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# Implementing creative dance activities for primary school children to improve health and wellbeing: a qualitative study in the North East England

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## Abstract

**Aims:** Evidence suggests that group arts activities with children build resilience and positive mental wellbeing. However, insufficient attention has been paid to how such activities can be implemented in practice across different contexts, particularly in socio-economically disadvantaged areas. Therefore, we explored the implementation of a dance-based intervention in two primary schools situated in an area of high economic deprivation in North East England.

**Methods:** Our study explored Year 1 (age 5–6) and Year 5 (age 9–10) children, their parents, teachers and dance artists' views of a creative dance intervention (South Tees Arts project; STAR) in two schools in North East England, using interviews and focus groups, combined with innovative data capture activities (i.e. movement activities, graffiti walls, songs and Vox Pops).

**Results:** Children felt that STAR contributed positively to their emotional wellbeing and physical health. Teachers noticed improved confidence, engagement, literacy, and social and motor skills and less disruptive behaviour in class. Benefits continued beyond school, with children exercising at home to practice their dance moves. Several implementation barriers were identified ranging from limited time, large classes, dealing with challenging behaviours, the impact of COVID-19, stigma and anxiety. In response to these challenges, several solutions were developed during project delivery, such as artists and children working in pairs and role modelling by teachers and dance artists.

**Conclusions:** We found three underlying mechanisms for successful implementation: (1) constant communication between teachers, dance artists and parents was essential to managing challenging behaviours, building personal relationships with children, and helping parents to get involved and support their children at home. (2) Linking dance activities to the school curriculum (using narratives from existing reading schemes) helped to support skill gaps. (3) A strong ethos of partnership between school, dance and arts providers and researchers ensured the adaptability and flexibility of projects.

## INTRODUCTION

Engaging children in creative activities such as dance has been recognised as an important health-promoting strategy that can improve their health and wellbeing, and promote social inclusion and positive environments.<sup>1,2</sup> Over the

last two decades, several creative public health interventions have been developed to support resilience and mental wellbeing in children and young people, such as dance mat exergaming.<sup>3</sup> The latter is a combination of a computer game and physical activity in which dance steps are

projected onto a wall or screen and players follow them on foot-activated floor pads. An umbrella review conducted by McCrary et al.<sup>4</sup> highlighted that performing arts were the most popular form of arts participation with beneficial effects for children, adolescents, adults and older adults across 17 health domains (including body composition; cognitive; mental health; physical fitness; physical function; self-reported health/wellbeing; social functioning). These benefits occurred after as little as 30–60 min of dance per week through expressive (ballroom, social) and exercise-based (aerobic dance, Zumba) activities. However, only 8 out of 109 interventions listed in their review targeted children, and only one creative dance intervention (for older adults) was included. They also concluded that despite increasing evidence on the health benefits of arts engagement and participation, specific benefits associated with optimal modes and ‘doses’ of arts participation remain unclear, limiting evidence-based recommendations.

In one of the few studies that examined arts-based activities for children and young people,<sup>5</sup> the authors concluded that structured group arts activities might help build resilience and contribute to positive mental wellbeing. However, they emphasised that the research evidence is limited and that insufficient attention has been paid to the context in which the activities took place and the mechanisms underpinning the use of the arts as an intervention.

Mansfield et al.<sup>6</sup> confirmed the low quality of evidence on dance interventions that enhance subjective wellbeing for young people, with some evidence from grey literature identifying that it might promote negative feelings of incompetency and incapability.

Therefore, there is a need for more research that investigates the impact of dance activities on children’s mental health and wellbeing while taking into account the context in which these activities have been implemented to identify underpinning mechanisms that address potentially negative feelings. There is a particular paucity of evidence on the potential impact of school-based

dance activities on young people living in areas of high economic deprivation, who are more likely to experience difficulties in emotional and social development.<sup>7,8</sup> This can impact their academic achievement, and mental health and wellbeing in adult life,<sup>9</sup> while having less access to mental health services and support than their peers living in more affluent areas.<sup>10</sup> Studies conducted in the UK focused on dance interventions with secondary school girls and failed to increase physical activity levels, although the participants enjoyed the activities.<sup>11</sup> Nevertheless, we could not find any published UK studies of dance activities in primary school children with mixed gender classes, which highlights a research gap that we are trying to address with our study.

Consequently, the aim of this study is to report on the implementation of a dance intervention (the South Tees Arts project; ‘STAR’) in two primary schools located in areas of high economic deprivation in North East England, and the perceptions of children, teachers, dance artists and project leads about the impact of the intervention on children’s health and wellbeing. Our study also considers the context in which the activities were implemented and identifies the underlying mechanisms of the intervention that supported children in overcoming challenges experienced in this context. Relevance of context and the need for mechanisms to address barriers experienced in this context emerged as key themes in our data analysis. We did not set out to conduct a realist study; however, the findings fitted well within this framework, and hence, we presented them in this configuration.

### Introducing the dance arts project

The project, named STAR, was a partnership between Northern Ballet, the North East and North Cumbria’s Child Health and Wellbeing Network, and community organisation TIN Arts, which aimed to find creative ways for these children to express themselves and to offer opportunities to access arts events that would benefit their health and wellbeing and reduce health inequalities.

Children in Year 1 (age 5–6) and Year 5 (age 9–10) from two primary schools located in Redcar and Middlesbrough took part in the study. The schools were located in the 20% of the most deprived districts/unitary authorities in England, as measured by the UK Index of Multiple Deprivation,<sup>12</sup> with 25.2% of children living in low-income families and 22.1% of children classified as obese in Year 6.<sup>13</sup>

Children at these schools took part in weekly dance sessions during term time for the school year 2021–2022, with sessions lasting 30 min (with Year 1) to 45 min (with Year 5). The sessions explored engaging ways to help the children develop their social, emotional and physical skills by relating them to characters in a narrative ballet (Pinocchio). The dance artists encouraged creative expression and ownership of movements based on games or facilitated tasks. Content overlapped with the school curriculum, with dance activities drawing on the content of children’s lessons, for example, maths, cookery recipes, the solar system, and the numbering and naming of different body parts. The dance project also incorporated an arts award, for which the children built up a portfolio of evidence during their engagement with the project. Children also attended a performance of Pinocchio in a local theatre, and the dance project culminated with a celebratory performance of the pupils’ work at a local theatre venue, which brought all participating children and families together.

### METHODS

We used a qualitative design, combining interviews and focus groups involving dance artists, teachers and project leads, with innovative data collection methods allowing children to explore their views about the development and implementation of the STAR project. In total, 37 participants were interviewed, individually or as part of focus groups, and creative engagement activities were run across the 2 primary schools, as summarised in Table 1.

Table 1.

**Sample of children, teachers, artists and project leads participating in focus groups, interviews and engagement activities (n=37).**

	Children year 1	Children year 5	Teachers year 1	Teachers year 5	Dance artists	Project leads
<i>School A</i>	6	3	3	2 + 1 follow-up	2 + 2 follow-up	3
<i>School B</i>	7	3	2	2 + 1 follow-up		
<i>Total</i>	13	6	5	4 (+ 2)	2 (+ 2)	3
<i>Timeline</i>	March and July 2022		December 2021–February 2022/July–October 2022		In November 2021; July 2022	August–September 2022
<i>Data</i>	Transcripts, photos, observation notes		Transcripts	Transcripts	Transcripts	Transcripts

**Data collection with children**

Focus groups were conducted with 19 children from Years 1 ( $n=13$ ) and 5 ( $n=6$ ) between March and July 2022. Children were selected by purposive sampling. Teachers from each Year group identified children with a range of individual characteristics (i.e. gender and ethnicity) to take part in the study. Two members of the research team (P.W. and P.N.L.) visited both schools to conduct the focus groups with children, incorporating, where possible, creative methods, such as movement activities, graffiti walls, songs and Vox Pops (further information about the activities are provided in Supplementary file 1). Focus groups explored pupils' expectations, experience and access to arts, including their reflections on the implementation of the dance project at their school. In addition, the researchers observed two of the weekly dance sessions in each Year group for each school and took structured fieldnotes.

**Data collection with teachers, dance artists and project leads**

Nine teachers from both schools participated in face-to-face focus group discussions before the intervention started (December 2021 and February 2022), facilitated by three members of the research team (P.W., P.N.L., L.A.). Focus groups with teachers investigated the acceptability, adoption and appropriateness of the dance project. Two follow-up interviews were conducted

by L.A. with Year 5 teachers, one at each school, after completion of the STAR project (July and October 2022) to reflect on observed outcomes for children. These follow-up interviews were conducted online using MS Teams.

