de riesgo para desarrollar diabetes (5–7).

En México, el 16% de población pertenece a algún grupo étnico considerando los criterios de autodefinición y el ser hablante de lengua indígena (8). Para atenderlos, el personal de salud enfrenta diversos retos, entre los cuales frecuentemente están: la escasez de infraestructura, la barrera del idioma y el desconocimiento sobre qué hace esta población cotidianamente para atender su salud-enfermedad, ya que tienden a ocultar sus prácticas porque desde la perspectiva médica institucional no es deseable mezclar los tratamientos. A pesar de esto, las personas hacen uso de todos sus recursos buscando sanarse intercambiando recomendaciones y recetas que no provienen del ámbito de la biomedicina, con el consumo de medicamentos y estudios clínicos, acudiendo tanto al médico como al curandero, así como auto atendiéndose en su hogar. Esta variedad muestra una búsqueda continua de atención para resolver sus problemas de salud-enfermedad, en lo que Menéndez ha llamado “transacción entre la biomedicina y la autoatención (9)”.

Tratándose de un padecimiento crónico, el objetivo del tratamiento médico para la diabetes es buscar adherencia terapéutica, promoviendo a través de acciones de educación para la salud (EPS) (10,11) comportamientos que eviten el desarrollo de complicaciones físicas que pueden ser fatales. Sin embargo, en la atención a población indígena es necesario considerar su propia perspectiva en torno al origen de la enfermedad y consecuentemente sus prácticas de tratamiento (12). Por ello, consideramos importante que el personal de salud integre la propuesta de la Promoción de la Salud (PS) específicamente sobre: “promover que las personas tengan mayor control de su propia salud (13,14)”. Entendiendo la salud como un proceso: salud-enfermedad-atención. Al respecto, se han documentado experiencias con pueblos originarios que muestran mayor apego al tratamiento cuando se consideran los recursos locales y se incluyen dentro del tratamiento ampliando la visión típica de la EPS (15).

Siguiendo a Chapela (16), reconocemos que existe una amplia discusión conceptual y diversos enfoques en torno al concepto de PS y EPS pero no es la intención discutirlos aquí. El objetivo del presente documento es mostrar cómo pacientes de pueblos originarios que padecen diabetes tipo 2, manejan recursos de los diferentes modelos de atención, para atender su enfermedad. Para ello utilizamos la definición de *trayectorias de atención*, entendida como “el curso que sigue el paciente para gestionar su padecimiento, y la organización del trabajo realizado por el personal de salud y la familia (17,18)”.

Material y métodos

El diseño metodológico utilizó métodos mixtos de investigación de tipo secuencial (19). La muestra de pacientes fue intencionada y estuvo compuesta por población hablante de Maya y Tzotzil que se atendían por diabetes tipo 2 en centros de salud rurales de Chiapas, Yucatán y Quintana Roo. De cada estado se eligieron dos localidades, considerando tres criterios: (a) Lugares con mayor porcentaje de población hablante de lengua originaria; (b) Mayor morbilidad de casos de diabetes tipo 2; (c) Funcionamiento de Grupos de Ayuda Mutua (GAM) para estos pacientes.

Para seleccionar los casos, los criterios de inclusión fueron: (a) Hombres y mujeres mayores de 18 años con diagnóstico de diabetes tipo 2; (b) Considerarse miembro de grupo originario y ser hablante de lengua indígena (6,20).

La recolección de datos se dividió en dos etapas: de 2008 a 2012. En la primera se obtuvo información transversal sociodemográfica, mediante la aplicación de un cuestionario con 89 reactivos que exploró los siguientes temas: características sociodemográficas; conocimientos sobre la enfermedad; autocuidado; uso de medicina tradicional; apego al tratamiento; apoyo social; consumo de alcohol y tabaco; composición e historia familiar.

En la primera fase del estudio se recolectaron 195 cuestionarios en Yucatán y Chiapas; en Quintana Roo no se obtuvieron datos cuantitativos por razones logísticas. Para la segunda etapa del estudio, la cualitativa, se seleccionó una submuestra de 103 casos: 37 en Chiapas (12 hombres y 25 mujeres);

34 en Yucatán (10 hombres y 24 mujeres); y 32 en Quintana Roo (7 hombres y 26 mujeres). Con estos se realizó una entrevista cualitativa breve-semiestructurada, previo diseño de una guía que exploró los mismos temas que el cuestionario.

Posteriormente, de la submuestra de 103 casos se eligieron 20 por considerarlos más ilustrativos debido a su trayectoria en la búsqueda de atención (4 hombres: 2 de Yucatán, 1 de Chiapas, 1 de Quintana Roo; y 16 mujeres: 6 de Yucatán, 5 de Chiapas, 5 de Quintana Roo), con estos se amplió la entrevista inicial y se profundizó en información de tipo biográfico con relación a la vivencia de la diabetes. Adicionalmente se hicieron videograbaciones con un guion especial para elaborar material audiovisual de tipo educativo que se dejó en los centros de salud visitados, con la intención de apoyar las sesiones de educación para la salud.

Todas las entrevistas fueron audio-grabadas previa obtención de consentimiento informado. Adicionalmente se empleó la técnica de 'observación no participante' para identificar elementos del contexto (comunidades y servicios de salud biomédicos y tradicionales) y para comprender mejor la utilización de las diferentes alternativas de salud y las prácticas para el cuidado de la misma.

Para el análisis de los datos se elaboraron dos bases: (a) Cuantitativa: se utilizó el software Stata 12.0 SE para analizar las respuestas de 195 participantes a través de frecuencias simples. (b) Cualitativa: primero se transcribieron las entrevistas literalmente; cuando fue necesario, apoyó un traductor previamente capacitado para hacerlas y transcribirlas; posteriormente, siguiendo los temas contemplados en la guía de entrevista, se procedió a codificar 103 casos utilizando el software Atlas ti v6. Con los 20 casos más ilustrativos, adicionalmente se hizo una segunda codificación de forma manual.

Se siguió el marco de referencia de la Fenomenología para la interpretación de los datos cualitativos, exclusivamente siguiendo los autores (21,22) que enfatizan sobre la importancia de comprender cómo las personas construyen significados sobre su realidad mediante la comunicación y la interacción social, ya que es a partir de la resolución de los avatares que se presentan cotidianamente, de donde se obtiene el conocimiento práctico para continuar resolviéndolos en el futuro y transmitiéndolo a las nuevas generaciones.

Para este artículo se analizaron resultados solamente de los siguientes temas explorados: autocuidado y uso de medicina tradicional. Del análisis de estos temas se interpretaron dos categorías analíticas: significados del padecimiento y trayectoria de atención (ver Figuras 1 y 2).

Aspectos éticos

Se consideraron los estándares éticos para realizar estudios médicos de la Declaración de Helsinki (23).

Resultados

Características sociodemográficas (ver cuadros con información cuantitativa en Material Complementario).

De los 195 cuestionarios, 89 (45.6%) se recolectaron en Chiapas y 106 (54.4%) en Yucatán. Los participantes en el estudio fueron principalmente mujeres (86.1% mujeres, 13.9% hombres); el 50.3% tenía entre 50-64 años, 25.1% se ubicaba en el rango de 21-49 años y para el 24.6% su edad oscilaba entre 65-86 años, la ocupación principal fue dedicarse a las labores del hogar y la mayoría (73.2%) refirió vivir en pareja. El 39% no tenía estudios y únicamente 34.8% respondió recibir algún tipo de ingreso monetario; 11% refirió haber utilizado de manera conjunta la medicina alópata y la tradicional (curandero) para la atención de la diabetes.

Sumado a lo anterior y derivado de la técnica de observación, se pudieron documentar las condiciones de precariedad económica y vulnerabilidad social en la que vivían las personas que participaron en el estudio. Las localidades tenían características rurales, con servicios básicos de saneamiento ambiental y luz eléctrica. Había escuelas primarias y telesecundarias, en algunas con profesores hablantes solamente de Maya o Tzotzil, pero la mayoría bilingües. Además de la presencia del centro de salud rural que otorgaba atención médica, otros recursos provenían de la medicina tradicional: curanderos, yerbateros, parteras. A pesar de que en la recolección de información cuantitativa pocos declararon atenderse con estos proveedores, durante el ejercicio de observación, se pudo constatar la alta afluencia de los pacientes a los consultorios de estos proveedores para atenderse con ellos, así como la compra de diferentes 'remedios', plantas medicinales y diversos 'medicamentos milagro' que les recomendaron para tratarse la diabetes.

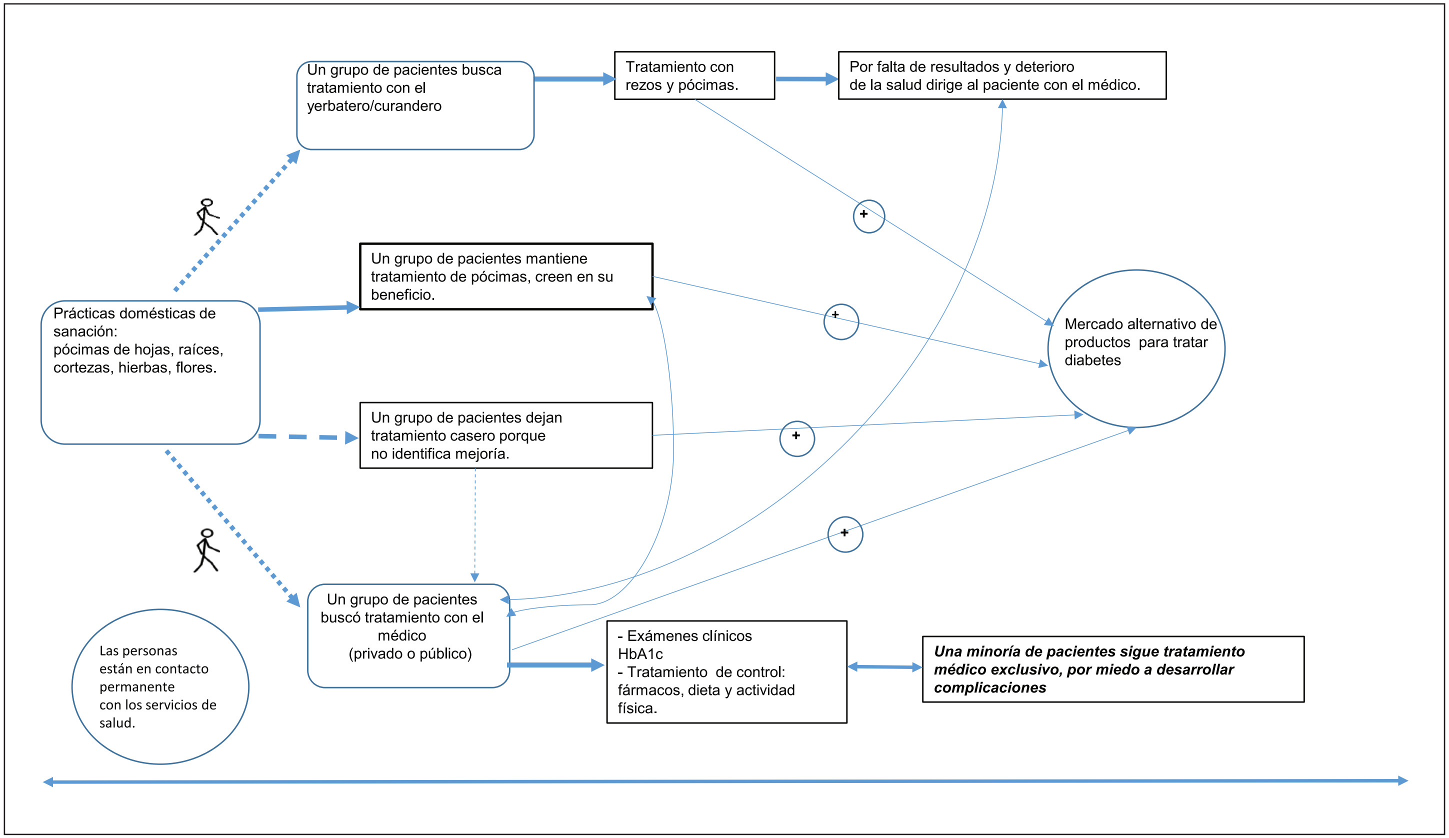

Figura 1. Vías principales de autoatención por las que se inició la trayectoria como enfermo.

