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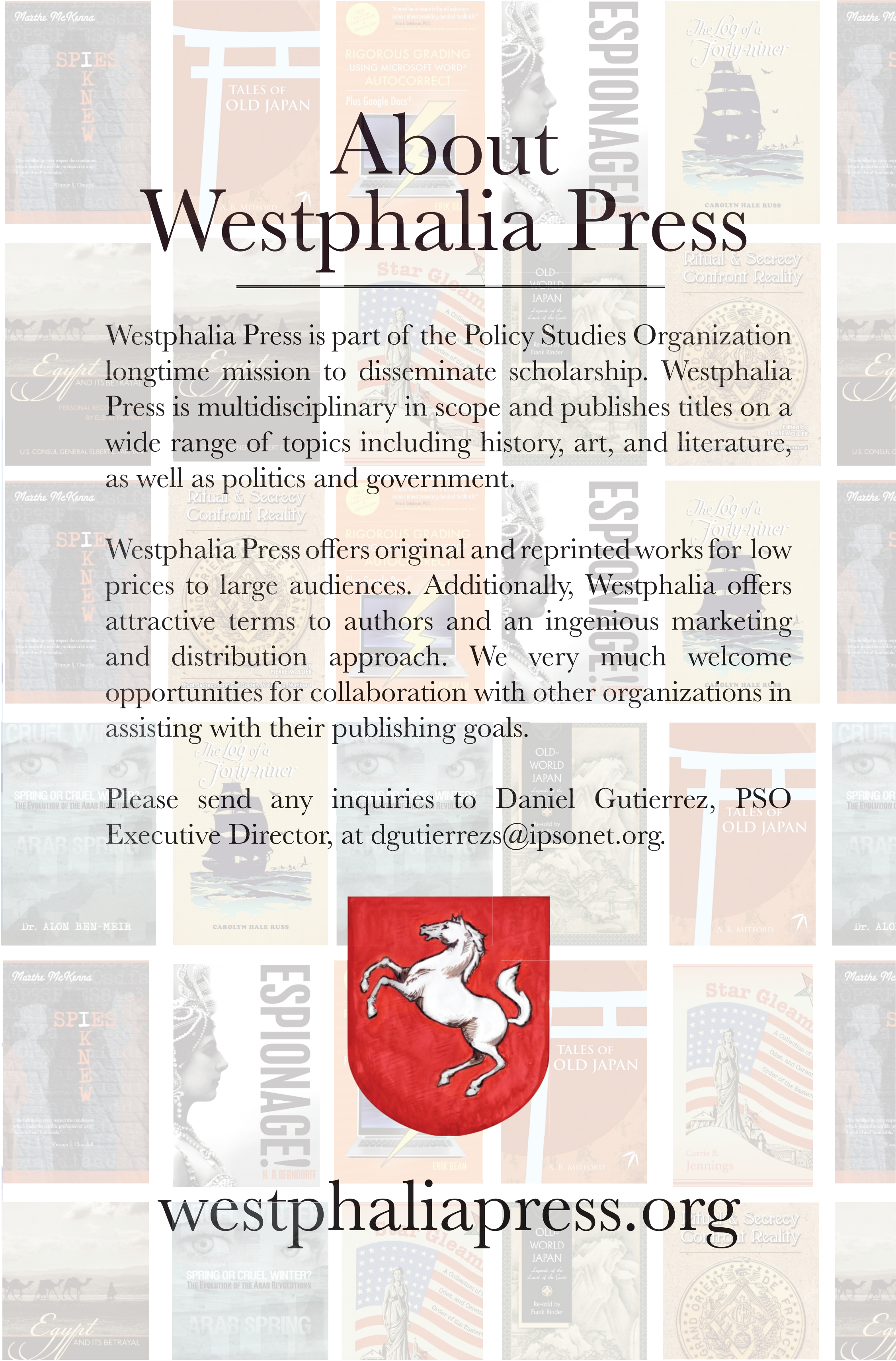

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RESEARCH ARTICLE

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The Association between Medicare Annual Wellness Visits and diabetes outcomes among older adults

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Abstract

The rising prevalence of diabetes among older adults is an increasing concern in the United States and is expected to nearly triple within the next 40 years. The purpose of this study was to investigate whether the utilization of Medicare Annual Wellness Visits (AWVs) is associated with changes in type 2 diabetes (T2D) outcomes among older adults Medicare beneficiaries. We conducted an observational retrospective cohort study to compare the T2D outcomes between those who attended AWVs and those who did not from 2017 to 2019. The criteria used for this study include having at least two readings (hemoglobin A1c [A1c] levels, glucose levels, and the number of T2D medications), and for the AWV cohort, the AWVs had to occur between those readings. A total of 508 (2%) Medicare beneficiaries fit our selection criteria. Only 154 (30%) of these patients with T2D participated in AWVs. At baseline, the AWV cohort had lower A1c levels and fewer comorbidities than the non-AWV cohort. No other statistically significant findings were found. These findings indicate that providers did not utilize AWVs on the more complicated patients, who may need it the most.

KEYWORDS

Annual Wellness Visits, Medicare, older adults, primary care, primary prevention, type 2 diabetes mellitus

Key points

- We investigated whether the utilization of Annual Wellness Visits (AWVs) is associated with changes in diabetes outcomes in people with type 2 diabetes among older adults Medicare beneficiaries.

- We found that individuals with more complicated diabetes are receiving fewer AWVs than those with less complicated diabetes.
- These more complicated diabetes individuals may benefit the most from preventive care because a resulting AWV care plan may provide an opportunity to outline changes in diabetes medications and education leading to fewer diabetes-related complications.
- Future study is needed to determine strategies that increase the number of people with complicated diabetes receiving AWVs.

INTRODUCTION

The prevalence of diabetes among older adults is increasing in the United States. The Centers for Disease Control and Prevention (2020) indicates that 26.8% or 14.3 million of the US population aged 65 and older has diabetes and 24.2 million have prediabetes. These numbers are projected to double or nearly triple by 2060 due to the aging of the overall population, which is recognized as a major risk factor for the development of diabetes (Lin et al., 2018). This disease places a significant burden on older adults' health because of the associated comorbidities of functional decline and premature death (Shang et al., 2021). Therefore, to mitigate these risks and ensure optimal healthy aging, healthcare providers and people living with diabetes may benefit from adopting preventive services in their practices, such as Medicare Annual Wellness Visits (AWVs).

Utilizing AWVs could help diabetic patients stay proactive and informed about their chronic condition. Unlike an annual physical exam, the AWVs is a preventive service that focuses on maintaining the health of older adults through the identification of health risk factors, early detection of chronic diseases, and the provision of a personalized prevention plan (CMS, 2021). The initial AWV has three main components. The first component is to complete the health risk assessment (HRA). With the assistance of a nurse, patients fill out a self-administrated questionnaire regarding their health and well-being. The HRA includes questions about patients' demographics, health status, medical and family history; behavioral and psychological risk factors; and daily activities. The purpose of this assessment is to help health-care providers identify any risk factors for functional decline such as chronic disease or cognitive impairment, which has proven to be 60% higher in diabetic patients (Chatterjee et al., 2016).

The second component is to perform routine checkups, which include assessments such as measuring height, weight, and blood pressure. These assessments give providers an idea of the overall health of the patient as well as aid in the detection of early health conditions or diseases (e.g., type 2 diabetes [T2D], dementia, and depression).

The third component is to develop a personalized prevention plan. Based on the information provided from the HRA and routine checkups, primary care providers (PCPs) will be able to identify the risk factors that require more attention and discuss those with patients in addition to creating a 5- to 10-year personalized prevention plan. These components of an AWV get updated during each subsequent visit (CMS, 2021). Moreover, the purpose of the personalized prevention plan is to provide personalized health advice to the patient, including referrals to health education or preventive counseling, which could significantly change the trajectory of chronic disease outcomes (CMS, 2021).

However, despite its established financial benefit for health-care providers and positive impact on health-care quality and costs (Beckman et al., 2019), the utilization of AWVs is relatively low. The most recent data indicate that, in 2015, only 23.1% of PCPs had adopted AWVs to their practice (Ganguli et al., 2018). In addition, between 2011 and 2016, less than 25% of all Medicare beneficiaries received an AWV (Lind et al., 2019). Earlier studies questioned the value of AWVs (Bluestein et al., 2017; Mehrotra & Prochazka, 2015). However, more recent studies have demonstrated the value of utilizing AWVs, particularly in accountable health-care organizations (Moore & Koenig, 2021).

Prior research has mainly focused on the impact of AWVs on preventive services use, particularly, vaccinations and screenings (Simpson & Kovich, 2019). However, due to the paucity of research on AWVs, only four studies discussed diabetes preventive services and clinical outcomes in their findings (Beckman et al., 2019; Camacho et al., 2017; Galvin et al., 2017; Lobo et al., 2022; McMurry et al., 2022). Beckman et al. (2019) investigated AWV association with health-care quality and costs. The study found that AWVs were associated with lower hemoglobin A1c (A1c) levels (77% vs. 65%). Galvin et al. (2017) examined the effectiveness of team-based AWVs on the use of preventive services. They found that the rate of patients' receipt of diabetes screenings increased from 89.7% during the AWVs to 98.2% at 6-month post-follow-up visits. Similarly, Camacho et al. (2017) compared preventive service use between those who received AWVs and those who did not. The results showed that recipients of AWVs were significantly more likely to receive diabetes screenings than non-AWVs recipients. Lobo et al. (2022) examined whether AWVs are associated with a reduced risk of major lower extremity amputations for patients in the Diabetes Belt (top 15 states with the highest rates of diabetes). The findings revealed that the odds of major lower extremity amputations were 36% lower in patients who received AWVs in the same year compared to those who did not. Finally, McMurry et al. (2022) assessed whether AWVs were associated with increased use of preventive services in Medicare patients with diabetes living in the Diabetes Belt and surrounding counties. In this study, the results demonstrated that AWVs were significantly associated with an increased recommended preventive care use, including eye exams, foot exams, A1c tests, and microalbuminuria tests.

To the best of our knowledge, the effect of utilizing AWV on diabetes outcomes has not been specifically investigated. Therefore, the purpose of this study is to examine whether the utilization of AWVs is associated with changes in diabetes outcomes in people with T2D among older adults Medicare beneficiaries. For the purpose of this study, diabetes outcomes are defined as changes in A1c, glucose levels, and the number of diabetes medications.

METHODS

We conducted an observational retrospective cohort study to compare the T2D outcomes between Medicare-eligible older adult patients (age ≥65 years old) who participated in AWVs and those who did not. The observational period was from January 2017 to December 2019. We excluded the year 2020 due to the government shutdown because of coronavirus disease 2019 and the unknown effect on completion of routine AWVs.

The data comes from 13 community clinics within the University of Utah Health system and was extracted from the University of Utah Enterprise-wide Data Warehouse. Moreover, the data contains information about eligible Medicare patients and their demographics, place of service, visit type, follow-ups, and of interest to the current study, information about T2D (i.e., glucose levels, A1c values, and diabetes medications). This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE)

Guidelines (Von Elm et al., 2007). The study was approved by the University of Utah Institutional Review Board (IRB#00095154).

Study sample

We used medical claims to identify two different cohorts of Medicare beneficiaries who had at least one primary care visit between January 2017 and December 2019. The AWV cohort is patients who attended AWVs during the observational period. The non-AWV cohort is those patients who did not receive an AWV during the observational period. The total number of patients included in this study was 25,000. However, only 508 (2%) of them fit the study criteria. The two cohorts were selected based on the following criteria: First, having at least two readings for A1c, glucose, and diabetes medications. Second, for the AWV cohort, the AWVs have to occur between those readings (the A1c's must be 90 days apart and at least two A1c's between 2017 and 2019). Moreover, we included patients who were ≥65 years, enrolled continuously in Medicare parts A and B during the observational period, and attended one of the 13 community clinics used for this study.

To compare the two cohorts, first, we identified the AWV and non-AWV cohorts based on the selection criteria described above. Second, we calculated the total number of healthcare visits (outpatient and/or physician visits) per year for each cohort. Third, we divided the cohorts into four different categories (AWV T2D, non-AWV T2D, T2D, and non-T2D). Fourth, we identified three comorbid conditions in the patients in the above categories—heart failure, chronic obstructive pulmonary disease (COPD), and hypertension. These three comorbid conditions were chosen because of their high association in people with T2D (AHA, 2019; Park et al., 2022; Wei et al., 2011). Fifth, we used A1c and glucose levels in addition to the use of several diabetes medications (e.g., insulin glargine, metformin HCl, glimepiride, etc.) for the comparison. Finally, *t*-tests were used to conduct two different types of comparisons. First, the two cohorts were compared against each other at the first and last visits. Second, we compared differences within the cohorts (baseline vs. overtime for AWV and baseline vs. overtime for non-AWV).

Statistical analysis

t-Tests were used to compare the means of the continuous variables (age, A1c levels, glucose levels) and discrete count data (comorbid conditions, the number of diabetes medications). Moreover, this analysis was conducted with the assumption of unequal variances between groups and a nonnormal distribution of data. For the dichotomous outcome of diabetes diagnosis, the χ^2 test and proportion test were used to assess the difference in diabetes percentages between the two groups.

RESULTS

At baseline, a total of 508 Medicare beneficiaries were identified. Approximately, 30% ($n = 154$) were AWV participants and 70% ($n = 354$) were non-AWV participants. There were statistically significant differences in demographic characteristics between the two groups. On average, the age of the total sample was 73.9 years old (SD = 6.8) with a higher presence of females (57%) than males (43%). However, the AWV group was significantly younger (mean difference 2.0 years; $p < 0.001$). In addition, the AWV sample was predominantly white (84%) and non-Hispanic (91%) (see Table 1). With regard to

TABLE 1 Baseline (first available) descriptive statistics.

	#Patients	Age (mean)	Age (standard deviation)	Age (range)	Comorbidity (mean)	Comorbidity (standard deviation)	Comorbidity (range)
Total	508	73.9	6.8	65.3–96.6	1.23	0.47	1–3
AWV	154	72.6	5.6	65.4–91.0	1.16	0.40	1–3
Non-AWV	354	74.5	7.2	65.3–96.6	1.26	0.49	1–3
T2D	508		Same as total				
Non-T2D	0		N/A				
AWV T2D	Same as AWV and non-AWV						
Non-AWV T2D							

	#Patients	#Female	#Male	#Married	#Nonmarried	#White	#Non-White	#Hispanic	#Non-Hispanic
Total	508	292	216	297	211	392	116	71	437
AWV	154	88	66	105	49	129	25	15	139
Non-AWV	354	204	150	192	162	263	91	56	298
T2D	508		Same as total						
Non-T2D	0		N/A						
AWV T2D	Same as AWV and non-AWV								
Non-AWV T2D									

t-Test	AWV versus non-AWV	T2D versus non-T2D	AWV T2D versus non-AWV T2D
Age	$p = 0.002$*	N/A	Same as AWV versus non-AWV
Comorbidity	$p = 0.02$*		

Abbreviations: AWV, Annual Wellness Visits; N/A, not available; T2D, type 2 diabetes.

*Significance level *p*-value was chosen as 0.05.

TABLE 2 Baseline (first available) T2D descriptive statistics in AWV versus non-AWV.

	#Patients	#T2D	% T2D	A1c (mean)	A1c (standard deviation)	A1c (range)
AWV	154	154	100	6.99	1.47	5–15.4
Non-AWV	354	354	100	7.31	1.49	4.6–14.2

	Glucose (mean)	Glucose (standard deviation)	Glucose (range)	#Medications (mean)	#Medications (standard deviation)	#Medications (range)
AWV	158.1	50.6	83–404	1.21	0.54	1–5
Non-AWV	173.7	74.3	49–743	1.30	0.61	1–4

	% T2D	A1c	Glucose	#Medications
AWV versus non-AWV	N/A	*t*-Test $p = 0.02$*	*t*-Test $p = 0.006$*	*t*-Test $p = 0.1$

Abbreviations: A1c, hemoglobin A1c; AWV, Annual Wellness Visits; N/A, not available; T2D, type 2 diabetes.

*Significance level *p* value was chosen as 0.05.

TABLE 3 Overtime (last available) T2D descriptive statistics in diabetic AWV versus non-AWV.

	#Patients	#T2D	% T2D	A1c (mean)	A1c (standard deviation)	A1c (range)
AWV	Same as baseline			6.99	1.28	4.7–13.7
Non-AWV				7.21	1.45	4.9–16.1

	Glucose (mean)	Glucose (standard deviation)	Glucose (range)	#Medications (mean)	#Medications (standard deviation)	#Medications (range)
AWV	155.0	48.5	76–455	1.21	0.54	1–4
Non-AWV	162.8	63.9	72–749	1.29	0.58	1–4

	% T2D	A1c	Glucose	#Medications
AWV versus non-AWV	N/A	*t*-Test	*t*-Test	*t*-Test
		$p = 0.07$	$p = 0.13$	$p = 0.16$

Abbreviations: A1c, hemoglobin A1c; AWV, Annual Wellness Visits; N/A, not available; T2D, type 2 diabetes.

*Significance level *p* value wass chosen as 0.05.

TABLE 4 Overtime versus baseline (paired *t*-test *p* values).

	A1c (mean)	Glucose (mean)	Medications (mean)
AWV	0.91	0.46	0.89
Non-AWV	0.17	0.008*	0.80

Note: All AWV and diabetes statuses are based upon info from any visit.

Abbreviations: A1c, hemoglobin A1c; AWV, Annual Wellness Visits.

*Significance level *p* value was chosen as 0.05.

comorbidities, participants had between one and three co-morbid conditions (i.e., diabetes, hypertension, and heart failure) and all of them had T2D (AWVs T2D, non-AWVs T2D). Additionally, the AWV group had fewer comorbid conditions (mean difference 0.1; $p < 0.02$) than the non-AWVs group (see Table 1). The AWV group also had lower A1c levels (mean difference 0.32; $p < 0.02$) and glucose levels (mean difference 15.6; $p < 0.001$) than the non-AWV group (see Table 2).

Comparing AWV and non-AWV groups at the first patient visit and last patient visit, there were no statistically significant differences in outcome measures between the cohorts; A1c levels, $M = 6.99$ (SD = 1.28) versus $M = 7.21$(SD = 1.45); $p = 0.07$; glucose levels, $M = 155.0$ (SD = 48.5) versus $M = 162.8$ (SD = 63.9); $p < 0.013$; and the number of T2D medications, $M = 1.21$ (SD = 0.54) versus $M = 1.29$ (SD = 0.58); $p < 0.016$) (see Table 3). Additional *t*-tests were done within the cohorts (i.e., baseline vs. overtime for AWV and baseline vs. overtime for non-AWV) and the results also show no statistically significant differences except glucose levels within the non-AWV cohort. For the AWV group, A1c levels, $M = 6.99$ (SD = 1.47) versus $M = 6.99$ (SD = 1.28; glucose levels, $M = 158.1$ (SD = 50.6) versus $M = 155.0$ (SD = 48.5); and the number of T2D medications, $M = 1.21$ (SD = 0.54) versus $M = 1.21$ (SD = 0.54). For the non-AWV cohort, A1c levels, $M = 7.31$ (SD = 1.49) versus $M = 7.21$(SD = 1.45); glucose levels, $M = 173.7$ (SD = 74.3) versus $M = 162.8$ (SD = 63.9); and the number of T2D medications, $M = 1.30$ (SD = 0.61) versus $M = 1.29$ (SD = 0.58) (see Tables 2, 3, and 4). However, at baseline, the AWV cohort had lower A1c levels and fewer comorbidities than the non-AWV cohort.

DISCUSSION

Our findings show that people with T2D receiving AWVs have less complicated diabetes, defined as having lower A1c levels and fewer comorbidities, when compared to people in the non-AWV group. This indicates that PCPs conducted AWVs on healthier people rather than those with more complicated T2D. Diabetes outcomes, defined as A1c levels, glucose levels, and number of diabetes medications, did not significantly change in the AWV cohort and were similar to the non-AWV cohort over time. Based on these findings, we sought to understand why PCPs are not conducting AWVs on more complicated patients.

We identified two possible reasons why PCPs may not be currently conducting AWVs on sicker patients. The first potential explanation is that medically complex individuals may prioritize addressing chronic and acute problems more than preventive care-related visits. This may be related to patients' traditional value of addressing their agenda related to current chronic and acute conditions over discussing prevention (Beran & Craft, 2015). Additionally, some patients might lack empowerment to address their health issues, leading to less optimal health outcomes and less interest in the AWV. Therefore, PCPs may resort to traditional visits that address chronic conditions, acute concerns, and physiological issues in one visit, which leaves little time for prevention (Beran & Craft, 2015). This may encourage PCPs to avoid recommending AWV to individuals with more complicated conditions.

The second potential explanation is that PCPs may prefer to pay more time and attention to challenging conditions seen in medically complex patients that they are traditionally accustomed to rather than engaging in preventive approaches and services. This may be especially true when considering the time and complexity of implementing and utilizing AWVs in addition to urgent health-care visits (Bluestein et al., 2017). According to Bluestein et al (2017), a considerable number of PCPs valued AWVs; however, they were deterred by the billing and documentation complexities.

The third potential explanation is that since appointments are scarce and expensive resources to both the patients and clinicians, PCPs may prioritize providing AWVs for healthier patients where there is the most plausible gain for earlier detection of modifiable consequences of diabetes. This explanation may align with the current research indicating that AWVs may be effective for the early detection of diabetes and diabetes-related complications (Lobo et al., 2022; McMurry et al., 2022), thus allowing individuals with diabetes to take preventative actions.

Despite the comfort of providers and individuals with T2D, it is imperative for providers to increase AWVs in the large patient population of individuals with diabetes. The AWV provides an opportunity to document diabetes inertia defined as the lack of timely adjustment to therapy when a patient's treatment goals are not met. In diabetes care, therapeutic inertia means being slow to add or change the care plan if a patient's A1C is too high. The care plan that may be developed in an AWV for individuals with diabetes includes changes in medications, health checks, diabetes education, nutrition therapy, an exercise prescription, and/or emotional support. According to the American Diabetes Association (ADA), despite the variety of diabetes treatments available, no meaningful improvements in A1c have been made. Moreover, there is an increase in the percentage of patients with high A1c levels (ADA, 2023). Providers may benefit from education on how to conduct diabetes-specific AWVs and to create a diabetes therapeutic inertia care plan. The potential benefit of this education and resulting care plan is the improvement in diabetes care for Medicare beneficiaries with diabetes.

Although we did not find a significant change in A1c levels, this contrasts with findings from previously published research that sought to determine an association between AWVs and health-care quality and costs. Beckman et al. (2019) evaluated 16 quality measures, including A1c, and found that AWVs were associated with lower A1c levels (77% vs. 65%). This difference may be accounted for by their much larger sample size ($N = 8917$) drawn from 44 primary care clinics participating in two accountable care organizations. Thus, more research is necessary to determine whether A1c is associated with AWVs in other health-care systems.

Research has shown several other positive outcomes related to AWVs in individuals with diabetes. First, AWVs have been shown to significantly increase the likelihood of receiving preventive services including diabetes screenings (Camacho et al., 2017). These AWV screenings allow PCPs to detect diabetes in the early stages and to create a 5- to 10-year personalized prevention plan that could help patients improve their chronic condition outcomes. Similarly, a recent study published by the ADA found that the odds of major lower extremity amputations were 36% lower in patients who used AWVs in the same year compared to those who did not, adjusting for all covariates (Lobo et al., 2022). Moreover, AWVs have been shown to increase referrals for other preventative care, including eye exams, A1c testing, foot exams, and microalbuminuria (McMurry et al., 2022).

Second, AWVs substantially improve the rate of adherence to diabetes screenings (Galvin et al., 2017). Due to the level of communication that AWVs require, PCPs have a unique opportunity to have thorough discussions with their patients and answer any concerns they might have regarding their current health status, risk factors, and their proposed prevention plan. This helps patients avoid confusion and potentially increases their motivation and adherence to follow the prescribed prevention plan.

Our study has limitations that need to be considered. First, the observational period for this study is only 2 years. This could be considered a relatively short time frame, especially when considering the fact that AWVs are only conducted once per year and the prevention plan it provides is designed for 5–10 years. Longer observational periods (5–10 years) could be more effective when conducting future research.

Second, although the sample size was sufficient for this study, the sample was not racially or ethnically diverse, which limits the generalizability of our results. Further research, with a nationally representative sample, is needed. Third, due to the unavailability of data, we could not include body mass index (BMI) in our outcome measures. BMI is strongly associated with T2D management (Gray et al., 2015). Future research could utilize more outcome measures when assessing T2D management, including BMI in addition to using hepatocellular carcinoma risk score or a comorbidity index (Charlson or Elixhauser) to have a stronger understanding of the diabetes burden of Medicare beneficiaries.