Two dance artists from TIN Arts were interviewed twice by C.E. at the start and end of the STAR project (in November 2021 and July 2022, respectively). These interviews focused on the artists' views and experiences of the delivery, engagement, uptake, challenges and sustainability of the dance project. Follow-up interviews focused on outcomes and future development, and were conducted using MS Teams.

Finally, the three project leads (Executive Director of TIN Arts, Programme Lead for North East and North Cumbria Child Health and Wellbeing Network (NENC CHWN), and Director of Learning at Northern Ballet) were interviewed by P.N.L. between August and September 2022. The project leads represented the three partner organisations that developed and delivered the project, with TIN Arts providing overall project management and North Ballet providing the dance artists to the schools, while NENC CHWN resourced the evaluation. The interviews reflected on the planning and delivery stages of STAR and the impact of the project on the targeted audience. Interviews lasted between 25 min and 1.5 h (average of 45 min).

All focus groups, interviews and engagement activities were

audio-recorded, and photos were taken of the graffiti walls and movement activities for data analysis.

Ethical approval for the study was granted by the Teesside University Research Ethics and Governance Committee (No 290/18).

Parental consent for children's participation in the focus groups and engagement activities was obtained via letters to the parents sent home by both schools and through digital requests using the schools' online Parent Mail system. Not providing consent did not preclude children from taking part in the dance activities. In addition, researchers attended two parent meetings, one at each school. Written consent for the interviews was also obtained from participating teachers, artists and project leads.

**Data analysis**

Focus groups and individual interviews were transcribed verbatim. Qualitative data from focus groups and the individual interviews were analysed in NVivo 12 using an inductive approach to thematic data analysis described by Braun and Clarke.<sup>14</sup> Following familiarisation with the data, line-by-line codes for each transcript were created along with extensive analytical memos. Coding continued until a sense of no new codes could be identified from the transcripts. Codes were then mapped and developed into main themes, which were named and defined.

Initially, research team members developed and drafted themes for each participant group separately. Final themes were discussed and interpreted by the research team in conjunction with their own fieldnotes, and illustrative extracts were discussed and selected for each theme. Themes are described narratively alongside the quotes which illustrate each theme. Quotes are referenced by the number assigned to each participant in the dataset to preserve their anonymity, and we have added a qualifier to each quote to identify participant group (e.g. child, teacher or artist). In addition, detailed fieldnotes were analysed from both the observations (i.e. dance sessions) and focus groups to add to the description and interpretation of identified themes.

## RESULTS

We first describe the outcomes identified by children, artists, teachers and project leads, followed by reflections on four barriers in the implementation of dance activities in areas affected by high levels of economic deprivation. Finally, we outline the practical solutions developed by participants in response to these barriers, which are summarised in a model.

### Positive engagement skills development and mental health

Findings from the focus groups, interviews and engagement activities demonstrated positive engagement of children in both schools. Teachers reported that children were enthusiastic about participating in the project.

Artists felt that the dance activities and performances contributed to children's creative, social, cognitive and physical skills, and increased their confidence. The focus group and engagement activities with children confirmed that STAR contributed to their emotional wellbeing as well as their physical health, with outcomes such as 'Feeling more confident', 'More fit and well' and 'Full of energy', most often mentioned by children in both schools across Years 1 and 5. These answers were recorded from the engagement activities with children, such as graffiti walls, songs and

Vox Pops, described in the Methods section and Supplementary File 1:

*Yes, they love it. They're devastated if it's not on. They're like, every Monday they come in, 'Are we dancing today, are we dancing today, what time are we going to dance?'. So, they love it and it is really good for them, it is.* (Teacher, ID02)

Expressing themselves through dance appeared to help children feel more confident and happier to engage in schoolwork and other daily activities. Teachers noticed that children were more able to listen and engage in classwork, showing less disruptive behaviour. In addition, teachers reported improvements in children's literacy skills:

*We can say that they're more engaged and we can say that they seem to be more expressive in classroom when they're doing role playing activities. They're able to describe like the way they move, people move. They're able to describe expressions better.* (Teacher, ID02)

Children mentioned feeling fitter and healthier, which continued beyond school. They reported doing more exercises at home and were keen to continue practising the dance moves learnt at school. Finally, project partners worked well together to deliver the STAR project within time and budget.

In summary, STAR supported children in getting out of the classroom to experience a different learning style that helped with their mental health and emotional wellbeing. Teachers often do not have time or the tools to deal with mental health issues, particularly after COVID-19; the STAR project provided an outlet for children and an opportunity for teachers to address mental health issues by tapping into their creativity. Overall, children, teachers and dance artists were optimistic about the success of the project and suggested that the project should be delivered at a scale. The range of outcomes noted by the children, teachers and dance artists

is summarised in the right-hand column of Figure 1.

### Barriers and solutions

Children, teachers, dance artists and project leads identified five barriers to engaging children in the dance activities and performances but also developed solutions in response to implementation challenges. We discuss each barrier, and the solution participants developed in response, separately below. We situated these barriers within the context of the schools being located within under-resourced communities, as these barriers related to entrenched problems experienced in these communities (see Figure 1).

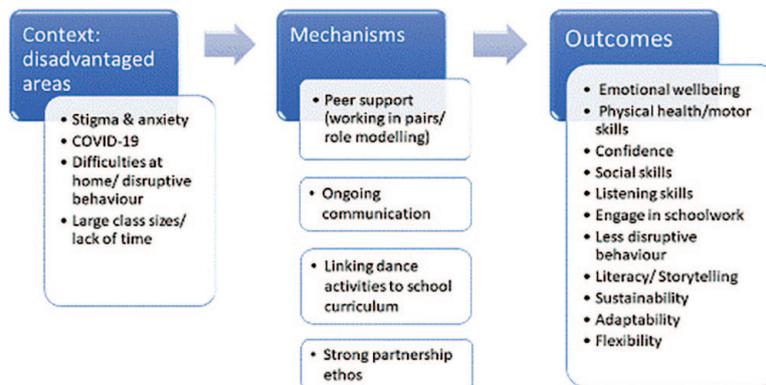
#### Limited time and large classes

Both artists and teachers reported that two-weekly, 1-h sessions were deemed insufficient to engage with the children on a personal level, to get to know them and tailor the project to their needs, despite artists' (and teachers') best efforts to build relationships with the children. The ability to engage children in the dance activities was further hampered by the number of children that artists had to manage in each session, approximately 30 children at a time, reducing opportunities for personal contact with each child to build rapport and tailor the activities to their needs and creativity:

*It was about kind of trying to connect to the children and to see them, to be able to see them individually a bit and that's hard when you've got, you know, twenty children in a space and you're moving. So you're trying to kind of manage the space and managing level noise levels and all the needs.* (Artist, follow-up interview, ID03)

The two dance artists worked together to deliver the dance sessions and, in doing so, were able to support each other with the limited session duration and large class sizes. In addition, observations of dance sessions and interviews with teachers highlighted that teachers in Year 1 often took part in the dance activities themselves to model the activities for their children.

Figure 1

**Model of context challenges, addressed by underlying project mechanisms, resulting in outcomes****Dealing with disruption**

Teachers and staff had to spend considerable time dealing with disruptive behaviour from some children who, for various reasons, were not engaging in the dance activities. Children noted how disruptive behaviour from some of their classmates negatively impacted their own engagement, 'spoiling the sessions' for them. Some children also struggled to make the transition back to the classroom after the dance activities, finding it a challenge to cool and calm down and settle into the class.