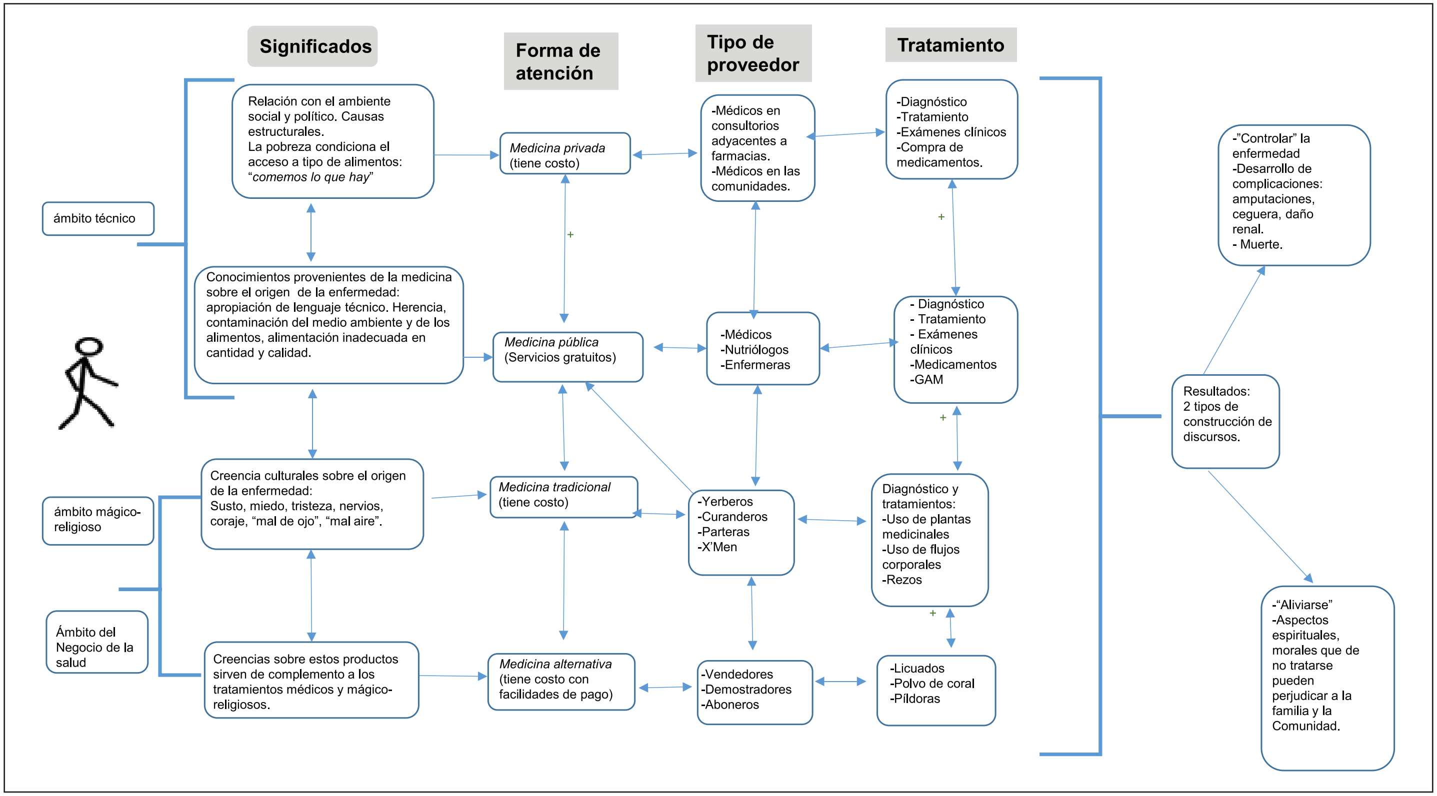

Figura 2. Trayectorias de atención de acuerdo al uso de la oferta de atención a la salud y significados otorgados a la enfermedad.

Antecedentes de la enfermedad

Una cuarta parte de quienes utilizaron la medicina tradicional tenía más de 12 años padeciendo diabetes. Quienes acudieron al curandero refirieron menos antecedentes familiares de diabetes (42.9%) en contraste con el total de pacientes (51.8%), aunque la presencia de complicaciones por diabetes fue mayor entre los usuarios de medicina tradicional (47.6%) versus el total de pacientes con diabetes (29.7%).

El 1% del total de pacientes refirió conocimientos adecuados sobre la enfermedad (como: saber si la diabetes tiene cura, cómo se controla y conocimiento de sus complicaciones); el 4.8% de los utilizadores de medicina tradicional y 8.7% del total de la población mencionó llevar a cabo acciones de autocuidado.

Casi todos (70%) recibieron diagnóstico de diabetes en el centro de salud rural, pero al 21% lo diagnosticó el curandero. Las razones principales que les dio el curandero para haberse enfermado fueron: enojo, susto y "exceso de calor". Su tratamiento fue con base en productos de la medicina tradicional (cortezas, hierbas, flores, semillas), los cuales ingirieron en combinación con los medicamentos proporcionados por el médico; algunos participantes señalaron que los "remedios tradicionales" les ayudaron a disminuir dolencias físicas, pero la mayoría declaró no sentir mejoría utilizándolos. Cuando los médicos se enteraron que utilizaban "remedios tradicionales", el 40% opinó que no tenían eficacia.

Resultados cualitativos

Para comprender desde qué horizonte cultural los participantes hicieron uso de los diferentes recursos de atención, es importante entender primero los significados que otorgaron al padecimiento. Para los participantes, tener diabetes o "*tener la sangre dulce*" (como ellos lo entienden), significó una metáfora de su vida de avatares, ya que el hecho fue explicado a partir de vincular el padecimiento con narraciones de eventos estresantes en su vida cotidiana, que fueron difíciles de resolver por su condición de pobreza. Las emociones intensas derivadas de esas circunstancias las relataron como: enojos, sustos, corajes, miedo, tristeza, angustia, nervios. De acuerdo con su perspectiva, la relación entre esos eventos y el estrés derivado de ello marcaron el inicio de la enfermedad. A partir de esta asociación construyeron un marco explicativo conformado por su experiencia corporal, el entorno familiar y social; una interpretación sincrética del padecimiento que une dos mundos, el de la cultura de los pueblos originarios estudiados y el del campo biomédico.

Así, bajo este marco, tanto las prácticas de autoatención (Figura 1), como la búsqueda de recursos sociales y materiales para atender su padecimiento, fueron una consecuencia de sus prácticas legas sobre por qué enfermaron, con sus consecuentes prácticas de atención. De esta manera, combinaron las técnicas y tratamientos de los diferentes proveedores de servicios, utilizándolos de acuerdo con sus necesidades y disponibilidad de recursos económicos.

Se identificaron entonces tres ámbitos donde los pacientes iniciaron la trayectoria de atención: mágico-religioso; "negocio" de la salud; técnico-biomédico. Al elegir una u otra vía de inicio se vincularon con cuatro formas de atender la diabetes mediante el uso de: (i) medicina tradicional; (ii) medicina alternativa; (iii) servicios médicos privados; (iv) servicios médicos públicos (Figura 2). *(i) Ámbito mágico-religioso - uso de medicina tradicional* (ver cuadro de testimonios para los tres ámbitos en el idioma original: Tzotzil y Maya, y su traducción al español en Material Complementario).

Las prácticas para el autocuidado a base de recursos botánicos fueron empleadas por los entrevistados al margen del tratamiento recomendado por los prestadores de servicios biomédicos. Estas responden a un conjunto de representaciones culturales que ligan la salud y el bienestar con elementos presentes en plantas, tallos y cortezas. La mayoría de los participantes habían tomado algún remedio casero basado en plantas medicinales, las cuales habían sido recomendadas por algún familiar, amigo o por proveedores de la medicina tradicional como curanderos, yerberos, parteras. Estos remedios se preparaban y tomaban en combinación con el medicamento proporcionado en el centro de salud. En algunos casos señalaron que usando los remedios tradicionales sintieron mejoría para disminuir el dolor.

A pesar de no tener la certeza de su beneficio, utilizaron estos recursos buscando controlar su enfermedad o incrementar el efecto de los medicamentos "disminuyendo el *azúcar* en la sangre". Adicionalmente, hubo testimonios que describieron prácticas relacionadas con la fe y la espiritualidad en diferentes cultos de tipo religioso; en actos sincréticos que denotaron a la fe como parte importante de la cultura indígena, en la creencia del alivio del sufrimiento emocional vinculado al padecer diabetes.

(ii) Ámbito del negocio de la salud - uso de medicina alternativa

Aunque con menos frecuencia, los entrevistados se trataron el padecimiento consumiendo diversos productos que no tienen regulación sanitaria como: "polvo de coral" (un triturado que se cree es derivado de coral marino, pero no hay certeza de qué está elaborado); o consumiendo secreciones y fluidos corporales con fines terapéuticos (como la orina). En ambos casos fueron recomendados por la red de apoyo social, aunque no conocieran los efectos colaterales del tratamiento o su eficacia. Algunos dejaron de tomar los medicamentos recetados por los médicos para probar estos nuevos tratamientos; otros los usaron como complemento. Esta diferencia varió en función de la confianza en la persona que hizo la recomendación.

(iii) Ámbito técnico biomédico – uso de servicios médicos privados

A pesar de tener escasos recursos económicos, algunos participantes acudieron a médicos privados que prestaban sus servicios en pequeños consultorios, instalados junto a farmacias que pertenecen a una sola empresa (cadena), el costo promedio de la consulta: $30 pesos (un dólar americano y cincuenta centavos); en algunos casos la consulta fue gratuita, pero debían comprar los medicamentos en esa farmacia. Otros pacientes acudieron a consultorios médicos privados (no de farmacias) pagando un costo mayor. La decisión de ir al médico privado fue tomada en los casos de malestares inesperados o pequeñas urgencias vinculadas a padecer diabetes. Ir al médico privado también fue una decisión derivada de circunstancias relacionadas con la calidad de la atención; por ejemplo, consideraron que perdían demasiado tiempo haciendo fila para sacar turno y esto no siempre conducía a tener la consulta. La falta de medicamentos en los servicios públicos, así como la necesidad de realizarse exámenes clínicos, fueron dos de las razones más frecuentes para acercarse a la oferta de servicios privados; pese a sus escasos ingresos debían destinar recursos para pagarlos, ya que hacerlos en el hospital público de referencia les implicaba inversión de tiempo y también de dinero para pagar el transporte.

(iv) Ámbito técnico biomédico – uso de servicios médicos públicos

En el momento del estudio, la atención en el centro de salud para los pacientes con diabetes funcionaba a través de pláticas de educación para la salud en los GAM. En estas sesiones, los prestadores de atención recomendaban: (a) comer alimentos con poco contenido de carbohidratos, grasas y azúcares; (b) tomar medicamentos a la hora prescrita; y (c) realizar actividad física. Frecuentemente el contenido de las sesiones se refería a estilos de vida ajenos a los hábitos de los entrevistados. Opiniones recurrentes por parte de los participantes sobre su experiencia en los GAM se refirieron a la disociación entre el contenido de los mensajes de salud con su realidad, lo cual se reflejaba en el bajo apego al tratamiento. Adicionalmente algunos de los mensajes les parecían poco comprensibles, posiblemente por la falta de un enfoque intercultural en la atención para la salud (o la falta de competencias culturales) por parte de los prestadores de servicios. Aunque el mayor obstáculo para comunicarse se debía al idioma, ya que el personal de salud no hablaba Maya y entender completamente español era difícil sobre todo para las personas de mayor edad.

Una de las entrevistadas refiriéndose a esta situación lo dijo en Maya de la siguiente manera, evidenciando que si hay disposición es posible comunicarse:

> Ma', waye' mix juntúul le aj ts'aakyaj ku t'anik maaya. . . le aj ts'aakyajo' ku taalo'ob tu noj kaajil México', ma' in wóojelo'on jach tu'uxilo'obi', in tukultike' ma' u yoojelo'ob u t'aan mayai', ma' in woojeli'. Ba'ale' tene' yaan juntúul in kiik, cheen bisa'ak yiknal aj ts'aakyaje', ku ya'ala'al ti'al in soob tumen le ajts'aakyajo' ka'aj u tsool le ba'ax k'oja'anil yáan ti' u na'.
>
> Traducción al español:
>
> . . .Nada, aquí casi nadie [de los doctores] habla Maya. . .doctores que vienen de México, quien sabe de dónde, no saben la Maya [el idioma]. Pero yo tengo una hermana, cuando la llevan con el

> doctor, explican a mi sobrina, le explica qué es lo que padece su mamá, le dice el doctor.

Discusión

Los principales hallazgos de este estudio indican que contrariamente a lo que se espera en el modelo biomédico, la búsqueda de atención implica mezclar caminos y recursos. Las personas utilizan al mismo tiempo varios modelos de atención con base a sus creencias y dependiendo de su horizonte cultural. Desde la Antropología Médica, siguiendo a Menéndez, los modelos de atención se entienden como: "no sólo las actividades de tipo biomédico, sino todas aquellas que tienen que ver con la atención de los padecimientos en términos intencionales, es decir que buscan prevenir, dar tratamiento, controlar, aliviar y/o curar un padecimiento determinado (9)". Dicho autor propone cinco modelos de atención: biomédico; tradicional; alternativo; acupuntura-ayurvédico y los centrados en la autoayuda (24). Al relacionar los hallazgos con este marco conceptual podemos ver representados en las Figuras 1 y 2 la trayectoria de atención seguida, iniciada a partir del significado otorgado a la diabetes (20), así como la interconexión entre los modelos. Independientemente del ámbito en donde se inició el recorrido, tarde o temprano buscarán otros ámbitos de atención para tratar de solucionar su enfermedad sin cuestionar su eficacia, incluidas acciones de *autoatención*, entendidas según el mismo autor como aquellas "prácticas de autoprescripción, uso y mezcla de tratamientos por iniciativa de los pacientes (9)". Al respecto, coincidimos con su perspectiva crítica al señalar que en las prácticas de promoción de la salud, el sector salud tiene un discurso contradictorio en la atención a enfermedades crónicas, ya que por un lado promueve actividades que ayudan a la independencia de los pacientes, como inyectarse insulina, pero por otro desacredita las prácticas legas, ajenas al modelo biomédico pero que son construcciones sociales presentes en todos los grupos humanos, no solamente entre población indígena.

La evidencia aquí mostrada indica que la prohibición a usar otros recursos fuera de la biomedicina no tiene sentido, las personas utilizarán cualquier terapéutica y capital social (25) que esté a su alcance. Por otro lado, Strauss (18), precursor del concepto, propone que conocer la trayectoria de atención, ayuda a ordenar analíticamente los eventos que ocurren en torno a la persona que padece e identificar cómo les hace frente, lo cual, consideramos, es relevante como insumo para las acciones de EPS.