Third, our observation is limited to the claims database from the University of Utah Health System. We did not investigate AWVs outside this system during the observational period. Therefore, it is plausible that some patients who we categorized as non-AWV may have conducted their AWVs in different health systems.

Our study adds to a growing body of literature showing the importance of utilizing AWVs, particularly in health promotion and disease prevention (Simpson & Kovich, 2019). Our findings provide a foundation for future research to further explore the value of utilizing AWVs for PCPs, specifically for individuals with T2D. Future research could also investigate the association between AWVs and T2D by comparing the incidence of T2D diagnosis between those who attended AWVs versus those who did not. The results may show the value of detecting T2D at an early stage, which could allow patients and clinicians to better manage their complications.

In addition, future research may consider exploring the benefits and challenges of incentivizing patients to complete AWVs. These incentives may include financial incentives. Providers can also benefit from incentives to complete AWVs. Providers may be unaware of the reimbursement available for AWVs and the impact this has on their practice's income. Further research is needed to examine the effects of innovative educational programs addressing the importance of AWVs for patients and providers. Our study findings are timely given the current transition from volume- to value-based care, which mainly focuses on disease prevention (Change Healthcare, 2019).

In summary, we investigated whether the utilization of AWVs is associated with changes in diabetes outcomes in people with T2D among older adults Medicare beneficiaries. We found that individuals with more complicated diabetes are receiving fewer AWVs than those with less complicated diabetes. These more complicated diabetes individuals may benefit the most from preventative care because a resulting AWV care plan may provide an opportunity to outline changes in diabetes medications and education leading to fewer diabetes-related complications. Future study is needed to determine strategies that increase the number of people with complicated diabetes receiving AWVs.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ETHICS STATEMENT

The data were used only for the purposes described in this manuscript. We ensured the privacy of the participants in this study by keeping the results anonymous. The participants' information and the data obtained from the participants has not been discussed with anyone who is not involved in the study. The confidentiality of the data is maintained, and the participants' records were in locked files and stored on password-protected computers.

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REFERENCES

American Diabetes Association (ADA). (2023). *About therapeutic inertia*. therapeuticinertia.diabetes.org. https://www.therapeuticinertia.diabetes.org/about-therapeutic-inertia#:~:text=What%20is%20diabetes%20therapeutic%20inertia,patient's%20A1C%20is%20too%20high

American Heart Association (AHA). (2019, June 6). *Diabetes and heart failure are linked; treatment should be too*. Retrieved April 11, 2023, from https://www.heart.org/en/news/2019/06/06/diabetes-and-heart-failure-are-linked-treatment-should-be-too#:~:text=People%20who%20have%20Type%202,a%20risk%20factor%20for%20diabetes

Beckman, A. L., Becerra, A. Z., Marcus, A., DuBard, C. A., Lynch, K., Maxson, E., Mostashari, F., & King, J. (2019). Medicare Annual Wellness Visit association with healthcare quality and costs. *The American Journal of Managed Care*, *25*(3), 76.

Beran, M. S., & Craft, C. (2015). Medicare Annual Wellness Visits. Understanding the patient and physician perspective. *Minnesota Medicine*, *98*(3), 38–41.

Bluestein, D., Diduk-Smith, R., Jordan, L., Persaud, K., & Hughes, T. (2017). Medicare Annual Wellness Visits: How to get patients and physicians on board. *Family Practice Management*, *24*(2), 12–16.

Camacho, F., Yao, N. A., & Anderson, R. (2017). The effectiveness of Medicare Wellness Visits in accessing preventive screening. *Journal of Primary Care & Community Health*, *8*(4), 247–255. https://doi.org/10.1177/2150131917736613

Centers for Disease Control and Prevention. (2020). *National diabetes statistics report*. https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf

Centers for Medicare & Medicaid Services. (2021). *Medicare claims processing manual*. https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/clm104c18pdf.pdf

Change Healthcare. (2019). *Value-based care in America: state-by-state*. https://www.pcpcc.org/sites/default/files/resources/%7Ba7b8bcb8-0b4c-4c46-b453-2fc58cefb9ba%7D_Change_Healthcare_Value-Based_Care_in_America_State-by-State_Report.pdf

Chatterjee, S., Peters, S. A. E., Woodward, M., Mejia Arango, S., Batty, G. D., Beckett, N., Beiser, A., Borenstein, A. R., Crane, P. K., Haan, M., Hassing, L. B., Hayden, K. M., Kiyohara, Y., Larson, E. B., Li, C. Y., Ninomiya, T., Ohara, T., Peters, R., Russ, T. C., … Huxley, R. R. (2016). Type 2 diabetes as a risk factor for dementia in women compared with men: A pooled analysis of 2.3 million people comprising more than 100,000 cases of dementia. *Diabetes Care*, *39*(2), 300–307. https://doi.org/10.2337/dc15-1588

Von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P., STROBE Initiative. (2007). The Strengtheningstrengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. *PLoS Medicine*, *4*(10), e296. https://doi.org/10.1371/journal.pmed.0040296

Galvin, S. L., Grandy, R., Woodall, T., Parlier, A. B., Thach, S., & Landis, S. E. (2017). Improved utilization of preventive services among patients following team-based Annual Wellness Visits. *North Carolina Medical Journal*, *78*(5), 287–295. https://doi.org/10.18043/ncm.78.5.287

Ganguli, I., Souza, J., McWilliams, J. M., & Mehrotra, A. (2018). Practices caring for the underserved are less likely to adopt Medicare's Annual Wellness Visit. *Health Affairs*, *37*(2), 283–291. https://doi.org/10.1377/hlthaff.2017.1130

Gray, N., Picone, G., Sloan, F., & Yashkin, A. (2015). Relation between BMI and diabetes mellitus and its complications among US older adults. *Southern Medical Journal*, *108*(1), 29–36. https://doi.org/10.14423/SMJ.0000000000000214

Lin, J., Thompson, T. J., Cheng, Y. J., Zhuo, X., Zhang, P., Gregg, E., & Rolka, D. B. (2018). Projection of the future diabetes burden in the United States through 2060. *Population Health Metrics*, *16*(1), 9. https://doi.org/10.1186/s12963-018-0166-4

Lind, K. E., Hildreth, K. L., & Perraillon, M. C. (2019). Persistent disparities in Medicare's Annual Wellness Visit Utilization. *Medical Care*, *57*(12), 984–989. https://doi.org/10.1097/MLR.0000000000001229

Lobo, J. M., Kim, S., Kang, H., & Sohn, M. W. (2022). 122-OR: association between Annual Wellness Visits and major amputations among Medicare beneficiaries in the diabetes belt. *Diabetes*, *71* 122-OR. https://doi.org/10.2337/db22-122-OR

McMurry, T. L., Lobo, J. M., Kang, H., Kim, S., Balkrishnan, R., Anderson, R., McCall, A., & Sohn, M. W. (2022). Annual Wellness Visits are associated with increased use of preventive services in patients with diabetes living in the diabetes belt. *Diabetes Epidemiology and Management*, *7*, 100094. https://doi.org/10.1016/j.deman.2022.100094

Mehrotra, A., & Prochazka, A. (2015). Improving value in health care—Against the annual physical. *New England Journal of Medicine*, *373*(16), 1485–1487. https://doi.org/10.1056/NEJMp1507485

Moore, N., & Koenig, N. (2021). I*ncreasing Medicare annual wellness visits in accountable care organizations*. AJMC. Retrieved April 18, 2023, from https://www.ajmc.com/view/increasing-medicare-annual-wellness-visits-in-accountable-care-organizations

Park, S. S., Perez Perez, J. L., Perez Gandara, B., Agudelo, C. W., Rodriguez Ortega, R., Ahmed, H., Garcia-Arcos, I., McCarthy, C., & Geraghty, P. (2022). Mechanisms linking COPD to type 1 and 2 diabetes mellitus: Is there a relationship between diabetes and COPD? *Medicina*, *58*(8), 1030. https://doi.org/10.3390/medicina58081030

Shang, Y., Fratiglioni, L., Vetrano, D. L., Dove, A., Welmer, A. K., & Xu, W. (2021). Not only diabetes but also prediabetes leads to functional decline and disability in older adults. *Diabetes Care*, *44*(3), 690–698. https://doi.org/10.2337/dc20-2232

Simpson, V. L., & Kovich, M. (2019). Outcomes of primary care-based Medicare annual wellness visits with older adults: A scoping review. *Geriatric Nursing*, *40*(6), 590–596. https://doi.org/10.1016/j.gerinurse.2019.06.001

Wei, G. S., Coady, S. A., Goff, Jr. D. C., Brancati, F. L., Levy, D., Selvin, E., Vasan, R. S., & Fox, C. S. (2011). Blood pressure and the risk of developing diabetes in African Americans and Whites. *Diabetes Care*, *34*(4), 873–879. https://doi.org/10.2337/dc10-1786

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RESEARCH ARTICLE

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Sociopathic narcissistic leadership: How about their victims?

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Abstract

There is evidence globally that the number of sociopathic, narcissistic, and so-called antisocial personality disorders is far more prevalent than expected. Most individuals with such a disorder cause limited harm to society. However, politicians may, through an exaggerated sense of entitlement, grandiosity, sensitivity to criticism, and the hunger for acclaim, cause conflicts that have historically reached the level of wars, political unrest, or severe social suffering. This is often evident only after attaining a high office and is especially witnessed in international and national politicians. Thus, this review aims to clarify the social, political, and healthcare security implications of sociopathic narcissistic leadership and to recommend potential societal options to avoid the untoward leadership consequences that too often occur.

KEYWORDS

leader, narcissistic, politics, sociopathic, victims

Key points

- Narcissistic sociopathy appears to be more common globally than previously believed.
- The sociopolitical consequences of such personality traits are far more costly and serious if found among high leadership positions.
- Although the condition is well known among medical professionals, ordinary people have no or insufficient knowledge.
- Educational initiatives and medical evaluation can help identify affected individuals early in adulthood and before taking office.

INTRODUCTION

There has been an increasing interest in the so-called dark triad (DT) and its existence among the global population (Zeigler-Hill & Marcus, 2016). DT encompasses Narcissism, Psychopathy, and Machiavellianism, shown to exist across cultures and nationalities, affecting both men and women to diverse degrees (Rogoza et al., 2021; Sedikides et al., 2015).

The American Psychological Association (APA) defines *narcissism* as "excessive self-love or egocentrism" (American Psychological Association APA, 2023). Narcissism, seen in upwards of 10% of the American public, is diagnosed in individuals who seek more attention and admiration and who display an unreasonably high sense of self-importance (Khorram-Manesh & Burkle, 2022a; Post, 2015). Over 75% of those diagnosed are men (Green et al., 2022). Narcissism is part of normal development in childhood and adolescence and develops into "healthy narcissism" in individuals with a supportive home and social life, for example, academicians (Post, 2015; Yakeley, 2018). However, the lack of support and educational resources may result in abnormal development, which may continue to dominate one's personality development into adulthood, resulting in the pathological variant of narcissism, that is, "narcissistic personality disorder (NPD)" (Khorram-Manesh & Burkle, 2022a). Narcissism, as a personality trait, is so frequent that there have been attempts to eliminate NPD from the revised version of the APA's Diagnostic and Statistical Manual (DSM) of Mental Disorders because it was rapidly becoming "the new normal" (Post, 2015). Post describes the narcissist as one who is "arrogant, vain, egocentric, extremely ambitious, believing he is a very special person; he is full of himself" (Post, 2015).

Originally formulated by psychoanalysts such as Wilhelm Reich (1897–1957), Otto Kernberg (1928–), Heinz Kohut (1913–1981), and psychologist Theodore Millon, NPD is defined by the APA (DSM-IV-TR and DSM-5) as a personality disorder with the following characteristics: "(a) a long-standing pattern of grandiose self-importance and an exaggerated sense of talent and achievements; (b) fantasies of unlimited sex, power, brilliance, or beauty; (c) an exhibitionistic need for attention and admiration; (d) either cool indifference or feelings of rage, humiliation, or emptiness as a response to criticism, indifference, or defeat; and (e) various interpersonal disturbances, such as feeling entitled to special favors, taking advantage of others, and inability to empathize with the feelings of others" (APA, 2023; Yakeley, 2018).

Post was the first to psychologically analyze narcissism and politics, systematically exploring the entitlement, grandiosity, sensitivity to criticism, and hunger for acclaim that is witnessed in international and national politicians (Post, 2015). In 2017, Post, along with 26 other psychiatrists, psychologists, and other mental health professionals, described the "clear and present danger" that then-US President Trump's mental health posed to the nation (Lee, 2017). It resulted in him recommending, under a '*duty to warn*', information that the public deserves in assessing the potential threat to the mental health of future world leaders with antisocial personality disorder (ASPD). ASPD is defined by the APA as "the presence of a chronic and pervasive disposition to disregard and violate the rights of others. Manifestations include repeated violations of the law, exploitation of others, deceitfulness, impulsivity, aggressiveness, reckless disregard for the safety of self and others, and irresponsibility, accompanied by a lack of guilt, remorse, and empathy." ASPD has been known by various names, including dissocial personality, psychopathic personality, and sociopathic personality, and is among the most heavily researched personality disorders as well as the most difficult to treat, included in both DSM-IV-TR and DSM-5 (APA, 2023).

Psychopathy represents a neuropsychiatric disorder in which the affected individual shows a lack of emotional responses and empathy and exhibits poor behavioral controls that may lead to self-serving antisocial actions and criminal deeds (Lynam & Gudonis, 2005).

TABLE 1 Summary of differences between psychopathy and sociopathy (Pemment, 2013).

Psychopath	Sociopath
Pretend to care about others	Do not care about how others feel
Ignorant and cold-hearted and do not recognize other people's concerns and affliction	Behave more impulsively, are prone to anger and rage, and while understanding their behavior, try to explain and find the rationale behind their acts
Their relationships are shallow and fake, can maintain a normal life under a cover, and fail to form genuine emotional attachments while loving others in their way	They usually cannot maintain regular work but may have a family life and be attached emotionally with great difficulties

Sociopaths, on the other hand, have a limited ability to feel empathy and remorse. They easily react violently when confronted by the consequences of their actions. The term "sociopathic" has been used collectively to describe narcissistic individuals with antisocial characteristics and negative influence on rules, regulations, and the well-being of societies and governing systems (Burkle, 2016). Although sociopathy and psychopathy are used interchangeably and may overlap in some areas, there are distinct differences in meaning between sociopathy and psychopathy (Yakeley, 2018) (Table 1).

This distinction between sociopathy and psychopathy is important for many reasons. The most critical one is the fact that sociopaths have a sense of morality, indicating differences in brain activities between the two (Pemment, 2013). This may clarify why sociopaths can hide their conditions better than psychopaths, paving the way for them to succeed and achieve high positions in society. Both sociopaths and psychopaths may exhibit violent actions, which can manifest through enforcing violence in several areas and against social norms and rules, for example, domestic violence, interfamily violence, street violence, and so on. This so-called antisocial personality disorder (ASPD) is evident in approximately 3%–15% of psychopaths, while the number of sociopaths having ASPD exceeds 30% (Johnson, 2019). Most important is that both groups are eminent threats to society on different scales, depending on their positions and responsibilities within the society. The threats are more evident if they have any influence on the societal infrastructures, people's lives and well-being, and basic human rights. Once an individual with an antisocial disorder gains power, he or she continues to cause disharmony without seeking peace (Burkle, 2016). Social harmony, justice, and political stability are needed, in particular, for achieving the Sustainable Development Goals (SDGs) of the United Nations (UN) to guarantee a brighter future for the global community. The last two SDGs, that is, SDG 16 and 17, encompass global partnership, peace, justice, and strong institutional structures. These so-called "consequential factors" are crucial pillars for social harmony and development and allow for achieving other SDGs, which are grouped into (1) environmental, (2) infrastructural and economic, and (3) social and health-related factors (Khorram-Manesh, 2023).

Finally, *Machiavellianism*, the last element of the DT, is a condition that shares many similar traits with narcissism, such as being manipulative and deceitful, but the motivation behind these behaviors differs. The Machiavellian personality trait appears to be less emotional, shows indifference to morality, lacks the classic narcissistic rage, and is manipulative for personal benefit (Kay & Arrow, 2022; Post, 2015).

Historically, leaders such as Hitler, Mussolini, Stalin, and Tojo have personified the picture of despotic governments leading their populations under the oppression of autocratic regimes (Burkle, 2019). With increasing knowledge about ASPD, it might be clear that many tyrants and dictators shared or share this characteristic. As we turn the pages of the last four decades, new leaders with suspected narcissistic sociopathy have appeared with the special mission of global dominance, serving their agenda, and endangering global social well-being, including the destruction of healthcare and healthcare security. The impacts of such a destructive attitude afflict people, nationally and internationally, often resulting in destructive global public outcomes (Yakeley, 2018).

The purpose of this paper is to investigate universal factors seen in narcissistic and sociopathic leadership and to describe the results in a comprehensive way to get a better familiarity with the current global political system and its impact on the global population. Additionally, some recommendations are offered on how to better cope and forestall the emergence of future tyrants and sociopathic narcissistic leadership.

METHODS

A review was conducted to map the current literature on the topic systematically and to review the results nonsystematically while having the following question in mind: "How do sociopathic narcissistic leaders influence their victims and global health security?" This method appears to be eligible to answer the research question and lay the groundwork for future research (Grant & Booth, 2009). The following search terms: Sociopathy, Narcissism, Leader, Victims, Nationalism, and Politics, were used, alone or in combinations, using the following search engines: PubMed, Scopus, WOS, and the University of Gothenburg Library databases (Figure 1).

The terms were searched in diverse combinations by both authors independently to obtain the highest number of possible hits, using the Boolean operators AND/OR. The focus was on the first three terms (Sociopathy, Narcissistic, and Leader). Other terms were added subsequently, alone or in combination. The results were compiled and filtered by removing duplicates and irrelevant studies according to the PRISMA flow chart (Page et al., 2021). All publications discussing leadership associated with narcissism and sociopathy were

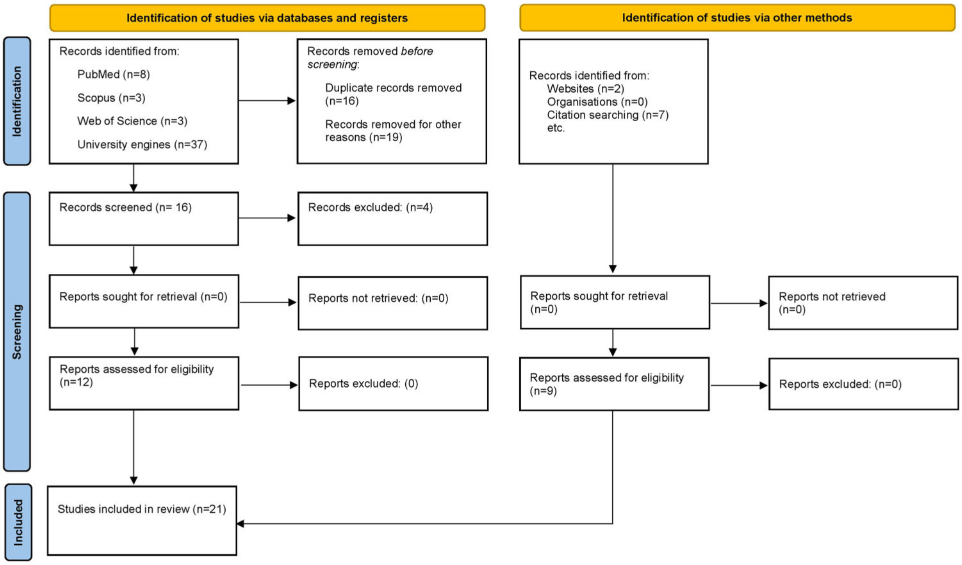

FIGURE 1 Identification of studies via databases according to the PRISMA flow diagram for new systematic reviews, which included searches of databases, registers, and other sources (Page, Moher, et al., 2021). *From*: Page, McKenzie et al. (2021). For more information, visit: http://www.prisma-statement.ord/.

included. However, articles with no relevance to the aim of the study, non-English papers, books, and reports were excluded.

Both authors reviewed all abstracts and full manuscripts collectively and achieved a consensus on the included studies after a discussion and based on inclusion and exclusion criteria. One author is a psychiatrist and has direct experience with antisocial leadership, including structured interviews. His experience and knowledge helped to identify relevant publications.

Information about each included study was transferred to a table (Table 2), with a short description of the findings. Almost all studies were descriptive, with only a few quantitative studies. Consequently, quality assessment of included studies based on their method was not possible.

RESULTS

The search resulted in eight hits in PubMed, three in WOS, three in Scopus, and 37 in the University databases. Fifty-one studies were reviewed, compiled, and filtered. Fifteen studies were removed as duplicates, and 19 were found to be irrelevant. Another nine studies from the list of references of included studies were found to be relevant and were added at the last stage (Figure 1). All 21 included studies were thoroughly studied and categorized under two predesigned main topics:

(1) Leadership and narcissistic sociopathy.
(2) Healthcare security and narcissistic sociopathy.

The rationale behind the two groups was to identify the relationship between leadership, narcissism, sociopathy, and healthcare security. The latter would reveal the impact on the victims, that is, the population.

Leadership and narcissistic sociopathy

Early on in their lives, a certain percentage of the global population can be identified with unique, often troublesome, and yet poorly understood personality characteristics. During normal childhood, children learn to experience personal anxiety, doubt, shame, depression, guilt, and so on. Moreover, they learn to establish both age-appropriate neurologically and socially beneficial developmental tasks, resulting in a healthy curiosity; critical reflection; perception; sound judgment; and foundations of ethics, morality, and empathy. A lack of such development may result in the development of narcissism, deteriorated ego, and immaturity in a certain portion of the young population (Burkle, 2016; Khorram-Manesh & Burkle, 2022a; Rogoza et al., 2021; Zeigler-Hill & Marcus, 2016). However, the symptomatology is often too vague, and one may only know of their presence later in life as a subset of the population who are driven to seek the ultimate opportunity to control, dictate, and live out their fantasies of power on the world stage as adults. They may first be seen as someone who bullies other youngsters at schools and in social gatherings, with their behavior often becoming more evident later at universities or in the workplace (Khorram-Manesh & Burkle, 2022a). Their attempt to control others, whether they be individuals or leaders of countries who challenge them, almost always culminates in some degree of violence.

The traits displayed by such individuals, in contrast to psychopaths, are not that of a mental illness per se but of discernible character disorders beginning at a young age with

TABLE 2 Included papers in the review.