Teachers helped dance artists to tailor sessions to personal needs and interests of children by sharing their knowledge about children with the artists, and by providing additional support and reassurance to children who felt less confident or anxious. In return, the successful engagement from children in the dance sessions reduced disruptive behaviour from children in the classroom:

*We're starting to work with the teachers as well to try and understand some of the children. Whether it's, you know, they have some diagnosis, behavioural or home life, so we're starting to work with the teachers to understand that. And if they've got methods that they put in place with that child, whether there's any trigger points. (Artist, ID03)*

**Impact of COVID-19**

The pandemic had a major impact on the ability of artists to deliver the dance

activities in the schools, causing delays in project delivery. Teachers also commented on the impact of COVID-19, particularly the lockdowns, on children's confidence and social skills, with children having missed 2 years of socialising and interacting with other children and adults. This meant that the children started from an even more disadvantaged position than they were already in when the STAR project was delivered in schools after the lockdown:

*I'm expecting these children to be year fives, I'm expecting them to be like ten year olds but really their last full year in school was year two. So they were, you know, seven year olds and then they'd missed these two years of socialising. (Teacher, follow-up interview, ID10)*

Children working in pairs were an important enabler, as more confident children supported the less confident, and motivated them to engage in the dance activities:

*So there were some who really threw themselves into it but some that surprised me. I have a boy in my class, he's got a quirky personality, he's, you know, very unique, but he's sort of reserved and keeps to himself. He has to be quite confident to let his personality shine. But he threw everything into the dance, he was the one that came out with the energy, really challenged himself with the*

*balances, and that was great. (Teacher, follow-up ID10)*

**Stigma and anxiety**

Artists and teachers commented on having to overcome gender stigma around dance activities. Boys in Year 5 appeared more self-conscious about engaging in dance activities, with some experiencing stigma (exhibiting embarrassment) and feeling nervous about taking part. In addition, teachers reported that some children experienced anxiety about going on stage in front of their peers and families during their theatre performance:

*Initially, when we introduced that we were going to be working with dance, the boys do, do the, argh, kind of we don't want to do ballet, we don't want to do dance. And they don't automatically see it as a way of getting your feelings and your emotions out and a way of communicating. They don't see it like that. They see it as someone who wears a dress. (Teacher, ID03)*

The stigma associated with dance experienced by some boys in Year 5 was overcome by inviting a professional male dancer into the schools to speak with the children about the important role of dance in his life, which helped to normalise the dance activities for boys.

Parents also commented to teachers on how they appreciated their children

being publicly acknowledged and celebrated for their achievements. This does not happen very often for children who struggle with a formal curriculum which focuses on the assessment of highly structured subject knowledge and skills. Instead, the STAR project celebrated giving it a go and having fun, offering an alternative format and platform for learning:

*. . . if their kids aren't great at Maths and English, again they're not getting that celebration from their parents, that moment of being, you know, you were amazing and we're just really proud of you. [ . . . ] Our big moments aren't always fun ones, it's a test at the end of half term or it's, you know, like something negative is a big judgement moment. But that was like a real fun celebration sort of and to have that with the parents was really great. You could see how proud they were and how excited they were to go into an environment that they haven't been in and watch their children do something really different, that was lovely.*  
(Teacher, follow-up interview, ID10)

## DISCUSSION

### Key findings and relation to current literature

Our study contributes to the emerging evidence base about the impact of dance activities on the mental health and wellbeing of children. In line with other studies, our results showed that creative dance activities can improve children's cognitive skills, mental health, and physical and social functioning.<sup>4</sup> Children felt that STAR contributed to their physical and emotional wellbeing and that benefits continued beyond school, with children practicing at home. Expressing themselves through dance has the potential to help children feel more confident and happier to engage in schoolwork and other daily activities, though precisely how, and for whom, warrants further investigation. Teachers also noticed that children were more able to listen and engage in classwork, showing less disruptive behaviour and noted improvements in children's literacy, social and motor skills.

Moreover, our study demonstrated that an understanding of context in which these activities have been implemented, such as areas of high economic deprivation, is crucial for addressing particular challenges faced by dance artists and teachers. This includes a lack of familiarity with the arts and stigma and anxiety about the arts and performance as experienced by some of the children in this study. The difficulties they face in their home situation and the disruptive behaviour this causes in classes, according to the teachers, were exacerbated by COVID-19. Further challenges included large class sizes and lack of time available to staff to build up trusting relationships with children to personalise their engagement. Similar issues were highlighted in the review of Zarobe and Bungay,<sup>5</sup> who concluded that insufficient attention had been paid to the context in which art and dance activities took place and the mechanisms underpinning the use of the arts as interventions. Addressing the negative feelings towards dance experienced by some children living in disadvantaged areas is essential to produce positive health outcomes. As highlighted by Mansfield et al.,<sup>6</sup> young people can experience negative feelings of incompetency and incapability towards the arts, and dance activities and group-based or peer-supported activities have the potential to improve subjective wellbeing of young people. Our findings demonstrate that working in pairs can help children to overcome negative feelings and resolve their differences to make up new dance moves. Similarly, working in pairs between teachers and artists can support personal engagement, with teachers and artists acting as role models and tailoring activities.

### Underlying mechanisms

From the barriers and facilitators, three mechanisms were identified as crucial for the development and implementation of dance and art interventions in primary schools in economically disadvantaged areas.

### Communication

Artists relied on information from teachers about children's individual needs. This exchange of information was often crucial for managing disruptive behaviour and tailoring activities. Artists would have preferred more time for reflection after sessions to document issues and learning with teachers.

Teachers did not feel they had enough information at the start of the project to understand what the children would be engaging in and therefore felt limited in their ability to support children, and by extension artists. A more detailed and bespoke introduction session to teachers with the artists at the start of the project would facilitate clear communication about expectations from both teachers and artists, and how they could support each other during the project:

Ongoing communication between schools, dance and arts providers, and parents would help the latter to keep informed and understand how they can support their children at home and get involved themselves. Providing children with simple instructions to increase their engagement and more information about the performances, familiarity with the theatre and opportunities to rehearse on stage could also help to reduce their anxiety about performing on a stage. This need links to wider literature suggesting the importance of accountability at all levels for the implementation of public health intervention in school, requiring involvement and engagement for different professions and stakeholders based on clear communication.<sup>15</sup>

### Linking dance and art activities to the school curriculum

Initial fears from teachers that STAR would take time away from delivering an already cramped and challenging curriculum were alleviated by their observations that the project actually supported the delivery of the curriculum. Teachers noticed an increase in children's attention in class, combined with improved confidence to express themselves, enhancing engagement and learning in the classroom. According to the teachers, STAR taught children to

articulate themselves differently by teaching them how to tell a story (through dance and music) and enabling them to listen to music and discover different storytelling elements, such as rhythm, pace, pitch and lyrics. These new skills directly supported the formal curriculum, such as English, where storytelling is a key ingredient. Therefore, linking narratives in dance sessions to existing reading schemes in schools could further support embedding dance and arts activities in the school curriculum. This mechanism is in line with findings from a recent literature review on the sustainability of school-based public health interventions.<sup>16</sup> The review highlights staff observing a positive impact on students' engagement and wellbeing as a key motivator for being involved in the delivery, in spite of time and resource constraints, which are listed as a key barrier in the review. The authors suggest that adaptation to existing routines and embedding into the curriculum is an essential part of the sustainability process, enabling schools to move beyond separate, isolated interventions.<sup>15</sup>

#### Partnership working

Collaboration between artists, teachers and project leads supported the successful delivery of the STAR project despite the COVID-19 pandemic and the various challenges this represented. A strong ethos of partnership ensured the adaptability and flexibility of the project, although some partners were less involved and struggled to make links with different teams.

Assuring the sustainability and future roll-out of dance interventions across other schools requires strong, collaborative and distributed leadership. The partnership ethos on which this project has been built demonstrates the value of different organisations coming together and contributing to a common goal, adding value from different perspectives. The importance of commitment and support from senior leaders has been highlighted in the literature,<sup>16</sup> with external support from the wider system identified as a key sustainability factor.<sup>17</sup> The three

mechanisms, illustrated in Figure 1, underpin the use of dance and art activities by addressing barriers around stigma, lack of confidence and capability, and enabling positive health and wellbeing outcomes for children. These mechanisms are important to consider for implementation of creative public health interventions in primary schools located in disadvantaged areas and could be further explored and tested in future research.

#### Strengths and limitations of study

The qualitative data collected in focus groups, interviews with dance artists, teachers and parents, and engagement activities with children yielded rich insights into their experiences of the project. While we were able to interview all dance artists and teachers involved in the delivery of STAR in both schools at the start, we only managed to interview two teachers, one from each school, in the follow-up interviews, limiting insights on the changes in teachers' perceptions over the course of the project.