Desde Alma Ata (26), se reconoció la importancia de los saberes ancestrales de la población indígena respecto al uso de las plantas medicinales vinculadas al modelo de atención tradicional y se recomendó incorporarlos a la provisión de los servicios médicos para tratar la diabetes. Esto ya ocurre en países como Canadá, India y Pakistán (27–29). Sin embargo, en México no se ha logrado un proceso más incluyente de creencias y prácticas de la población indígena sobre el origen de sus padecimientos, que haga sinergia con la perspectiva biomédica (30).

Desde el año 2013, en México se incorporó la perspectiva intercultural en las normatividades de salud (31,32), pero todavía se trata de iniciativas aisladas (28). La barrera del idioma limita la comunicación entre la población y el personal de salud. Además de considerar este punto, es necesario promover mayor comprensión hacia la alteridad, hacia otras formas de entender los padecimientos y por ello de visualizar otras opciones de atención, lo cual implica la búsqueda de recursos diversos (33). Al respecto, estamos de acuerdo con otros autores que proponen la importancia de que los planeadores de salud identifiquen los componentes de la trayectoria de atención y las implicaciones de su interdependencia, para mejorar el apego al tratamiento (34). Se deben respetar las decisiones de los pacientes considerando la elección terapéutica de su preferencia, sus necesidades de atención y el momento en el que se encuentra la enfermedad. En la actualidad, por ejemplo, existe evidencia que sustenta la importancia del modelo alternativo y del capital social y cultural para el manejo del estrés en enfermedades crónicas (35–38).

Además de la cultura, las desigualdades sociales influyen en la búsqueda y acceso a los diferentes sistemas de atención a la salud y contribuyen a ampliar la brecha de inequidad entre las poblaciones (39). Interpretando a Luna (40), la situación se agudiza más entre población indígena debido a la doble capa de vulnerabilidad: la de la pobreza y la de la etnicidad. Por ello, es necesario que se reconozcan e incorporen al modelo biomédico las prácticas de atención de los otros modelos, para potenciar los beneficios que pueden brindarse a la salud de los diferentes grupos sociales.

En conclusión, históricamente las prácticas de atención desde los saberes populares han sido juzgadas y minimizadas desde el modelo biomédico (41). Los resultados de esta investigación muestran la diversidad de fuentes de atención para la salud utilizadas y por ello, la necesidad de ajustar las acciones desde el sector salud, más enfocadas a las prácticas reales de la población y sin juzgarlas (10). La Organización Mundial de la Salud propone reducir 25% de nuevos casos de diabetes para el año 2025, como parte de los Objetivos de Desarrollo del Milenio (42). Para lograrlo es importante considerar evidencia como la aquí presentada (43,44).

Declaración de conflicto de intereses

Ningún conflicto declarado.

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Material complementario

Este artículo tiene material complementario disponible en línea.

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"Enfermarse aquí es un lujo": prácticas y perspectivas en la atención de enfermedades entre inmigrantes yucatecos en el sur de California

Alba Rocío Valdez Tah

Resumen: Este estudio se enfoca en cómo un grupo de inmigrantes originarios del estado de Yucatán, en México, y quienes viven en el sur de California, atienden las enfermedades que les aquejan y cómo articulan sus prácticas de atención con sus condiciones socioeconómicas, su estatus migratorio y acceso a los servicios de salud institucionales. La metodología elegida fue de corte cualitativo, a través de entrevistas se recopilaron datos etnográficos analizados con el software MAXQDA12. Las modalidades de las trayectorias en la búsqueda de atención son complejas al ser articulaciones a través de las cuales los entrevistados enfrentan las barreras estructurales para acceder a servicios médicos, y por constituirse al mismo tiempo como una síntesis dinámica de los sistemas de conocimiento científico y del saber popular. Las limitantes estructurales son mayormente prevalentes en el acceso de servicios médicos a partir del segundo nivel y son más profundas entre los participantes indocumentados. El trabajo reflexiona sobre el impacto estructural de la política pública en salud y de la política migratoria sobre las modalidades de atención, sobre las condiciones de salud de los participantes, y sobre las implicaciones de los hallazgos en las estrategias de promoción a la salud en el contexto de migración internacional.

Palabras clave: atención de salud, estudio etnográfico, determinantes de la salud, América Latina, cualitativo, migración.

Introducción

En el estado de California, Estados Unidos (EE. UU.), los inmigrantes mexicanos conforman un grupo poblacional mayoritario (1). Aún posterior a la entrada en vigencia de la política federal en salud del Affordable Care Act (2), se estima que un 47% de la población en el país no cuenta con cobertura médica. Para 2019 se calcula que de 1.3 a 1.7 millones de personas sin seguro médico serán inmigrantes indocumentados (3), muchos de ellos mexicanos. En adelante, el término "indocumentado" refiere a una persona nacida en otro país y sin autorización legal para establecerse en los EE. UU.

Este estudio se enfoca en cómo un grupo de inmigrantes originarios del estado de Yucatán, en México, y quienes viven en el sur de California, atienden las enfermedades que les aquejan y cómo articulan sus prácticas de atención con sus condiciones socioeconómicas, su estatus migratorio y acceso a los servicios de salud institucionales. El estudio visibiliza las modalidades de las prácticas de atención de enfermedades desde la perspectiva de los propios actores, de cómo éstas son afectadas por las políticas del sistema de salud y migración de los EE. UU. y de las posibles implicaciones en la promoción de la salud, esto último como eje de las reflexiones finales.

Como marco analítico se retoma la propuesta de Eduardo Menéndez (4,5) que ve la salud, la enfermedad y la búsqueda de atención como un proceso relacional que articula distintos sistemas de

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conocimiento. En las trayectorias de las personas para procurar alivio a sus dolencias y enfermedades, ellas acceden a diferentes formas de atención que coexisten como fuentes de conocimiento y práctica: el sistema biomédico, el saber popular y la medicina doméstica (4,5). De acuerdo con Menéndez, el proceso salud/enfermedad/atención está inserto en dinámicas estructurales históricas caracterizadas por relaciones de hegemonía y subalternidad, y esta misma jerarquía se extiende a la interrelación de los diferentes sistemas de atención de enfermedades (4). La medicina denominada científica -o alópata- es una de las formas más institucionalizadas y es percibida como la más correcta y eficaz de atender los eventos de enfermedad, por lo cual ocupa una posición hegemónica.

Menéndez señala que la medicina científica, como las otras formas academizadas (acupuntura, homeopatía, etcétera) o populares (herbolaria, curanderismo, etcétera), son "determinadas maneras de pensar e intervenir sobre las enfermedades." Sin embargo, el saber popular mantiene una posición subalterna o no-hegemónica en relación a la medicina alópata (4). El saber popular sintetiza concepciones y prácticas derivadas de diferentes saberes, especialmente desde la cosmovisión de los grupos étnicos mexicanos, pero también incluye el saber biomédico (5).

Asimismo, dentro de cada sistema de conocimiento, como el científico y los saberes populares, existen curadores que son los expertos de los acervos de conocimiento y que son reconocidos socialmente para atender un determinado espectro de daños a la salud individual y colectiva. Entre los curadores del saber popular se encuentran las parteras empíricas, los curadores herbolarios y los hueseros o *hmen*, estos últimos son los de mayor prestigio en la Península de Yucatán (6). Los curadores diagnostican, entre otros, los síndromes de filiación cultural, que son complejos mórbidos percibidos, clasificados y tratados conforme a claves culturales propias del grupo, como el empacho, el susto, la caída de mollera y el mal de ojo (6).

En este marco analítico, el proceso de salud y enfermedad es también afectado por la estructura social (4). Las condiciones de pobreza, de explotación directa o indirecta y de hegemonía/subalternidad obligan a individuos y colectividades a desarrollar una notable variedad de actividades para aliviar las enfermedades que los afectan. En este sentido, en tanto se producen en la vida social como una totalidad y en la intersección de procesos políticos, económicos, sociales e ideológicos, interacciones cotidianas, biografías y relaciones entre muy diversos actores, las prácticas de atención de enfermedades son complejas y la multifactoriales (4).

En el estudio de los factores estructurales socioeconómicos y políticos que constriñen las condiciones de salud de los migrantes en los EE. UU., sobresale el estatus migratorio indocumentado asociado con un mayor riesgo de enfermedad (7,8). La población migrante enfrenta el reto de acceder a los servicios institucionales de salud, lo que está determinado por su poder adquisitivo y su participación en el mercado laboral de la sociedad de acogida (9). De aquí se deriva el concepto de "vulnerabilidad estructural", que enmarca la experiencia de los inmigrantes como producto de su relación con su entorno social y material, y considera la complejidad derivada de adicionales formas de exclusión, como la etnia, la raza, la clase, la edad y el género (10). Este planteamiento contempla el discurso público y las políticas anti-migratorias como parte del entorno social adverso a la salud de los inmigrantes (11).

Al centrarse en el efecto de los determinantes estructurales culturales y socioeconómicos de las condiciones de salud, las corrientes teóricas aquí descritas han dejado de lado la narrativa del padecimiento y su contexto social más amplio, en los que se negocia la identidad personal y moral del sujeto y dentro de los que se construyen las visiones personales en torno a la aflicción (12). En esta experiencia del padecer, la relación médico/paciente se torna especialmente crítica en sistemas de salud en su mayoría privatizados y de corte empresarial, como el que se describirá en el caso de este estudio.

El presente trabajo indaga las trayectorias de atención de enfermedades entre un grupo de inmigrantes de origen yucateco en los EE. UU., y cómo éstas, desde la perspectivas de los propios actores, son afectadas por factores estructurales. Tres dimensiones resultaron claves: 1) las modalidades en la atención de enfermedades, 2) las barreras para el acceso a servicios de salud, y 3) los sentimientos de desconfianza y aprensión. Los resultados que se presentan más adelante están agrupados en estas mismas temáticas, ilustrados con extractos de entrevistas de participantes citados bajo seudónimos.

Tabla 1. Información sociodemográfica de Los participantes segregado por sexo.

	Mujeres	*Hombres*	*Total*
Contexto de origen en Yucatan	rural= 11 urbano= 2	rural= 12 urbano= 5	rural= 23 urbano= 7
Lenguas habladas*	maya = 2 inglés= 4	maya = 10 inglés = 8	maya= 12 inglés = 12
Nivel de escolaridad (años de escuela) +	9.4	8.5	8.9
Tiempo de vivir en California +	18	28.5	24
Tipo de empleo/ ocupación ^	Empleo formal: 4 Empleo informal o trabajadora independiente: 4 Ama de casa: 4 Jubilada: 1	Empleo formal: 8 Empleo informal o trabajador independiente: 5 Jubilado/Deshabilitado: 3 Dueño de empresa: 1	Empleo formal^: 12 Empleo informal o trabajador/a independiente: 9 Ama de casa: 4 Jubilado/Deshabilitado: 4 Dueño de empresa: 1
Situación migratoria	4 con presencia autorizada en los EEUU 9 sin autorización legal/ indocumentadas	9 con presencia autorizada en los EEUU 8 sin autorización legal/ indocumentados	13 con presencia autorizada en los EEUU 17 sin autorización legal/ indocumentados

*Lenguas habladas además de español, ésta última fue la preferida por los entrevistados al momento de la entrevista.

+Número de años promedio.

^Empleo formal: Actividad laboral desempeñada por las personas cuando ésta es contratada por una empresa o persona con la protección legal de un contrato registrado, lo que permite al empleado ser acreedor de beneficios y prestaciones laborales. En los EE. UU. actualmente se requiere de un estatus autorizado y de un número de seguridad social para acceder a este tipo de empleo.

Empleo informal: Se refiere a las actividades laborales de quienes trabajar y perciben ingresos al margen del control tributario del gobierno de los EE. UU. y de lo regido por la ley en material laboral, por ejemplo prestaciones de salud, indemnización y retiro. Se opta por una ocupación informal cuando el estatus migratorio es indocumentado y también cuando se desea percibir una remuneración económica sin que sea gravado por el estado. Entre los participantes algunas actividades realizadas de este tipo es el trabajo como empleadas domésticas y niñeras, preparación y venta de alimentos desde el hogar, recolecta y venta de materiales reciclados y empleo en pequeños negocios.

Métodos

El método etnográfico consistió en entrevistas semi-estructuradas a 30 participantes de origen yucateco, adultos y residentes en los condados de Los Ángeles y Orange, al sur de California, durante la primera mitad del 2017. Estos migrantes económicos, dejaron su país de origen buscando mejorar su nivel de vida y el de sus familias en un país distinto al suyo (13). Un primer contacto con actores claves de la comunidad del estado de Yucatán en los condados mencionados hizo posible la realización de subsecuentes entrevistas, técnica que se conoce como “bola de nieve”.

La entrevista abordó las prácticas de atención médica, el uso de medicina doméstica y la demanda de curadores del saber popular (4). También se colectó información sociodemográfica de los participantes, de cobertura médica y de su acceso a programas de salud subsidiados.

Ninguna de las personas entrevistadas (13 mujeres y 17 hombres) tiene una esposa(o) o hijos(as) menores de edad viviendo en Yucatán, y dos terceras partes de ellos tienen por lo menos un hijo(a) nacido en los EE. UU. La participante más joven es una mujer de 31 años de edad que emigró a EE. UU. hace 12 años. El participante de mayor edad, un hombre de 76 años, emigró a los EE. UU. cuando tenía 28 años, atraído por las experiencias de paisanos en el trabajo temporal agrícola como parte del programa “Bracero”. Al momento de ser entrevistados, 13 de los hombres tenían más de 50 años de edad. El promedio de edad del grupo de hombres es de 55.3 años, y el de las mujeres 46.9 años (Tabla 1). El español fue la lengua preferida en las entrevistas, aunque 18 de ellos son bilingües (maya y español) y seis de ellos son trilingües (maya, español e inglés).