Number/ Reference	Author/Journal/Year	Title	Description
1	Beck, *Behaviour Research and Therapy*, 2002	Prisoners of hate.	There is group narcissism in all extremist groups that enhance their collective self-image as pure, righteous, and united. The gain is martyrdom for foot soldiers while the instigators and leaders have their own personal narcissistic goals, that is, power and prestige with impacts on local and global value and well-being.
2	Lynam and Gudonis, *Annual Review of Clinical Psychology*, 2005	The development of psychopathy.	This is a review exploring two aspects of the development of psychopathy, that is, what is it and where it comes from.
3	*Pemment, Aggression and Violent Behavior*, 2013	*Psychopathy versus sociopathy: Why the distinction has become crucial*.	*There are differences in the meaning of the interchangeably used terms psychopath and sociopath. Psychopathy, which is the more common of the two, has a much more specific definition in neuroscience*.
4	Sedikides et al., *Advances in Motivation Science*, 2015	On the panculturality of self-enhancement and self-protection motivation: The case for the universality of self-esteem	There are differences in how Easterners and Westerners experience self-esteem. The former experience liking-based self-esteem, and the latter competence-based self-esteem, as well as consider individualistic attributes important and self-enhance on them. When constraints on candid self-enhancement are lifted, Easterners behave like Westerners. Nevertheless, implicit self-esteem is similarly high across cultures. Finally, self-esteem and self-enhancement/self-protection confer parallel benefits in both East and West, depending in part on domain relevance. Self-enhancement and self-protection, as well as self-esteem, reflect fundamental human motivation.
5	*Rosenberg and Shvetsova, The Political Economy of Social Choices*, 2016	*Autocratic health versus democratic health: Different outcome variables for health as a factor versus health as a right. In Gallego, M. & Schofield, N. (Eds.) The political economy of social choices*.	*Autocracies' healthcare policy is a part of their economic policy, focusing on developing the labor force as a production factor, thus better in the management of diseases that damage the workforce, at the expense of other areas of health improvement*.
6	*Burkle, Disaster Medicine and Public Health Preparedness*, 2016	*Antisocial personality disorder and pathological narcissism in prolonged conflicts and wars of the 21st century*.	*Burkle describes how many protracted and long-lasting internal conflicts and wars have created global instability since the end of the Cold War. These conflicts have also created turmoil and the vacuum needed to establish bad leadership by opportunistic leaders, suffering from severe antisocial character disorders. He also describes the identifying characteristics of this unique and poorly understood subset of the population who are driven to seek the ultimate opportunity to control, dictate, and live out their fantasies of*

TABLE 2 (Continued)

Number/ Reference	Author/Journal/Year	Title	Description
			power on the world scene and discusses why their destructive actions remain unabated in the 21st century.
7	*Zeigler-Hill and Marcus*, 2016	*The dark side of personality: Science and practice in social, personality, and clinical psychology.*	*Understanding the dark personality traits and traits with dark features, and their consequences is necessary in the treatment of affected individuals. This review synthesizes recent research that connects pathological personality features to the Big Five personality dimensions, creating an interdisciplinary taxonomy of dark personality traits, and sociopathy, narcissism, authoritarianism, and so on. Chapters discuss the maladaptive and adaptive features of these traits, including how to address them in clinical settings.*
8	Mercer, *Pastoral Psychology*, 2018	The dangerous case of Donald Trump: A case study in contested ethics and the public uses of professional expertise.	This is a book review that raises important questions about the ethical conundrum presented by a professional code of ethics containing both the Goldwater Rule's requirement for practitioners to avoid a diagnosis of public figures with whom they have no therapeutic relationship, and the Duty to Warn, which impels them to provide warnings when the risk of danger is suspected with emphasis on President Donald Trump and the so-called "Trump effect."
9	*Johnson, Forensic Research & Criminology International Journal*, 2019	*Understanding the violent personality: Antisocial personality disorder, psychopathy, & sociopathy explored.*	The paper discusses the relationship between violence, sociopathy, and psychopathy, emphasizing the importance of the evaluation and assessment of people with these characteristics. Discussing the violent personality in relation to sociopathy, narcissism, and psychopathy.
10	*Burkle, Prehospital and Disaster Medicine*, 2019	*Character disorders among autocratic world leaders and the impact on health security, human rights, and humanitarian care.*	*This paper reports the shared character traits in several leaders stemming from a cognitive and emotional developmental arrest in both childhood and adolescence resulting in fixed, life-long, concrete thinking patterns, resulting in autocratic leadership. It further recommends building multidisciplinary capacity and capability in societies among democracies to limit or cease such authoritarian dominance by a developmental understanding of why autocrats exist and persist in externalizing their pathological behaviors on unsuspecting and vulnerable populations, and the limitations they place on negotiations.*
11	Meyer and Taft-Morales, 2019	Central American migration: root causes and U.S. policy	This report tries to understand and address the root causes of the migration trends to the US borders from the Northern Triangle

(Continues)

TABLE 2 (Continued)

Number/ Reference	Author/Journal/Year	Title	Description
			region of Central America (composed of El Salvador, Guatemala, and Honduras).
12	*Burkle, Prehospital and Disaster Medicine*, 2020	*Declining public health protections within autocratic regimes: impact on global public health security, infectious disease outbreaks, epidemics, and pandemics.*	*The paper discusses the management elements of public health emergencies of international concern, which is not sufficient in nations ruled by autocratic regimes. Autocratic leaders have a direct impact on health security, a direct negative impact on health, and create adverse political and economic conditions that only complicate the crisis further. Exemplifying COVID-19 pandemic management, the author calls for stronger strategic capacity, legal authority, support, and institutional status under WHO leadership granted by an International Health Regulations Treaty.*
13	*Pils, Ethics & Global Politics*, 2021	Complicity in democratic engagement with autocratic systems	*The paper describes how the autocratic control of civil society, including academia, can be extended to democratic societies and institutions in ways that pose threats to liberal-democratic values, such as academic freedom, for example, through mechanisms and practices that lead to academic self-censorship. It also addresses the complicity in global collaboration in autocratic leadership.*
14	*Rogoza et al., Assessment*, 2021	*Structure of dark triad dirty dozen across eight world regions.*	*The structure of the Dark Triad (i.e., narcissism, psychopathy, Machiavellianism) is examined in a sample of 11,488 participants from several countries in the West and East and other world regions. The results confirmed the measurement invariance of the DTDD (the Dark Triad Dirty Dozen) across participants' sex in all world regions, with men scoring higher than women on all traits, except for psychopathy in Asia, where the difference was not significant.*
15	*Brenner, International Journal of Applied Psychoanalytic Studies*, 2021	*Disinformation, disease, and Donald Trump.*	*Discusses the role of leadership during the pandemic by referring to the COVID-19 pandemic and President Donald Trump's actions, distortions, misleading statements, and frank lies resulting in a great erosion of trust in a time of great peril. The paper also psychoanalytically explores the author's contention that there has been a dual pandemic that has damaged the body and the mind—a highly contagious virus and a disinformation campaign gone viral.*
16	*Khorram-Manesh and Burkle, Disaster*	*Narcissistic sociopathy in global autocratic leaders: Arrested*	*The purpose of this paper is to investigate the developmental nature of decision makers with sociopathic narcissistic characteristics and the*

TABLE 2 (Continued)

Number/ Reference	Author/Journal/Year	Title	Description
	Medicine and Public Health Preparedness, 2022a	*development, obsessive demand for power, and the emergence of unlawful hybrid wars.*	*consequences of their acts of aggression both locally and globally. There is a clear relationship between the psychological developments of individuals with narcissistic and psychopathological disorders and the implications of an abnormal progression of these individuals and their obsessive desire for singular leadership, which seriously impacts healthcare security and its essential elements provided by international humanitarian law and the Geneva Convention.*
17	Kay and Arrow, *Social and Personality Psychology Compass*, 2022	Taking an elemental approach to the conceptualization and measurement of Machiavellianism, narcissism, and psychopathy.	The study outlines how decomposing personality traits into smaller elements can address several issues and provides a primer on the history and assessment of these traits and sets an agenda for future research.
18	*Guillén et al., Personality and Social Psychology Bulletin*, 2023	*To lead, or to follow? How self-uncertainty and the dark triad of personality influence leadership motivation.*	*Theoretical framework, discussing how leaders who possess dark triad personality traits seem able to attain leadership positions during chaos and uncertainty. The self-uncertainty reduces leadership motivation for individuals low in the dark triad while those high in the dark triad had an elevated leadership motivation that remained unaltered when they were self-uncertain.*
19	World Population Review, 2023	Autocratic countries	Defines autocracy and countries with different types of autocratic rulings.
20	*Diamond, Psychoanalytic Inquiry*, 2023	Perverted containment: Trumpism, cult creation, and the rise of destructive American populism	*The author examines Trumpism and its destructive leadership, demonstrating how a vindictive, narcissistic, and toxic masculine leader such as ex-President Trump serves to "pervert" the containing function of healthy leadership to increase authoritarian rule. They also emphasize the cult of Trumpism fosters and exploits paranoia and allegiance to an all-powerful, charismatic figure, contributing to a social milieu at risk for the erosion of democratic principles and the rise of fascism.*
21	Herbst and Roux et al., *Higher Education Policy*, 2023	Toxic leadership: A slow poison killing women leaders in higher education in South Africa?	This mixed methods study explores toxic leadership as a potential contributing factor to the gender gap at senior management levels in universities in South Africa. The article concludes with recommendations for future research and actions to mitigate workplace toxicity.

Note: Italic papers ($n = 12$) were obtained through the search and nonitalic ($n = 9$) were added at the last stage from the reference lists of included papers.

Abbreviations: COVID-19, coronavirus disease 2019; WHO, World Health Organization.

socially undesirable behavior, poor control of impulses, and an inability to maintain emotional relationships, especially in a marriage. Such individuals also display the absence of anxiety or guilt. What is prominent is an inflated sense of self-importance, a need for constant attention, an expectation of special treatment, exaggeration of achievements, being intolerant of criticism, and obsession with power (Burkle, 2016; Kay & Arrow, 2022; Khorram-Manesh & Burkle, 2022a; Lynam & Gudonis, 2005; Pemment, 2013). This "narcissism" is further distinguished by excessive admiration for oneself, selfishness, a sense of entitlement, lack of empathy for others, need for constant admiration, and self-centeredness that fails to distinguish or consider the needs of others. The discernable character disorder can be witnessed in many of the world's leaders, of whom the US former President Donald Trump and Russian President Vladimir Putin's narcissism appears to drive them to think they are the "one and only," although there might be some differences in attitudes (Khorram-Manesh & Burkle, 2022a). For President Putin, the protracted conflict in Ukraine ensures a political impasse that results in ever more persecution, violence, destruction, fleeing refugee populations, and death (Khorram-Manesh & Burkle, 2022b).

Narcissistic sociopaths do not attain the crucial last stage of mental and emotional development, especially abstract thinking, which is necessary for critical analysis. Abstract reasoning allows an individual to consider the broader significance of ideas and information, rather than depending on concrete details and impulses alone. Domineering leaders often have a limited capacity, if any, for empathy, love, guilt, or anxiety, all of which become developmentally permanent and guide their everyday decision making (Burkle, 2019; Guillén et al., 2022). Narcissistic sociopaths love to live in chaos, allowing them to rule and govern and show off as the only savior who can rescue the nation, with nothing in their way being holy. This type of situation may appear clearly in domestic conflicts and riots, such as the US riots on January 6, 2021 and the ongoing civilian uprising in IR Iran (Khorram-Manesh, 2022; Meyer & Taft-Morales, 2019).

Although the end of the Cold War and the dissolution of the Soviet Union in 1991 brought temporary global peace, it also created the perfect storm and chaos of unruly circumstances, which either perpetuated those in power or gave birth to unprecedented opportunities for rising authoritarians. Many of these would-be tyrants showed evidence of antisocial behaviors to varying degrees. They took advantage of the power vacuum to seek commanding roles in some of the world's most vulnerable and lawless countries. Unlike at any other time in history, incompetent leaders were often assured tenure by the easy availability of sophisticated weaponry and ready access to eager followers, who were often bored, unemployed, disadvantaged, or disaffected youth looking for a cause. They found that cause—and a leader—in that chaotic void (Beck, 2002; Burkle, 2019; Khorram-Manesh & Burkle, 2022a).

A repressive rule can be perceived in several forms. According to the World Population Review, there are either closed autocracies or electoral autocracies. China and Myanmar, among others, are closed autocracies, while Russia and IR Iran are electoral autocracies (World Population Review, 2023). One dictator rules a pure autocracy. Oligarchies, which are increasingly popular today, occur when power is held by members of an elite segment of a society, such as in Russia, China, and the Philippines. From 2017 through 2020, the Trump Administration put the United States, arguably, on that same track, with a corporate elite having a greater influence than "the people." Other autocratic models are military dictatorships in which all citizens must adhere to their respective strict military laws, as seen in Thailand, Libya, Pakistan, and, most recently, Burma (Myanmar), and religious autocracy that is found in IR Iran and Saudi Arabia. There is yet another type of authoritarianism, which can be found in the Northern Triangle of Central America. Gang violence in Honduras, Guatemala, and El Salvador has subverted all existing government authority, leaving people starving for law and order. Because of this pervasive lawlessness, more than 500,000 people fled the region in 2019, heading north for a better life (Meyer & Taft-Morales, 2019; World Population Review, 2023).

Healthcare security and narcissistic sociopathy

Healthcare security can be defined as all measures that ensure people's safety (patients and healthcare staff), including medical instruments and technology that are needed to save lives across countries and borders. These measures aim to prevent emergent threats from occurring or to respond to what may be endangering populations' health. The implementation of these measures requires a leader who puts the well-being of others before him or herself and thinks globally. Such leadership does not match the characteristics of a narcissistic sociopath, who, with his or her actions, prevents the fulfillment of health security and therefore should be viewed as a threat.

Healthcare security has a major role in achieving the SDGs and global healthcare, since implementing these goals requires peace, justice, strong institutional structures, and global partnership. In other words, developing global healthcare needs global healthcare security. Having the coronavirus disease 2019 (COVID-19) pandemic in mind, we could recognize that although its management was not satisfactory, it was more difficult to implement diverse strategies in autocratic countries than in others (Burkle, 2020; Heidari & Jafari, 2021; Khorram-Manesh et al., 2021). This may depend solely on the government structure, undemocratic performances, and a fragile and incomplete line of trust between people and their leaders, failing to guarantee justice and equality for both national and global interests (Khorram-Manesh, 2023). The current COVID-19 pandemic highlighted the importance of harmony and standardized management for the benefit of populations. Today's global communication and traveling engage all countries in what could become a pandemic if we fail to act swiftly and in concert with other nations (Khorram-Manesh et al., 2022c).

The SDGs call for universal and sustainable action against all current threats to humanity, that is, climate change, lack of proper management of natural resources, inequality, poverty, access to health, and so on. These threats, caused by man-made and natural hazards, hinder the achievement of the SDGs, which is only possible through peace, global partnership, and strong efforts, necessitating a strong institutional structure, organizational skills, and equality among the workforce (gender, age, and knowledge), and maybe the most crucial factor, that is, population awareness and knowledge (Khorram-Manesh, 2023). Global peace and partnership guarantee justice and equal distribution of resources, including healthcare. Although each goal can be achieved alone, the interrelated nature of SDGs mandates simultaneous prioritization, assessment, and management of all goals (Filho et al., 2023; McGill et al., 2023).

Several areas need to be managed in partnership with other countries, including coordination, cooperation, and collaboration, necessitating easy access to domestic data (Bjerge et al., 2016). Depending on the type of incident, such information may include patient information or data relating to critical infrastructures (power grid and nuclear power plant), communication systems, information security, population mobility, and supply chain, essential to healthcare management. The same process applies to information about acute and chronic diseases, medical and technological skills, the number of available shelters, medical facilities, or anything that can give a hint of social and medical capacity, mismanagement, or mass mobility due to discontent or other policies (Allen et al., 2014; Bjerge et al., 2016; Khorram-Manesh, 2023; Lang, 2014). As such, data should be collected, analyzed, shared, and utilized in partnership with other nations, and during collaborative actions, some countries, especially repressive nations, might find it an intrusion into their national and security interests and difficult to do, especially if there is an existing conflict between countries (Burkle, 2020; Rosenberg & Shvetsova, 2016). Therefore, the lack of information for proper preparedness will create difficulties in several areas, such as decontamination capacity, logistics, and provision of special units and devices, such as prehospital intensive care units, ventilators, dialysis units, and so on, all of which afflict and victimize the third party, that is, people, nationally and internationally (Dzhus & Golovach, 2023; Kaur & Singh, 2019; Norisue et al., 2021; Smith et al., 2020).

Finally, engagement by the community and the population in the management of disasters and emergencies is of utmost importance, yet extremely dependent on government policies about healthcare capacity and population education, and willingness (Phattharapornjaroen et al., 2022). First, healthcare capacity in autocratic nations is focused on economic gains; therefore, they invest more in preventing diseases that damage their workforce, which in the end creates an insufficient healthcare system (Rosenberg & Shvetsova, 2016). In addition, engaging communities and people in the management of healthcare and its development, such as eHealth, preparedness for emergencies, preventive measures, and so on requires trust between people and their government, which does not exist in autocratic countries, preventing participation in social activities, such as voting, academic activities, voluntary healthcare involvement, and so on (Pils, 2021; Xu & Jin, 2018).

DISCUSSION

Despite the marked differences in their cultures and languages, it is hardly surprising that opportunistic rulers across the globe share the same character traits of these two kinds of ASPDs: narcissism and sociopathy. Both conditions have proven to be predictably common and comparable to other failed leaders throughout history. Once they have achieved dominance, these power holders feel universally threatened and compelled to destroy democratic thought and freedoms. Many people are unable to understand how and why this need to break down the democratic system arises (Burkle, 2016, 2019; Khorram-Manesh & Burkle, 2022a).

From a global perspective, such conditions might be more destructive if the trait can be found in a leader whose characteristics, self-centeredness, and rage can victimize the ordinary population. The dictator's continued antisocial presence, influence, and the levels of violence he or she unleashes must be seen as a global security issue. Unfortunately, this issue is not amenable to any conventional diplomatic intervention, negotiation, or international sanctions, as seen in the current geopolitical conflicts in both IR Iran and Russia's invasion of Ukraine. The former presents a religious autocratic political system, while the latter is a new face of tyrannic power demonstration by President Putin (Burkle, 2016; Johnson, 2019; Khorram-Manesh, 2022; Khorram-Manesh and Burkle, 2022a, 2022b).

While narcissistic sociopathy may be known medically, it is not the medical professions that would be called upon to stand up to the faulty deeds of these people. Youngsters and teenagers with ASPD may have diverse symptoms, and diagnostic measures may be lacking or impossible to conduct. Individuals with characteristics and symptoms, identified within their societal or family networks, should preferably undergo psychological evaluation and follow-up. Although there is no cure for these individuals, group therapy and family therapy may help them to control their symptoms and live a happier life (Day et al., 2020; Yakeley, 2018). Even if it may sound impossible, there are areas for corrective interventions. These measures might be employed by any institutions or governing bodies by integrating strategies and improving leadership (Milligan et al., 2022). This type of educational initiative should start among the smallest groups in our society, that is, families and schools.

Many schools have parent–teacher conferences in which they discuss children's development at the school. Unfortunately, these conferences are lacking in secondary school, where narcissistic behaviors become most evident. However, these conferences can be used to identify narcissists and differentiate normal from pathological narcissism. Robust educational initiatives, consistent with identifying, when pathological narcissism becomes most evident in high school and college, developmentally, must be developed. There are very few formal opportunities to recognize pathological narcissistic behaviors beyond this point in one's career. One example is that of the Yale University Law School, which, in recognizing that many students apply for positions with various governmental agencies every year, alerts students that they must undergo a “suitability review” as part of a security clearance. This review is an “evaluation of a person's character traits and conduct to decide whether that individual is likely to act with integrity and efficiency in their job” (Yale Law School, 2023).

Nevertheless, what is lacking to identify and manage individuals in high political positions is a globalized and standardized process that requires electoral candidates to be medically examined before being allowed to run for governmental positions that might endanger the population and their human rights (Post, 2015; Rogoza et al., 2021). Although the issue has been raised in several reputable magazines and news in the United States, there is a need for legislative and legal considerations and a major change in policies, which can probably only be possible in democratic nations (Greenwood, 2023; Racker, 2023). Unlike officials at federal agencies, US lawmakers do not have security clearances per se, potentially leading to narcissistic opportunities to bolster their own claims of political power and leadership (Donnelly, 2023).

In the wake of the January 6 riots at the US Capitol, questions have been raised as to whether members of Congress, including Republican leaders of defense and intelligence panels, would even meet the minimal standards for a government official to hold a security clearance. Members of Congress are entitled to access classified information by virtue of the constitutional offices they hold and do not need security clearances, thereby “weakening Congress's ability to legislate or conduct effective oversight” (Smithberger & Schman, 2020). Continuous media reporting and free journalism become necessary to reveal individuals with such personality traits and to ensure a resilient global democracy (Day et al., 2020; Milligan et al., 2022; Pils, 2021; Xu & Jin, 2018). Another possibility is information and education that targets voters, constituents, and people whose suffering nourishes such leadership. Since narcissism is prevalent globally, global educational investment by international organizations, such as the World Health Organization and the UN, and through democratic governance that allows individual activities for the sake of the community and global well-being, is needed (Day et al., 2020; Milligan et al., 2022; Pils, 2021; Xu & Jin, 2018).

On January 6, 2021, the American people experienced what they believed could only happen in a repressive and undemocratic country. More than 2000 rioters entered the Capitol Hill building, assaulted police officers and reporters, vandalized and looted federal properties, and attempted to locate lawmakers to capture and harm (United States Department of Justice, 2021). While many were arrested and charged with various crimes, the outcomes are a result of President Trump's deeds, reflecting his narcissistic sociopathy and actions during and after the election in 2021 (Crump, 2020; Diamond, 2023; Mercer, 2018). Several reports and studies have already described his personality and its impact on his followers and the fate of democracy in the United States. In fact, he contributed to the second COVID-19 pandemic through disinformation and intrusion into the medical profession's decision making (Brenner, 2021). Despite everything, democracy could function, and while the world was eagerly watching its fall in the United States, democracy could rise again and show that strong institutions and justice still work (United States Department of Justice, 2021). This, however, may have been an expensive lesson for the

American people to cherish their democracy and freedom and to never be fooled again by manipulative populist and narcissistic sociopaths, reminding them of the importance of never stopping to teach their children their rights and the rights of all human beings. It is the only way to keep the spirit of freedom and well-being and to achieve justice, peace, and partnership for the benefit of all (Khorram-Manesh, 2023).

Putin's narcissistic sociopathy is playing out on the world stage for everyone to ponder. Strong sociopaths, such as Putin, can transfer their “logic” onto an unaware population or be manipulative and act strategically to avoid a political confrontation (Baker et al., 2023; Burkle et al., 2022). For instance, while the people killed their loved ones for him, not for Russia, and knowing what major force mothers and wives could be, President Putin met the members of the Committee of Soldiers Mothers of Russia (CSMR) publicly to ensure that no demonstrations by mothers, wives, and sisters of Russian soldiers could take place publicly against the invasion of Ukraine (Rogoza et al., 2021; Zeigler-Hill & Marcus, 2016). CSMR is one of Russia's most respected civil society organizations, which has previously criticized Russia's unpopular war in Afghanistan (Mathers & Danilova, 2023).

As we all are easily impressed and potentially fooled by a narcissist's impassioned dictates, either we collectively feel powerless to do anything to prevent their obsessions, or we are frightened by the consequences of challenging the leader's constant demand for power (Johnson, 2019). However, only the masses of a tyrant's victims and potential targets hold the key to demanding a collective cessation of such malignant behavior. It is time to tell the mothers, sisters, and wives of the victims of any conflict, but especially those deployed Russian soldiers to Ukraine that we sincerely feel their pain and anxiety. By witnessing global wars and conflicts led by so many autocrats since the end of World War II, we must admit that terrifying dictators cause much suffering to their people and the land they invade. It may be hard and seem impossible, but collectively, people can change the fate of a nation by speaking up and acting before it is too late. There are substantial pieces of evidence indicating that toxic leadership causes serious and enduring harm in all communities (Herbst & Roux, 2023). Understanding and recognizing them and stopping them from holding vital positions is a formidable but possible way to prevent future conflicts and global misery. Ultimately, proof of character is what should be sought and expected by the voting population.

Limitations

The method used in this review is a rapid review, which can be performed faster and by only one reviewer. This may weaken the results if fewer databases are used, or a single reviewer performs the search. In this study, however, we used the most common databases, and both authors contributed to searching and evaluating the included papers. Additionally, extra time was allotted to study the relevant papers on the list of included papers. This strategy may counteract the weaknesses normally found in a rapid review method, especially on rapidly changing topics, which are politically sensitive, and wars that have ignored international laws and the established protections under these laws that pertain to civilians and their healthcare systems.

CONCLUSION

Hence, narcissistic sociopathy appears to be more common around the world than previously believed. The societal consequences of such personality traits are far more costly and serious if present in political and top leadership positions in our society. Leaders who possess these personality traits may cause conflicts and wars and expose their populations to catastrophic dangers and harm. In addition, although the condition is relatively well known medically, ordinary people do not have enough knowledge to distinguish between politicians or leaders with such characteristics. To avoid future consequences, individuals seeking governmental or leadership positions should be medically and psychologically examined for such traits. Moreover, people's knowledge about this medical condition should be increased through educational initiatives, continuous media reporting, and free journalism to ensure a resilient global democracy.

AUTHOR CONTRIBUTIONS

Conceptualization: Amir Khorram-Manesh and Frederick M. Burkle. *Methodology*: Amir Khorram-Manesh and Frederick M. Burkle. *Validation*: Amir Khorram-Manesh and Frederick M. Burkle. *Formal Analysis*: Amir Khorram-Manesh and Frederick M. Burkle. *Investigation*: Amir Khorram-Manesh and Frederick M. Burkle. *Writing—original draft*: Amir Khorram-Manesh and Frederick M. Burkle. *Writing—review and editing*: Amir Khorram-Manesh and Frederick M. Burkle. The authors have read and agreed to the submitted version of the manuscript.

DATA AVAILABILITY STATEMENT

All data are included.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ETHICS STATEMENT

Not applicable.