We deliberately limited the number of children in each activity to six to maximise their engagement and support their interactions in each activity, which was time-intensive. However, by only having a small proportion of the children across both schools, different opinions from other children might have been missed and limiting comparisons between schools, age groups and gender of children. Children were also sampled by the teachers from each Year group, based on their individual characteristics, to identify a range of experiences. This might have introduced an element of bias, but we felt in this small exploratory study that teachers were best placed to judge the different experiences of children given the limited sample size.

Finally, we struggled to recruit parents for the focus groups in both schools, considerably limiting their input in the project. Despite several recruitment efforts through the schools' newsletters, attending parents' mornings after the Pinocchio performance, and teachers' best efforts to encourage parents to

attend, we completed one focus group with parents in Year 5.

While explorative in nature, our study provided a practical model of mechanisms to consider when developing and implementing dance and art interventions in other primary schools. The collaborative design of the study with the active involvement of children, teachers, dance artists and project leads provided a degree of validity and credibility of the results and their usefulness for other contexts.

#### CONCLUSION

Our study provided qualitative evidence of the potential positive impact of dance activities for children in primary schools based in areas of high economic deprivation, who are more likely to experience emotional and social development difficulties that can impact academic achievement.

Our findings highlighted the potential positive impact that these activities can have on children's cognitive skills, mental and physical wellbeing, and social functioning. We also demonstrated the importance of understanding the context in which dance and art activities were implemented and the particular challenges this created for dance artists and teachers. We identified three underlying mechanisms that need to be addressed to encourage sustained, flexible and personalised engagement from children in the dance activities.

Future research could focus on the long-term benefits of piloting interventions across a range of school settings.

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### CONFLICT OF INTEREST

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### ADDITIONAL RESOURCES

The resources (reports, final research and films) for STAR 2021-22 are available online for reading, watching and sharing (<https://www.tinarts.co.uk/current-projects/star/s-t-a-r-resources-for-sharing/>). More information about the research can be found at: <https://arc-nenc.nihr.ac.uk/projects/an-evaluation-of-the-c-works-knowledge-hub/>.

### SUPPLEMENTAL MATERIAL

Supplemental material for this article is available online.

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# Participatory asset mapping and photovoice interviews to scope cultural and community resources to reduce alcohol harm in Chitwan, Nepal

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## Abstract

**Aims:** To scope the breadth of existing cultural and community assets and how alcohol drinkers and community health workers perceived them in relation to reducing alcohol-related harm.

**Methods:** The study was conducted in Chitwan, south-central Nepal, which has considerable alcohol problems. Participatory asset mapping was conducted using field notes, photography, and through engaging with communities to explore how community assets affect alcohol consumption. Semi-structured photovoice interviews were conducted with harmful/hazardous drinkers (AUDIT score 8 to 19) and community health workers. Purposive and snowball sampling were used to recruit participants. During interviews, participants used their photographs to reflect on how community assets influenced alcohol use. Thematic framework analysis was used to analyse the data.

**Results:** We recruited 12 harmful/hazardous drinkers (3 females) and 6 health workers (2 females). The mean AUDIT score of the former was 12.17 (SD  $\pm$ 2.86). Thematic analysis of the photovoice interviews produced three themes: 'influences and impact of families and communities'; 'culture and spirituality'; and 'nature and the environment'. The community mapping produced five assets that promoted alcohol consumption: (1) availability; (2) advertising; (3) negative attitudes towards users; (4) festivals/gatherings; and (5) illiteracy/poverty. Six assets that discouraged consumption were: (1) legislation restricting use; (2) community organisations; (3) cultural/spiritual sites; (4) healthcare facilities; (5) family and communities; and (6) women's community groups. Those from certain ethnic groups consumed more alcohol, experienced more family discord, or felt stigmatised due to their drinking. Assets 'festivals/gatherings' and 'negative attitudes toward users' and the theme 'family and communities' concerned with relationships and community activities were perceived to both promote and reduce alcohol use.

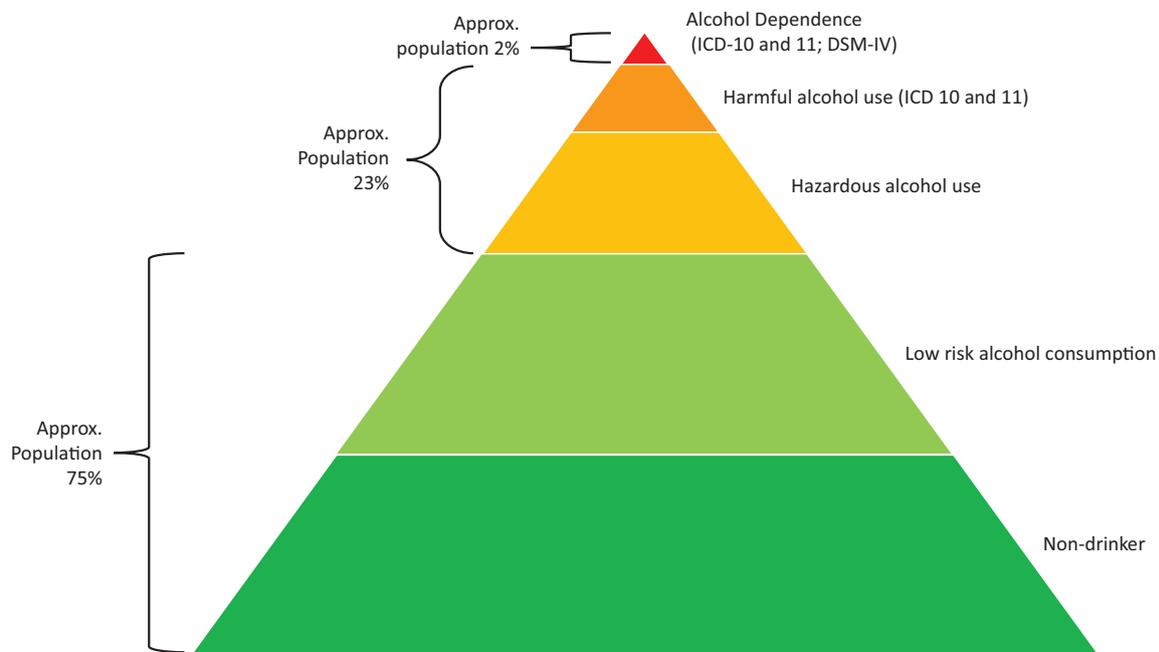
**Conclusions:** This study provides new insight into a variety of cultural and community assets that promote and reduce alcohol use. The study identifies new possibilities to build on visual participatory and arts-based methods that have potential to be effectively implemented at scale.

## INTRODUCTION

Alcohol causes around 3.3 million deaths annually, representing 6% of annual global mortality.<sup>1</sup> Alcohol is one of four main modifiable

behavioural risk factors contributing to non-communicable diseases (NCDs);<sup>2</sup> these risk factors have been recognised in one of the United Nations' key Sustainable Development Goal

Figure 1

**Patterns of alcohol use and disorders (not to scale)**Source: Adapted from the study by Saunders *et al.*<sup>5</sup>Note: *DSM*: Diagnostic and Statistical Manual of Mental Disorders; *ICD*: International Classification of Diseases.

(SDG).<sup>3</sup> In low- and middle-income countries (LMICs) such as Nepal, morbidity and mortality risks are greater per litre of pure alcohol consumed than in higher-income countries.<sup>1,4</sup> This is largely due to poverty, poor nutrition, adverse living conditions, and poor access to care. These inequities are made worse by the dearth of understanding and availability of the most appropriate and cost-effective approaches to reduce alcohol-related harm in LMICs.

Figure 1 illustrates the range of alcohol use and disorders associated with patterns of drinking based on data from high-income countries and LMICs.<sup>5</sup> Where 'harmful' use is defined as drinking at levels likely to cause psychological and physical harm, without experiencing full dependence syndromes;<sup>6</sup> 'hazardous' use relates to a pattern of drinking that confers a risk of possible future harm to the user.<sup>6</sup>

In LMICs where health care resource availability is limited, brief psychosocial

interventions delivered collaboratively with non-specialist health workers in primary care settings can provide scalable public health options to effectively lower alcohol risk levels and improve health outcomes.<sup>6,7</sup> Communities from both high-income countries and LMICs have a long social and cultural history with alcohol, including the diverse ways alcohol is produced and consumed. Nepal has a rich cultural heritage where knowledge and practice of the arts, religion, and public health are often interconnected.<sup>8</sup> These varied experiences and perceptions can be both an asset and a challenge to creating effective ways to reduce alcohol-related harm, especially in communities with a long social and cultural history of alcohol production and consumption. Therefore, designing and delivering brief psychosocial interventions that relate to local cultures and community resources are more likely to be acceptable and relevant to communities. Engaging and culturally

sensitive interventions also have better potential to be scaled-up and are more likely to produce effective long-term reductions in alcohol-related harm.