Los audios de las entrevistas fueron transcritos en el procesador Word y el texto de las transcripciones analizado con ayuda del programa de análisis cualitativo MAXQDA 12. Se codificó con base tanto a los temas de la entrevista como a temas emergentes, y ambos en relación con el estatus migratorio, el género y el origen rural/urbano.

Resultados

Modalidades en la atención de enfermedades

Los entrevistados describieron cómo atienden algunas de las enfermedades que los afectan, desde malestares menores como gripas y dolor estomacal, hasta condiciones crónico-degenerativas como diabetes, hipertensión y artritis. En general, una primera línea de atención a malestares considerados "normales" son los remedios caseros y los medicamentos adquiridos sin receta médica. Algunos medicamentos son enviados desde Yucatán como parte de la dinámica transnacional reportada también entre inmigrantes yucatecos en Texas (13).

De los testimonios se desprende que ante el inicio de síntomas de una enfermedad, la visita al doctor no es la primera opción. Este fue un tema recurrente incluso entre los participantes que contaban con seguro médico y las razones identificadas fueron ahorro de tiempo y dinero que invierten en la visita al servicio médico, y por la desconfianza hacia el sistema de salud estadounidense, como se expondrá más adelante.

Ante un evento de enfermedad, si los primeros intentos de curación en casa son insuficientes, la segunda opción son los servicios médicos del nivel de atención primario. Sin embargo, el tiempo de espera para asistir al doctor es mayor entre los hombres y entre quienes carecen de seguro médico.

Los entrevistados que carecen de seguro médico recurren, en su mayoría, a clínicas comunitarias, centros de salud y consultorios de médicos familiares cercanos a su domicilio y que sólo aceptan pagos en efectivo o con tarjetas de debido/crédito. El costo de la consulta médica varía entre 35 y110 dólares, y a esto se suma el costo de los exámenes de laboratorio y los medicamentos. El carácter impredecible del costo final del servicio médico en estos proveedores médicos, genera desconfianza en los entrevistados. Entre quienes no cuentan con seguro médico privado, algunos reciben apoyo gubernamental conocido como MediCal para acceder a servicios en unidades médicas públicas y privadas. Sobre este tema se ahondará en los siguientes segmentos.

Entre los entrevistados con cobertura médica, la atención de primer nivel está asegurada con su servicio médico primario, lo cual les procura acceso a medicina general, medicina familiar y enfermería (no de emergencia). El pago por este servicio se descuenta directamente de su salario como trabajadores y con éste se paga a las compañías aseguradoras contratadas por sus empleadores. Al momento de la entrevista, ninguno de los entrevistados contaba con seguro médico contratado por ellos mismos.

Sin importar el estatus de cobertura médica, los testimonios recopilados sugieren que ante la persistencia de cierta sintomatología, sobre todo entre los infantes, surge la sospecha de se trata de una enfermedad "que no cura el doctor". Como parte de las nociones del proceso salud y enfermedad del grupo, se considera que estos infantes pueden estar afectados por el *mal de ojo* y el empacho, lo cual requiere de un curador del saber popular (5,6). Una mujer de la tercera edad y de origen yucateco había sido la principal curadora entre el grupo entrevistado hasta su fallecimiento reciente. Ella atendió a por lo menos tres generaciones de inmigrantes yucatecos en el sur de California. Estos malestares en infantes también son tratados por las "personas antiguas", como los abuelos. Otros síndromes de filiación cultural reportados fueron el susto y caída de mollera, también encontrados entre otros grupos de inmigrantes latinos (6,14).

Las mujeres entrevistadas reportaron problemas como la caída de matriz y frialdad en el útero, atendidos con mujeres "sobadoras" o aquellas más "antiguas" de la familia, de quienes también han recibido cuidados durante el embarazo y posterior al parto (5,6). Ninguna de las mujeres mencionó la atención de una partera durante el alumbramiento. Por último, entre los varones entrevistados se encontró una mayor demanda de servicios de curadores como "hueseros" y masajistas para atender problemas músculo-esqueléticos.

Ante el agravamiento o persistencia de síntomas que requieren atención médica más allá del nivel primario de atención, la cobertura médica –o la ausencia de ella- es un factor determinante en las trayectorias de atención seguidas por los participantes (7). Ante la falta de cobertura médica, se recurre a nuevas opciones de remedios domésticos así como a la adquisición de manera informal de antibióticos. También se recurre a curadores del saber popular existentes en el paisaje sociocultural latino-hispano del sur de California, quienes no cuentan con ningún tipo de licencia para ejercer. Una trayectoria similar en la cual se regresa a la primera modalidad de atención doméstica, de "alternativas culturales", después de recurrir servicios médicos primarios, fue encontrada entre inmigrantes latinos al este de Los Ángeles (14).

En algunos casos, la carencia de recursos económicos para cubrir los costos de atención secundaria o terciaria somete a los inmigrantes a una espera resignada y pasiva con la esperanza de que "la enfermedad pase" o "se cure por sí sola". Denominado en otro estudio como un período de "estoicismo" (15), este patrón de comportamiento reduce las posibilidades de atención médica oportuna y se convierte en un riesgo en sí mismo para el desarrollo de mayores complicaciones en el paciente.

Los entrevistados sin cobertura médica mencionaron que la sala de emergencia es el último recurso al cual se recurre cuando se agrava la enfermedad o ante la aparición de una enfermedad aguda (como cálculos en la vesícula, apendicitis o embolia). Sin cobertura médica ésta no es una decisión fácil, como lo expresan los mismos participantes. Esto inclusive cuando han tenido experiencias positivas en el pago de cuentas médicas con la ayuda gubernamental dirigida a población de bajos ingresos (ejemplo MediCal). Por cada nueva solicitud de apoyo en este y otros programas gubernamentales a nivel del condado, la situación socioeconómica y de vulnerabilidad de la familia es evaluada para determinar su elegibilidad. Debido al cambio continuo de los criterios para calificar como beneficiario de los programas, siempre existe incertidumbre sobre la aprobación de la ayuda.

Por el contrario, para aquellos que cuentan con seguro médico, su médico general primario los puede referir a especialistas en otros niveles de atención.

Barreras estructurales para el acceso a servicios de salud

La mitad de los participantes cuentan con seguro médico y visitaron al doctor por lo menos una vez durante el año anterior a la entrevista. En cinco casos, la cobertura médica fue posible a través de programas gubernamentales públicos como MediCal; en los otros 10 casos, el seguro médico de los participantes era por medio de sus empleos o el de sus esposos, en el caso de las mujeres entrevistadas. De este subgrupo con cobertura médica, 13 entrevistados han regularizado su situación migratoria en el país y dos más son indocumentados. Si bien este último grupo en su mayoría se excluye del programa federal de acceso a servicios médicos MediCaid, la versión estatal en California (MediCal) ofrece una cobertura restringida a emergencias y a especialistas a quienes no pueden pagar un seguro médico, a pesar de su estatus migratorio.

Todos aquellos participantes entrevistados que carecen de cobertura médica son inmigrantes indocumentados. Por el tipo de trabajo que realizan, generalmente su salario es más bajo, en comparación a sus pares legales, no se les ofrece seguro médico, o bien, éste les resulta muy caro por lo que prefieren no contratarlo. Entre los participantes indocumentados, cuatro de ellos contaron anteriormente con MediCal o están en proceso de registro. Bajo la cobertura de este programa han accedido a servicios médicos para el control de la diabetes y sus complicaciones así como de otras enfermedades crónico-degenerativas.

En el caso de las mujeres inmigrantes indocumentadas, a través de MediCal han accedido a pruebas de detección de cáncer, servicios de ginecología y la atención del embarazo, de parto y sus potenciales complicaciones. En consonancia con lo reportado por otros autores (7), las mujeres tienen más probabilidades que los hombres de contar con MediCal debido a la atención del embarazo y a la procuración de servicios médicos para sus hijos. Sin embargo, entre las entrevistadas con residencia legal en los EE. UU., su acceso a servicios de salud depende de la inserción económica de sus parejas, de quienes se espera cuenten con servicio médico por medio del trabajo. Este acceso a la atención médica como condición de género también fue reportado entre las mujeres inmigrantes al sur de California provenientes del municipio de Tunkas, en Yucatán (16).

Diez participantes que carecían de seguro médico y estatus migratorio autorizado en los EE. UU. recurrieron a servicios médicos primarios en clínicas de bajo costo cercanas a sus domicilios. Otros dos participantes en las mismas condiciones terminaron en salas de emergencia. En el mercado neoliberal del país, la simple existencia de estos proveedores médicos que son relativamente accesibles pero de cuestionada calidad y que están dirigidos a la población sin cobertura médica y de limitados ingresos económicos, refleja las condiciones de vulnerabilidad del grupo de inmigrantes indocumentados, quienes suelen a su vez conformar la población de bajos recursos en el país. En estas condiciones, se entiende que el acceso a servicios médicos a partir de segundo nivel es prohibitivo, como lo señala Doña Ana:

> Una vez caí al hospital porque me empezó a doler todo el brazo y me dolía el pecho para respirar. Sentía que las veces que respiraba *uuyy* me dolía, duró como tres días, y yo no quería [ir al doctor]. . . yo soy de esas que no quiero [ir al doctor] por lo primero que digo "es mucho, es mucho dinero" y luego te tratan de cobrar, y no te van a cobrar diez, cien. . . si solo mi esposo cuando lo han operado antes de que le den el MediCal, te llega uno [la factura] de $9 mil [dólares], te llega uno de $16 mil [dólares] ¡siiiií es mucho!" (Mujer indocumentada, 53 años de edad, empleada en fábrica y ama de casa).

La carencia de seguro médico está directamente relacionada con el tipo de inserción económica de los inmigrantes en los EE. UU. (7,9). Esta suele ser más desfavorable entre quienes son empleados por compañías de servicios y por pequeños negocios, como se encontró entre otros inmigrantes mexicanos (9). El bajo salario, sumado a la necesidad de priorizar el pago de la renta, la comida y el transporte, entre otros, son el principal impedimento para adquirir una cobertura médica familiar o acceder a proveedores médicos de mayor calidad. Estas limitaciones se explican por el alto costo del sistema de salud en los EEUU, tema recurrente en relación con las constricciones de dinero entre los entrevistados.

Aunado al bajo salario, los hombres indocumentados por lo general no gozan de prerrogativas para ausentarse del trabajo a causa de enfermedad sin reducir sus ingresos, como sí cuentan sus pares legales. Quizá debido a ello acuden con menor frecuencia al médico cuando enferman, y su visita al médico es más factible que la hagan solo cuando el dolor es "insoportable", después de varios días de enfermedad y, en última instancia, cuando les impide trabajar ya que afecta su salario. En sus palabras, al ser cuestionados sobre su procuración médica, estos varones aseveraron que: "no hay tiempo ni dinero para enfermarse" o "aquí no tengo el lujo de estarme enfermando".

Adicionalmente, el estatus migratorio determina la posibilidad de viajar a Yucatán, o Tijuana, para acceder a servicios médicos de menor costo y que son percibidos como culturalmente más apropiados. Entre los inmigrantes latinos en los EE. UU., este llamado "turismo médico" es relevante en el cuidado dental (17), uno de los servicios más caros en el país, lo cual también se encontró en este estudio. Entre los participantes entrevistados que cuentan con residencia legal en los EE. UU. y que han viajado regularmente a Yucatán, declararon no solo buscar atención en hospitales reconocidos en la capital de aquel estado mexicano, sino también aquella ofrecida por los curadores del saber popular, principalmente parteras, sobadoras y hueseros.

En general, las personas entrevistadas encontraron y prefirieron opciones con proveedores médicos en los EE. UU. que contaban con personal hispanohablante u ofrecían servicios de traducción. Así superaron las barreras de lenguaje reportadas en otro estudio (18). También se encontró una preferencia de consultar doctores de origen o ascendencia mexicana o latina, de quienes se opina están más inclinados a prescribir antibióticos inyectables, vitaminas y sueros, contrario al manejo habitual ofrecido por los doctores anglosajones. Esta preferencia puede deberse a que dichos tratamientos son percibidos como fuentes de una mayor "eficacia terapéutica" (19), más "fuertes" y de efecto inmediato en contra las dolencias y enfermedades.

Desconfianzas y aprensiones

Los testimonios acerca de las trayectorias de atención de enfermedades dejan en claro un sentir generalizado de desconfianza de los entrevistados frente el sistema de salud de los EE. UU., cuya prioridad, se cree, es de lucro y no el bienestar del paciente. Esta desconfianza se expresa en la creencia generalizada de que los doctores engañan a los pacientes sobre su condición de salud para prolongar las visitas médicas y los procedimientos médicos innecesarios, sólo con el ánimo de obtener más ganancias. Otra versión de este sentimiento es la creencia de que los medicamentos recetados por doctores estadounidenses solo "adormecen o entumen" el dolor, lo que, de nuevo, prolonga la trayectoria médica del paciente. Esta desconfianza se expresa cuando los participantes comentan que

> . . .cuando tienes seguro [médico] los médicos no te curan así por al cien [porciento], ¿por qué? Porque tienes seguro. (Mujer ciudadana, 51 años de edad, ama de casa).