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REFERENCES

Allen, D. K., Karanasios, S., & Norman, A. (2014). Information sharing and interoperability: The case of major incident management. *European Journal of Information Systems*, *23*(4), 418–432. https://doi.org/10.1057/ejis.2013.8

American Psychological Association (APA). (2023). *APA dictionary of psychology*. https://dictionary.apa.org/antisocial-personality-disorder

Baker, M. S., Baker, J., & Burkle, Jr, F. M. (2023). Russia's hybrid warfare in Ukraine threatens both healthcare & health protections provided by International Law. *Annals of Global Health*, *89*(1), 3. https://doi.org/10.5334/aogh.4022

Beck, A. T. (2002). Prisoners of hate. *Behaviour Research and Therapy*, *40*(3), 209–216. https://doi.org/10.1016/s0005-7967(01)00103-6

Bjerge, B., Clark, N., Fisker, P., & Raju, E. (2016). Technology and information sharing in disaster relief. *PLoS One*, *11*(9), e0161783. https://doi.org/10.1371/journal.pone.0161783

Brenner, I. (2021). Disinformation, disease, and Donald Trump. *International Journal of Applied Psychoanalytic Studies*, *18*(2), 232–241. https://doi.org/10.1002/aps.1694

Burkle, F. M. (2016). Antisocial personality disorder and pathological narcissism in prolonged conflicts and wars of the 21st century. *Disaster Medicine and Public Health Preparedness*, *10*(1), 118–128. https://doi.org/10.1017/dmp.2015.113

Burkle, F. M. (2019). Character disorders among autocratic world leaders and the impact on health security, human rights, and humanitarian care. *Prehospital and Disaster Medicine*, *34*(1), 2–7. https://doi.org/10.1017/S1049023X18001280

Burkle, F. M. (2020). Declining public health protections within autocratic regimes: Impact on global public health security, infectious disease outbreaks, epidemics, and pandemics. *Prehospital and Disaster Medicine*, *35*(3), 237–246. https://doi.org/10.1017/S1049023X20000424

Burkle, F. M., Goniewicz, K., & Khorram-Manesh, A. (2022). Bastardizing peacekeeping and the birth of hybrid warfare. *Prehospital and Disaster Medicine*, *37*(2), 147–149. https://doi.org/10.1017/S1049023X22000425

Crump, J. (2020). Trump has a narcissistic personality disorder, says a leading psychoanalyst. Independent. https://www.independent.co.uk/news/world/americas/us-politics/donald-trump-narcissistic-personality-disorder-mary-trump-john-zinner-bandy-x-lee-a9665856.html

Day, N. J. S., Townsend, M. L., & Grenyer, B. F. S. (2020). Living with pathological narcissism: A qualitative study. *Borderline Personality Disorder and Emotion Dysregulation*, *7*, 19. https://doi.org/10.1186/s40479-020-00132-8

Diamond, M. J. (2023). Perverted containment: Trumpism, cult creation, and the rise of destructive American populism. *Psychoanalytic Inquiry*, *43*(2), 96–109. https://doi.org/10.1080/07351690.2023.2163147

Donnelly, J. M. (2023, January 12). Congress: When it comes to security clearances, rules for others don't apply to Congress. *Roll Call*. https://rollcall.com/2021/01/12/when-it-comes-to-security-clearances-rules-for-others-dont-apply-to-congress/

Dzhus, M., & Golovach, I. (2023). Impact of Ukrainian–Russian War on health care and humanitarian crisis. *Disaster Medicine and Public Health Preparedness*, *17*, e340. https://doi.org/10.1017/dmp.2022.265

Filho, W. L., Minhas, A., Schmook, B., Mardero, S., Sharifi, A., Paz, S., Kovaleva, M., Albertini, M. C., & Skouloudis, A. (2023). Sustainable development goal 13 and switching priorities: Addressing climate change in the context of pandemic recovery efforts. *Environmental Sciences Europe*, *35*(1), 6.

Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, *26*(2), 91–108. https://doi.org/10.1111/j.1471-1842.2009.00848.x

Green, A., MacLean, R., & Charles, K. (2022). Female narcissism: Assessment, aetiology, and behavioural manifestations. *Psychological Reports*, *125*(6), 2833–2864. https://doi.org/10.1177/00332941211027322

Greenwood, M. (2023, February 15). Haley calls for mental competency tests for politicians over 75. *The Hill*. https://thehill.com/homenews/campaign/3859468-haley-calls-for-mental-competency-tests-for-politicians-over-75/

Guillén, L., Jacquart, P., & Hogg, M. A. (2023). To lead, or to follow? How self-uncertainty and the dark triad of personality influence leadership motivation. *Personality and Social Psychology Bulletin*, *49*, 1043–1057. https://doi.org/10.1177/01461672221086771

Heidari, M., & Jafari, H. (2021). Challenges of COVID-19 vaccination in Iran: In the fourth wave of pandemic spread. *Prehospital and Disaster Medicine*, *36*(5), 659–660.

Herbst, T. H. H., & Roux, T. (2023). Toxic leadership: A slow poison killing women leaders in higher education in South Africa? *Higher Education Policy*, *36*(1), 164–189. https://doi.org/10.1057/s41307-021-00250-0

Johnson, S. A. (2019). Understanding the violent personality: Antisocial personality disorder, psychopathy, & sociopathy explored. *Forensic Research & Criminology International Journal*, *7*(2), 76–88.

Kaur, H., & Singh, S. P. (2019). Sustainable procurement and logistics for disaster resilient supply chain. *Annals of Operations Research*, *283*, 309–354. https://doi.org/10.1007/s10479-016-2374-2

Kay, C. S., & Arrow, H. (2022). Taking an elemental approach to the conceptualization and measurement of Machiavellianism, narcissism, and psychopathy. *Social and Personality Psychology Compass*, *16*(4), e12662.

Khorram-Manesh, A. (2022). The impacts of armed conflicts and civilian uprisings on children's health. *Children*, *9*(12), 1913. https://doi.org/10.3390/children9121913

Khorram-Manesh, A. (2023). Global transition, global risks, and the UN's sustainable development goals—A call for peace, justice, and political stability. *Global Transitions*, *5*, 90–97.

Khorram-Manesh, A., & Burkle, Jr, F. M. (2022a). Narcissistic sociopathy in global autocratic leaders: Arrested development, obsessive demand for power, and the emergence of unlawful hybrid wars. *Disaster Medicine and Public Health Preparedness*, *17*, e263. https://doi.org/10.1017/dmp.2022.213

Khorram-Manesh, A., & Burkle, Jr. F. M. (2022b). Civilian population victimization: A systematic review comparing humanitarian and health outcomes in conventional and hybrid warfare. *Disaster Medicine and Public Health Preparedness*, *11*(17), e192. https://doi.org/10.1017/dmp.2022.96

Khorram-Manesh, A., Carlström, E., Hertelendy, A. J., Goniewicz, K., Casady, C. B., & Burkle, F. M. (2022c). Does the prosperity of a country play a role in COVID-19 outcomes? *Disaster Medicine and Public Health Preparedness*, *16*(1), 177–186. https://doi.org/10.1017/dmp.2020.304

Khorram-Manesh, A., Dulebenets, M. A., & Goniewicz, K. (2021). Implementing public health strategies—The need for educational initiatives: A systematic review. *International Journal of Environmental Research and Public Health*, *18*(11), 5888. https://doi.org/10.3390/ijerph18115888

Lang, A. (2014). Government capacities and stakeholders: What facilitates eHealth legislation? *Globalization and Health*, *10*, 4. https://doi.org/10.1186/1744-8603-10-4

Lee, B. X. (2017). *The dangerous case of Donald Trump: 27 psychiatrists and mental health experts assess a president*. Macmillan Publishers.

Lynam, D. R., & Gudonis, L. (2005). The development of psychopathy. *Annual Review of Clinical Psychology*, *1*, 381–407.

Mathers, J., & Danilova, N. (2023). Ukraine war: Why Russian soldiers' mothers aren't demonstrating the strong opposition they have in previous conflicts. The Conversation. https://theconversation.com/ukraine-war-why-russian-soldiers-mothers-arent-demonstrating-the-strong-opposition-they-have-in-previous-conflicts-196605

McGill, N., Verdon, S., Curtin, M., Crockett, J., Parnell, T., & Hodgins, G. (2023). The impact of climate-related disasters on children's communication and wellbeing: Addressing sustainable development goals. *International Journal of Speech-Language Pathology*, *25*(1), 20–26. https://doi.org/10.1080/17549507.2022.2156613

Mercer, J. A. (2018). The dangerous case of Donald Trump: A case study in contested ethics and the public uses of professional expertise. *Pastoral Psychology*, *67*, 323–336. https://doi.org/10.1007/s11089-018-0810-8

Meyer, P. J., & Taft-Morales, M. (2019). *Central American migration: Root causes and US policy* (Vol. 27). Library of Congress. Congressional Research Service. https://www.hsdl.org/?abstract%26did=826218

Milligan, M., Mankelwicz, J., & See, H. P. (2022). Narcissism as a global barrier to education for sustainable development. *Perspectives in Education*, *40*. 3. https://doi.org/10.18820/2519593X/pie.v40.i3.3

Norisue, Y., Deshpande, G. A., Kamada, M., Nabeshima, T., Tokuda, Y., Goto, T., Ishizuka, N., Hara, Y., Nakata, R., Makino, J., Matsumura, M., Fujitani, S., & Hiraoka, E. (2021). Allocation of mechanical ventilators during a pandemic. *Chest*, *159*(6), 2494–2502. https://doi.org/10.1016/j.chest.2021.01.015

Page, M. J, McKenzie, J. E, Bossuyt, P. M, Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, *372*, n71. https://doi.org/10.1136/bmj.n71

Page, M. J., Moher, D., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … McKenzie, J. E. (2021). PRISMA 2020 explanation and elaboration: Updated guidance and exemplars for reporting systematic reviews. *BMJ*, *372*, n160.

Pemment, J. (2013). Psychopathy versus sociopathy: Why the distinction has become crucial. *Aggression and Violent Behavior*, *18*(5), 458–461. https://doi.org/10.1016/j.avb.2013.07.001

Phattharapornjaroen, P., Carlström, E., Sivarak, O., Tansuwannarat, P., Chalermdamrichai, P., Sittichanbuncha, Y., Kongtoranin, L., Phattranonuthai, R., Marlow, P., Winyuchonjaroen, W., Pongpasupa, N., & Khorram-Manesh, A. (2022). Community-based response to the COVID-19 pandemic: Case study of a home isolation centre using flexible surge capacity. *Public Health*, *211*, 29–36. https://doi.org/10.1016/j.puhe.2022.06.025

Pils, E. (2021). Complicity in democratic engagement with autocratic systems. *Ethics & Global Politics*, *14*(3), 1958509. https://doi.org/10.1080/16544951.2021.1958509

Post, J. M. (2015). *Narcissism and politics:* Dreams of glory. Cambridge University Press.

Racker, M. (2023, March 9). Members of Congress lives with mental illness. Politics influences how they manage it. *Time*. https://time.com/6261386/mental-health-congress-john-fetterman/

Rogoza, R., Żemojtel-Piotrowska, M., Jonason, P. K., Piotrowski, J., Campbell, K. W., Gebauer, J. E., Maltby, J., Sedikides, C., Adamovic, M., Adams, B. G., Ang, R. P., Ardi, R., Atitsogbe, K. A., Baltatescu, S., Bilić, S., Bodroža, B., Gruneau Brulin, J., Bundhoo Poonoosamy, H. Y., Chaleeraktrakoon, T., … Włodarczyk, A. (2021). Structure of dark triad dirty dozen across eight world regions. *Assessment*, *28*(4), 1125–1135. https://doi.org/10.1177/1073191120922611

Rosenberg, D., & Shvetsova, O. (2016). Autocratic health versus democratic health: Different outcome variables for health as a factor versus health as a right. In Gallego, M. & Schofield, N. (Eds.), *The political economy of social choices. Studies in political economy* (pp. 1–20). Springer. https://doi.org/10.1007/978-3-319-40118-8_1

Sedikides, C., Gaertner, L., & Cai, H. (2015). On the panculturality of self-enhancement and self-protection motivation: The case for the universality of self-esteem. In Alicke M. D. & Sedikides C. (Eds.), *Advances in motivation science* (Vol. 2, pp. 185–241). Elsevier. https://doi.org/10.1016/bs.adms.2015.04.002

Smith, R. S., Zucker, R. J., & Frasso, R. (2020). Natural disasters in the Americas, dialysis patients, and implications for emergency planning: A systematic review. *Preventing Chronic Disease*, *17*, 190430. https://doi.org/10.5888/pcd17.190430

Smithberger, M., & Schman, D. (2020, February 7). A primer on Congressional staff clearances. *POGO*. https://www.pogo.org/report/2020/02/a-primer-on-congressional-staff-clearances

United States Department of Justice. (2021). *One year since the January 6 attack on the capitol*. https://www.justice.gov/usao-dc/one-year-jan-6-attack-capitol

World Population Review. (2023). *Autocratic countries 2023*. https://worldpopulationreview.com/country-rankings/autocratic-countries

Xu, X., & Jin, X. (2018). The autocratic roots of social distrust. *Journal of Comparative Economics*, *46*(1), 362–380.

Yakeley, J. (2018). Current understanding of narcissism and narcissistic personality disorder. *BJPsych Advances*, *24*(5), 305–315.

Yale Law School. (2023). *Understanding government background checks*. https://law.yale.edu/student-life/career-development/students/career-pathways/public-interest/you-apply-understanding-government-background-checks

Zeigler-Hill, V., & Marcus, D. K. (2016). Introduction: A bright future for dark personality features? In V. Zeigler-Hill & D. K. Marcus (Eds.), *The dark side of personality: Science and practice in social, personality, and clinical psychology* (pp. 3–22). American Psychological Association. https://doi.org/10.1037/14854-001

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RESEARCH ARTICLE

Qualitative evaluation of the health insurance program in Nepal: Expectations beyond limitations

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Abstract

The government of Nepal introduced a national health insurance program in 2016 to comply with the constitution and international commitments to ensure universal health coverage by 2030. This qualitative study explores public perceptions and satisfaction concerning the new health insurance program. The study is guided by an interpretive worldview using both in-depth interviews (IDIs) and focus group discussions (FGDs). Altogether, 34 (28 IDIs and 6 FGDs) events were conducted covering both self- and government-sponsored health insurance enrollees in the new health insurance program. The study found that insurees had larger expectations as well as both favorable and negative perceptions of the program. Positive perceptions included that the program helped to lower the gap between the wealthy and the poor, increase coverage with fewer financial contributions, and make it easier to receive health services financially. Negative perceptions included long waiting times for registration, consultations, laboratory test results, and pharmacy visits, as well as the lack of drugs, inadequate coverage (a low ceiling), low-quality services, and strict procedures, which combined to make insurees dissatisfied. We noticed that insurees had expectations that went beyond the program's guidelines, such as the expectation that services would be provided without queues and long waits, that additional services and coverage would be provided, and that preference would be shown for patients who lived far from hospitals. Adequate information, education, and communication- and process-related interventions that address these issues may help minimize the insurees' unrealistic expectations and areas of dissatisfaction.

KEYWORDS

health-care financing, Nepal, perception of insurees, sustainability of health insurance, universal health coverage

Key points

- Government-sponsored insurees had more comments of appreciation than negative comments, while self-sponsored insurees had more negative comments than comments of gratitude. Fewer grievances were noticed regarding the services available free of cost.
- Insurees had more program expectations than comments about the program's limitations. More exceptions were noticed concerning service coverage and ceiling amount than about the insurance guidelines.
- Findings suggest that appropriate interventions (information, education, and communication) are needed to address concerns and expectations for households and insurees.

BACKGROUND

Consumer satisfaction creates trust in new programs or products (Sultan et al., 2019). Like other programs, health insurance programs (HIP) also need insurees' satisfaction for their continuity and sustainability to attain universal health coverage (UHC). The slogan of “health for all” is important since the HIP is a novel and a much-needed health-care resource for the Nepalese people (Health Insurance Board [HIB], 2020).

The Constitution of Nepal has offered basic healthcare as a fundamental right of the citizens according to Article 35 (Nepal Law Commission, 2015). The government of Nepal has also committed to ensuring international commitments and declarations such as accomplishing the sustainable development goal and UHC by 2030 (Acharya, 2020). Considering these facts, HIP was introduced as a social health security program by Nepal's Social Health Security Development Committee. When the health insurance act was enacted in 2017, SHCDC was renamed as the HIB.

There is no doubt that individuals generally pay more to receive healthcare services from private hospitals and healthcare institutions that ultimately increase their out-of-pocket (OOP) expenditures. Comparatively, OOP expenditures are higher in Nepal (57.81) than in neighboring countries; OOP expenditure was 17.79% in Bhutan, 35.23% in China, 54.78% in India, 53.81% in Pakistan, and 45.64% in Sri Lanka based on the data of 2019 (The World Bank, 2022).

Almost 3 out of 10 (28.2%) of the insurees recorded dropped out of HIPs in Pokhara (a major metropolitan city in Nepal and capital of the Gandaki Province), which indicated that there has been a major challenge to the sustainability of the new HIP (Sharma et al., 2021). According to HIB, people's participation in enrolling in the new HIPs remains low (HIB, 2020), and the rate of dropout is high. Dropout rates varied in time and place, which accounted for 51.93%–78.28% in the Year 2016/2017, 15.22%–95.58% in 2017/2018, and 15.33%–84.02% in the fiscal year 2018/2019 (Ranabhat et al., 2020). However, the only studies to evaluate the public acceptance of the HIP found that most of those who received the insurance were so pleased with it that they were willing to pay two times more for the insurance than the current required contribution amount (CCA) that was set for enrollment (Acharya et al., 2018) and almost all people (total 810) surveyed responded positively toward HIP (Acharya, 2020). It is interesting to learn from these studies that people who did enroll in the health insurance appreciate the coverage, want to participate, and even are willing to pay more than the CCA for the HI (Acharya et al., 2018). Given this response, it is important to learn more about why there has been low enrollment and high dropout from the new HIPs. HIB data indicate that less than 10% of the Nepalese public were enrolled in the HIP (HIB, 2020). Gurung and Panza (2022) found that the income status of a family, quality of healthcare, and utilization of services were predictive factors for insurance renewal. However, the major underlying issues concerning public acceptance, critique, and use of HIP have not yet been examined or discussed. These are the major concerns of the study reported here, which examines why the HIP has not attracted a greater percentage of the public and why those who did enroll in the HIPs did not continue their participation in the HIP. Moreover, this study examines—more fully than ever before—public perception and satisfaction with HIP.

A study conducted (total sample of 810) in 2014 in Kailali (a district situated within the Western Region of Nepal) showed that nearly 1 out of 10 (11%) people had heard about HI; however, only 9% of them had a good level of knowledge about HI (KOICA-Nepal Health Insurance Support Project NHISP, 2014). Later in 2018, another study conducted in Kailali and Baglung (another municipality in Western Nepal) showed that 72% of the respondents (total 810) had heard about health insurance in 2018 and 29% were not satisfied with the program (Acharya et al., 2022). That means about 3 out of 10 were not satisfied with the HIP. The sustainability of the program depends upon the satisfaction of the insurees. The satisfaction of the program could lead to better participation. In contrast, dissatisfaction leads to misleading information and frustration, and ultimately, low participation, even the program's failure.

As of this writing, the HIP has been in effect for 5 years since implementation, but data from HIB show low enrollment and high dropout. However, we could not find any previous studies that examined the experience of the insurees to determine whether they were satisfied or not, and what factors influenced their levels of satisfaction or dissatisfaction with self- and government-sponsored insurance programs. The main purpose of this current study was to fill this important gap in previous research about insurees' experiences concerning their satisfaction with the new HIPs, as well as to guide evidence-based strategies for enhancing public acceptance of and enrollment in health insurance in Nepal.

MATERIALS AND METHODS

Study design

To examine insurees' perspectives and experiences with the HIP, this study followed a qualitative research approach, conducting in-depth personal interviews and focus group discussions (FGDs). The study focused on the strongly held perspectives of program users and did not explore the status or experiences of representatives from the HIP and its services.

Study setting and sample

The HIP has now been implemented in all 77 districts of Nepal. The study was conducted in at least one district from each of the provinces. Districts were selected for inclusion, whereas the districts were selected purposively for inclusion in the study. At least four samples (two self-sponsored groups of insurees and two government-sponsored groups of insurees) for in-depth interviews (IDIs) were conducted in each district with representation from both rural and urban municipalities in the districts selected with purposive sampling techniques. Separate homogenous groups of self- and government-sponsored insurees were selected for FGD. Altogether, six FGDs were conducted from three different provinces (Madhesh, Gandaki, and Lumbini) covering both self- and government-sponsored insurees. Therefore, a total of 34 (28 IDIs and 6 FGDs from 58 participants) events were conducted for data collection. Data collection was stopped after data saturation was achieved (Fusch & Ness, 2015).

Data collection tool and validation

IDI and FGD guidelines were used for data collection. Questions for IDI were pretested in different districts. It was finalized after a comprehensive discussion with the research members and field enumerators. A mock session was also conducted for FGD with a group of self- and government-sponsored insurees. After comprehensive discussion among the study team and experts, FGD guidelines were finalized.

Inclusion and exclusion criteria

Participants or informants who were enrolled (called insurees) from government-funded health insurance implemented by HIB and who resided in the study area were included in the study. Mostly, household heads (HHs) from the enrolled household who agreed to participate in this study were included. On the other hand, insurees enrolled other than in HIB were excluded. Insurees or households enrolled in HIP who participated in pretest or mock sessions were also excluded. Moreover, the samples were only taken from those insurees who received the health-care services under the health insurance scheme after enrollment.

Data collection procedure

After completing the official procedure, a 2-day training was conducted on December 3–4, 2021 for all research team members about data collection, research ethics, and quality assurance of the data. A team of trained enumerators was deployed to assist with data collection as part of the research team. Interviews were conducted following the research guidelines and FGD guidelines. All these events were conducted where the participants wanted to respond: from home, working in fields, and even in public places, but FGDs were conducted in schools and hotels/teashops as they suggested. All these events were recorded. In addition, notes were also taken and transcribed right after completing the interviews and discussions (Creswell, 2014; Levitt et al., 2018; Maykut & Morehouse, 1994). Data collection was started on January 4, 2022 and was completed on April 4, 2022.

Data analysis

IDIs and FGDs were recorded and transcribed, with these transcripts serving as the main source for data analysis. The raw text was minutely studied. Data analysis was guided by the research objective to examine respondent perspectives and evaluations concerning the HIPs. The analytic procedure adhered to the three fundamental components of qualitative research analysis: categorical aggregation, data coding, and display (Creswell, 2014). First, all informant's transcripts were read several times, key issues were noted, and codes were assigned accordingly. Initially, the coding was highly descriptive, using respondents' original words. It focused on the research informants' expressions of their experiences. The emerging themes described the informants' feelings about the HIP.

Further, different themes under each category were examined using the constant comparison analytic method by revisiting each informants' narratives (Creswell, 2014). All the audio-recorded data were transcribed verbatim and later translated into English. A codebook was established for cataloging thematic findings. Content from the textual data was converted into themes and subthemes. After rigorous identification of initial themes, a thematic analysis approach was used to further analyze the transcripts and field notes (Byrne & Humble, 2007). Finally, the findings from the study were compared with findings from previous research and studies. After a comprehensive discussion among the research group and with representative insurees, the study findings were summarized and conclusions were determined from the study data. The results are categorized into three major themes: 1. perceived benefits and advantages, 2. perceived problems, and 3. perceived disadvantages and expectations that were further classified as perceived benefits, perceived problems, and expectations.

Ethical/safety issues

The study proposal was reviewed and approved by the National Health Research Council (NHRC) on September 26, 2021 (NHRC Ref. # 682: Protocol Registration # 506/2021P). Consent was taken before interviewing and discussion. We asked subjects to consent to voluntarily participate in the study, informing them of their "right to reject" at any time. All data were kept confidential and the ethical core values of respect for informants, beneficence, and justice were followed throughout the research process (Department of Health Education and Welfare, 1979). The checklist for ethical issues (American Psychological Association, 2020) and guidelines for health research (NHRC, 2022) were followed and considered while conducting the research.

RESULTS

Basic characteristics of the participants

Of the total 58 participants, a majority (52%) of the participants were self-sponsored insurees, and the same number (52%) were involved in FGD. The age, mean, median, mode, range, and minimum age of the participants were 43 ± 11, 42, 38, 48, and 22 years, respectively. Almost 40% of the participants were female, and 29% of the participants were from service sectors, followed by business (22%), agriculture (17%), and domestic work (16%) (see Table 1).

We summarize findings about insurees' perceptions about self- and government-sponsored HIPs and the healthcare services provided by the programs. Moreover, insights

TABLE 1 Background characteristics of the participants.

Variables	Characters	Frequency	Percent
Insurees type	Government-sponsored insurees	28	48.3
	Self-sponsored insurees	30	51.7
Participated in	In-depth interview	28	48.3
	Focus group discussion	30	51.7
Age category	Up to 40 years	27	46.6
	More than 40 years	31	53.4
Gender	Male	35	60.3
	Female	23	39.7
Occupation	Agriculture	10	17.2
	Business	13	22.4
	Service	17	29.3
	Domestic work	9	15.5
	Labor	5	8.6
	Others	4	6.9
Total		58	100.0

TABLE 2 Code used for participants for verbatim.