Of the limited alcohol research conducted in LMICs, very few have explored perspectives, contexts, or experiences of individuals and communities.<sup>9,10</sup> There is also no known intervention study, which has led to significant reduction in alcohol harm in Nepal.<sup>11</sup> In LMICs' health systems, resources including healthcare staff are limited. Therefore, alternative approaches are urgently needed to increase availability and access to care by harnessing existing community assets more effectively to promote health and wellbeing.<sup>12</sup> Such approaches would be framed around a salutogenic paradigm rather than a traditional deficit model. Asset-based alternatives to deficit-based models have been developed from emancipatory approaches to education and community work, often grounded in global alternatives to western medical philosophies.<sup>13</sup>

The use of cultural and community assets in public health can help reduce stigma, raise awareness, and enable engagement of diverse communities.<sup>14,15</sup> Such public health approaches would require participatory<sup>16</sup> and co-design<sup>17</sup> methodologies to examine cultural and community assets, including the arts, cultural sites, natural environment, and community groups on their potential to reduce alcohol harm and associated risks. Therefore, this study aimed to stimulate new thinking on how cultural and community assets could be integrated to co-design alcohol interventions for future evaluation in Nepal and other LMICs. This was achieved through scoping the breadth of cultural and community assets related to alcohol, and exploring attitudes and experiences of alcohol use and existing support to reduce alcohol-related harm.

## METHODS

The study had two components: participatory cultural and community asset mapping<sup>18</sup> sub-study conducted by researchers; and semi-structured photovoice interviews<sup>19</sup> with local harmful/hazardous drinkers (henceforth 'harmful drinkers') and health workers. This article has been prepared following the COREQ (consolidated criteria for reporting qualitative research) standard for qualitative research.<sup>20</sup>

### Setting

Chitwan, a south-central district of Nepal, is an area with considerable mental health and alcohol problems.<sup>21</sup> Chitwan is a relatively urban district with a population of 719,859; 84% literacy rate (national average = 76%); and a diversity of culture, caste, geography, language, and religion.<sup>22</sup> The district has government and private hospitals within urban areas, while rural areas comprise of primary health care centres (PHCC) and health posts.<sup>23</sup> The district offers alcohol detoxification treatment as part of the national Basic Health Service (BHS) Package from government hospitals;<sup>24</sup> however, the provision of psychosocial interventions to prevent harmful alcohol use is limited. Female Community Health Volunteers (FCHVs) are involved in

promoting maternal, child, and public health activities through PHCC government-supported schemes.<sup>25</sup>

### Ethics and study reporting

The study received ethical approval from Nepal Health Research Council (NHRC; Reference-27 /2021 P) and City, University of London (UK; ETH2021-1001).

### The community asset mapping sub-study

Two local researchers (AA and AS) scoped community assets and resources and their relationship with alcohol (January to July 2021). This involved the two researchers observing and photographing a variety of cultural, religious, social, and community venues and activities to explore how these may affect alcohol consumption. Local communities were approached to clarify and gain deeper insight into researchers' observations. Researchers' field notes and photographs were discussed regularly within the team during data collection and analysis.

### Semi-structured photovoice interview

#### Recruitment

Purposive and snowball sampling were used by local researchers (AA, PP, and DR) to identify adult ( $\geq 18$  years), possible harmful drinkers and health workers. The former were defined as scoring 8 to 19 on the Alcohol Use Disorder Identification Test (AUDIT), based on a version validated for use in Nepal.<sup>26,27</sup> Individuals who scored 20 or more on the AUDIT, an indication of possible dependent drinking, were excluded and advised to seek specialist support for safeguarding reasons and to focus on our study target – harmful drinking population.

Primary health workers and FCHVs were also involved in informing and referring those interested in participating in the study to local researchers. Some FCHVs and primary health workers were aware of or had been involved in the multi-country 'Programme for Improving Mental Health Care' (PRIME) research programme for LMICs<sup>28</sup> (Chitwan was one of the research sites) and received

training on how to identify and support those with mental health and alcohol problems. Individuals were informed about the study at PHCCs, health posts, and within social and cultural venues such as community parks or temples. Those who provided informed written consent were recruited to the study.

Primary health workers, referred in this article as 'health workers' ranged from basic health assistants, auxiliary health workers, to medical doctors and were recruited by researchers from PHCCs and health posts. These healthcare facilities provide basic services including some mental health support.<sup>23</sup> Harmful drinker and health worker participants were reimbursed for their travel and received a compensation of Rs 1000 (US\$9) for their involvement.

### Semi-structured photovoice interviews data collection

Individual in-depth interviews with 12 harmful drinkers and six health workers were conducted from April to July 2021 either at health care facilities, the Prime Nepal office (local mental health NGO in Chitwan where AA is based), or participant's home, depending on individual preference. Following informed consent, socio-demographic data were collected from each participant. The semi-structured interview guide was developed following the asset mapping and informed by a review of alcohol research literature from Nepal and other LMICs. The guide was underpinned by theories relating to asset-based models of health.<sup>29</sup> Interview topics included: general alcohol use; problems associated with drinking; community and cultural assets; and alcohol support and treatment needs of the community. Health workers were asked questions related to their professional experience of working with harmful drinkers and training and support requirements.

Before each interview, all participants were invited to click at least four photographs over a week to either reflect on their experience of alcohol use as a harmful drinker participant, or when engaging with drinkers through their work as a health worker. All participants were also encouraged to explore the

Table 1

<b>Characteristics of photovoice interviewees.</b>		
<b>Characteristics</b>	<b>Harmful/hazardous drinkers (n = 12)</b>	<b>Health workers (n = 6)</b>
Age (years) mean (SD), range	41.25 (SD $\pm$ 7.67) 29–58	44.50 (SD $\pm$ 3.94) 39–49
Gender:		
Female	3 (25)	2 (33)
Male	9 (75)	4 (67)
Marital status:		
Married	11 (91.7)	6 (100)
Unmarried	1 (8.3)	/
Religion:		
Hindu	11 (91.7)	6 (100)
Christian	1 (8.3)	/
Ethnicity/caste:		
Brahmin	6 (50.0)	5 (83.3)
Chettri	2 (16.7)	1 (16.7)
Newar	1 (8.3)	/
Dalit or also known as Nepali caste	1 (8.3)	/
Chaudhari	2 (16.7)	/
Education:		
Informal education or literate	3 (25)	1 (16.7)
Secondary school education	7 (58.3)	/
College or university	2 (16.7)	5 (83.3)
Employment:		
Agriculture	5 (41.7)	1 (16.7)
Employed within a service industry	4 (33.3)	5 (83.3)
Self-employed business	2 (16.7)	/
Unemployed	1 (8.3)	/
Number of months of income received during past one year:		
More than 9	8 (66.7)	6 (100)
Between 7 to 9	2 (16.7)	/
Between 3 to 6	2 (16.7)	/
Values are numbers (%) unless stated otherwise. Slash (/) indicates no data were reported by participants for these characteristics.		

possible influence of cultural and community assets on alcohol consumption. All participants were offered a digital camera or a mobile phone by the researcher, or if they preferred, they could use their own device. Throughout the interviews, both harmful drinker and health worker participants were encouraged to refer to their four printed photographs when discussing their experiences and attitudes to alcohol. All participants were asked to reflect on what and how community assets helped or hindered health and wellbeing; and for health worker participants, on ways it affected them when offering support. Each interview lasted between 30 and 75 min, was audio-recorded, transcribed into Nepali, and translated into English for analysis.

### Thematic framework analysis

Field notes and photographs from the community asset mapping were analysed using a thematic framework<sup>30</sup> to identify factors influencing alcohol use among individuals and communities.

Thematic framework<sup>30</sup> was also used to analyse the narrative and photographic data. The interviews were first analysed by AA, RD, and HY by re-reading the interview transcripts to familiarise with the content and check for accuracy. Codes were developed inductively from transcripts and photographs as well as deductively from the broad themes covered by the interview guide initially by AA, and further coding were then independently completed by RD and HY. The codes were then collapsed into sub-themes and multifaceted themes through discussion between the wider research team. NVivo20<sup>31</sup> was used to manage the analysis.