Además de la desconfianza frente al sistema de salud y su alto costo, los testimonios de los entrevistados sugieren otro factor por el cual renuncian o dilatan la atención médica de dolencias y enfermedades. Se trata de la idea difundida en los EE. UU. de que los inmigrantes, sobre todo los indocumentados, vienen a este país a tomar ventaja y abusar de los servicios de asistencia social públicos. Ello se hace evidente en las expresiones en las cuales los participantes aseguran usar el MediCal de manera limitada: "no vamos cada vez que nos enfermamos", "no muy seguido" y "sin abusar". Definido como un "efecto de enfriamiento" (11), esta animosidad en contra de los migrantes también hace que renuncien a recibir MediCal, ante la angustia de exponer sus datos personales a las autoridades migratorias. Éste es el caso de Malena, quién explica su dilema de atender su enfermedad en este país donde ha nacido su hija:

> Y ya me hicieron estudios, y salió que tengo una vena inflamada en la cabeza, pero me dijeron que yo aplicara para un MediCal completo, pero también me dicen que ese lo da migración. Entonces yo no lo quise agarrar, y yo lo dejé pasar. Y luego yo sí quería ir, y cuando hablé para preguntar costaba $500 dólares la consulta. Y entonces ya mejor no, no hice. . . tengo miedo que migración tenga todos mis datos. (Mujer indocumentada, 34 años de edad, empleada doméstica).

Conclusión

Desde la perspectiva de los entrevistados, todos migrantes, aunque bajo diversos estatus migratorios y circunstancias, sus trayectorias de atención de enfermedades se visibilizan como complejas y multifactoriales. Por un lado, ellas son articulaciones a través de las cuales se enfrentan a las barreras estructurales para el acceso a servicios médicos, y por otro lado, son una amalgama de los sistemas de conocimiento científico y saber popular.

Las limitantes estructurales de una política restrictiva de salud, pero también migratoria en los EE. UU., son particularmente evidentes en las barreras que los participantes encuentran para acceder a servicios médicos de segundo y tercer nivel. Dichas barreras son más profundas para los participantes migrantes indocumentados, entre quienes la falta de seguro médico es más común (7,9). Entre ellos, la primera visita al médico ocurrió hasta después de cinco a 15 años de haber llegado al país y, a diferencia de lo que sostiene el discurso anti-inmigrante, este trabajo considera que los migrantes utilizan el sistema de salud simplemente como resultado de su presencia en el país y como un mero medio para mantener su salud mientras trabajan en condiciones difíciles para lograr sus metas individuales y familiares, por las cuales migraron a este país (13).

Con fines de análisis, las trayectorias de atención de enfermedades entre el grupo de entrevistados, en articulación con los determinantes estructurales y el proceso de salud y enfermedad, son planteadas como modalidades a través de una primera, segunda y tercera línea de atención. Esta formulación, en consonancia con lo planteado por Menéndez, mantiene una dinámica relacional e iterativa, como los mismos datos de campo lo muestran. Asimismo, no se pretende que estos sean exclusivos del grupo de personas entrevistadas, ya que planteamientos similares se han hecho entre otros grupos sociales.

Ante el fenómeno migratorio internacional, expresado en los más de 258 millones de la población mundial (o 3.4% de la población mundial) que son migrantes internacionales (20), el presente trabajo es de actualidad ya que abona al entendimiento de las condiciones de salud entre un grupo migrante desde la perspectiva de los mismos actores. Un hallazgo fundamental es que el estatus migratorio puede constituir una barrera para acceder a servicios de salud entre población migrantes y, en última instancia, afectar sus condiciones de bienestar en el país de acogida (8,10). Desde esta perspectiva, se entiende la urgente necesidad de poner en práctica estrategias de promoción de la salud que contemplen el tema de las poblaciones migrantes como un asunto de salud pública, no sólo a escala nacional y regional, sino también mundial, poniendo de relieve los desafíos que suponen los actuales cambios poblacionales, territoriales y aquellos derivados de la globalización.

Entre la población migrante resulta necesario apuntar al desarrollo de un abordaje integral, actualizado y contextualizado, orientado no sólo a evitar la enfermedad, sino a la promoción de la salud como un medio para mejorar la vida de las personas que se han desplazado de sus lugares de origen. Para ello, la pluralidad de las trayectorias de atención entre población migrante, como la que se muestra en este estudio, debe ser considerada en el diseño de programas de promoción para la prevención y atención de la salud, que garanticen el acceso a servicios culturalmente sensibles.

Como lo señala Gálvez, la promoción de la salud

> solicita el fortalecimiento de la acción comunitaria en la fijación de prioridades, toma de decisiones, elaboración y puesta en marcha de estrategias de planificación para alcanzar un mejor nivel de salud(. . .) trasciende la idea de formas de vida sana para incluir las condiciones y requisitos para la salud: la paz, la vivienda, la educación, la alimentación, la renta, un ecosistema estable, los recursos sostenibles, la justicia social y la equidad (21).

Alineado con dicha idea, los hallazgos de este trabajo obligan a considerar no sólo las competencias culturales de los proveedores de salud, sino también las limitantes estructurales de acceso a los servicios médicos por parte de los usuarios inmigrantes, el clima anti-migratorio en el país receptor, y la política neoliberal en la que se enmarca el sistema de salud.

En el interés de impulsar la prosperidad tanto de México como de los EE. UU., el acceso a servicios médicos de toda la población no debe depender de la posibilidad de pagar altos costos sino debe ser entendido como un derecho humano, tanto individual como colectivo y comunitario. Esto beneficiaría la salud y la calidad de vida tanto de los inmigrantes como de la población en general.

Reconocimientos

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Desarrollo del sentido de comunidad: una propuesta para las universidades promotoras de la salud

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Resumen: Las Universidades Promotoras de la Salud (UPS) promueven que las personas movilicen sus recursos para participar e influir en las decisiones que les afectan, creando oportunidades de desarrollo para la mejora continua de la salud y el bienestar en el campus. La búsqueda de las condiciones que generan salud es la base de la salutogénesis. Desde el modelo de activos en salud, podría visualizarse la comunidad universitaria como un recurso que potencia la capacidad de sus integrantes para mantenerse sanos. Se propone incorporar de manera más explícita entre los lineamientos de la UPS el desarrollo del sentido de comunidad como elemento clave que actuaría de forma sinérgica individual y colectivamente, facilitando que las personas se sientan parte de la comunidad universitaria, se apropien de esta iniciativa y puedan participar activamente de ella, lo que podría ser un elemento de distinción que contribuiría a revitalizar la estrategia de las UPS.

Palabras clave: promoción de la salud, comunidades, salutogénesis

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Las Universidades Promotoras de la Salud (UPS) son una estrategia de entornos saludables, definidos como

> «el lugar o contexto social en el que las personas participan en actividades cotidianas en las que los factores ambientales, organizacionales y personales interactúan para afectar la salud y el bienestar(1)».

Esta enfatiza la intrincada relación entre las personas, su comportamiento y su entorno, e implica que las decisiones relacionadas con su salud pueden ser respaldadas a través de políticas y cambios en estos factores contextuales (2). Su finalidad es propiciar el desarrollo humano y mejorar la calidad de vida de quienes allí estudian o trabajan, proyectándolo en su entorno inmediato y futuro (3), lo que puede enmarcarse en la salutogénesis y el modelo de activos pues promueve la identificación de las condiciones y recursos que generan salud en los integrantes de la comunidad universitaria, ampliando la gama de acciones promocionales posibles de desarrollar más allá de los estilos de vida saludable, al optimizar la calidad de vida social, relacionándola con lo biológico, cultural y con el buen vivir (4). Para lograrlo, la promoción de la salud y la participación comunitaria deben incorporarse como ejes vertebradores del proceso (5).

Pese a los avances en la implementación de las UPS (6), este concepto es relativamente nuevo pues su formalización aparece en los años noventa (7)

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existiendo aún desafíos para potenciarla (8,9). Se requiere fortalecer su conceptualización (6), identificando elementos distintivos como propuesta de salud pública (7), aumentando la evidencia científica sobre la relación entre la estructura organizacional, la formación de educación superior y el bienestar de las personas (10).

Nuestro propósito es proponer una innovación a la iniciativa de UPS, incorporando una estrategia colectiva que favorezca el involucramiento de los diferentes integrantes de la comunidad universitaria en un proyecto común: el desarrollo del sentido de comunidad. Esto puede ser un elemento distintivo de esta iniciativa, resguardando los valores y principios de la promoción de la salud como la solidaridad, equidad, justicia social, participación y el derecho al nivel de salud más alto posible.

Comunidad y sentido de comunidad

Una comunidad es un grupo de personas con características e intereses comunes y que puede ser definida por localización geográfica, etnia, edad, ocupación, afinidades compartidas, u otros vínculos en común (11,12). Comprende una dimensión territorial, una simbólica y una relacional (13,14). La primera se refiere al espacio geográfico; es decir una visión de comunidad basada en la proximidad, en las relaciones entre los miembros y en el apego a un lugar determinado. La segunda, da cuenta de elementos culturales e identidad social. La tercera alude a la visión subjetiva de la comunidad, experiencia, calidad de la relación humana y atributos asociados a la vida en común de sus miembros (15,16). Estas dos últimas dimensiones se vinculan con el sentido de comunidad (17), que está compuesto por (a) pertenencia (identificación con símbolos compartidos, vivencia de una seguridad emocional basada en la confianza en los otros miembros, y diferenciación entre quienes son y no miembros de la comunidad), (b) integración y satisfacción de necesidades (valores compartidos, creación y mantención de una unidad e intercambio de recursos para satisfacer necesidades) y (c) la conexión emocional compartida derivada del contacto continuo entre sus integrantes y de participar en experiencias e historias comunes (17–19).

El sentido de comunidad promueve el desarrollo de una identidad colectiva facilitando la cohesión del grupo, potenciando su empoderamiento, acción y el sistema de vínculos, la pertenencia y conciencia de participación para resolver problemas comunes (20) contribuyendo al bienestar de sus integrantes (21) y a su autonomía, permitiéndoles mejorar la capacidad para desenvolverse estratégica y eficazmente en un sistema de relaciones interconectado (22).

Salutogénesis y Modelo de Activos en salud como marcos de las UPS

Existe un interés creciente en adoptar enfoques colectivos, estratégicos e integrales, abarcando a los distintos integrantes de la comunidad universitaria (6). La salutogénesis y el modelo de activos pueden considerarse como marcos de referencia para fortalecer los lineamientos que se centran en los recursos y procesos promotores de la salud (11,23,24). La carta de Okanagan recomienda a la educación superior utilizar un enfoque salutogénico para generar comunidades universitarias prósperas, empoderadas, conectadas y resilientes respaldadas por una cultura de bienestar (25,26), reconociendo la salutogénesis como uno de los modelos cruciales para el fortalecimiento de las UPS (5). Este enfoque se orienta a explorar el origen y mantenimiento de la salud, identificando recursos que ayudan a las personas a avanzar hacia una salud positiva (23). Plantea que las personas poseen la capacidad de percibir el significado del mundo que les rodea y de advertir la correspondencia entre sus acciones y los efectos de ellas sobre su entorno. Esta capacidad les permite solucionar adaptativamente los eventos estresantes evaluándolos como significativos, predecibles y manejables (27).

Un activo en salud se define como cualquier factor o recurso que potencie la capacidad de los individuos, comunidades y poblaciones para mantener y promover su salud y el bienestar, redirigiendo la mirada hacia aquellos elementos que permiten el aumento del control sobre su propia salud, manteniéndola y mejorándola (24).

El desarrollo del sentido de comunidad en una UPS puede considerarse un activo para la salud, constituyéndose en recurso para que las personas, el colectivo y la institución fortalezcan relaciones recíprocas y confiables, generando y potenciando oportunidades de desarrollo para la mejora continua de la salud y el bienestar en el campus (6,22,23).

La integración de la persona en la comunidad y en la sociedad en general, así como el entendimiento de cómo hacer esto a lo largo de la vida, constituye una oportunidad para las instituciones de educación superior y sus estrategias de promoción de la salud.

En la medida en que las acciones de una UPS trascienden lineamientos individuales y se orienten al desarrollo del sentido de comunidad, éste puede constituirse en un elemento catalizador de la participación y la promoción de salud de sus miembros, toda vez que el éxito y sostenibilidad de un programa de salud se relaciona directamente con el grado de implicación de la población local a la cual éste se dirige (28). Este lineamiento, en el marco de la salutogénesis y los activos en salud, podría transformarse en la piedra angular de la estrategia de UPS, actuando de forma sinérgica individual y colectivamente, pudiendo contribuir a revitalizarla. Para ello, las UPS deberían explicitar en sus planes estratégicos la incorporación, de este lineamiento, para lo que se propone poner énfasis en las siguientes acciones:

(a) Facilitar que las personas de la comunidad universitaria identifiquen y movilicen los activos en salud personales, comunitarios, de redes, así como los activos del entorno, desde una perspectiva de género y de equidad.
(b) Desarrollar un sistema de vínculos al interior de la comunidad universitaria, reinterpretando conceptos como comunicación y estructura de poder, promoviendo la confianza, cooperación y participación.
(c) Promover la vinculaciãn entre grupos heterogéneos al interior de la comunidad universitaria, permitiendo también el desarrollo de estas conexiones con el exterior del sistema.
(d) Fortalecer la identidad colectiva a partir de la diversidad de sus integrantes y su patrimonio.

Conclusión

El desarrollo del sentido de comunidad es una línea de trabajo insuficientemente explorada en el ámbito de las UPS. Incorporar este abordaje más explícitamente en los lineamientos de UPS, en un marco salutogénico y de activos en salud, contribuiría a favorecer el desarrollo de vínculos entre sus diferentes integrantes movilizando a las personas para que se sientan parte de la comunidad universitaria, puedan apropiarse de esta iniciativa y participen activamente de ella. Esto implica cambios cualitativos en la institución, sustentados en políticas estratégicas que den sentido y continuidad a estas acciones.