Character of participants	Verbatim code	Remark
Self-sponsored insuree	SSI	
Government-sponsored insuree	GSI	
In-depth interview	IDI	
Focus group discussion	FGD	
Age	……	Exact completed age in years
Sex		
Male	M	
Female	F	

Note: *GSI, IDI, 34/F* indicates government-sponsored insuree, in-depth Interview, 34 years old, and female.

from deep analysis of the data by researchers are also presented in this section. The codes used for presenting participant responses (verbatim) are shown in the Table 2.

Perceived benefits and advantages

Most (35/58) participants expressed positive perceptions toward the HIP and health-care services under the insurance scheme. Some of the following issues illustrate why the participants expressed positive feelings toward the program.

Convenience

Participants expressed that after enrolling in the HIP, they felt that it was more convenient for them to receive healthcare services from the health facilities. They were also less worried about healthcare costs, even if they had limited finances. They liked the convenience of using their insurance cards as cash at the registration counter, pharmacy counter, and cash counter. For example, one respondent commented:

> Now it is very convenient to receive healthcare services. We have received services by paying a little amount of money for enrolment. Previously, we used to treat health problems by homemade remedies (traditional and locally available herbs and shrubs) due to financial constrain; now it is very beneficial for us. Just go and register the name and receive the services without any payment, how easy. Not only me, all insurees are fully satisfied. (GSI, IDI, 55/M)

Increased access to healthcare

The main objective of health insurance is to ensure access to quality health-care services for all Nepali citizens. Participants indicated that before having health insurance, they used to stay home when becoming ill due to lack of funds, but now they receive care when feeling ill. Now they can access healthcare services even though they may not have money. Therefore, the program has increased their access to and utilization of health-care services. For example, one respondent said:

> The program has increased access to healthcare services. Previously, people with chronic disease(s) used to take traditional medicine due to financial constraints. However, now the situation has changed, households that have limited resource settings could also be benefitted from the program. Moreover, we can see the crowd of patients in the first service point as well as referral hospital, it has proved that the insurance program has increased access to healthcare from poor to the rich. Registration is free, checkup free, x-ray free, test free, and medicine free, therefore the program has increased access to services more especially who have not sufficient money for treatment. (GSI, FGD, 38/F)

Financial benefits

One of the attractive features of HIPs is their financial benefits. For example, prepayment of the insurance contribution amount covers up to almost 29 times higher amounts for medical coverage, which is a major attraction of the insurance program. Insurees in the study felt that they benefitted financially from the insurance programs since they could now afford to use important healthcare services and get needed medicine on a regular basis. For example, one respondent commented:

> We may not have money in the situation when we need medical support since diseases and ailments are not predictable. It is a supportive program since we can get up to Nepali Rupees (NRs.) 100,000/- just being a member of the insurance cost NRs. 3,500/- for a five-member family. People are benefitted more than 28 times financially which attracted people to enroll in the insurance scheme. (GSI, IDI, 55/M)

Financial protection

Financial protection is similar to financial benefits, but the financial benefits were perceived by insurees from an economic point of view, whereas financial protection was perceived from a social point of view, such as social inclusion, cohesion, and social mainstreaming. The participants said that with health insurance, they did not need to seek money for healthcare services from their relatives or neighbors. They did not have to wait for loans from others to be able to afford healthcare. They stated that they are now able to receive healthcare without having available funds. Moreover, they felt they were secure/supported by having an insurance card. For example, one respondent commented:

> We may not always have money. Diseases and illnesses are unpredictable so we do not know when the disease will start. After enrollment in a health insurance scheme, you can get treatment even if you do not have money. The insurance program has also provided us with financial security. (GSI, FGD, 45/F)

Minimize the gap in care between the poor and the rich

The participants (28/58) claimed that the HIP enabled poor people to utilize needed healthcare services that were now available to them. Previously, when they did not have insurance cards and became sick, they would just have to stay home and pray to recover their health. The situation changed and even poor people who are covered by health insurance are able to utilize healthcare services to address health problems. The insurance program has now helped to minimize the gap between the poor and the rich when addressing health issues. For example, one respondent commented:

> Before insurance, only rich people used to get treatment because poor people lacked money for treatment. Even if they got sick, they used to take care by homemade remedy or treatment at home from locally available herbs, shrubs and traditional medicine. After the insurance, even the poor have ease in treatment. The poor people who could not get treatment due to lack of funds now got healthcare services after enrollment in health insurance programs. Because of the insurance scheme, access to treatment has also increased for the poor. (SSI, FGD, 52/M)

Perceived problems and disadvantages

Some (26/58) of the participants expressed negative perceptions about HIP. They expressed concerns about the lack of quality health-care services available under the insurance programs, poor access to care, unpractical/rigid procedures, and limited coverage for needed healthcare services. For example, one respondent commented:

> We have to face everywhere problems from start to end. We need to stay in a queue for a long time for registration, consultation, referral process, re-registration in a referral point, test and diagnostics, billing, and even in pharmacy. Doctors do not provide sufficient time to check-up. Not only that they

> even, do not listen about our problems. Everywhere is queue and at last we should but medicine from outside (private) pharmacy. (SSI, IDI, 45/M)

Unavailability of services/medicine

While the insurance scheme identifies more than 1100 kinds of medicines, surgeries, diagnostic tests, and other healthcare services, not all of these services are available in all hospitals and referral centers. However, the insurees often demand these health benefit packages where they are admitted. Most (40/58) of the participants complained that they did not receive the services and medicine they wanted, which were listed as part of the insurance scheme. They also indicated that only the least expensive medicines and services were available at their local healthcare facilities, and more expensive medicines and services needed to be sought from other healthcare facilities and pharmacies. For example, one respondent commented:

> I could not be positive towards insurance program since I could not get medicine for my baby. We need to buy medicine for outside pharmacy. I went to hospital with my child expecting that insurance will cover all the cost of treatment of my baby. Neither the doctor checked up well nor the prescribed medicine available in the hospital. Doctors did not come in time. They discriminated us only they preferred the patients who paid money. They did not check-up seriously. (GSI, IDI, 38/F)

Poor coverage

Most (30/58) of the participants responded that the healthcare coverage amount in the insurance program was very limited and should be increased. Others (25/58) said that all health-care services should be covered under the insurance scheme. Some (20/58) of the participants complained about the limited medicines that were available under the insurance scheme. They said that there should be no additional costs for buying needed medicines if they were enrolled in the insurance program. Moreover, participants (30/58) argued that some healthcare facilities were not covered in the scheme and that all available healthcare facilities and providers should be listed as service centers under the HIP. For example, one respondent commented:

> Patients need to buy medicine from outside the hospital. Most of the medicines are not available under the scheme. For the senior citizens in the ICU and CCU, all medicines should be bought from patients' pockets. Since we enrolled in the insurance scheme all treatment and services should be free of cost for insurance card holders. (SSI, FGD, 48/M)

Unsatisfied/dissatisfied

While the HIP program acts and regulations are designed to treat all insurees equally, those who live further away from treatment facilities find that they face challenges to getting care and often need to expend more resources for receiving healthcare services.

For example, some (19/58) of these distantly located participants stated that they need to pay more than NRs 1000 to travel to a hospital just to get medications that cost them as little as NRs 10–20. This was cost-prohibitive for them. They also complained that there was no special provision about the length of required hospital stays, which often last 3 days or more (including referral/registration—usually one day, check-up/diagnosis—another day, and treatment/discharge—at least another day), which is difficult for them to do when they are far away from their homes. They also indicated that as “distance patients,” they should be treated differently than local patients who are located closer to the facilities. For example, these distance patients (19/58) wished that they did not have to wait in line for services. They also wanted to have full costs for local short-term stay accommodations provided to them for multiple-day outpatient healthcare services. Distance patients (32.75%) complained that healthcare providers were not sensitive to their concerns about living further away from the healthcare facilities, and were also concerned about poor quality medicines, long duration in the queue for services, lack of availability of drugs, poor coverage provision, and desired healthcare services that were not available in program-approved healthcare facilities. For example, one respondent commented:

> The insurance program has not covered most of the services and medicines. On the other hand, the medicine available under the scheme does not work. If you pay, you can get services easily and fast but if you go through the scheme, you have to spend more time. Doctors did not check up well for insurees but they pay attention to the patients who pay. (SSI, IDI, 42/F)

Low-quality services

One of the major issues pointed out by the participants (38/58) was concerns about the quality of healthcare services. Low quality of healthcare services makes the insurees feel dissatisfied with the insurance program. Informants (53.44%) said that they had to wait in a queue to register for healthcare services and then they had to wait again to receive a referral letter from the first service point and yet again. Later, they needed to wait another time to register at the referral center. After that, they faced further waits for checkups, billing, tests and diagnoses, laboratory and radio diagnosis reports, doctor's consultations, pharmacy services, and then again for discharge from the healthcare facility. These time-consuming and rigid processes made the insurees feel frustrated and dissatisfied. Participants expressed that even after long waiting times (more than 2 h), they did not receive even a single medicine under the scheme and had to arrange to purchase needed medications from outside pharmacies. In addition, several of the participants (50%) complained that healthcare and administrative facilities staff misbehaved with them and treated them poorly. For example, one respondent commented:

> We have to spend more time in waiting. Neither the doctors check up properly nor the medicine available as per the prescription. The freely provided medicines do not work since there are low-quality medicines. Doctors mostly discriminate who are enrolled in the insurance scheme and do not provide adequate time for a checkup. Everywhere is a queue such as registration, referral point, check-up/consultation, test and diagnostics, report receipt, document scanning, and pharmacy. (SSI, FGD, M/38)

Not fairly distributed

The HIP was implemented aiming to minimize the gap in service utilization among the rich and poor by managing the prepayment system for healthcare services. However, due to geographical access, most of the insurees were not equally treated. Some (36.2%) of the participants expressed that they had to spend more money out of pocket for travel and accommodation costs than for their healthcare costs. They also demanded that they should be treated differently, such as priority given to them, or other affirmative actions, like reimbursing travel and accommodation costs for those who live far from the assigned healthcare facility. For example, one respondent commented:

> We are far from the referral center (hospital). We need to make a referral slip from the first service point. Due to the large number of patients, we almost spend one day for referral slips. Same problem we have to face in the hospital. We have to travel by bus to reach the hospital. Limited buses are there and we cannot get a bus every time. We reach hospital by midday. All the processes we should follow to receive the services such as stay in the queue for reregistration, consultation, billing, test and diagnostic. After that, we even buy medicine from a private pharmacy. There should be special provisions for the patients who live in far from the hospital so that they could return home same day. We have to pay a higher cost in travel and accommodation than healthcare cost. Therefore, affirmative action should be made for those who live in a distance from the hospital, senior citizens, and differently-abled persons. (SSI, IDI, 43/M)

Awkward processes

A majority (51.72%) of participants expressed that they were unaware of the basic information on health insurance. They did not know all the processes that they need to follow while receiving the healthcare services. Moreover, many (58.6%) of the participants were unhappy with the referral system used with the insurance program, explaining that it was both impractical and infeasible. For example, they complained that they were required to get referral slips from their first point of healthcare service, which was required to be from a government healthcare institution. Yet, in the past many enrollees had received care from private or community/charity-based hospitals, which were not accepted for initiating referrals. They further explained that if they were referred to receive additional care at referral sites that were far away from the initial point of care, it was often inconvenient to travel to get care, especially for patients who needed healthcare as soon as possible. It was perceived that the current regulations with the referral system were impractical, unfit, and inconvenient, and argued that these regulations should be revised. For example, one respondent commented:

> We have to spend one day for registration and referral services, one day for consultations and billing, and one day for test reports and medicine. So at least three days we need to spend on health services. Moreover, hospitals ask for referral cards in every week. The referral slip works for only one week and patients with chronic diseases need to make it in every week to receive the services. Not only that, the referral process is very rigid, rigorous, inconvenient, and impracticable. (GSI, IDI, 40/F)

Expectations

Queueless services

Respondents (70.68%) expressed high expectations of the healthcare services they would receive under the new HIPs. For example, insurees expected that they would receive hassle-free provision of care, which means that they would be able to access healthcare services without any delay and without having to wait in line or queue. The expectation was that if they now had an *insurance card*, then they would not have to wait in line/queue for healthcare services. Yet, many respondents (65.51%) explained that they usually encountered long lines to receive care. Participants demanded (51.72%) that there should be adequate human resources for health, medicine, and equipment to better meet the demand for care according to the health insurance enrollment ratio or the number of healthcare service users. For example, one respondent commented:

> Due to the access to healthcare by the insurance scheme, the utilization rate has increased. Even poor people have no access to health services. However, the healthcare providers remain the same so they are not able to provide services timely. Everywhere is a queue such as for registration, referral slip, consultation, billing, test and diagnostics, prescription scanning, and pharmacy. All healthcare providers should manage adequate human resources for healthcare as per the flow of patients. Since we have an insurance card, we have the right to get quality services from the hospitals. (SSI, IDI, 52/F)

Wider coverage: Amount and services

Most of the insurees' unfulfilled expectations were related to problems with the ceiling amount of health insurance coverage provided and with limitations in healthcare services available under the insurance scheme. Some participants (41.38%) expressed that they were even willing to pay more for healthcare insurance (currently NRs 3500/-) if they could have more of their expected healthcare services covered by the insurance program. Participants (37.93%) further declared that with their *insurance card*, they should be able to receive all needed healthcare services. For example, one respondent commented:

> We can afford more contribution amount (> NRs. 3500/-) and we can pay for basic health services but all costs should be free that we cannot afford in critical illnesses such as cancer, kidney failure, trauma, head and spinal injuries, coronary heart diseases, stroke. Therefore, coverage services and amounts should be increased. (SSI, IDI, 38/M)

Travel/accommodation costs

Respondents (39.66%) expressed the expectation that the insurance program would adequately cover their travel and accommodation expenses incurred in accessing healthcare. However, due to geographical diversity and scattered residential areas in Nepal, many of those who are covered by the insurance plan live far away from the facilities where they were required to access healthcare. The insurance plans utilize a limited number of healthcare delivery facilities, so those who are insured are forced to travel to the sites where their healthcare is covered, often far away from where they live. In some cases, those who are insured may need to spend multiple days to visit health facilities. In such situations, patients often accrue travel and accommodation costs that are far more than the maximum ceiling costs covered by the health insurance. Therefore, participants expected that there should be a provision for covering travel and accommodation costs for those who live far from healthcare delivery facilities. However, there is no provision for covering these travel and accommodation expenses in the health insurance act and in the health insurance regulations. For example, one respondent commented:

> We have to pay more amount as transportation cost than healthcare costs. Moreover, we also have to stay in a hotel due to the unavailability of public vehicles timely. Therefore, there should be a provision of travel and accommodation facilities to patients who live in far/remote areas if the government wants to establish equity to all citizens. (GSI, FGD, 55/M)

Card-based treatment system

Respondents (26/58) expressed the expectation that they would be able to receive insurance-covered healthcare services from all available healthcare facilities. However, as mentioned earlier, there is no provision for insurees to receive healthcare services outside the limited number of healthcare delivery facilities that are included as service providers for insurees by the HIB. Many respondents (31/58) wanted to be able to access care services from all available health facilities under the scheme. Moreover, healthcare is often an unpredictable need for people and they are often unprepared for health problems that may happen accidentally and also may happen anywhere and anytime. Therefore, respondents wanted all local healthcare service providers to be available to them within the insurance program. Several respondents suggested that their health *insurance card* should work like an ATM bank card to cover their care from any healthcare facility. For example, one respondent commented:

> We can receive healthcare services from the first service point (government hospital) and if we have referral slip, we can get healthcare services from limited community and private hospitals. Since we have insurance card it should work as ATM in the banking system. Insurance cardholders should have a provision to receive health services from all health facilities after showing the insurance card. (SSI, IDI, 35/M)

DISCUSSION

This qualitative study identified a range of important factors from the perspectives of individuals who were enrolled in the HIP that influenced their levels of satisfaction with the new HIP in Nepal. Three major sets of factors were identified from the study findings: *policy-related factors*, service *provider-related factors*, and *user-related factors* that influenced insurees' positive or negative perceptions about the HIP. The analysis of user responses in this study highlighted issues concerning the convenience of accessing healthcare services, ability to access needed healthcare services, and financial benefits of the HIP as factors that led to positive responses, while poor quality services, poor coverage, and rigid health insurance procedures were found top lead to negative responses to the program. In addition, findings suggested that there were several areas where the insurance program did not meet user expectations. We believe this is an appropriate and powerful research approach for phenomenologically examining the essence of experience from the perspectives of those enrolled in the new HIPs (Bourgeault et al., 2010; Kreps, 2008; Ngenye & Kreps, 2020; Rapport, 2004).

Various previously conducted systematic reviews (SRs) and meta-analyses (MAs) reinforced many of the findings in our study, showing that health insurance and health literacy increased the rate of utilization of healthcare (Shami et al., 2019; Yagi et al., 2022; Zhang et al., 2020). Another SR showed that the major themes identified included insurance policies, sociodemographic characteristics, awareness, enrollment, need and benefits, service quality, operation scheme, and policy for perception renewal decision making that are similar to this study (Hussien & Azage, 2021). Awareness, level of education, and knowledge about insurance schemes were significantly associated with enrollment in health insurance and were good ways to manage healthcare costs and guide positive refinements in insurance policies in Ibadan (Akinyemi et al., 2021).

Availability of prescribed drugs was associated with higher enrollee satisfaction, whereas waiting for more than an hour made insurees frustrated in Ethiopia (Hailie et al., 2021). Individual characteristics were also associated with satisfaction. For example, females were found to be comparatively more satisfied with healthcare services under insurance programs in Nigeria (Adewole et al., 2020). Most people were found to have limited information about their insurance programs in Nigeria (Michael et al., 2020). These past findings are very similar to the findings in this study.

Long wait times for services, particularly in registration, accounts, laboratories, and pharmacies, were shown to be the main causes of dissatisfaction with the Nigerian HIP (Olamuyiwa & Adeniji, 2021). Another study showed that rural insurees were more satisfied with Ghana's National HIP (Nketiah-Amponsah et al., 2019). However, individuals' perceptions toward the quality of healthcare services were significantly associated with age, occupation, region, and experiences of insurance schemes in Ghana (Nsiah-boateng et al., 2018). In this study, almost the same result was obtained, For example, dissatisfaction was observed for long waiting times (74%), and other sociodemographic characteristics such as age, educational level, and occupation were significantly associated with satisfaction in Nigeria (Akande et al., 2022). These findings are also similar to our study.

Nwanaji-Enwerem et al. (2022) indicated that service providers' attitudes and healthcare service environments were key factors for satisfaction, whereas referral services, waiting time, account, and pharmacy were factors that caused dissatisfaction among the patients/clients in Nigeria. Another study showed that younger age, working in private sectors, and information about the quality of services were significant predictors of satisfaction in the insurance program (Adewole et al., 2022). A study from Pokhara, Nepal showed that the unavailability of drugs, rental housing, self-perception of good health, and misbehavior of health-care professionals were associated with health insurance nonrenewal (Sharma et al., 2021). These findings also appeared similar to our study.

Nearly one-fourth (23.9%) of the respondents did not renew their insurance scheme in Ghana. Poor service quality, a lack of funds, and a preference for alternative sources of treatment were the reasons for the nonrenewal (Boateng & Awunyor-vitor, 2013). Another study from India showed that the availability of doctors, medicine, and positive outcome of the treatment was associated with the satisfaction of patients and renewal (Devadasan et al., 2011). Ewulum et al. (2022) claimed that satisfaction with health insurance was highly influenced by factors such as age, sex, education level, financial status, and understanding of insureds. Another study observed that insured individuals believed and encountered lengthy wait times, verbal abuse, not being physically examined, and prejudice in favor of the wealthy and uninsured (Dalinjong & Laar, 2012). Almost all these studies showed similar results to those identified in our study.

CONCLUSIONS AND POLICY IMPLICATIONS

Our comprehensive qualitative analysis of personal interviews and FGDs with individuals who were enrolled in the Nepal HIPs indicated that many of these insurees held high coverage expectations that were well beyond the limitations established within the current HIP acts, regulations, and provisions. The gaps between perceived expectations and the current realities enrollees faced in utilizing the HIP illustrate serious perceived program limitations among enrollees that need to be addressed to increase enrollment in the HIP and satisfaction with the new HIPs, including:

1. There were widespread perceptions found about insufficient established maximum ceilings for healthcare coverage as currently defined by the HIB as part of the insurance *benefits packages* for the wide range of healthcare services needed by those who were insured. These included strong concerns about insufficient coverage for medical procedures, medicines, tests and diagnostics, equipment, and travel/accommodation costs. This finding suggests the need to re-evaluate the established ceiling limit policies to make sure the limits do not restrict access to needed care. It also suggests the strong need to introduce relevant communication programs and educational tools (program brochures, online information sites, mailers, and targeted educational programs) to do a better job of clearly explaining coverage limits and options to enrollees in the program. Communication programs and materials should be designed to address the specific communication issues of greatest concern to enrollees, as well as to use familiar, easy-to-understand and easy-to-apply messages that are appropriate for different groups of program participants (Kreps, 2006).
2. There were also differential levels of satisfaction found concerning the HIPs between distinct groups of enrollees based on the kinds of HIPs they were enrolled in, where the insurees lived, and their different individual characteristics, such as their socioeconomic status. For example, government-sponsored enrollees expressed more appreciation than complaints toward the new HIP, while self-sponsored insurees were less satisfied with their coverage, sharing more complaints about the insurance program. Similarly, rurally located insurees were less satisfied with their health insurance than those who lived in more urban areas, and poorer enrollees were less satisfied with health insurance coverage than those who had more income. This finding suggests the need to re-examine issues of program equity for these different key groups of insurance program users. New program policies may be needed to better meet the needs of those groups of enrollees who are deeply dissatisfied with their levels of health insurance coverage.
3. Most of the insurees appeared to possess inadequate knowledge about insurance plan program rules, regulations, and coverage levels, leading to serious problems with information gaps, misinformation, confusion, and errors in effectively utilizing the new HIPs. This finding suggests the demand to design and implement more effective HIP education and information dissemination programs. The findings provided in this study can help guide the development of new communication and education programs to reduce information gaps and guide healthcare decision making, which should lead to increased HIP satisfaction and enrollment, while also helping to improve health outcomes for those enrolled in the HIP.

It can be concluded that insurees had more positive than negative perceptions toward the insurance program, including higher expectations for the insurance program. Positive perceptions of the HIP included providing better financial access to healthcare services, delivering higher healthcare coverage levels with smaller enrollee contributions, and reducing the health-care access gap between haves and have-nots. Negative perceptions included long waiting times for registration, consultations, laboratory tests/reports, and pharmacy services; unavailability of needed drugs; poor coverage levels (ceiling amounts); low-quality services; and rigid referral processes. Interestingly, insurers held many expectations for the program that went beyond the HIP's limitations, such as providing services without having to wait in long queues, delivering more coverage in amount and services, and establishing priorities for distantly located patients. It is obvious that insurees demand more health-care services once they are enrolled in HIPs. It would be good if the HIP did more to help meet these high expectations. Adequate information, education, and communication-related interventions may minimize the insurees' missed expectations and dissatisfaction since they were still unaware of the processes and limitations of the program.

Limitations and biases

There were methodological tradeoffs made with our decision to employ a qualitative research design for this study. While the qualitative methods used provided us with great depth of analysis, it also limited our ability to make predictions that could have been afforded with rigorous quantitative data collection and advanced statistical analysis. However, we felt that there was a strong need for in-depth analysis of user responses, evaluations, and experiences with HIPs in Nepal, necessitating our use of personal interviews and FGDs for data collection. Similarly, while the use of purposive sampling allowed us to recruit respondents with relevant experiences to share with us about the new HIPs, this sampling strategy might also lead to selection bias and limitations of generalizability that could have been offset with a random sampling strategy. In addition, our purposive sampling strategy focused on collecting data from HHs or senior members of the family, who we assumed could provide us with rich information about their family and health insurance, but this may have also introduced an information bias, especially since we collected data mostly from first and single visit participants due to resource constraints. Future research might use a multimethodological design that triangulates both quantitative and qualitative data, as well as use random sampling strategies, to increase both precisions and generalizability (Kreps, 2011).

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data sets/transcripts are available from the corresponding author upon a reasonable request.

ETHICS STATEMENT

Nepal Health Research Council reviewed and approved the study proposal (NHRC Ref. # 682: Registration # 506/2021P).