## RESULTS

### Demographics of participants

A total of 18 participants were recruited (see Table 1 for a summary of demographic characteristics). Mean AUDIT score of the 12 harmful drinkers was 12.17 (SD  $\pm$ 2.86, range 9–17). Harmful drinker and health worker and participants were of similar mean age (41



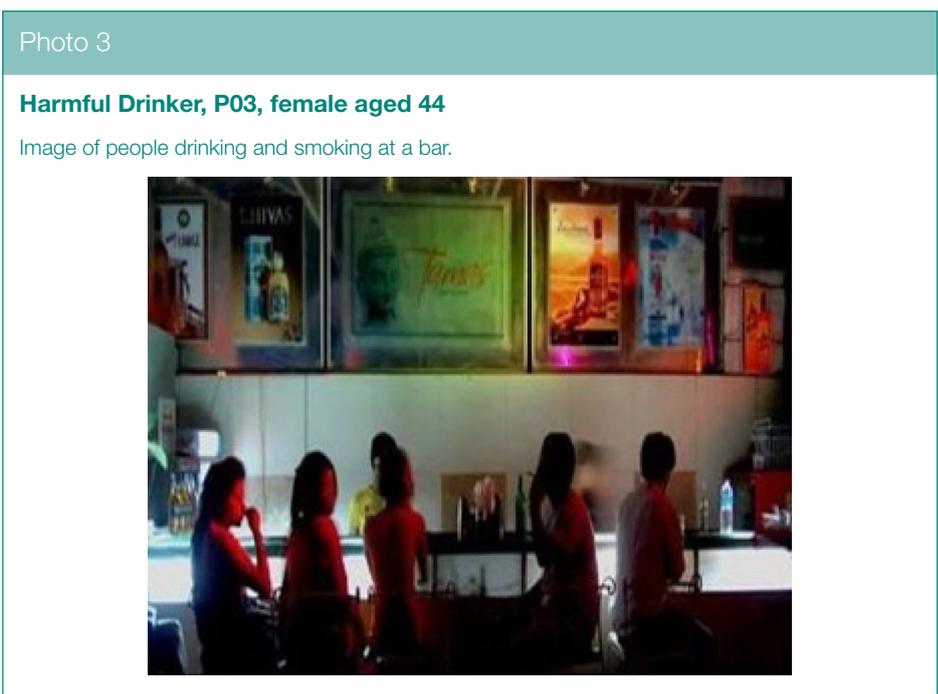
and 44 years, respectively); mostly male (75% versus 67%); were married; and Hindu religion. Half of the harmful drinkers were Brahmins and from other ethnic castes, while health workers were only either from Brahmin (83%) or Chettri (17%) ethnic castes. More health workers had completed college or university education (83%) compared to harmful drinker participants (17%).

Three themes were produced following the data analysis of the photovoice interviews: ‘influences and impact of families and communities’; ‘culture and spirituality’; and ‘nature and the environment’. These themes were developed from sub-themes, which described their multifaceted nature. Presented here are each theme followed by their sub-themes (*italic headings*), which are illustrated with participants’ quotations and photographs (see Photos 1, 2, 3, 4, 5, 6, and 7).

**Influences and impact of families and communities**

*Strong and supportive families and communities*

Participants described families and communities as strong and supportive



and spoke of the interconnectedness and interdependence of these relationships. Families cared for their members, coming together for meals and festivities, encouraging individuals to seek help, and accompanying them to alcohol treatment centres. Health

workers described how local alcohol services were utilised as an asset:

*For them [alcohol users] we provide proper counselling by helping them realise how important they are for the family and community and the nation*

Photo 4

**Harmful Drinker, P06, male aged 39**

Image of a temple with a golden coloured pitched roof.



Photo 6

**Health Worker, P05, female aged 41**

Image of green farmland with a few houses and hills in the distance.



Photo 5

**Harmful Drinker, P02, male aged 46**

Image of a golden statue of Buddha seated on a platform.



Photo 7

**Health Worker, P02, male aged 44**

Image of a forest with tall trees and low growing shrubs.



particularly women, could provide. Previously, supporting harmful drinkers had been regarded as a role to be undertaken by medical doctors and traditional healers. However, following mental health campaigns and training programmes this led to increased awareness about lay primary healthcare workers, and FCHV's roles to reduce alcohol harm:

*There are FCHVs [who] try to provide the treatment service to that individual by persuading the family members. I have also found that the local area representatives held meetings to encourage such people to go to the health post. (Harmful Drinker, P11, female aged 29)*

Participants also asserted that communities should promote structural changes within community-based groups, health, and social care organisations, as well as attitudinal change to challenge local drinking cultures. Participants described how their community representatives could bring people together to discuss alcohol problems and develop solutions. Some participants described local networks

*as well . . . we help move them forward with the skills and knowledge to help to survive. (Health Worker, Participant number (P2), male aged 44 years)*

Nevertheless, both health workers and harmful drinkers alike spoke of how alcohol can undermine family and

community networks. For this reason, participants believed that communities had an important role in prevention of alcohol-related harm, both at a public health and individual level.

*People who can help*  
Participants described two forms of help that community members, and

such as the mothers' groups and the FCHVs as similarly influential.

### *Families and communities are not necessarily an asset*

Some male harmful drinkers felt that the women who 'scolded them and gossiped', perpetuated the stigma around alcohol. They, therefore, considered mothers' groups and FCHVs unhelpful. Communities tended to regard harmful drinkers as selfish, irresponsible, untrustworthy, and as bad role models to children. Community leaders and health workers shunned drinkers, which had the effect of further isolating drinkers. Harmful drinkers described how community members would speak harshly and behave unsympathetically towards people who were intoxicated.

*. . . they [community group] normally say you [alcohol user] shouldn't drink like this and don't waste your time in such way . . . they only counsel. There isn't any other help or support for those who drink alcohol.* (Harmful Drinker, P1, male aged 58)

### **Culture and spirituality**

#### *Cultural norms and alcohol use*

Participants were predominantly male, from higher castes, who described the diverse roles alcohol played within their lifestyles and religion. Within castes permitting alcohol use, alcohol tended to be readily available at family and community events. Participants could drink at social, cultural, and religious celebrations held at 'party palaces' (function halls), picnic sites, and other venues.

However, for castes which discouraged/prohibited alcohol use, harmful drinkers either brewed their own alcohol or drank in restaurants with friends. Participants concurred that, despite the deterrent effects of social censure, this pattern of drinking was causing the greatest harm to families and communities. Participants cited the benefits of exchanging knowledge between communities, and the increase

in alcohol awareness provided by public health initiatives:

*In the old days people used to hide and drink. Due to hiding sometime people used to drink fast, but this [practice] is gradually decreasing due to greater acceptance of them having a little bit of alcohol with the family member in our community . . . People shouldn't run or hide because of drinking alcohol but should drink in moderation.* (Health Worker, P1, male aged 48)

#### *Cultural and religious resources to help harmful drinkers*

Participants described the role of spirituality and faith practices in reducing alcohol harm. For some male harmful drinkers, spending time at religious sites was helpful because alcohol was prohibited there. For men and women, religious observances such as meditation, yoga, and singing hymns, provided a sense of meaning or purpose which could reduce their desire for alcohol and motivated them to reduce their drinking. Religious organisations often played an important social and charitable role in bringing men together, enabling harmful drinkers to contribute more positively to their communities. Female participants also found spirituality, meditation, and faith observances beneficial, but they tended to practice these at home rather than at religious sites.

Some health workers described meditation and yoga as an effective form of treatment for alcohol problems, and as a long-term alternative to prescribed medication. Several participants advocated an increased emphasis on yoga within primary care services.

*I have clicked the pictures of the temples and organisations . . . worshipping the gods and goddess is our belief . . . religious organisations can encourage a person to save the money used for buying alcohol so that in the future he could use that money for other purpose* (Harmful Drinker, P6, male aged 39)

### **Nature and the environment**

#### *Agriculture and gardening as livelihood and leisure*

A third of participants were farmers and described how they enjoyed gardening and horticulture as leisure activities. Many harmful drinkers described agriculture and gardening as an activity which distracted them from thoughts about drinking:

*I have not taken any treatment services instead of that I control myself while drinking . . . I try to control my drinking habit by making myself busy working in the farm . . . Being busy in the farm I don't have time to think about gathering with friends and getting drunk'. (Harmful Drinker, P10, female aged 33)*

Among both harmful drinkers and health workers, this was a theme that female participants particularly emphasised.