El sentido de comunidad podría favorecer el rol de las universidades como agentes de transformación de la sociedad, promoviendo un sistema de vinculación que contribuya a generar condiciones que apoyen el bienestar, inclusión y justicia social.

Declaración de conflicto de intereses

Ningún conflicto declarado.

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Resúmenes

Adaptación de un currículo basado en imágenes sobre agua, saneamiento e higiene en la República Dominicana

J. Nordhauser y J. Rosenfeld

Aspectos como el agua potable, el saneamiento y la higiene constituyen barreras para la salud en la República Dominicana. El acceso limitado a estos servicios acompaña una prevalencia de enfermedades relacionadas precisamente con ellos. Para enfrentar dicho inconveniente, se ha adaptado un programa en educación y cambio de comportamiento mediante clubes de salud comunitarios en áreas que tienen un alto riesgo de transmisión de enfermedades relacionadas con el agua, el saneamiento y la higiene. Para apoyar esta iniciativa, se creó un protocolo que evalúa 147 imágenes de un kit de herramientas de los clubes de salud comunitarios en las comunidades agrícolas, o bateyes, para determinar la comprensión de estas imágenes y la adecuación cultural, así como las variables demográficas asociadas con el alfabetismo visual. Se realizaron 112 entrevistas en siete bateyes ubicados cerca de la ciudad de La Romana, y se determinó que 60 imágenes requerían una adaptación adicional. Análisis adicionales demostraron que la edad y la educación estaban asociadas de manera significativa con una mayor alfabetización visual. Estos resultados confirman que las ayudas visuales educativas requieren pruebas de adecuación cultural y que un trabajo futuro debería ser encaminado a investigar los factores que contribuyen al alfabetismo visual. (Global Health Promotion, 2020; 27(3): 6–14)

Una revisión sistemática de los enfoques basados en activos para promover la salud en las comunidades: desarrollo de un marco de referencia

V. Cassetti, K. Powell, A. Barnes y T. Sanders

Los enfoques basados en activos para la promoción de la salud se están popularizando como una forma de combatir las desigualdades en salud mediante el empoderamiento de las personas de las comunidades más desfavorecidas para que utilicen los recursos locales e incrementen el control sobre su salud y sus determinantes. Sin embargo, todavía quedan dudas sobre cómo funcionan en la práctica. Este artículo presenta los hallazgos de una revisión sistemática de las publicaciones empíricas sobre los enfoques basados en activos en las comunidades. El objetivo fue el de identificar los elementos clave de los enfoques basados en activos y su puesta en práctica en las intervenciones dirigidas a promover la salud y reducir las desigualdades en las comunidades locales. Se investigaron cuatro bases de datos (Medline, PsycINFO, CINAHL y ASSIA) y se incluyeron los artículos cuando estos describían las intervenciones donde explícitamente se adoptaba un enfoque de activos, pero se excluyeron si se limitaban a una identificación de los activos. En la revisión se analizaron 30 artículos. Se extrajeron datos sobre el tipo de activos en los que se basó la intervención, cómo estos fueron movilizados, los resultados esperados y los métodos de evaluación. Se presenta aquí un marco de referencia donde se sintetizan las características clave de las intervenciones de activos para promover la salud en las comunidades. En la bibliografía consultada se identificaron tres enfoques principales para movilizar activos: (A) conexión entre activos, (B) creciente sensibilización con respecto a los activos y (C) desarrollo de los activos. Se sostiene que los enfoques de activos para la promoción de la salud adoptan una amplia variedad de formas, haciendo difícil la anticipación de los resultados y la evaluación de las intervenciones. El marco expuesto aquí puede ser utilizado para entender mejor los procesos a través de los cuales los enfoques de activos funcionan en la práctica para promover la salud y reducir las inequidades. (Global Health Promotion, 2020; 27(3): 15–23)

Impacto de una intervención para dejar de fumar en el cumplimiento de las directrices para el tratamiento del tabaquismo entre los trabajadores de salud de las poblaciones en Vietnam

N. Nguyen, T. Nguyen, V. Truong, K. Dang, N. Siman y D. Shelley

Los trabajadores comunitarios de salud o promotores de la salud (conocidos en Vietnam como trabajadores sanitarios de los poblados) tienen el potencial de jugar un papel fundamental en la expansión del acceso al

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tratamiento basado en evidencia del tabaquismo. Realizamos un ensayo controlado aleatorizado por grupos en centros de salud comunitarios en Vietnam que comparó el efecto del consejo y la ayuda para dejar de fumar (como consejería breve y materiales educativos para pacientes, BC, por sus iniciales en inglés) con BC + tres sesiones de asesoría en persona dirigidas por un promotor de la salud (BC+R) sobre el cumplimiento de las directrices para el tratamiento del consumo de tabaco por parte de los proveedores y los trabajadores de salud. Todos los trabajadores de salud y los proveedores de asistencia médica recibieron la capacitación.
Este documento presenta los datos del efecto de la intervención en el cumplimiento de las directrices para el tratamiento del tabaquismo por parte de los trabajadores comunitarios de la salud, incluyendo preguntar si el paciente fuma, aconsejarlo para que deje de fumar, ofrecerle su ayuda y su actitud, normas y autoeficacia relacionada con el tratamiento del consumo de tabaco. Analizamos los cambios en el cumplimiento de las directrices para el tratamiento del tabaquismo antes y 12 meses después de la intervención en 89 promotores de salud que trabajan en 13 centros comunitarios de salud inscritos en la condición de estudio BC+R. El cumplimiento de las directrices entre los trabajadores de salud se incrementó de manera significativa, con una alta probabilidad de preguntar si hay un consumo de tabaco (3,4% al inicio, 32,6% al cabo de los 12 meses), ofrecer consejos para dejar de fumar (de 4,5% a 48,3%) y ofrecer asistencia (de 1,1 % a 38,2%). Los obstáculos que se percibían para tratar el tabaquismo disminuyeron de manera significativa, mientras que la autoeficacia y las actitudes hacia el tratamiento del consumo de tabaco mejoraron considerablemente. Esta mejora en el cumplimiento de las directrices del tratamiento fue asociada con las actitudes positivas hacia su papel en el tratamiento del tabaquismo y al aumento de la toma de conciencia de la política libre de humo del centro de salud comunitario.

Los hallazgos sugieren que, con formaciones y sistemas de apoyo, los promotores de la salud pueden ampliar su papel para incluir servicios de ayuda para dejar de fumar. Esta fuerza laboral puede representar un recurso sostenible para apoyar a los fumadores que quieran abandonar el consumo. (Global Health Promotion, 2020; 27(3): 24–33)

‘Nunca nadie nos preguntó’: un estudio de viabilidad que evalúa la cocreación de un programa de actividad física con niñas adolescentes

M. Corr y E. Murtagh

Contexto: En el mundo, el bajo nivel de actividad de las adolescentes es un problema de salud pública. Hay muy poca investigación que involucre a las adolescentes en el diseño de intervenciones. Este estudio evaluó la viabilidad de incluirlas en la cocreación de un programa de actividad física.

Métodos: Se reclutaron treinta y una estudiantes (15-17 años) de una escuela secundaria. La Rueda de Cambio del Comportamiento orientó el diseño de la intervención, proporcionando información sobre la capacidad, la oportunidad y la motivación de las participantes. El conteo de los pasos y el autorreporte de los niveles de actividad física fueron grabados antes y después de la intervención. Con puntos de referencia (parámetros) se evaluaron el reclutamiento, la recolección de datos, la aceptabilidad y la adherencia.

Resultados: La actividad y las sesiones educativas se realizaron en seis semanas durante las clases de educación física. La asistencia promedio fue de 87% (referencia = 80%). La elegibilidad fue de 61% (referencia = 60%). Hubo una tasa de retención de 100% (referencia = 90%). Todas las participantes (n = 31) finalizaron las medidas de base y el 71% completó medidas posteriores. El 54% (n = 17) de las estudiantes hizo mediciones de podómetro, con un 32% (n = 10) con los datos completos. El promedio de pasos diarios fue de 13.121 antes de la intervención y 14.128 después de ella ($p > 0{,}05$). La recolección de datos fue factible, con un puntaje promedio > 4/5 (referencia > 3,5/5).

Conclusiones: La Rueda de Cambio del Comportamiento puede ser utilizada para cocrear un programa de actividad con niñas adolescentes. Se alcanzaron o se excedieron los puntos de referencia predeterminados, a excepción de las medidas de podómetro, lo cual evidencia la necesidad de un ensayo controlado aleatorizado para probar su efectividad. (Global Health Promotion, 2020; 27(3): 34–43)

Desarrollo del Cuestionario Mundial sobre Actividad Física coreano: estudio de fiabilidad y validez

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El objetivo de este estudio fue desarrollar una versión coreana del Cuestionario Mundial sobre Actividad Física (GPAQ, por sus iniciales en inglés) y examinar su fiabilidad y validez. La versión inglesa fue traducida al coreano a través de una traducción directa e inversa. La fiabilidad del cuestionario coreano (K-GPAQ, por sus iniciales en inglés) se evaluó usando un método de prueba-reprueba con intervalo de una semana en 115 individuos, mientras que la validez del K-GPAQ fue examinada con 199 participantes mediante acelerómetros. El kappa de Cohen y los coeficientes de correlación de Spearman sirvieron para medir respectivamente la fiabilidad y la validez de la prueba-reprueba. Con un análisis de Bland-Altman se evaluó la concordancia entre los niveles de actividad física (AF) medidos con el K-GPAQ y el acelerómetro. Los coeficientes de la fiabilidad del K-GPAQ mostraron una concordancia moderada para la AF recreativa (en el tiempo libre) y una leve concordancia para la AF relacionada con el trabajo (kappa de Cohen: 0,60–0,67 para la AF recreativa y 0,30–0,38 para la AF en el trabajo; y rho de Spearman: 0,27–0,47 para la AF relacionada con el trabajo y 0,53–0,70 para la AF recreativa). El criterio de validez del nivel total de AF, calculado con el K-GPAQ y con el acelerómetro, mostró una correlación leve pero significativa ($r = 0{,}34, p < 0{,}01$). El K-GPAQ es un cuestionario confiable y válido para medir la AF, aunque haya sobreestimado algunos niveles de AF. (Global Health Promotion, 2020; 27(3): 44–55)

Un comité asesor comunitario sobre el VIH que actúa como agente de acción comunitaria y de promoción de la salud en un asentamiento de bajos recursos: estudio de caso en Nueva Iguazú (Río de Janeiro, Brasil)

J.R. Milnor, C. Silva Santana, A.J. Martos, J.H. Pilotto y C.T. Viera de Souza

Introducción: La carga del VIH en Brasil ha aumentado considerablemente en la última década, especialmente para los grupos vulnerables y marginados de la sociedad como adolescentes, mujeres, y hombres que tienen relaciones sexuales con hombres. La razón por la cual han empeorado los resultados del VIH es compleja, pero las crisis económica y política actuales han impuesto cargas operativas y financieras extremas tanto al sistema de salud pública como a la sociedad civil relacionada con el VIH, afectando sus esfuerzos de tratamiento y prevención, además de la prestación de los servicios correspondientes.

Contexto: A pesar de dichos contratiempos, las actividades comunitarias de promoción de la salud relacionadas con el VIH continúan en Nueva Iguazú (Río de Janeiro). Estos esfuerzos son liderados por un comité asesor comunitario semi independiente y un grupo de compromiso radicado en el Hospital General de Nueva Iguazú, con el apoyo de investigadores de la Fundación Oswaldo Cruz.

Métodos: El equipo de investigación apoyó, documentó y participó en varias actividades organizadas por el comité asesor comunitario y el grupo de compromiso entre el 2017 y el 2018, como reuniones, talleres y capacitaciones con la comunidad, producción de material de promoción de la salud y la difusión de los resultados de sus investigaciones.

Resultados: El grupo de investigación utilizó los conceptos de conocimiento vernáculo y pedagogía crítica para describir y documentar el continuo enfoque ascendente de los esfuerzos del comité asesor comunitario y del grupo de compromiso. En particular, describimos el proceso del compromiso de los interesados, la popularización de los resultados de investigación y el intercambio de recursos encabezado por el comité asesor comunitario en Nueva Iguazú.

Conclusión: El comité asesor comunitario demuestra cómo los esfuerzos dirigidos por la comunidad son esenciales para dar una respuesta sobre el VIH y el Sida a la luz de la creciente carga del virus y los cambios mundiales hacia la biomedicalización. Sus actividades relacionadas con el VIH dependen de las redes y de los recursos existentes en la comunidad y del apoyo de un equipo de investigación. Esto resalta el punto de intervención clave entre la investigación tradicional y una movilización comunitaria empoderada que pueda orientar esfuerzos similares en otros entornos de bajos recursos. (Global Health Promotion, 2020; 27(3): 56–64)

Comprender el enigma de la salud en los barrios marginales del África subsahariana: una propuesta para un enfoque basado en los derechos para la promoción de la salud en los suburbios

D.A. Alaazi y G.A.M. Aganah

El África subsahariana es la región menos urbanizada del mundo pero, irónicamente, es también la que cuenta con la mayor proporción de habitantes en tugurios en las ciudades. Sin embargo, hay una comprensión limitada del impacto que tienen estos suburbios en la salud. Para abordar esta brecha de conocimiento, dirigimos una búsqueda sistemática en PubMed, Google y Google Scholar con el fin de identificar y revisar los estudios que examinan la relación entre la salud y los barrios marginados en las ciudades del África subsahariana. Posteriormente, realizamos análisis temáticos de 40 estudios para identificar los tópicos que explican el impacto en la salud de los barrios marginales en la región. La mayoría de dichos estudios caracteriza los suburbios como asentamientos perjudiciales para la salud, donde la pobreza y las condiciones ambientales desfavorables amenazan la salud pública y la seguridad. Solo unos cuantos documentos sugieren una relación benéfica entre estos barrios y la salud, con aspectos como la consecución de vivienda a buen precio, generación de empleo y cohesión comunitaria.