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REFERENCES

Acharya, D. (2020). *Information, education, and communication for enrolment in health insurance in Nepal*. Tribhuvan University. http://elibrary.tucl.edu.np:8080/bitstream/123456789/9538/1/All%20thesis.pdf

Acharya, D., Devkota, B., & Adhikari, R. (2018). Willingness to pay for family health insurance: Evidence from Baglung and Kailali districts of Nepal. *Global Journal of Health Science*, *10*(12), 144–155. https://doi.org/10.5539/gjhs.v10n12p144

Acharya, D., Devkota, B., & Kreps, G. L. (2022). Does perceived susceptibility and severity of health problems serve as drivers for household enrolment in health insurance? A case study from Nepal. *The International Journal of Health Planning and Management*, *37*(2), 839–853. https://doi.org/10.1002/hpm.3377

Adewole, D. A., Adeniji, F. P., Adegbrioye, S., Dania, O., & Ilori, T. (2020). Enrollees' knowledge and satisfaction with national health insurance scheme service delivery in a tertiary hospital, South West Nigeria. *Nigerian Medical Journal*, *61*(1), 27. https://doi.org/10.4103/nmj.nmj_126_18

Adewole, D. A., Reid, S., Oni, T., & Adebowale, A. S. (2022). Factors influencing satisfaction with service delivery among national health insurance scheme enrollees in Ibadan, Southwest Nigeria. *Journal of Patient Experience*, *9*, 237437352210741. https://doi.org/10.1177/23743735221074186

Akande, R. O., Abodunrin, O. L., Olarewaju, S. O., Adeomi, A. A., Akande, J. O., & Faramade, I. O. (2022). Health insurance in private and public health facilities in Southwestern Nigeria: What determines clients' satisfaction with quality of service? *The Pan African Medical Journal*, *41*(268), 268. https://doi.org/10.11604/pamj.2022.41.268.26875

Akinyemi, O. O., Owopetu, O. F., & Agbejule, I. O. (2021). National health insurance scheme: Perception and participation of federal civil servants in Ibadan. *Annals of Ibadan Postgraduate Medicine*, *19*(1), 49–55.

American Psychological Association. (2020). *Publication manual of the American Psychological Association 2020: The official guide to APA style* (7th ed.).

Boateng, D., & Awunyor-vitor, D. (2013). Health insurance in Ghana: Evaluation of policy holders' perceptions and factors influencing policy renewal in the Volta region. *International Journal for Equity in Health*, *12*(50), 50. https://doi.org/10.1186/1475-9276-12-50

Bourgeault, I., Dingwall, R., & de Vries, R. (Eds.). (2010). *The SAGE handbook of qualitative methods in health research*. SAGE Publications Ltd.

Byrne, J., & Humble, Á. M. (2007, December). An introduction to mixed method research. *Atlantic Research Centre for Family-Work Issues*, 1–4.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications, Inc.

Dalinjong, P. A., & Laar, A. S. (2012). The National Health Insurance Scheme: Perceptions and experiences of health care providers and clients in two districts of Ghana. *Health Economics Review*, 2(13), 1–13. https://doi.org/10.1186/2191-1991-2-13

Department of Health Education and Welfare. (1979). *The Belmont report: Ethical principles and guidelines for the protection of human subjects of research*.

Devadasan, N., Criel, B., Van Damme, W., Lefevre, P., Manoharan, S., & van der Stuyft, P. (2011). Community health insurance schemes & patient satisfaction—Evidence from India. *The Indian Journal of Medical Research*, *133*(1), 40–49.

Ewulum, K., Abiodun, O., Ogunniyi, A., Ajani, O., Yashim, A., Tomori, M., Oyewande, A., Udah, C., Igbinovia, F., Enejoh, D., Gwa, Z., Afelumo, O., & Sanni, F. (2022). Enrollees' knowledge, satisfaction, and barriers to uptake of National Health Insurance Scheme in north-central Nigeria. *MGM Journal of Medical Sciences*, *9*(1), 89. https://doi.org/10.4103/mgmj.mgmj_79_21

Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, *20*(9), 1408–1416.

Gurung, G. B., & Panza, A. (2022). Predictors of annual membership renewal to increase the sustainability of the Nepal National Health Insurance program: A cross-sectional survey. *PLoS Global Public Health*, *2*(4), e0000201. https://doi.org/10.1371/journal.pgph.0000201

Hailie, M. T., Hassen, S. L., & Temesgen, M. M. (2021). Client satisfaction on community based health insurance scheme and associated factors at Boru Meda Hospital, Northeast, Ethiopia: Institutional based cross-sectional study. *BMC Health Services Research*, *21*(1), 1287. https://doi.org/10.1186/s12913-021-07223-4

Health Insurance Board (HIB). (2020). *Brief annual report FY 2075-76*. https://hib.gov.np/public/uploads/shares/notice_hib/health_insurance_report_2075-76.pdf

Hussien, M., & Azage, M. (2021). Barriers and facilitators of community-based health insurance policy renewal in low-and middle-income countries: A systematic review. *ClinicoEconomics and Outcomes Research; A Journal of Science and Its Applications*, *13*, 359–375. https://doi.org/10.2147/CEOR.S306855

KOICA-Nepal Health Insurance Support Project (NHISP). (2014). *Comprehensive district assessment for health insurance in Kailali district*.

Kreps, G. L. (2006). One size does not fit all: Adapting communication to the needs and literacy levels of individuals. *Annals of Family Medicine*, 219–238. https://www.annfammed.org/content/4/3/205/tab-e-letters#one-size-does-not-fit-all-adapting-communication-to-the-needs-and-literacy-levels-of-individuals

Kreps, G. L. (2008). Qualitative inquiry and the future of health communication research. *Qualitative Research Reports in Communication*, *9*(1), 2–12.

Kreps, G. L. (2011). Methodological diversity and integration in health communication inquiry. *Patient Education and Counseling*, *82*, 285–291.

Levitt, H. M., Bamberg, M., Creswell, J. W., Frost, D. M., Josselson, R., & Suárez-Orozco, C. (2018). Journal article reporting standards for qualitative primary, qualitative meta-analytic, and mixed methods research in psychology: The APA Publications and Communications Board Task Force Report. *American Psychologist*, *73*(1), 26–46. https://doi.org/10.1037/amp0000151

Maykut, P., & Morehouse, R. (1994). *Beginning qualitative research: A philosophic and practical guide*. The Falmer Press (A member of the Taylor & Francis Group).

Michael, G., Grema, B., Aliyu, I., Tanimu, S., Suleiman, A., Shuaibu, A., & Adesida, A. (2020). Awareness, knowledge, and perception of the National Health Insurance Scheme among national youth service corp members in Kano, Nigeria. *Nigerian Medical Journal*, *61*(4), 201. https://doi.org/10.4103/nmj.nmj_140_19

Nepal Health Research Council (NHRC). (2022). *National ethical guidelines for health research in Nepal* (4th ed., pp. 1–68). https://nhrc.gov.np/wp-content/uploads/2022/04/National-ethical-guidelines-October.pdf

Nepal Law Commission. (2015). *The constitution of Nepal*. Member of Parliament. https://www.lawcommission.gov.np/en/wp-content/uploads/2021/01/Constitution-of-Nepal.pdf

Ngenye, L., & Kreps, G. L. (2020). A review of qualitative methods in health communication research. *The Qualitative Report*, *25*(3), 631–645.

Nketiah-Amponsah, E., Alhassan, R. K., Ampaw, S., & Abuosi, A. (2019). Subscribers' perception of quality of services provided by Ghana's National Health Insurance Scheme—What are the correlates? *BMC Health Services Research*, *19*, 196. https://doi.org/10.1186/s12913-019-4023-3

Nsiah-boateng, E., Asante, F. A., Spaan, E., & Velden, K. V. D. (2018). Perception of quality health care delivery under capitation payment: A cross-sectional survey of health insurance subscribers and providers in Ghana. *BMC Family Practice*, *19*(37), 1–12.

Nwanaji-Enwerem, O., Bain, P., Marks, Z., Nwanaji-Enwerem, P., Staton, C. A., Olufadeji, A., & Nwanaji-Enwerem, J. C. (2022). Patient satisfaction with the Nigerian National Health Insurance Scheme two decades since establishment: A systematic review and recommendations for improvement. *African Journal of Primary Health Care & Family Medicine*, *14*(1), 1–10. https://doi.org/10.4102/phcfm.v14i1.3003

Olamuyiwa, T. E., & Adeniji, F. O. (2021). Patient's satisfaction with quality of care at a National Health Insurance Clinic at a tertiary center, South-South Nigeria. *Journal of Patient Experience*, *8*, 237437352098147. https://doi.org/10.1177/2374373520981471

Ranabhat, C. L., Subedi, R., & Karn, S. (2020). Status and determinants of enrollment and dropout of health insurance in Nepal: An explorative study. *Cost Effectiveness and Resource Allocation*, *18*, 40. https://doi.org/10.1186/s12962-020-00227-7

Rapport, F., (Ed.). (2004). *New qualitative methodologies in health and social care research*. Routledge. https://doi.org/10.4324/9780203408643

Shami, E., Tabrizi, J. S., & Nosratnejad, S. (2019). The effect of health insurance on the utilization of health services: A systematic review and meta-analysis. *Galen Medical Journal*, *8*, e1411. https://doi.org/10.31661/gmj.v8i0.1411

Sharma, P., Yadav, D. K., Shrestha, N., & Ghimire, P. (2021). Dropout analysis of a National Social Health Insurance Program at Pokhara Metropolitan City, Kaski, Nepal. *International Journal of Health Policy and Management*, *11*, 2476–2488. https://doi.org/10.34172/ijhpm.2021.171

Sultan, P., Tarafder, T., Pearson, D., & Henryks, J. (2019). Intention–behaviour gap and perceived behavioural control–behaviour gap in theory of planned behaviour: Moderating roles of communication, satisfaction and trust in organic food consumption. *Food Quality and Preference*, *81*, 1–33. https://doi.org/10.1016/j.foodqual.2019.103838

The World Bank. (2022). Out-of-pocket expenditure (% of current health expenditure) - Nepal.

Yagi, B. F., Luster, J. E., Scherer, A. M., Farron, M. R., Smith, J. E., & Tipirneni, R. (2022). Association of health insurance literacy with health care utilization: A systematic review. *Journal of General Internal Medicine*, *37*(2), 375–389. https://doi.org/10.1007/s11606-021-06819-0

Zhang, C., Fu, C., Song, Y., Feng, R., Wu, X., & Li, Y. (2020). Utilization of public health care by people with private health insurance: A systematic review and meta-analysis. *BMC Public Health*, *20*(1), 1153. https://doi.org/10.1186/s12889-020-08861-9

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RESEARCH ARTICLE

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Conservation and health policy implications linked to the human consumption of sea turtles in northwestern Mexico

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Abstract

Human consumption of sea turtles remains prevalent throughout Mexico even though laws restricting trade and take of threatened and endangered species have been in place for several decades. The illegal consumption of sea turtles represents a risk to animal conservation, and the pathogens in the meat can adversely affect human health. In 2017, we surveyed 201 adult residents of 22 coastal communities about their diets, health, and attitudes about the environment, and we collected hair samples that were tested for heavy metals. A large percentage of the samples had high levels of mercury (87%), arsenic (81%), lead (65%), aluminum (57%), and cadmium (31%). Odds ratios suggested that the 28% of participants who reported recent sea turtle consumption had an increased likelihood of high metal levels even after adjusting for sex, age, and consumption of fish that bioaccumulate heavy metals. Conservation efforts may be more successful when they appeal to people's self-interest rather than merely focusing on ecological benefits. Concerns about toxins in sharks, tuna, and other types of deep-sea fish have reduced human consumption of some species. Both sea turtle conservation and human health may benefit from awareness campaigns that emphasize the adverse outcomes associated with eating sea turtles while continuing to

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A. Alonso Aguirre and Kathryn H. Jacobsen were at George Mason University at the time the study was conducted.

affirm the economic benefits of healthy ecosystems. Transdisciplinary research that draws on ecology, epidemiology, toxicology, law, and public policy provides a valuable foundation for solving complex health issues. Creative reframing of biodiversity concerns will be necessary for promoting planetary health in a time of accelerating environmental change.

KEYWORDS

conservation of natural resources, endangered species, food preferences, heavy metal poisoning, public policy, sea turtles

Key points

- Human consumption of endangered sea turtles remains prevalent throughout Mexico even though laws restricting trade in threatened and endangered species have been in place for several decades.
- Sea turtle consumption by residents of communities in northwestern Mexico was associated with high hair metal levels even after adjusting for sex, age, and consumption of fish that bioaccumulate heavy metals.
- Sea turtle conservation efforts may benefit from awareness campaigns that emphasize the adverse health outcomes associated with eating turtle meat while continuing to affirm the economic benefits of healthy ecosystems.

INTRODUCTION

Health connects all species on the planet—humans, animals, and plants—and the ecosystems in which they coexist. Conservation medicine, EcoHealth, One Health, Planetary Health, and other frameworks for addressing the shared concerns of all species have emerged in response to growing recognition of the pervasive and sometimes irreversible anthropogenic changes that are transforming Earth's ecosystems into unhealthy landscapes (Aguirre et al., 2019). These complex challenges call for transdisciplinary, interprofessional, and multisectoral interventions that are effective, practical, and sustainable. At the implementation level, policies related to the intersection of human, animal, and ecosystem health must be grounded in a keen understanding of local socioeconomic and cultural factors as well as a solid grasp of the relevant regional, national, and international health and conservation policies, laws, and regulations (Aguirre et al., 2019).

Sea turtles have served as an important food source among coastal communities for centuries and they have been highly regarded for their cultural significance and nutritional value in Mexico. In the mid-1900s, increased market demand for sea turtle meat and the growth of the fisheries industry led to a massive decline in sea turtle populations and eventually resulted in a ban on sea turtle fisheries and derived products (Aguirre & Nichols, 2020). Despite the ban, consumption of sea turtles, especially the green turtles (*Chelonia mydas*) that are known in Mexico as black turtles, remains very much engrained in regional tradition and is prevalent throughout the country (Mancini & Koch, 2009). In Baja California, more than 75% of sea turtle mortality may be due to human consumption (Koch et al., 2006). Previous studies have estimated that at least a quarter of the residents and more than half of men who work in the fishing industry consume sea turtle meat at least monthly (Aguirre et al., 2006; Mancini & Koch, 2009). There is also physical evidence that many thousands of sea turtles are consumed annually in Baja California (Koch et al., 2006; Mancini & Koch, 2009; Senko et al., 2014). Sea turtle trafficking and illegal harvesting remain a major threat to the species (Mancini et al., 2011).

Sea turtle consumption may also pose a threat to human health because turtles harbor a variety of bacteria, parasites, heavy metals, and organochlorine compounds (Aguirre et al., 2006; Alduina et al., 2020; Fraga et al., 2018; Warwick et al., 2013; Zavala-Norzagaray et al., 2015). In Baja California Sur, green turtles have been found to accumulate aluminum, lead, cadmium, and mercury in their blood and scute tissue (Escobedo Mondragón et al., 2023). Humans with high levels of exposure to these elements have an increased risk of developing neurological disorders, kidney disease, and cardiovascular diseases (Basu et al., 2022; Jaishankar et al., 2014; Xu et al., 2018). Sea turtles have also been found to have detectable levels of organochlorine contaminants, polychlorinated biphenyls, and phthalates (Gardner et al., 2003; Richardson et al., 2010; Savoca et al., 2018). These chemicals are associated with neurodevelopmental issues, childhood obesity, prostate cancer, and other health and development issues in humans (Ali et al., 2016; Cupul-Uicab et al., 2013; Eskenazi et al., 2006; Nakajima et al., 2006). High levels of chemical contaminants have also been found in sea turtle eggs and other turtle parts collected in northwest Mexico (Gardner et al., 2006; Ley-Quiñónez et al., 2011, 2013, 2017; Olimón-Andalón et al., 2021; Páez-Osuna et al., 2010; Ross et al., 2017; Vazquez et al., 1997; Zavala-Norzagaray et al., 2014).

Even though there is ample evidence that sea turtles carry a variety of pathogens and toxic chemicals that are harmful to human health, previous studies have not directly linked sea turtle consumption to human health. The goal of our study was to identify current rates of sea turtle consumption among residents of coastal communities along the Gulf of California, to measure and compare the levels of heavy metals in hair samples obtained from adults who consume and do not consume sea turtle meat, and to explore local attitudes toward conservation.

MATERIALS AND METHODS

The research team visited 22 coastal communities in the states of Sinaloa and Sonora in northwestern Mexico during May to October 2017 (Figure 1). At each community we recruited a convenience sample of 12–20 adults who represented the diversity of the individuals present in the commercial centers of the visited towns, aiming for about half males and half females, a range of adult ages, and a variety of occupational and socioeconomic groups. Individuals who were in visibly poor health, appeared to be intoxicated, did not live in the sampled communities, or were less than 18 years old were not eligible for inclusion. The 201 consenting volunteers were interviewed using a 60-item questionnaire that included questions about demographics, self-reported socioeconomic status (based on a five-item scale from low to high), diet, personal health, and attitudes toward the environment and conservation. The items about diet and nutrition included questions about the types of seafood eaten and the frequency of consumption of sea turtles and various types of fish.

Hair samples have been used to examine long-term exposure to and concentration levels of heavy metals in studies of a diversity of human health issues (Foo et al., 1993; Katz & Katz, 1992), including those focused on seafood consumption and human health (Agusa et al., 2005; Airey, 1983; Dolbec et al., 2001; Elhamri et al., 2007; Oyoo-Okoth et al., 2010; Schoeman et al., 2010). Hair specimens for this study were collected according

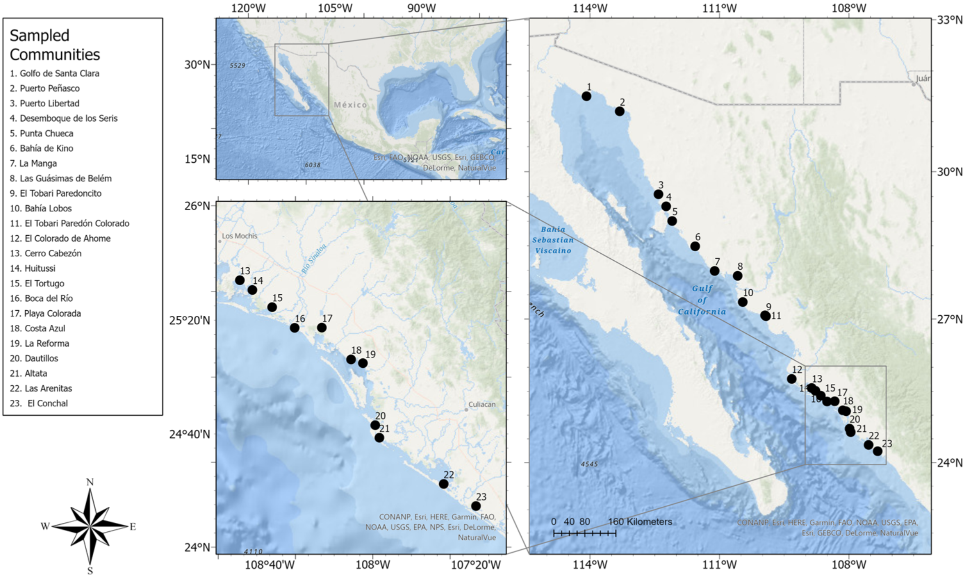

FIGURE 1 A map of the coastal communities in the states of Sinaloa and Sonora in northwestern Mexico that were sampled for participation on our study of sea turtles, human health, and nutrition in 2017.

to the protocols provided by Mosaic Diagnostics LLC (formerly Great Plains Laboratory LLC), which is Clinical Laboratory Improvement Amendments (CLIA) certified. Researchers cut several strands of hair (3–5 g) from the scalp of each consenting participant near the root and placed the collected strands in prelabelled plastic bags provided by the testing laboratory. (The specimen collection instructions allowed for testing of both scalp and pubic hair, so the one participant with no hair on his head collected his own pubic hair and gave the bag to a member of the research team.) Potential volunteers with dyed, bleached, permed, or otherwise chemically treated hair were excluded from the study.

Mosaic Diagnostics tested all specimens using their standard hair test for 17 toxic metals and 22 other elements. Results for each participant's chemical tests were labeled as low, normal, or high based on reference values determined by the lab's standards for heavy metal testing using hair samples (The list of tests and the reference values for high levels for males and females is provided in Supplemental Table 1). Our analysis focused on the heavy metals that are recognized to bioaccumulate in fish and seafood and are known to affect human health when consumed at high levels (Agusa et al., 2005; Airey, 1983; Bosch et al., 2015; Dolbec et al., 2001; Elhamri et al., 2007; Oyoo-Okoth et al., 2010; Schoeman et al., 2010).

Descriptive statistics were used to summarize the characteristics of the participants, the responses to the questionnaire items, and the results of the laboratory tests. Chi-square tests for independence were used to examine diet and heavy metal levels by sex, and chi-square tests for trend were conducted to examine these variables by age group and socioeconomic level. Odds ratios examining sociodemographic, dietary, and other potential predictors of high levels of heavy metals in hair were calculated in IBM SPSS (v.27) using logistic regression models. Backward stepwise multiple logistic regression was used to examine the associations between sea turtle consumption and high levels of heavy metals in hair after statistically adjusting for sociodemographic characteristics and consumption of fish like marlin and shark that bioaccumulate heavy metals (Frías-Espericueta et al., 2014; Jakimska et al., 2011; Soto-Jiménez et al., 2010). Because the percentage of participants with high levels of heavy metals in their hair was much higher than we anticipated in our sample size calculations before data collection, we used R (v. 4.1.0) to calculate the statistical power for a binomial distribution with continuity correction for our simple logistic regression models.

RESULTS

Of the 201 study participants, 94 (47%) identified as men and 107 (53%) as women. The median age was 46 years, with 54 (27%) participants 18–34 years old, 94 (47%) 35–54 years, and 53 (26%) 55–83 years. Most study participants reported being married (76%) and currently working (71%). Self-reported socioeconomic status was reported to be middle or upper-middle by 43%, lower-middle by 19%, and low by 38%. Many study participants reported that their overall health status was not so good (46%) or was poor or very poor (14%), and 38% reported that an illness or health problem limited their daily activities. The most frequently reported chronic health conditions among participants were hypertension (28%), high cholesterol (23%), diabetes (18%), stomach ulcers (17%), and heart problems (15%). Comparisons of the reported dietary practices of individuals with and without these conditions yielded few statistically significant differences.

A variety of heavy metals were found in the 201 tested hair specimens, with more than half of the participants having high levels of mercury (87% of participants), arsenic (81%), lead (65%), and aluminum (57%) in their hair (Figure 2). By contrast, less than 1% of the hair specimens tested high for platinum, copper, and selenium. Males were significantly more likely than females to have high levels of lead ($p < 0.001$), aluminum ($p < 0.001$), and cadmium ($p < 0.001$). Participants who reported being employed were more likely to have high levels of lead ($p < 0.001$), aluminum ($p = 0.002$), and cadmium ($p = 0.008$). Males were much more likely than females to work in the fishing industry ($p < 0.001$). Participants with low socioeconomic status were more likely than others to have high levels of arsenic

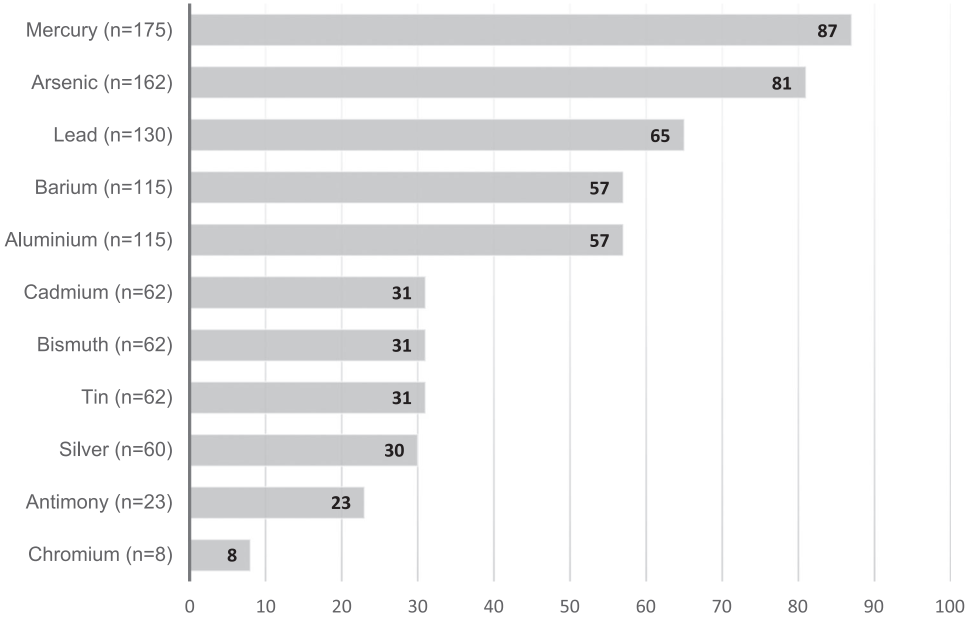

FIGURE 2 Percentage of study participants with high levels of heavy metals in their hair ($n = 201$).

($p = 0.03$). There were no significant associations between high levels of heavy metals and self-reported health problems.