#### *The natural environment as a social and spiritual space*

Chitwan is renowned for its natural beauty. Participants described how they enjoyed socialising with friends and colleagues at picnic sites and swimming spots. Several harmful drinkers described how people drank less at open-air social gatherings than in restaurants, because they could derive camaraderie and pleasure from the scenery and wildlife rather than from alcohol alone.

For many participants, the outdoor environment provided not only livelihood, leisure, or social opportunities, but also spiritual or personal experiences. Participants described being among natural beauty as calming and uplifting, and effective in reducing preoccupation with or craving for alcohol:

*. . . garden, parks also help in the reduction of the alcohol . . . while clicking the picture of the flowers and garden I forget all the pain, stress as well as tension . . . Sitting in the garden and looking the scenery can help to release the stress . . . and can*

*dwell the mind in the surrounding rather than in the alcohol. (Health Worker, P5, female aged 41)*

### Asset mapping findings

A total of five community assets considered to promote alcohol use along with six assets likely to discourage consumption were produced through the analysis and are presented in Figures 2 and 3. Those from certain ethnic groups consumed more alcohol than others, experienced family discord or felt stigmatised due to their drinking. Assets and factors relating to 'Family and communities' were perceived to both promote and reduce alcohol use. However, having access to a supportive family, community, and faith groups were thought to reduce consumption.

### DISCUSSION

Resources and factors, which either promoted or discouraged alcohol use were identified from the participatory asset mapping study. The photovoice interviews produced three themes, which signified the importance of families and communities; culture and spirituality; and nature and environment in shaping participants' attitudes to alcohol.

This study identified that families and communities in Chitwan, Nepal, play a particularly significant role in preventing and treating alcohol-related harm. Belonging to a cohesive nuclear or extended family, which can offer strong kinship and compassionate alcohol support, is an important factor to build locally developed interventions on. Having a better understanding of cultural family practices and how this may differ from the often individualised philosophy of health care found in western-focussed literature would need to be examined, especially to create contextually appropriate alcohol interventions for Nepal.<sup>32</sup> However, this study also identified unsympathetic and punitive attitudes towards alcohol, which could marginalise and isolate drinkers. This supports literature exploring the relationship between social exclusion and poor outcomes following alcohol treatment.<sup>33</sup>

Culture, spirituality, and religion were identified as key assets to reduce drinking, as captured in participants' photographs and the asset mapping. Nevertheless, Nepal is a nation of vast cultural, social, and ethnic diversity and a complex caste system; given the myriad ways that spirituality, and religion are known to interrelate, it is important to emphasise that this study's findings cannot be assumed as generalisable across Nepali communities. Importantly, alcohol production and consumption practices vary widely across different ethnic groups, and for those seeking to utilise these findings to develop alcohol interventions, cultural competence and cultural humility will remain important. This study found that local religious practices were a particularly strong motivation to reduce drinking, particularly for men. This study adds a Nepali perspective to the literature.

Engaging with the natural environment is beneficial to individuals who experience substance use or mental health problems, particularly to reduce anxiety, depressive, and stress-related disorders.<sup>34</sup> This study found nature and the environment to be valuable assets to drinkers and health workers alike. This was captured through nearly all participants' photographs as well as their accounts of the intersections between the natural environment and their local culture, lifestyles, and worldviews.

### The public health concept of alcohol use

The study found Nepali men and women had different patterns of drinking, chose different places to drink and accessed community resources differently. Nepali women have traditionally been known not to drink alcohol or consume less than men.<sup>35-37</sup> It remains unclear how accurate these perceptions are and whether drinking behaviour may be changing. Because of the ethnic and cultural diversity of the country, the general pattern of alcohol use presented in Figure 1 may not be an accurate reflection of alcohol consumption.

When participants described alcohol harm, they often referred to more serious consequences of drinking, often related

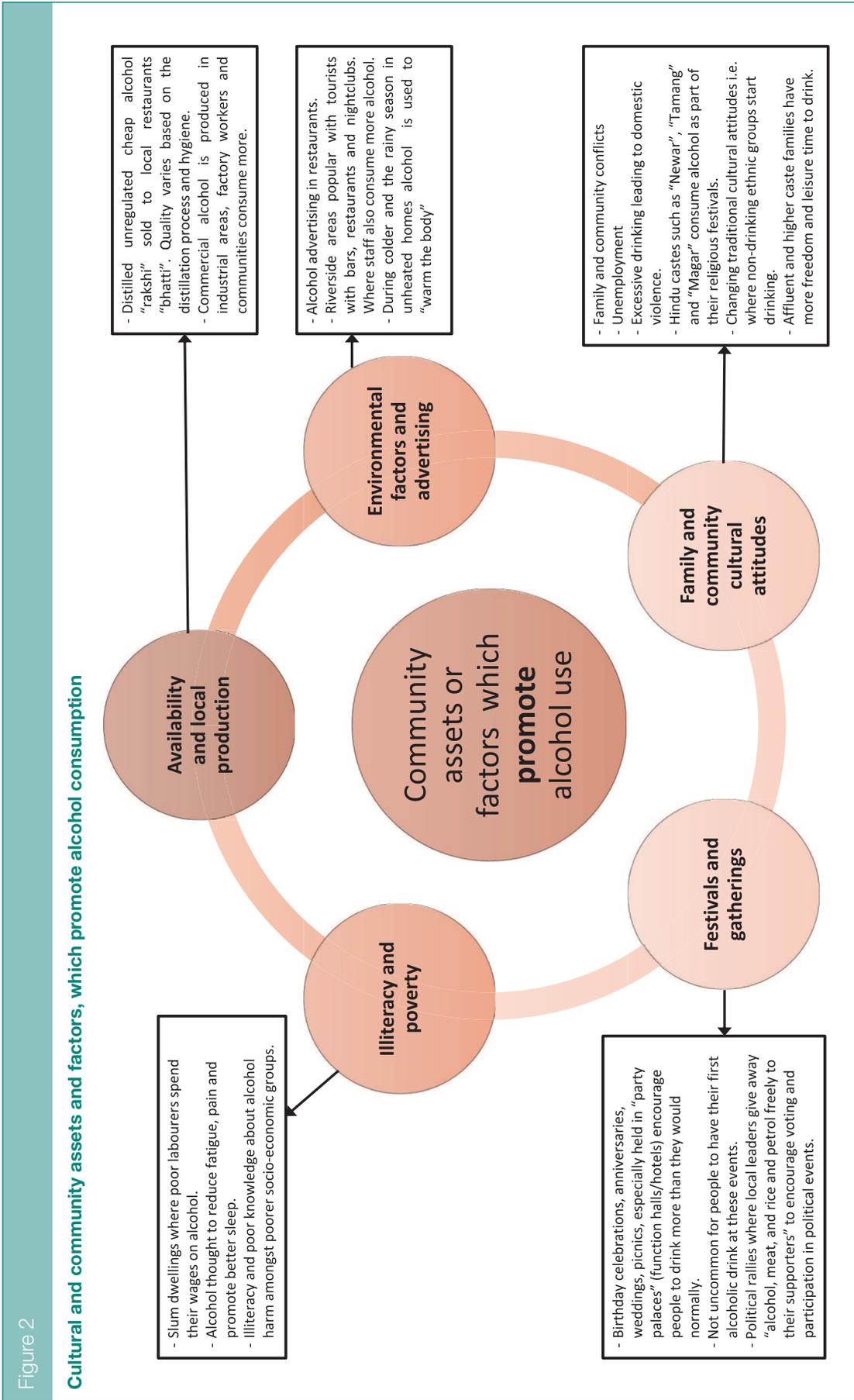
to alcohol dependence syndromes which are likely to require medical treatment in healthcare facilities. Participants appeared to hold a professionalised understanding of alcohol support, whether medical or primary care practitioners or traditional healers. For example, managing alcohol use was considered the realm of experts, rather than something lay people could do for themselves. Our study identified that while drinkers and communities saw women as care giving figures, exemplified by FCHVs, primary health care workers or medically trained personnel were regarded as more credible and effective.