Nuestro argumento sostiene que el énfasis abrumador de las publicaciones en los riesgos ambientales de los suburbios nutre una agenda urbana neoliberal que busca limpiar estos barrios a expensas de sus contribuciones benéficas para la salud. De acuerdo con esto, abogamos por un cambio en el discurso político, de una caracterización estática de los suburbios como perjudiciales para la salud a un programa de promoción de la salud que haga énfasis en la vivienda y en los derechos a los servicios de las poblaciones que allí habitan. (Global Health Promotion, 2020; 27(3): 65–72)

Análisis del entorno de las tiendas de alimentos (FoodSee): un nuevo método de estudio que utiliza cámaras portátiles

C. McKerchar, M. Smith, J. Stanley, M. Barr, T. Chambers, G. Abel, C. Lacey, R. Gage, C.N. Mhurchu y L. Signal

Introducción: Los ambientes alimentarios influyen en los comportamientos de alimentación y están implicados en las crecientes tasas de obesidad en el mundo. La medida de las interacciones de la gente con las tiendas de alimentos es importante para comprender las asociaciones entre los entornos alimentarios y el comportamiento en las tiendas. Este artículo describe un nuevo método, el Análisis del Entorno de la Tienda de Alimentos (FoodSee, por su acrónimo en inglés), para medir la interacción de las personas con los ambientes de estos establecimientos en un estudio de viabilidad que se enfocó en las tiendas de barrio y los niños.

Métodos: Se seleccionaron al azar 168 niños (de 11 a 13 años) de 16 escuelas también escogidas aleatoriamente en Wellington, Nueva Zelanda, quienes durante 4 días usaron cámaras portátiles que grababan imágenes cada 7 segundos. El estudio se realizó entre julio del 2014 y junio del 2015. Todas las imágenes de las tiendas de barrio y de las estaciones de servicio, así como una muestra de imágenes de supermercados, fueron analizadas para determinar la viabilidad de evaluar la disponibilidad y la comercialización de los alimentos. Los resultados de interés valorados fueron: disponibilidad del producto alimentario, ubicación, empaque, marca, rebajas, compras y consumo.

Resultados: Treinta y siete niños (22%) visitaron una tienda de barrio o una estación de servicio al menos una vez durante el periodo del estudio. En total, fueron 65 visitas a 34 tiendas diferentes. Setecientas diecinueve

imágenes revelaron el ambiente de las tiendas. De estas, 86,1% se pudieron utilizar y analizar para los resultados de interés.
Conclusiones: La metodología FoodSee ofrece un nuevo mecanismo prometedor para estudiar la interacción de las personas con el ambiente alimentario en las tiendas. La evidencia generada será valiosa para comprender y mejorar el ambiente de una tienda de alimentos en el que la gente compra y va a contribuir con los esfuerzos para enfrentar la obesidad en el mundo. (Global Health Promotion, 2020; 27(3): 73–81)

Un programa de prevención de complicaciones en las extremidades inferiores culturalmente informado para personas con diabetes en el sur de India

A. Peacock, L. Skemp, S. Seetharam, R. Shanmukha, M. Prasad y M.R. Seetharam

Contexto: La diabetes y sus complicaciones son cada vez más frecuentes en el mundo entero. Las complicaciones en las extremidades inferiores conllevan un alto riesgo de morbilidad y mortalidad, pero se pueden prevenir en gran medida mediante la educación y la autovigilancia. En la India, las áreas rurales no tienen acceso a la educación, a la atención médica ni al tratamiento. A pesar de los programas existentes basados en evidencia para reducir las complicaciones en las extremidades inferiores relacionadas con la diabetes en áreas con recursos limitados, su adopción y su sostenibilidad pueden verse obstaculizadas por la falta de adaptación al contexto cultural local.
Objetivos: Con el fin de subsanar dicha deficiencia, este estudio utilizó el procedimiento de enfermería Envejecimiento Saludable Culturalmente Informado para desarrollar un programa de prevención de complicaciones en las extremidades inferiores en un poblado rural. El artículo describe los resultados de una evaluación de las necesidades sanitarias de la comunidad, realizada cada año entre el 2009 y el 2014 y la posterior prueba piloto de una intervención incorporando estos resultados.
Métodos: El proceso Envejecimiento Saludable Culturalmente Informado es un método naturalista e inductivo que se utiliza para identificar y abordar las necesidades de salud. Los componentes incluyen la asociación comunitaria, la evaluación comunitaria, la planeación de programas, la selección de prioridades de salud, la formación de grupos de trabajo y la traducción de evidencia, así como la evaluación de resultados. El programa se valora mediante la evaluación del proceso, lo cual permite el monitoreo continuo y su modificación.
Resultados: La evaluación de la comunidad en el sur rural de la India reveló una serie de valores, creencias y prácticas relacionadas con el cuidado y la revisión de los pies. Estos resultados fueron incorporados en el programa culturalmente informado y los protocolos basados en evidencia fueron adaptados para utilizarlos en el contexto local. El programa dio como resultado un incremento en la capacidad para prevenir las complicaciones en las extremidades inferiores, tamizaje accesible a la población y educación culturalmente informada para el cuidado de los pies. (Global Health Promotion, 2020; 27(3): 82–91)

Una mirada más detallada al programa de promoción de la salud con una perspectiva de género, como una forma de abordar las desigualdades de género en salud y atención médica

S.A. Horgan, S-P. Chen, T. Tuininga y H. Stuart

La promoción de la salud relacionada con las cuestiones de género aborda las transacciones recíprocas entre los contextos socioculturales que configuran los valores basados en el género y las conductas normativas de género y las experiencias de salud de las personas.
Se realizó una revisión preliminar con el fin de (a) resaltar cómo, cuándo y bajo qué circunstancias se pone en práctica la promoción de la salud con una perspectiva de género y, (b) evaluar de manera crítica la operacionalización de los principios de la promoción de la salud con una perspectiva de género en la práctica para desarrollar una comprensión clara de las posibles barreras (conceptuales y prácticas) que pueden restarle

valor al uso más amplio de la promoción de la salud con una perspectiva de género como un enfoque establecido.
Con base en los resultados de este análisis, se propusieron recomendaciones específicas de manera que se ponga en práctica la promoción de la salud con una perspectiva de género como un enfoque general de la promoción de la salud alrededor del mundo. (Global Health Promotion, 2020; 27(3): 92–102)

Intervenciones intersectoriales de la promoción de la salud oral en escolares que viven en las comunidades rurales aisladas en los Andes: una evaluación realista

D.A. Bergeron, L.R. Talbot y I. Gaboury

Contexto: La promoción intersectorial de la salud oral implica la participación de las comunidades locales. Aunque en el 2013 se llevaron a cabo intervenciones en este sentido en escuelas primarias de Perú, la salud oral de los niños en edad escolar que viven en las comunidades rurales andinas aún está en niveles por debajo de los óptimos.
Objetivo: Comprender los elementos contextuales y los mecanismos subyacentes asociados a los efectos actuales de las intervenciones intersectoriales de la promoción de la salud bucodental en los escolares que viven en las comunidades rurales aisladas de los Andes.
Método: Se llevó a cabo una evaluación realista en tres comunidades rurales andinas, donde se implementaron las intervenciones intersectoriales de promoción de la salud oral enfocadas en niños en edad escolar. Siguiendo una evaluación de los efectos entre los escolares, se exploraron los elementos contextuales y los mecanismos con varios interesados involucrados en la promoción intersectorial de salud oral mediante grupos focales y entrevistas semiestructuradas. Posteriormente, un análisis iterativo de los datos y un proceso de validación dieron lugar a la identificación de las configuraciones de contexto-mecanismo.
Resultados: Entre los elementos de configuración que influyeron de manera positiva en la promoción intersectorial de la salud bucodental están las experiencias previas positivas de colaboración, una atención a la comunicación, la sensación de ser respetados y considerados y el desarrollo de liderazgo y confianza entre los interesados. Por otro lado, entre los factores que influyeron de forma negativa en los resultados se señalaron los entornos físicos, sociales y políticos desfavorables, experiencias previas negativas de salud, sentimientos de no ser respetados o considerados, la desmotivación, la falta de confianza y un liderazgo insuficiente.
Conclusión: Esta investigación resalta la complejidad asociada con el despliegue de intervenciones intersectoriales de promoción de la salud bucodental en comunidades rurales. Los interesados locales deberían participar más en la construcción de confianza para facilitar los procesos de coordinación entre las comunidades rurales aisladas y los profesionales de la salud bucodental, y para optimizar la puesta en práctica de las intervenciones intersectoriales de promoción de la salud oral. (Global Health Promotion, 2020; 27(3): 103–112)

Bajo el Árbol de Mango: Una intervención teatral del compromiso masculino en la eliminación de la transmisión del VIH de madre a hijo durante el postconflicto en el norte de Uganda

M.D.C. Komakech

La participación masculina en las cascadas de atención del virus de inmunodeficiencia humana (VIH) se identifica como un prerrequisito fundamental para la lucha exitosa contra la transmisión del VIH de madre a hijo. Hay una escasa evidencia de las intervenciones eficaces, culturalmente apropiadas e inclusivas para los hombres, en la eliminación de la transmisión de madre a hijo. Este artículo de reflexión en acción destaca las notas de campo y observaciones del desarrollo de 'Bajo el Árbol de Mango', una intervención piloto en forma de teatro que involucra a los hombres, que fue puesta a prueba en el norte de Uganda.

La intervención incluyó: (a) drama tradicional, danzas y canciones, y (b) testimonios expertos y diálogos de grupo. Las observaciones de este experimento demostraron que una intervención teatral era adecuada para la persuasión social, el modelado de roles y la experiencia de dominio a través de la combinación efectiva de canciones sencillas, danzas y drama; testimonios de adherencia exitosa por clientes expertos, y a través de discusiones grupales reflexivas. Estas observaciones tienen implicaciones en el desarrollo de intervenciones para una inclusión de los hombres en la lucha contra la transmisión de madre a hijo. (Global Health Promotion, 2020; 27(3): 113–121)

Efectos de un programa de educación sexual en términos de conocimiento, actitudes y conducta sexual en adolescentes de Asturias (España)

J. García-Vázquez, L. Quintó y E. Agulló-Tomás

La educación sexual en escuelas es un derecho de los adolescentes y puede traer beneficios para la salud, como mejor conocimiento o aumento del uso del preservativo. En Asturias, un programa para la escuela secundaria llamado Ni Ogros ni Princesas educa a los alumnos durante cuatro años con profesores capacitados y talleres externos. Este estudio evaluó si dicho programa (a) mejoró el conocimiento sexual, las actitudes y las competencias de los adolescentes, y (b) incrementó el uso de condón. Se realizó una encuesta cuasiexperimental, con grupos de comparación, una evaluación inicial en el primer año de escuela secundaria (de 12 a 13 años), y dos pruebas posteriores: justo después de la intervención (de 15 a 16 años) y dos años después (entre 17 y 18 años). Se utilizó un cuestionario con variables sociodemográficas, de conocimientos, de actitudes, de competencias y de conducta sexual. El efecto se evaluó con análisis de 'diferencia en diferencias'. Hubo un gran aumento del conocimiento en el grupo de intervención en las dos pruebas posteriores y un incremento en las competencias en la primera de ellas. Las jóvenes del grupo de intervención reportaron menos prácticas con penetración y un mayor uso del condón la primera vez, lo mismo fue visto en los muchachos. Sin embargo, el efecto fue limitado en tiempo. Las intervenciones que buscan incrementar la educación sexual en el currículo con calidad y fidelidad son una prioridad para garantizar los derechos de los menores y su salud. (Global Health Promotion, 2020; 27(3): 122–130)

Actividad física observacional en espacios públicos abiertos: determinantes ambientales de los niveles de intensidad de la actividad física en Irán

Z. Aliyas y K. Jafari

Los espacios públicos abiertos juegan un papel importante en la promoción de la actividad física (AF). Este estudio tuvo como objetivo describir las características de los usuarios de los espacios públicos abiertos, dado el tipo de ubicación y los niveles de AF. El estudio también evaluó la relación entre los determinantes ambientales de los espacios públicos abiertos y la intensidad de la AF. Se utilizaron datos observacionales para medir los determinantes ambientales y obtener la información de los usuarios y sus niveles de actividad en los espacios públicos abiertos de Darab, en Irán. De 13.342 personas observadas, la proporción de hombres fue ligeramente más alta que la de mujeres. Más de la mitad de los usuarios de los parques comunitarios practicaban actividades vigorosas. Los niños y los adolescentes fueron vistos más seguido que otros grupos de edad practicando actividades intensas. La mayoría de los usuarios observados practicaba ejercicios vigorosos en la tarde y actividades sedentarias durante los fines de semana. Los adultos mayores resultaron más sedentarios que los otros grupos. Los espacios públicos abiertos de mayor tamaño y con mejores instalaciones y estética incrementaban la probabilidad de que las personas fueran más activas. Sin embargo, un alto número de incivilidades fue asociado con una mayor posibilidad de caminar y una menor probabilidad de practicar actividades vigorosas. A medida que la calidad de los espacios públicos abiertos contribuye con los niveles de AF, las partes interesadas deberían considerar la calidad de tales espacios para modernizarlos y diseñarlos de tal manera que ayuden a maximizar los niveles de actividad. (Global Health Promotion, 2020; 27(3): 131–139)