Seafood is an integral part of the local diet in these coastal communities. Of the 177 (88%) participants who reported eating seafood at least once a week, the most consumed products over the past year included whitefish ($n = 165$, 93%), shrimp ($n = 156$, 88%), clams ($n = 104$, 59%), stingray ($n = 97$, 55%), and tuna ($n = 92$, 52%). A total of 57 (28%) study participants reported consuming sea turtle meat within the past year. Among sea turtle eaters, 9% ($n = 5$) reported eating turtles at least weekly, on average; 44% ($n = 25$) reported eating turtles at least monthly; and 81% ($n = 46$) reported eating turtles at least quarterly. Males ($p = 0.03$), adults ages 35 and older ($p = 0.03$), and participants of low socioeconomic status ($p = 0.04$) were more likely than other participants to report having consumed sea turtle meat in the past year. There were no significant associations between sea turtle consumption and self-reported health problems.

Because so many participants had high levels of heavy metals in their hair, our sample size provided limited statistical power to detect associations between sea turtle consumption and high levels of metals in hair samples. Only the test for aluminum had sufficient power (>80%) to generate statistical significance. The odds ratio for that association was 2.53 (1.30, 4.91), indicating that people with high aluminum levels were significantly more likely than others to have consumed sea turtles (Table 1). The point estimates for other metals associated with adverse human health outcomes were consistently greater than odds ratio (OR) = 1: 2.28 (0.75, 6.97) for mercury, 1.75 (0.89, 3.45) for lead, 1.63 (0.70, 3.80) for arsenic, and 1.62 (0.85, 3.09) for cadmium. These point estimates remained greater than OR = 1 after adjusting for sex, age group, socioeconomic group, and consumption of fish like marlin and shark that bioaccumulate heavy metals. The wide confidence intervals due to these analyses being underpowered precludes the odds ratios from being statistically significant, but the point estimates suggest that sea turtle consumption is associated with a greater likelihood of high levels of mercury, lead, arsenic, and cadmium as well as aluminum.

More than 97% of study participants reported supporting wildlife conservation; recycling and appropriate trash disposal; water, electricity, and gas conservation; planting trees; nature conservation; and educating children about the importance of nature conservation. There were no significant differences in support for ecological health by sea turtle eating status.

DISCUSSION

This pilot study found a stunningly high rate of high heavy metal levels in the hair of coastal residents of northwestern Mexico. Food is a significant source of human exposure to heavy metals (Gardner et al., 2006; Kampalath et al., 2006; Tchounwou et al., 2012), and sea turtles have been found to bioaccumulate these elements (Aguirre et al., 2006; Gardner et al., 2006; Kampalath et al., 2006; Zavala-Norzagaray et al., 2014). Exposure to heavy metals is associated with an increased risk of hypertension, cardiovascular disease, diabetes, and a variety of cancers and neurological disorders (Rehman et al., 2017; Tchounwou et al., 2012). Given the established links among fish consumption, heavy metals, and human health (Bosch et al., 2015; Ullah et al., 2017), it is reasonable to hypothesize that a similar association exists between sea turtles and human health.

A considerable proportion of the residents of our study communities continue to eat sea turtles even though this activity is banned. The very high level of support for ecological protection even among sea turtle eaters suggests that residents may not understand how important sea turtles are for the health of local ecosystems (Delgado & Nichols, 2005;

TABLE 1 Sea turtle meat consumption and prevalence of high levels of heavy metals in study participants, northwestern Mexico, 2017.

	Mercury	Cadmium	Lead	Aluminum	Arsenic
Prevalence of high levels in hair samples ($n = 201$)	87.1%	30.8%	64.7%	56.7%	80.6%
Prevalence among those who ate sea turtles in the past year ($n = 57$)	93.0%	38.6%	73.7%	71.9%	86.0%
Prevalence among those who did not eat sea turtles in the past year ($n = 144$)	85.3%	28.0%	61.5%	50.3%	79.0%
Odds ratio (OR) and 95% confidence interval for turtle consumption and high levels of heavy metals	2.28 (0.75, 6.97)	1.62 (0.85, 3.09)	1.75 (0.89, 3.45)	2.53 (1.30, 4.91)	1.63 (0.70, 3.80)
Power for the calculation of the OR	35.9%	31.2%	38.3%	82.0%	22.9%
Adjusted OR that adjusts for sex, socioeconomic group, and age group	2.19 (0.69, 6.92)	1.13 (0.54, 2.36)	1.19 (0.54, 2.64)	1.82 (0.86, 3.85)	1.31 (0.53, 3.24)
Adjusted OR that adjusts for sex, socioeconomic status, age group, and an interaction term for turtle eating and consumption of fish that bioaccumulate heavy metals	1.99 (0.53, 7.47)	1.17 (0.50, 2.77)	1.37 (0.52, 3.54)	2.41 (0.97, 6.00)	1.57 (0.48, 5.17)

Schneller & Baum, 2011). Very favorable attitudes toward ecosystem health may help residents translate increased awareness of the ecological harm caused by sea turtle harvesting into changed dietary behaviors, especially if traditional local knowledge is presented along with information about new scientific findings. A social-ecological resilience approach that emphasizes human interconnection with nature is necessary for protecting the health of the human population as well as the ecosystem at large (Faerron Guzmán et al., 2021; Folke et al., 2016). Intensified conservation efforts will need to be responsive to the economic burden that may be placed on commercial fishers (Aguilar-González et al., 2014).

Limitations and bias

There were several limitations to our study that require cautious interpretation of the results. The sampling method used for recruiting study participants was not a true random sample, even though the demographic characteristics of participants were reasonably representative of the sampled communities. Participants may not have accurately reported their dietary habits, nutritional status, or health conditions, and some may be unaware of undiagnosed medical issues. Hair testing may lack the accuracy of tests of blood and other body tissues. The higher-than-anticipated levels of high heavy metals among participants meant that our sample size did not provide sufficient statistical power for many of our calculations. Additional research using larger study populations and more rigorous research techniques will be necessary to confirm our preliminary results, but there is a biologically plausible explanation for why our pilot study found that sea turtle consumption might be associated with heavy metal exposure.

CONCLUSIONS AND POLICY IMPLICATIONS

Sea turtle populations remain under duress in the study communities, and their survival will be dependent on sustained changes in human behaviors related to these endangered species. Conservation efforts tend to be more successful when they appeal to people's self-interest rather than merely focusing on ecological benefits (De Dominicis et al., 2017). Warnings about mercury in deep-sea fish have contributed to reduced consumption of some types of seafood by high-risk human populations (Oken, 2003; Shamshak et al., 2019; Taylor et al., 2014). If our findings are validated with larger studies, a similar communication strategy that emphasizes the heavy metal exposure associated with sea turtle consumption might be valuable for promoting conservation. Many residents of the study region have indicated a willingness to cease consumption of sea turtles if their physicians tell them that the food is unhealthy (Senko et al., 2009). More generally, clinical health professionals play an important role in communicating about the adverse impacts of climate change and advocating for healthcare and health systems policies (Maibach et al., 2021). That suggests that an interprofessional approach that draws on trusted practitioners in human medicine, veterinary medicine, public health, conservation biology, ecology, and other areas would be useful for communication about sea turtles, human health, and related environmental and health policies.

Community involvement and sustainable collective governance are essential for responding to climate change, conserving species and ecosystems, and solving other environmental health concerns. Community engagement is most effective when communities share a vision for change, build trust, coordinate their activities, measure their successes, and ensure transparency (Patel, 2021). The sea turtle conservation movement in northwestern Mexico is now championed by many individuals from diverse backgrounds, and that widespread involvement is helping to change the deeply entrenched cultural traditions that are associated with sea turtle consumption (Bird et al., 2003; Delgado & Nichols, 2005). For example, local communities in several remote areas of Mexico have been given authority to monitor sea turtle bycatch, and some fishermen in these locations have transitioned from doing the traditional fishing methods practiced in their communities for generations to working directly on sea turtle conservation (Aguirre & Nichols, 2020; Delgado & Nichols, 2005). These community monitoring initiatives have contributed to reducing illegal trade and take of sea turtles, improving the quantity and quality of public services in participating communities, and strengthening community demand for longer-term reforms (Schneller & Baum, 2011).

Creative reframing of biodiversity concerns in countries around the globe will be necessary for promoting population and ecosystem health in a time of accelerating environmental change. Linking human health and ecosystem sustainability when those connections are supported by robust evidence will be critical in the coming years for responding to climate change and other emerging threats with a global scale. Our results from an interdisciplinary team of researchers provide new insights about how heavy metals in sea turtles might adversely affect human health, marine ecosystems, and environmental security. In northwest Mexico, and perhaps also in other coastal communities, emphasizing the adverse human health impacts of sea turtle consumption may directly contribute to reducing illegal trade in endangered species and yield benefits for both human health and sea turtle conservation.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ETHICS STATEMENT

The study protocol was approved by the ethical review committees of Universidad Autónoma de Sinaloa, Facultad de Medicina, Culiacán, Sinaloa, Mexico, and George Mason University in Fairfax, VA, United States, before initiation of recruiting and data collection. Documentation of informed consent was obtained from all individual participants in the study.

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REFERENCES

Aguilar-González, M. E., Luna-González, A., Aguirre, A., Zavala-Norzagaray, A. A., Mundo-Ocampo, M., & González-Ocampo, H. A. (2014). Perceptions of fishers to sea turtle bycatch, illegal capture and consumption in the San Ignacio-Navachiste-Macapule lagoon complex, Gulf of California, Mexico. *Integrative Zoology*, *9*, 70–84. https://doi.org/10.1111/1749-4877.12024

Aguirre, A. A., Basu, N., Kahn, L. H., Morin, X. K., Echaubard, P., Wilcox, B. A., & Beasley, V. R. (2019). Transdisciplinary and social-ecological health frameworks—Novel approaches to emerging parasitic and vector-borne diseases. *Parasite Epidemiology and Control*, *4*, e00084. https://doi.org/10.1016/j.parepi.2019.e00084

Aguirre, A. A., Gardner, S. C., Marsh, J. C., Delgado, S. G., Limpus, C. J., & Nichols, W. J. (2006). Hazards associated with the consumption of sea turtle meat and eggs: A review for health care workers and the general public. *EcoHealth*, *3*, 141–153. https://doi.org/10.1007/s10393-006-0032-x

Aguirre, A. A., & Nichols, J. W. (2020). *The conservation mosaic approach to reduce corruption and the illicit sea turtle take and trade*. Targeting Natural Resource Corruption project (World Wildlife Fund).

Agusa, T., Kunito, T., Iwata, H., Monirith, I., Tana, T. S., Subramanian, A., & Tanabe, S. (2005). Mercury contamination in human hair and fish from Cambodia: Levels, specific accumulation and risk assessment. *Environmental Pollution*, *134*(1), 79–86. https://doi.org/10.1016/j.envpol.2004.07.015

Airey, D. (1983). Mercury in human hair due to environment and diet: A review. *Environmental Health Perspectives*, *52*, 303–316.

Alduina, R., Gambino, D., Presentato, A., Gentile, A., Sucato, A., Savoca, D., Filippello, S., Visconti, G., Caracappa, G., Vicari, D., & Arculeo, M. (2020). Is *Caretta caretta* a carrier of antibiotic resistance in the Mediterranean Sea? *Antibiotics (USSR)*, *9*(3), 116. https://doi.org/10.3390/antibiotics9030116

Ali, I., Julin, B., Glynn, A., Högberg, J., Berglund, M., Johansson, J. E., Andersson, S. O., Andrén, O., Giovannucci, E., Wolk, A., Stenius, U., & Åkesson, A. (2016). Exposure to polychlorinated biphenyls and prostate cancer: Population-based prospective cohort and experimental studies. *Carcinogenesis*, *37*(12), bgw105. https://doi.org/10.1093/carcin/bgw105

Basu, N., Abass, K., Dietz, R., Krümmel, E., Rautio, A., & Weihe, P. (2022). The impact of mercury contamination on human health in the Arctic: A state of the science review. *Science of the Total Environment*, *831*, 154793. https://doi.org/10.1016/j.scitotenv.2022.154793

Bird, K. E., Nichols, W. J., & Tambiah, C. R. (2003). Integrating local knowledge and outside science in sea turtle conservation: A case study from Baja California, Mexico. In J. A. Seminoff (Ed.), *Proceedings of the twenty-second annual symposium on sea turtle biology and conservation* (pp. 63–64). NOAA Technical Memorandum NMFS-SEFSC-503.

Bosch, A. C., O'Neill, B., Sigge, G. O., Kerwath, S. E., & Hoffman, L. C. (2015). Heavy metals in marine fish meat and consumer health: A review. *Journal of the Science of Food and Agriculture*, *96*(1), 32–48. https://doi.org/10.1002/jsfa.7360

Cupul-Uicab, L. A., Klebanoff, M. A., Brock, J. W., & Longnecker, M. P. (2013). Prenatal exposure to persistent organochlorines and childhood obesity in the U.S. Collaborative Prenatal Project. *Environmental Health Perspectives*, *121*(9), 1103–1109. https://doi.org/10.1289/ehp.1205901

Delgado, S., & Nichols, W. J. (2005). Saving sea turtles from the ground up: Awakening sea turtle conservation in north-western Mexico. *Mast*, *3*(2), 89–104.

Dolbec, J., Mergler, D., Larribe, F., Roulet, M., Lebel, J., & Lucotte, M. (2001). Sequential analysis of hair mercury levels in relation to fish diet of an Amazonian population, Brazil. *Science of the Total Environment*, *271*(1–3), 87–97. https://doi.org/10.1016/S0048-9697(00)00835-4

De Dominicis, S., Schultz, P. W., & Bonaiuto, M. (2017). Protecting the environment for self-interested reasons: Altruism is not the only pathway to sustainability. *Frontiers in Psychology*, *8*, 1065. https://doi.org/10.3389/fpsyg.2017.01065

Elhamri, H., Idrissi, L., Coquery, M., Azemard, S., Abidi, A. E., Benlemlih, M., Saghi, M., & Cubadda, F. (2007). Hair mercury levels in relation to fish consumption in a community of the Moroccan Mediterranean coast. *Food Additives & Contaminants*, *24*(11), 1236–1246. https://doi.org/10.1080/02652030701329611

Escobedo Mondragón, M., Pérez Luzardo, O., Henríquez-Hernández, L. A., Rodríguez-Hernández, Á., Zumbado, M., Rosiles Martínez, J. R., González Farias, F., Suzán, G., & González-Rebeles Islas, C. (2023). Trophic behavior of inorganic elements in nesting sea turtles (*Chelonia mydas*, *Eretmochelys imbricata*, and *Caretta caretta*) in Quintana Roo: Biomagnification and biodilution effect in blood and scute tissues. *Marine Pollution Bulletin*, *187*, 114582. https://doi.org/10.1016/j.marpolbul.2023.114582

Eskenazi, B., Marks, A. R., Bradman, A., Fenster, L., Johnson, C., Barr, D. B., & Jewell, N. P. (2006). In utero exposure to dichlorodiphenyltrichloroethane (DDT) and dichlorodiphenyldichloroethylene (DDE) and neurodevelopment among young Mexican American children. *Pediatrics*, *118*(1), 233–241. https://doi.org/10.1542/peds.2005-3117

Folke, C., Biggs, R., Norström, A. V., Reyers, B., & Rockström, J. (2016). Social-ecological resilience and biosphere-based sustainability science. *Ecology and Society*, *21*(3), 41. https://doi.org/10.5751/ES-08748-210341

Foo, S. C., Khoo, N. Y., Heng, A., Chua, L. H., Chia, S. E., Ong, C. N., Ngim, C. H., & Jeyaratnam, J. (1993). Metals in hair as biological indices for exposure. *International Archives of Occupational and Environmental Health*, *65*, S83–S86. https://doi.org/10.1007/BF00381312

Fraga, N. S., Martins, A. S., Faust, D. R., Sakai, H., Bianchini, A., da Silva, C. C., & Aguirre, A. A. (2018). Cadmium in tissues of green turtles (*Chelonia mydas*): A global perspective for marine biota. *Science of the Total Environment*, *637–638*, 389–397. https://doi.org/10.1016/j.scitotenv.2018.04.317

Frías-Espericueta, M. G., Zamora-Sarabia, F. K. G., Osuna-López, J. I., Muy-Rangel, M. D., Rubio-Carrasco, W., Aguilar-Juárez, M., & Voltolina, D. (2014). Cadmium, copper, lead, and zinc contents of fish marketed in NW Mexico. *The Scientific World Journal*, *2014*, 546897. https://doi.org/10.1155/2014/546897

Gardner, S. C., Fitzgerald, S. L., Vargas, B. A., & Rodríguez, L. M. (2006). Heavy metal accumulation in four species of sea turtles from the Baja California Peninsula, Mexico. *BioMetals*, *19*, 91–99. https://doi.org/10.1007/s10534-005-8660-0

Gardner, S. C., Pier, M. D., Wesselman, R., & Juárez, J. A. (2003). Organochlorine contaminants in sea turtles from the Eastern Pacific. *Marine Pollution Bulletin*, *46*(9), 1082–1089. https://doi.org/10.1016/S0025-326X(03)00254-6

Guzmán, C. A. F., Aguirre, A. A., Astle, B., Barros, E., Bayles, B., Chimbari, M., El-Abbadi, N., Evert, J., Hackett, F., Howard, C., Jennings, J., Krzyzek, A., LeClair, J., Maric, F., Martin, O., Osano, O., Patz, J., Potter, T., Redvers, N., … Zylstra, M. (2021). A framework to guide planetary health education. *The Lancet Planetary Health*, *5*(5), e253–e255. https://doi.org/10.1016/S2542-5196(21)00110-8

Jaishankar, M., Tseten, T., Anbalagan, N., Mathew, B. B., & Beeregowda, K. N. (2014). Toxicity, mechanism and health effects of some heavy metals. *Interdisciplinary Toxicology*, *7*(2), 60–72. https://doi.org/10.2478/intox-2014-0009

Jakimska, A., Konieczka, P., Skóra, K., & Namieśnik, J. (2011). Bioaccumulation of metals in tissues of marine animals, part II: Metal concentrations in animal tissues. *Polish Journal of Environmental Studies*, *20*(5), 1127–1146.

Kampalath, R., Gardner, S. C., Méndez-Rodríguez, L., & Jay, J. A. (2006). Total and methylmercury in three species of sea turtles of Baja California Sur. *Marine Pollution Bulletin*, *52*(12), 1816–1823. https://doi.org/10.1016/j.marpolbul.2006.09.019

Katz, S. A., & Katz, R. B. (1992). Use of hair analysis for evaluating mercury intoxication of the human body: A review. *Journal of Applied Toxicology*, *12*(2), 79–84. https://doi.org/10.1002/jat.2550120203

Koch, V., Nichols, W. J., Peckham, H., & de La Toba, V. (2006). Estimates of sea turtle mortality from poaching and bycatch in Bahía Magdalena, Baja California Sur, Mexico. *Biological Conservation*, *128*, 327–334. https://doi.org/10.1016/j.biocon.2005.09.038

Ley-Quiñónez, C., Zavala-Norzagaray, A. A., Espinosa-Carreón, T. L., Peckham, H., Marquez-Herrera, C., Campos-Villegas, L., & Aguirre, A. A. (2011). Baseline heavy metals and metalloid values in blood of loggerhead turtles (*Caretta caretta*) from Baja California Sur, Mexico. *Marine Pollution Bulletin*, *62*(9), 1979–1983. https://doi.org/10.1016/j.marpolbul.2011.06.022

Ley-Quiñónez, C. P., Rossi-Lafferriere, N. A., Espinoza-Carreon, T. L., Hart, C. E., Peckham, S. H., Aguirre, A. A., & Zavala-Norzagaray, A. A. (2017). Associations between trace elements and clinical health parameters in the North Pacific loggerhead sea turtle (*Caretta caretta*) from Baja California Sur, Mexico. *Environmental Science and Pollution Research*, *24*(10), 9530–9537. https://doi.org/10.1007/s11356-017-8556-x

Ley-Quiñónez, C. P., Zavala-Norzagaray, A. A., Réndon-Maldonado, J. G., Espinosa-Carreón, T. L., Canizales-Román, A., Escobedo-Urías, D. C., Leal-Acosta, M. L., Hart, C. E., & Aguirre, A. A. (2013). Selected heavy metals and selenium in the blood of Black Sea turtle (*Chelonia mydas agasiizzi*) from Sonora, Mexico. *Bulletin of Environmental Contamination and Toxicology*, *91*(6), 645–651. https://doi.org/10.1007/s00128-013-1114-4

Maibach, E., Frumkin, H., & Ahdoot, S. (2021). Health professionals and the climate crisis: Trusted voices, essential roles. *World Medical & Health Policy*, *13*(1), 137–145. https://doi.org/10.1002/wmh3.421

Mancini, A., & Koch, V. (2009). Sea turtle consumption and black-market trade in Baja California Sur, Mexico. *Endangered Species Research*, *7*, 1–10. https://doi.org/10.3354/esr00165

Mancini, A., Senko, J., Borquez-Reyes, R., Póo, J. G., Seminoff, J. A., & Koch, V. (2011). To poach or not to poach an endangered species: Elucidating the economic and social drivers behind illegal sea turtle hunting in Baja California Sur, Mexico. *Human Ecology*, *39*, 743–756. https://doi.org/10.1007/s10745-011-9425-8

Nakajima, S., Saijo, Y., Kato, S., Sasaki, S., Uno, A., Kanagami, N., Hirakawa, H., Hori, T., Tobiishi, K., Todaka, T., Nakamura, Y., Yanagiya, S., Sengoku, Y., Iida, T., Sata, F., & Kishi, R. (2006). Effects of prenatal exposure to polychlorinated biphenyls and dioxins on mental and motor development in Japanese children at 6 months of age. *Environmental Health Perspectives*, *114*(11), 773–778. https://doi.org/10.1289/ehp.8614

Oken, E. (2003). Decline in fish consumption among pregnant women after a national mercury advisory. *Obstetrics & Gynecology*, *102*(2), 346–351. https://doi.org/10.1016/S0029-7844(03)00484-8

Olimón-Andalón, V., Valdés-Flores, J., Ley-Quiñonez, C. P., Zavala-Norzagaray, A. A., Aguirre, A. A., León-Sicairos, N., Velázquez-Román, J., Flores-Villaseñor, H., Acosta-Smith, E., Sosa-Cornejo, I., Valdez-Flores, M., Hart, C. E., & Canizalez-Román, A. (2021). Essential and trace metals in a post-nesting olive ridley turtles (*Lepidochelys olivacea*) in Ceuta beach, Sinaloa, Mexico. *Environmental Science and Pollution Research*, *28*, 29998–30006. https://doi.org/10.1007/s11356-021-12819-8

Oyoo-Okoth, E., Admiraal, W., Osano, O., Ngure, V., Kraak, M. H. S., & Omutange, E. S. (2010). Monitoring exposure to heavy metals among children in Lake Victoria, Kenya: Environmental and fish matrix. *Ecotoxicology and Environmental Safety*, *73*, 1797–1803. https://doi.org/10.1016/j.ecoenv.2010.07.040

Páez-Osuna, F., Calderón-Campuzano, M. F., Soto-Jiménez, M. F., & Ruelas-Inzunza, J. R. (2010). Trace metals (Cd, Cu, Ni, and Zn) in blood and eggs of the sea turtle *Lepidochelys olivacea* from a nesting colony of Oaxaca, Mexico. *Archives of Environmental Contamination and Toxicology*, *59*, 632–641. https://doi.org/10.1007/s00244-010-9516-3

Patel, S. S. (2021). Driving climate and health solutions by building a collective impact culture. *World Medical & Health Policy*, *13*(1), 8–15. https://doi.org/10.1002/wmh3.418

Rehman, K., Fatima, F., Waheed, I., & Akash, M. S. H. (2017). Prevalence of exposure of heavy metals and their impact on health consequences. *Journal of Cellular Biochemistry*, *119*, 157–184. https://doi.org/10.1002/jcb.26234

Richardson, K. L., Lopez Castro, M., Gardner, S. C., & Schlenk, D. (2010). Polychlorinated biphenyls and biotransformation enzymes in three species of sea turtles from the Baja California peninsula of Mexico. *Archives of Environmental Contamination and Toxicology*, *58*(1), 183–193. https://doi.org/10.1007/s00244-009-9360-5

Ross, D. A. N., Guzmán, H. M., Potvin, C., & van Hinsberg, V. J. (2017). A review of toxic metal contamination in marine turtle tissues and its implications for human health. *Regional Studies in Marine Science*, *15*, 1–9. https://doi.org/10.1016/j.rsma.2017.06.003

Savoca, D., Arculeo, M., Barreca, S., Buscemi, S., Caracappa, S., Gentile, A., Persichetti, M. F., & Pace, A. (2018). Chasing phthalates in tissues of marine turtles from the Mediterranean Sea. *Marine Pollution Bulletin*, *127*, 165–169. https://doi.org/10.1016/j.marpolbul.2017.11.069

Schneller, A. J., & Baum, P. A. (2011). The emergence of associational life in México's wild west: Pioneering civic participation, sea turtle conservation, and environmental awareness in Baja California Sur. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *22*(2), 259–282.