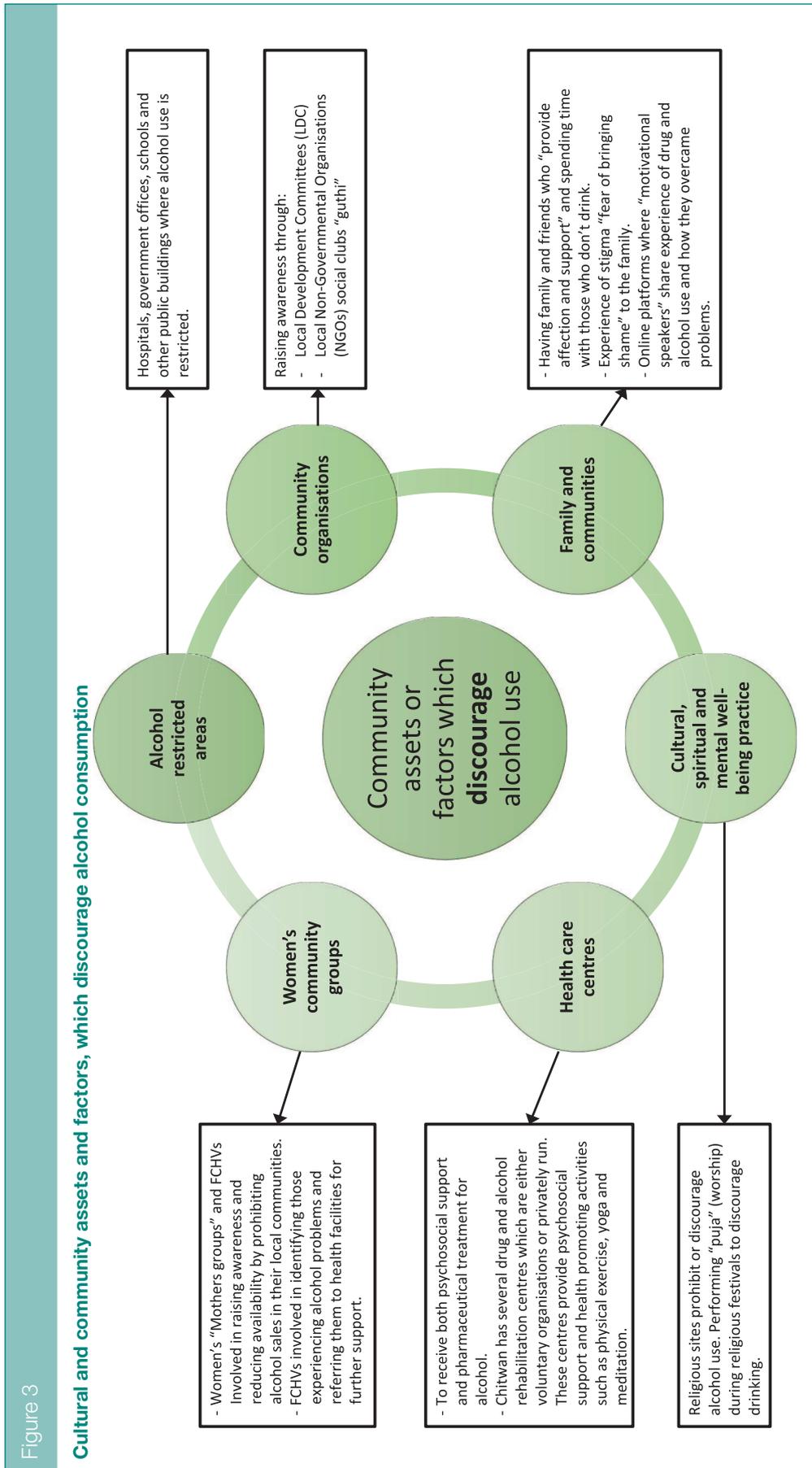
### Using photovoice interviews to explore drinking in Nepal

In recent years, photovoice and its adapted forms have been used in numerous qualitative health studies in Nepal<sup>38,39</sup> and elsewhere.<sup>40</sup> This study may be the first to use photovoice approaches in alcohol research in Nepal. Photovoice approach is likely to have enabled participants to speak openly about their experiences and relationships with alcohol, drawing on photos that were emotionally arousing and salient for them. It supported participants to feel in control about what to photograph and which images to share with the researcher.

### Implications for future research

In cultural and community settings such as Chitwan, our findings suggested the amplified impacts of being shunned by own families and communities, leading to social isolation and reduced access to support. Further research is needed to examine perspectives of other community members, especially women, as harm to others through alcohol use, especially against women, children, and other forms of gender inequality is a global concern.<sup>41</sup> Future research should consider factors such as: availability of alcohol; alcohol advertising; negative attitudes towards alcohol users; festivals and gatherings; and illiteracy and poverty, which promote consumption. As well as examining how resources and factors such as: legislation on restricting





alcohol use; community organisations such as Non-Governmental Organisations (NGOs); spiritual sites; healthcare facilities; and women's community groups discourage alcohol use for future work.

There is limited research exploring how spirituality might prove to be an asset to reduce alcohol harm.<sup>42</sup> Such research is urgently needed, given our results on the motivating and supporting role of spirituality, with religious venues and faith group members seen as sources of support for drinkers. Future alcohol interventions research should also explore and optimise assets embedded in nature and the environment. To map the alcohol consumption levels and patterns among an ethnically and culturally diverse Nepali population, a more detailed prevalence survey is needed. Finally, to translate our findings from the asset mapping and photovoice into alcohol interventions tailored to the local needs and assets, participatory workshops using the Experience-Based Co-Design (EBCD) methodologies<sup>17</sup> pulling key stakeholders including the drinkers in the wider community together are the natural next steps.

### Challenges, limitations, and strengths

This study was undertaken during the height of Nepal's COVID-19 pandemic, which created methodological challenges. This restricted travel and prevented Nepali and UK researchers from collaborating as closely as planned. The study was conducted during the monsoon season and the heavy rains caused additional barriers to communication and project activities.

The limitations of this research were the gender imbalances among participants. The cultural context and subject matter may have discouraged some from participating. Participants were disproportionately male; therefore, findings represented the perspectives of mainly male drinkers and health workers. Nevertheless, the two study components complemented one another instructively, both in identifying cultural and community resources and in

understanding how people view and utilise these resources. Consequently, the research gained insight of how gender, family, and caste dynamics are embedded to determine engagement with these resources, and how some resources could either be an asset or a liability or both, depending upon the context.

The photovoice interview method may have important implications to better understand the challenges faced by those who experience alcohol harm and possibly reduce the stigma of talking about alcohol.<sup>43</sup> Viewing participants' photographs also aided discussion between Nepali and UK researchers, stimulating discussion within the team and proving useful when clarifying misunderstandings caused by translation of the interviews. Nevertheless, this study has opened up possibilities for exploring other arts-based methods and facilitating culturally engaging experiences for Nepali participants and researchers alike.<sup>44</sup>

The photovoice interview proved to be an effective method, which produced three themes signifying the importance of families and communities; culture and spirituality; and nature and environment as important assets and factors in shaping participants' attitudes to alcohol. In addition, study participants were harmful drinkers or health workers; thus, findings reported were context specific and expressed by those with lived experience of alcohol, including the effects of others' alcohol use or were involved in providing health care support to their communities. Therefore, these factors added to the strength of the study findings.

### CONCLUSION

This study provided new insights of how cultural and community assets, considered by local communities in Chitwan, Nepal, could both promote and reduce alcohol use, and that these should be explored within their situational context. The study identified new potential to build on visual participatory methods for future research and explore other arts-based enquiry to co-design

inclusive and culturally engaging alcohol interventions.

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### AUTHOR CONTRIBUTIONS

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R.D. was involved in the conceptualisation, methodology, validation, formal analysis, data curation management, writing – original draft, writing – review and editing, supervision, project administration, and funding acquisition. H.Y. contributed towards validation, formal analysis, data curation management, writing – original draft, writing – review and editing. A.A. was involved in the formal analysis, investigation, data curation management, writing – review and editing, supervision, and project administration. N.P.L. contributed towards writing – review and editing, supervision, and project administration. A.N. and E.v.T. were involved in writing – review and editing. J.S. contributed towards the methodology, validation, writing – review and editing, supervision, project administration, and funding acquisition. All authors read and approved the submitted article.

### CONFLICT OF INTERESTS

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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