Apreciación de los alimentos, un concepto importante de la alimentación consciente: asociación entre el hogar y la educación escolar, actitud, comportamiento y salud en niños de primaria en Japón

Y. Kawasaki y R. Akamatsu

Contexto: Apreciar los alimentos es un concepto importante de la alimentación consciente según lo mencionaron los defensores de un modelo ampliado de la alimentación consciente en el 2016. Con excepción de Japón, este concepto no es tan común en muchos países.
Objetivo: Buscamos describir desde dos perspectivas el papel que el aprecio por los alimentos tiene en la salud infantil: 1) la asociación del aprecio de los niños por los alimentos y su origen, como las experiencias educativas en el hogar y en la escuela relacionadas con la alimentación y, 2) la asociación entre su apreciación por los alimentos y los resultados, como su actitud frente a la comida, los comportamientos alimentarios y el estado de salud.
Diseño: Transversal.
Métodos: Los datos fueron obtenidos de cuestionarios anónimos autoadministrados enviados a 2.070 estudiantes de escuela primaria en Tokio (Japón) durante octubre y diciembre del 2006. Estos contenían varias preguntas sobre las características de los participantes: experiencias educativas en casa y en la escuela relacionadas con la alimentación, actitudes frente a los alimentos (incluyendo el nivel de apreciación por la comida), comportamientos alimentarios y el estado de salud. Se utilizaron pruebas-t, el coeficiente de correlación de Pearson y análisis de regresión lineal simple y múltiple para comparar el puntaje total de la apreciación por los alimentos con otros factores.
Resultados: Las encuestas fueron diligenciadas por 1.994 niños (tasa de respuesta: 96,3%) y se indicaron correlaciones significativas por género, experiencias educativas en el hogar y en la escuela, actitudes frente a los alimentos saludables, preferencias alimentarias recomendadas, el consumo de desayuno y el índice de masa corporal.
Conclusión: Concluimos que el aprecio por los alimentos juega un papel importante en la salud de los niños.
(Global Health Promotion, 2020; 27(3): 140–149)

Repensar el alfabetismo para la salud: utilizar un enfoque de capacidades para alcanzar los objetivos de justicia social

C. Pithara

El alfabetismo para la salud ha ganado popularidad como un concepto útil para promover y proteger la salud. A pesar de que la investigación sobre el alfabetismo para la salud ha sido prolífica, esta también ha resultado fragmentada, haciendo frente a los desafíos para lograr sus objetivos relacionados con el empoderamiento y la justicia social. Hay limitaciones importantes que hacen que la aplicación de sus principios para la salud de los grupos vulnerables y poco representados sea problemática, aun cuando estos grupos se ven afectados de manera desproporcionada por problemas de salud. Los esfuerzos para perfeccionar el concepto y hacerlo más pertinente tienden a ampliar los modelos de alfabetismo para la salud y a ponerlo ‘en contexto’ para reflejar los factores ambientales y sociales que determinan precisamente el alfabetismo para la salud. Sin embargo, los factores relacionados con el contexto no han sido integrados de manera consistente en los esfuerzos de operacionalización y medición.
Este artículo sostiene que el alfabetismo para la salud debe ser reconceptualizado a través de un enfoque de capacidades. Además, propone que dicho enfoque de capacidades solo puede abordar las críticas conceptuales y metodológicas aplicadas al alfabetismo en salud, mientras incluya sus interpretaciones conceptuales de salud. La ventaja de este enfoque, más allá de otros desarrollos en la teoría y la práctica del alfabetismo en salud, es que se basa tanto en las oportunidades y libertades de las personas para alcanzar los objetivos deseados en relación con la salud, como en su habilidad para hacerlo. Esto permite desviar la atención del

alfabetismo en salud definido como aptitudes y competencias individuales, y verlo en términos de factores facilitadores o inhibidores que lo determinan. Un enfoque participativo sería esencial para llevar a cabo este cambio conceptual. (Global Health Promotion, 2020; 27(3): 150–158)

Adaptación del calendario de historia de eventos para adolescentes de Uganda

M. Saftner, M. Thompson, T.D. Ngabirano y B.J. McMorris

Las conductas de riesgo de los adolescentes y de los adultos emergentes constituyen un problema mundial. Discutir sobre la promoción de la salud y las conductas de riesgo con adolescentes y jóvenes adultos puede ser un desafío, sin importar el país donde se recolectan los datos ni la cultura dominante. En Estados Unidos, los calendarios de historia de eventos se han utilizado en entornos clínicos y de investigación para identificar las conductas saludables y riesgosas de los adolescentes y los adultos emergentes, así como los factores contextuales que pueden influenciar su comportamiento. Después de un intento fallido de utilizar un calendario particular de historia de eventos sobre la vida familiar, los sucesos positivos y negativos, el comportamiento sexual y el uso de sustancias, en la recolección de datos en los poblados rurales de pescadores en Uganda Occidental, este estudio optó por modificar el calendario de historia de eventos válido en Estados Unidos con el fin de utilizarlo con los adolescentes de Uganda, como un primer paso para la adaptación cultural. Grupos focales con 24 estudiantes de colegio brindaron información sobre cómo modificar dicho calendario para los jóvenes de Uganda. Este artículo analiza las modificaciones del calendario de historia de eventos para la población juvenil de Uganda. (Global Health Promotion, 2020; 27(3): 159–170)

Red de Actividad Física y Comportamiento Sedentario de Suramérica (SAPASEN)

A.O. Werneck, S-S. Baldew, J. J. Miranda, Ó. Incarbone y D.R. Silva

Este artículo presenta la Red Suramericana de Actividad Física y Comportamiento Sedentario (SAPASEN, por sus iniciales en inglés), que fue creada para proporcionar evidencia empírica transnacional continua sobre la actividad física y el comportamiento sedentario en Suramérica. Su objetivo inicial fue el de formar un cuerpo representativo de investigadores y legisladores de todos los países del continente (Argentina, Bolivia, Brasil, Chile, Colombia, Ecuador, Guyana, Paraguay, Perú, Surinam, Uruguay y Venezuela) con el fin de establecer prioridades y metas a corto, mediano y largo plazo. Se presentan aquí ejemplos que conectan la actividad física y los datos de sedentarismo tomados de encuestas existentes en los países participantes. El propósito de la Red SAPASEN será el de influir en las políticas de actividad física y comportamiento sedentario en Suramérica de acuerdo con las singularidades de cada país o región. Esperamos que esta Red, al motivar un esfuerzo inclusivo y colaborativo, apoye la conexión entre los investigadores de Suramérica y ofrezca una mejor comprensión de la epidemiología de la actividad física y el comportamiento sedentario en la región. (Global Health Promotion, 2020; 27(3): 171–176)

Desarrollo de una colaboración interorganizacional sostenible para la promoción de la salud: un análisis procesual

A-M. Corriveau y Y. Dufour

Debido a la diversidad, a la complejidad y al gran número de determinantes de la salud, los esfuerzos de promoción normalmente buscan beneficios que no pueden ser generados sin la colaboración de numerosas organizaciones. Sin embargo, no es fácil desarrollar una colaboración sostenible. Este artículo es el fruto de una investigación empírica sobre una cooperación durable para la promoción de la salud. Los datos fueron recolectados en el marco de un estudio longitudinal que examina los principales eventos que han marcado la colaboración durante un periodo de veinte años. El análisis muestra que la colaboración interorganizacional es un fenómeno complejo, digno de su reputación, e invita a los investigadores y profesionales a determinar los desafíos de la cooperación alrededor de proyectos específicos y aquellos que están relacionados con lo que llamamos la colaboración sostenible. (Global Health Promotion, 2020; 27(3): 184–192)

Activos para la salud en cuidadores familiares de enfermos de Alzheimer: desarrollo de un mapa de activos para la salud

J.M. Agulló-Cantos, J. García-Alandete y J.J. Paredes-Carbonell

El Alzheimer es la enfermedad más prevalente en mayores de 65 años, siendo una enfermedad neurodegenerativa progresiva. El cuidado de estas personas enfermas se sustenta, en la mayoría de los casos, desde el núcleo familiar, siendo éste quien sufre las consecuencias del cuidado. Tradicionalmente, el estudio y análisis de las personas cuidadoras se ha realizado desde perspectivas de déficit o negativas. El presente estudio introduce el modelo salutogénico y de activos para la salud, e intenta comprender el valor positivo del cuidado y la superación de las circunstancias adversas, a través de aquellas habilidades o recursos del cuidador o de su entorno que le ayudan a afrontar de forma positiva esta enfermedad.

En el estudio participaron cuidadores familiares (*n*=45) de tres Centros de Estancias Diurnas para enfermos de Alzheimer diferentes, donde fueron entrevistados en grupos (de 5 a 13 participantes por entrevista) y grabados en audio, para su posterior trascripción y análisis de contenido temático.

Los resultados muestran que los cuidadores familiares a pesar de vivir bajo una fuente de estrés, también pueden obtener consecuencias positivas de la experiencia del cuidado, siendo capaces de identificar activos para la salud, tanto internos como externos, que les ayudan a mejorar y/o mantener su salud como cuidador. (Global Health Promotion, 2020; 27(3): 209–216)

Trayectorias de atención en Mayas de México que padecen diabetes tipo 2

C. Juárez-Ramírez, F.L. Théodore, A.L. Villalobos, A.L. Sauceda, S. Treviño y B. Allen-Leigh

Objetivo: Mostrar cómo pacientes de pueblos originarios (Mayas) que padecen diabetes tipo 2 manejan recursos de los diferentes modelos de atención para atender su enfermedad.

Material y métodos: el diseño del estudio fue de métodos mixtos de tipo secuencial; incluyó un cuestionario (*n*=195), entrevistas cualitativas cortas (*n*=103) y 20 entrevistas a profundidad entre población originaria Maya diagnosticada con diabetes tipo 2, usuarios de servicios de atención pública para la salud en tres estados de México: Chiapas, Yucatán y Quintana Roo.

Resultados: Las trayectorias de atención se orientaron de acuerdo con las creencias sobre el origen de la enfermedad. La ruta seguida puede iniciar en los servicios públicos de salud, la medicina privada, tradicional o alternativa, o en el ámbito de las creencias religiosas; pero en algún punto se transita por todos estos recursos. La utilización de los recursos institucionales de la atención pública en salud depende de la apreciación de los pacientes sobre la eficacia del sistema de salud y las causas de la enfermedad, frecuentemente emocionales: sustos, enojos y/o preocupaciones.

Conclusiones: Las y los participantes buscaron activamente atender su salud por varios medios; esto implica que en la trayectoria de atención se mezclan modelos, recursos y medicamentos, en parte debido a las condiciones de pobreza. La evidencia puede ser usada para ajustar los programas de educación para la salud, siguiendo la propuesta de la promoción de la salud sobre impulsar que las personas tengan mayor control de su propia salud. (Global Health Promotion, 2020; 27(3): 217–226)

“Enfermarse aquí es un lujo”: prácticas y perspectivas en la atención de enfermedades entre inmigrantes yucatecos en el sur de California

A.R. Valdez Tah

Este estudio se enfoca en cómo un grupo de inmigrantes originarios del estado de Yucatán, en México, y quienes viven en el sur de California, atienden las enfermedades que les aquejan y cómo articulan sus prácticas de atención con sus condiciones socioeconómicas, su estatus migratorio y acceso a los servicios de salud institucionales. La metodología elegida fue de corte cualitativo, a través de entrevistas se recopilaron datos etnográficos analizados con el software MAXQDA12. Las modalidades de las trayectorias en la búsqueda de atención son complejas al ser articulaciones a través de las cuales los entrevistados enfrentan las barreras estructurales para acceder a servicios médicos, y por constituirse al mismo tiempo como una síntesis dinámica de los sistemas de conocimiento científico y del saber popular. Las limitantes estructurales son mayormente prevalentes en el acceso de servicios médicos a partir del segundo nivel y son más profundas entre los participantes indocumentados. El trabajo reflexiona sobre el impacto estructural de la política pública en salud y de la política migratoria sobre las modalidades de atención, sobre las condiciones de salud de los participantes, y sobre las implicaciones de los hallazgos en las estrategias de promoción a la salud en el contexto de migración internacional. (Global Health Promotion, 2020; 27(3): 227–235)

Desarrollo del sentido de comunidad: una propuesta para las universidades promotoras de la salud

P. Pérez-Wilson, C. Álvarez-Dardet, M.T. Ruiz Cantero, J.R. Martínez-Riera y M. Carrasco-Portiño

Las Universidades Promotoras de la Salud (UPS) promueven que las personas movilicen sus recursos para participar e influir en las decisiones que les afectan, creando oportunidades de desarrollo para la mejora continua de la salud y el bienestar en el campus. La búsqueda de las condiciones que generan salud es la base de la salutogénesis. Desde el modelo de activos en salud, podría visualizarse la comunidad universitaria como un recurso que potencia la capacidad de sus integrantes para mantenerse sanos. Se propone incorporar de manera más explícita entre los lineamientos de la UPS el desarrollo del sentido de comunidad como elemento clave que actuaría de forma sinérgica individual y colectivamente, facilitando que las personas se sientan parte de la comunidad universitaria, se apropien de esta iniciativa y puedan participar activamente de ella, lo que podría ser un elemento de distinción que contribuiría a revitalizar la estrategia de las UPS. (Global Health Promotion, 2020; 27(3): 236–239)