Schoeman, K., Tanaka, T., Bend, J. R., & Koren, G. (2010). Hair mercury levels of women of reproductive age in Ontario, Canada: Implications to fetal safety and fish consumption. *The Journal of Pediatrics*, *157*(1), 127–131. https://doi.org/10.1016/j.jpeds.2010.01.020

Senko, J., Mancini, A., Seminoff, J. A., & Koch, V. (2014). Bycatch and directed harvest drive high green turtle mortality at Baja California Sur, Mexico. *Biological Conservation*, *169*, 24–30. https://doi.org/10.1016/j.biocon.2013.10.017

Senko, J., Nichols, W. J., Ross, J. P., & Willcox, A. S. (2009). To eat or not to eat an endangered species: Views of local residents and physicians on the safety of sea turtle consumption in northwestern Mexico. *EcoHealth*, *6*(4), 584–595. https://doi.org/10.1007/s10393-010-0280-7

Shamshak, G. L., Anderson, J. L., Asche, F., Garlock, T., & Love, D. C. (2019). U.S. seafood consumption. *Journal of the World Aquaculture Society*, *50*, 715–727. https://doi.org/10.1111/jwas.12619

Soto-Jiménez, M. F., Amezcua, F., & González-Ledesma, R. (2010). Nonessential metals in striped marlin and Indo-Pacific sailfish in the southeast Gulf of California, Mexico: Concentration and assessment of human health risk. *Archives of Environmental Contamination and Toxicology*, *58*(3), 810–818. https://doi.org/10.1007/s00244-009-9452-2

Taylor, A. L., Collins, C. E., & Patterson, A. J. (2014). The relationship between potential contaminant exposure from fish and nutrient intakes in Australian women by pregnancy status. *Nutrition & Dietetics*, *71*(4), 229–235. https://doi.org/10.1111/1747-0080.12112

Tchounwou, P. B., Yedjou, C. G., Patlolla, A. K., & Sutton, D. J. (2012). Heavy metal toxicity and the environment. *Molecular, Clinical and Environmental Toxicology*, *101*, 133–164. https://doi.org/10.1007/978-3-7643-8340-4_6

Ullah, A. K. M. A., Maksud, M. A., Khan, S. R., Lutfa, L. N., & Quraishi, S. B. (2017). Dietary intake of heavy metals from eight highly consumed species of cultured fish and possible human health risk implications in Bangladesh. *Toxicology Reports*, *4*, 574–579. https://doi.org/10.1016/j.toxrep.2017.10.002

Vazquez, G. F., Reyes, M. C., Fernandez, G., Aguayo, J. E. C., & Sharma, V. K. (1997). Contamination in marine turtle (*Dermochelys coriaca*) eggshells of Playon de Mexiquillo, Michoacan, Mexico. *Bulletin of Environmental Contamination and Toxicology*, *58*, 326–333. https://doi.org/10.1007/s001289900338

Warwick, C., Arena, P. C., & Steedman, C. (2013). Health implications associated with exposure to farmed and wild sea turtles. *JRSM Short Reports*, *4*, 1–7. https://doi.org/10.1177/2042533313475574

Xu, L., Zhang, W., Liu, X., Zhang, C., Wang, P., & Zhao, X. (2018). Circulatory levels of toxic metals (aluminum, cadmium, mercury, lead) in patients with Alzheimer's disease: A quantitative meta-analysis and systematic review. *Journal of Alzheimer's Disease*, *62*(1), 361–372. https://doi.org/10.3233/JAD-170811

Zavala-Norzagaray, A. A., Aguirre, A. A., Velazquez-Roman, J., Flores-Villaseñor, H., León-Sicairos, N., Ley-Quiñonez, C. P., Hernández-Díaz, L. D. J., & Canizalez-Roman, A. (2015). Isolation, characterization, and antibiotic resistance of *Vibrio* spp. in sea turtles from Northwestern Mexico. *Frontiers in Microbiology*, *6*, 635. https://doi.org/10.3389/fmicb.2015.00635

Zavala-Norzagaray, A. A., Ley-Quiñónez, C. P., Espinosa-Carreón, T. L., Canizalez-Román, A., Hart, C. E., & Aguirre, A. A. (2014). Trace elements in blood of sea turtles *Lepidochelys olivacea* in the Gulf of California, Mexico. *Bulletin of Environmental Contamination and Toxicology*, *93*(5), 536–541. https://doi.org/10.1007/s00128-014-1320-8

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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THEORETICAL ARTICLE

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Decolonizing global health: A scoping review protocol

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Abstract

Although there has been attention paid to decolonizing global health, there is no accepted understanding of the concept. Therefore, this protocol outlines the steps for a planned scoping review to assess the academic literature for discussions on decolonizing global health. Namely, to consider what this concept means within mainstream global health databases and how it can be acted on. We also hope to shed light on who is participating in these discussions. The PRISMA guidelines for Scoping Reviews (PRISMA-ScR) was used to develop this scoping review protocol. With the guidance of an academic librarian, we searched OVID Medline, OVID Embase, EBSCO CINAHL Plus, Web of Science, PAIS Index, Worldwide Political Science Abstracts, and the International Bibliography of the Social Sciences databases from inception to the date the search is conducted. The inclusion criterion is that texts must: (i) use the exact phrasing of “decoloni* global health” or “anticolonial global health,” (ii) include substantive discussion of what decolonizi* global health or anticolonial global health means (i.e., we will exclude single mentions that do not include an explanation, elaboration, or context), and (iii) be published in English. Similarly, the exclusion criteria include: (i) texts that do not substantively discuss decolonizing global health and (ii) grey literature hits. This protocol establishes the study parameters for the planned scoping review. We anticipate the findings from the scoping review to bring much needed clarity to discussions around decolonizing global health, in terms of meaning(s), gaps, and possible actions.

KEYWORDS
decolonizing global health, global health, health equity, international health colonialism

Key points

- Although there has been attention paid to decolonizing global health, there is no accepted understanding of the concept.
- This protocol outlines the steps for a planned scoping review to assess what this concept means within mainstream global health databases and how it can be acted on.
- We also hope to shed light on who is participating in these discussions.
- We anticipate the findings from the scoping review to bring much needed clarity to discussions around decolonizing global health, in terms of meaning(s), gaps, and possible actions.

INTRODUCTION

Global health has roots in the colonial period that are reflected in many inequities in the present through an oppressive paradigm that has lasted for many generations (Mogaka et al., 2021). Efforts to address these have been forthcoming within the past few years under the label of "decolonization," but many questions remain. Despite increasing attention on decolonizing global health in the last few years, including a recent plenary at the Canadian Conference on Global Health in late 2021 (Canadian Association for Global Health, 2021) and the United Nations University–International Institute for Global Health hosting a webinar to introduce this new line of research inquiry in September 2022 (United Nations University, 2022), there is no consensus on what decolonizing global health means (Krugman, 2023). For instance, a symposium convened by the editorial board of *Global Health Research and Policy* in July of 2021 reached consensus that to "fully decolonize global health, systemic reforms must be taken that target the fundamental assumptions of global health: does investment in global health bring socioeconomic development, or is it the other way around?" (Kwete et al., 2022). However, Büyüm et al. note that "Decolonising global health advances an agenda of repoliticising and rehistoricising health through a paradigm shift, a leadership shift and a knowledge shift" (Büyüm et al., 2020). And further, Abimbola and Pai note that "to decolonise global health is to remove all forms of supremacy within all spaces of global health practice, within countries, between countries, and at the global level" (Abimbola & Pai, 2020). Evidently, as Finkel et al. note, suggestions for addressing decolonization vary greatly (Finkel et al., 2022). Thus, it is apparent that what "decolonizing global health" entails, is not solidified.

Therefore, this research seeks to contribute to the newly emerging decolonization of global health literature and associated efforts through a scoping review that answers the following question: What does the literature say about decolonizing global health? What does it mean and how should actors best proceed? We also hope to shed light on who is participating in these mainstream global health discussions. We hypothesize that characterizing academic discussions will reveal that the global health literature is deficient and insular, and that discussions may be insincere about truly decolonizing global health. We anticipate the findings from the scoping review to bring much needed clarity to discussions around decolonizing global health, in terms of meaning(s), gaps, and possible actions.

METHODS

A scoping review was selected to undertake this study given its focus on systematically scoping the literature (Grant & Booth, 2009) as opposed to answering a narrowly defined question, such as the case for systematic reviews that are largely utilized for clinical questions. The design of this scoping review protocol was informed by the work of Arksey and O'Malley (2005), whereby five primary stages informed the study design: (i) identifying the research question; (ii) identifying relevant studies; (iii) study selection; (iv) charting the data; and (v) collating, summarizing, and reporting the results. The PRISMA guidelines for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018) was used to develop this scoping review protocol, as other studies have done (Amri, Ali, et al., 2022; Amri et al., 2022a, 2022b).

Eligibility criteria

Inclusion criteria

The inclusion criteria are that texts must: (i) use the exact phrasing of “decoloni* global health” or “anticolonial global health,” (ii) include substantive discussion of what decolonizi* global health or anticolonial global health means (i.e., we will exclude single mentions that do not include explanations, elaboration, or context), and (iii) be published in English.

Exclusion criteria

The exclusion criterion includes: (i) texts that do not substantively discuss decolonizing global health and (ii) grey literature hits.

Information sources and search strings

With the guidance of an academic librarian, we will search OVID Medline, OVID Embase, EBSCO CINAHL Plus, Web of Science, PAIS Index, Worldwide Political Science Abstracts, and the International Bibliography of the Social Sciences databases from inception to the date the search is conducted. The planned search strings for each of the aforementioned databases and rationale for each database is noted in Table 1. In preliminary searches, we retrieved over 600 hits for duplication elimination and screening.

Study records

Data management

We will use Covidence software to compile hits from all database searches and to eliminate duplicates.

TABLE 1 Planned search strings for each database and rationale.

Database	Rationale	Search string
OVID Medline	Ovid MEDLINE is the core database for health sciences disciplines.	**#Search Statement** 1. Colonialism/ 2. (colonial* or decoloni* or de-coloni* or anticolonial* or anti-colonial*).ab,kf,ti. 3. 1 or 2 4. Global Health/ 5. (global health or global public health or international health or world* health).ab,kf,ti. 6. 4 or 5 7. 73 and 6
OVID Embase	Ovid EMBASE contains biomedical journals and has more international journals than Medline.	**#Query** 1. colonialism/ 2. (colonial* or decoloni* or de-coloni* or anticolonial* or anti-colonial*).ab,kf,ti. 3. 1 or 2 4. global health/ 5. (global health or global public health or international health or world* health).ab,kf,ti. 6. 4 or 5 7. 3 and 6
EBSCO CINAHL Plus	CINAHL Plus contains journals in nursing and the health professions.	**#Query** S5S1 AND S4 S4S2 OR S3 S3("global health" or "global public health" or "international health" or "world health" or "worldwide health" or "world-wide health") S2(MH "World Health") S1(colonial* or decoloni* or de-coloni* or anticolonial* or anti-colonial*)
Web of Science	Web of Science was selected because it is multidisciplinary and includes journals across the sciences, social sciences, and arts and humanities.	**Editions selected:** Arts & Humanities Citation Index, Science Citation Index Expanded, Social Sciences Citation Index, Conference Proceedings Citation Index–Science, Conference Proceedings Citation Index–Social Sciences and Humanities, Emerging Sources Citation Index Topic: (colonial* or decoloni* or de-coloni* or anticolonial* or anticolonial*) AND Topic: ("global health" or "global public health" or "international health" or "world health" or "worldwide health" or "world-wide health")
PAIS Index	PAIS Index was searched because it contains journals from public policy and international relations.	(MAINSUBJECT. EXACT("Colonialism") OR MAINSUBJECT.EXACT("Decolonization") OR NOFT(colonial* or decoloni* or de-coloni* or anticolonial* or anticolonial*)) AND NOFT("global health" or "global public health" or "international health" or "world health" or "worldwide health" or "world-wide health")

(Continues)

TABLE 1 (Continued)

Database	Rationale	Search string
Worldwide Political Science Abstracts	Worldwide Political Science Abstracts was searched for the political science and international relations literature.	(MAINSUBJECT.EXACT("Colonialism") OR MAINSUBJECT.EXACT("Decolonization") OR NOFT(colonial* or decoloni* or de-coloni* or anticolonial* or anticolonial*)) AND (NOFT("global health" or "global public health" or "international health" or "world health" or "worldwide health" or "world-wide health"))
International Bibliography of the Social Sciences (IBSS)	IBSS was included due to its broad spectrum of social sciences journals. Coverage includes globalization, health, policy studies, political science, and sociology.	(MAINSUBJECT.EXACT("Colonialism") OR MAINSUBJECT.EXACT("Anti-colonialism") OR MAINSUBJECT.EXACT ("Decolonization") OR NOFT(colonial* or decoloni* or de-coloni* or anticolonial* or anticolonial*)) AND (MAINSUBJECT.EXACT("Global health") OR NOFT("global health" or "global public health" or "international health" or "world health" or "worldwide health" or "world-wide health"))

Selection process

Following the PRISMA-ScR guidelines, we will engage in two stages for screening. In the first stage, titles and abstracts will be read independently by two reviewers to determine potential inclusion in the second stage. In the second stage, hits marked for full-text review will be read in full by two independent reviewers to determine inclusion by drawing on the established inclusion and exclusion criterions. Following the first and second stages, conflicts will be resolved in a consultative manner between the two reviewers. All final articles to be included in the scoping review will be approved by the full authorship team.

Data collection process

Final hits determined to meet the inclusion criteria will be drawn on to extract relevant data to answer the research questions. One researcher will qualitatively code final hits in NVivo12 software and undertake analysis to narratively synthesize findings in the planned scoping review.

Data items and charting

Our sample for analysis will be presented in a chart showing author(s), first author's institution, year, and title.

Outcomes and prioritization

In addition to the charted data, we will narratively synthesize findings related to both the meaning(s) of decolonizing global health and suggested way(s) forward.

Limitations

The three limitations we outline are biproducts of the intentional design of our study. These limitations pertain to: searching hits published in English, the exclusion of grey literature, and searching global health articles.

One limitation of this study is that it only searches hits published in English. Given the global nature of decolonizing global health and the potential desire to resist perpetuating a global north-south divide, we recognize that this limitation is quite impactful for this work. However, we are constrained by resources and believe that this English-language work can help push debates and bring clarity to ongoing mainstream discussions. In other words, it can enhance thoughtful discussion and make a step towards clarifying meaning(s) for associated action.

Second, we exclude grey literature because of the nature of our research question that is focused on characterizing mainstream discussion in the academic literature. We are not seeking to characterize all discussions around decolonizing global health, but we anticipate demonstrating that discussions in the academic literature can be insular.

And third, we focus our attention on global health articles which is evidenced by our search strategy and search strings. By electing to take a narrow approach to characterize discussions of decolonizing global health, we ultimately exclude the work of academics who fall outside of the parameters of global health. As an illustrative point, Aníbal Quijano is a sociologist who has worked on decolonial thinking but Quijano's work is not retrieved in our search strategy. Ultimately, this limitation entails that we can characterize decolonizing global health within the global health literature.

CONCLUSIONS

This protocol establishes scoping review study parameters, including the search strategy, search strings, research question, and inclusion and exclusion criteria. By design, it seeks to improve transparency and rigour and guide undertaking of the scoping review.

We anticipate the findings from the scoping review will bring clarity to mainstream discussions around decolonizing global health, in terms of meaning(s), gaps, and possible actions. Ultimately, this work contributes to reducing persistent inequities globally, which has been afforded much needed attention in global health (Amri et al., 2023; Amri, 2021; Amri, O'Campo, et al., 2022; Amri et al., 2020; Amri, Jessiman-Perreault, et al., 2021; Carducci et al., 2022), particularly as inequities have become more readily apparent due to the COVID-19 pandemic (Amri & Drummond, 2021; Amri & Logan, 2021).

AUTHOR CONTRIBUTIONS

Michelle Amri conceptualized and designed the study and wrote the manuscript. Michelle Amri, Kathryn Barrett, and Jesse B. Bump developed the search strategy. All authors read and approved the final manuscript.

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M. A. holds an SSHRC Postdoctoral Fellowship. This funding body had no influence on the design of the study; collection, analysis, and interpretation of data; and in writing or submitting the manuscript.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

ETHICS STATEMENT

Not applicable.

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REFERENCES

Abimbola, S., & Pai, M. (2020). Will global health survive its decolonisation? *The Lancet*, *396*(10263), 1627–1628.

Amri, M., Ali, S., Jessiman-Perreault, G., Barrett, K., & Bump, J. B. (2022). Evaluating the healthy cities initiative: A scoping review protocol. *PLoS One*, *17*(10), e0276179. https://doi.org/10.1371/journal.pone.0276179

Amri, M., Carducci, B., Plamondon, K. M., Mac-Seing, M., Shoveller, J., & Di Ruggiero, E. (2023). Exploring gender equality and equity in Canadian global health institutions. In R. Monchalin (Ed.), *Public health feminisms: Canadian scholars*. https://canadianscholars.ca/book/critical-perspectives-in-public-health-feminisms/

Amri, M., Chatur, A., & O'Campo, P. (2022a). Intersectoral and multisectoral approaches to health policy: An umbrella review protocol. *Health Research Policy and Systems*, *20*, 1–5. https://doi.org/10.1186/s12961-022-00826-1

Amri, M., Chatur, A., & O'Campo, P. (2022b). An umbrella review of intersectoral and multisectoral approaches to health policy. *Social Science & Medicine*, *315*, 115469. https://doi.org/10.1016/j.socscimed.2022.115469

Amri, M., O'Campo, P., Enright, T., Siddiqi, A., Di Ruggiero, E., & Bump, J. B. (2022). Probing key informants' views of health equity within the World Health Organization's Urban HEART initiative. *BMC Public Health*, *22*, 1–9. https://doi.org/10.1186/s12889-022-14395-z

Amri, M., Siddiqi, A., O'Campo, P., Enright, T., & Di Ruggiero, E. (2020). Underlying equity discourses of the World Health Organization: A scoping review protocol. *Social Science Protocols*, *3*.

Amri, M. M. (2021). Universal health coverage for the poorest billion: Justice and equity considerations. *The Lancet*, *397*(10273), 472–473.

Amri, M. M., & Drummond, D. (2021). Punctuating the equilibrium: An application of policy theory to COVID-19. *Policy Design and Practice*, *4*(1), 33–43.

Amri, M. M., Jessiman-Perreault, G., Siddiqi, A., O'Campo, P., Enright, T., & Di Ruggiero, E. (2021). Scoping review of the World Health Organization's underlying equity discourses: Apparent ambiguities, inadequacy, and contradictions. *International Journal for Equity in Health*, *20*(1), 70.

Amri, M. M., & Logan, D. (2021). Policy responses to COVID-19 present a window of opportunity for a paradigm shift in global health policy: An application of the multiple streams framework as a heuristic. *Global Public Health*, *16*, 1187–1197.

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, *8*(1), 19–32.

Büyüm, A. M., Kenney, C., Koris, A., Mkumba, L., & Raveendran, Y. (2020). Decolonising global health: If not now, when? *BMJ Global Health*, *5*(8), e003394.

Canadian Association for Global Health. (2021). *Rethinking partnership paradigms in global health 2021*. https://cagh-acsm.org/en/2021-rethinking-partnership-paradigms-global-health

Carducci, B., Keats, E. C., Amri, M., Plamondon, K. M., Shoveller, J., Ako, O., Osler, F. G., Henry, C., Pant Pai, N., & Di Ruggiero, E. (2022). Prioritizing gender equity and intersectionality in Canadian global health institutions and partnerships. *PLOS Global Public Health*, *2*, e0001105.

Finkel, M. L., Temmermann, M., Suleman, F., Barry, M., Salm, M., Binagwaho, A., & Kilmarx, P. H. (2022). What do global health practitioners think about decolonizing global health? *Annals of Global Health*, *88*(1), 61.

Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, *26*(2), 91–108.

Krugman, D. W. (2023). Global health and the elite capture of decolonization: On reformism and the possibilities of alternate paths. *PLOS Global Public Health*, *3*(6), e0002103.

Kwete, X., Tang, K., Chen, L., Ren, R., Chen, Q., Wu, Z., Cai, Y., & Li, H. (2022). Decolonizing global health: What should be the target of this movement and where does it lead us? *Global Health Research and Policy*, *7*(1), 3.

Mogaka, O. F., Stewart, J., & Bukusi, E. (2021). Why and for whom are we decolonising global health? *The Lancet Global Health*, *9*(10), e1359–e1360.

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., … Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, *169*(7), 467–473.

United Nations University. (2022). *Decolonising global health: Programme launch*. https://unu.edu/events/archive/other-event/decolonising-global-health-programme-launch.html

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COMMENTARY

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"Not what we signed up for": Nurse shortages, physician scarcity, and time for collective bargaining?

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Abstract

The amount of distress and disengagement among many nurses and physicians has reached concerning levels in recent years. The result has been acute nurse shortages, significant increases in travel nursing, more physicians working fewer hours and retiring early, and urgent calls for change and reform. This analysis surveys many of the leading systemic contributors to nurse and physician demoralization. As the healthcare sector continues to experience more consolidation and increased investment by private equity and other corporate interests, physicians are increasingly becoming employees with similar forms of employment arrangements and pressures that nurses have had for decades. They are also becoming employees of the same larger health systems, hospitals, and corporate employers. These trends are leading to a convergence in the kind and intensity of pressures and problems that nurses and physicians face. As more medical residents and fellows increasingly turn to unionization and as growing numbers of nurses have gone on strike, both professions should consider the potential benefits of joining forces for the purposes of maintaining the autonomy they have left and to push for better conditions both for themselves and the patients for whom they care.

KEYWORDS

collective bargaining, nurse shortages, physician scarcity

Key points

- Nurse shortages and physician burnout in the United States predated the pandemic, but have worsened over time.
- Physicians are increasingly becoming employed in contractual arrangements that nurses have worked

under for many decades. Their conditions of employment, work environments, professional pressures, as well as health and well-being concerns are becoming more similar and shared.

- With more nurses going on strike and medical residents unionizing, it is time for physicians and nurses to consider forming an alliance and considering collective bargaining to maintain the autonomy they have left and to advocate for both themselves and their patients for whom they care.

NURSE SHORTAGES: “YOU CAN'T PUT PATIENTS FIRST IF YOU PUT NURSES LAST”

Nurses and the nursing profession have received significant public attention in recent years. At the beginning of the COVID-19 pandemic in spring 2020, much of this attention was directed at the drama of “heroic” nurses risking their lives treating patients with a new disease without the protection of a vaccine and often without adequate protective equipment (Palmer, 2020). Over time the media coverage of nurses shifted to issues of widespread burnout and staffing shortages throughout the United States (Costa & Friese, 2022).

There have been nurse shortages before the pandemic, the last major one occurring at the tail end of the managed care era in the early 2000s (Buerhaus et al., 2009). And widespread job dissatisfaction and burnout among nurses, which predate the pandemic (Aiken et al., 2023), have waxed and waned for decades (McHugh et al., 2011). Yet these problems have reached unprecedented levels of prevalence and intensity in the years since the emergence of COVID-19 (Galanis et al., 2021). Whereas approximately 17% of nurses who left the profession in 2007 cited burnout as the reason, 31% cited burnout for their exit in 2017–2018. In 2021, an estimated two in five nurses reported that they intended to leave nursing due to burnout (Sinsky et al., 2021). Large nurse strikes in New York, Minnesota, Oregon, California, and Michigan occurred in 2021 and 2022 while “personnel shortages” ranked as the #1 concern among hospital CEOs. It was the first time since 2004 that “financial challenges” was not the #1 concern among hospital CEOs (American College of Healthcare Executives' Annual Survey, 2022).

The nurse population in the United States as a whole is also aging. The retirement of “Baby Boom” nurses, who constitute about one-third of the nursing workforce, began in 2011 at the rate of about 60,000 nurses per year. That number increased to 70,000 per year at the start of the pandemic and then accelerated thereafter to a level that is “not possible to fully replace the retiring nurses with new graduate nurses, particularly in intensive care units (ICUs), emergency departments, critical care, and other specialty units” (Buerhaus, 2021). From 2020 to 2021, the total supply of nurses fell by more than 100,000, the largest drop observed in four decades, with nurses under the age of 35 comprising the largest share of nurses quitting (Table 1; Auerbach et al., 2022).

Travel nursing (i.e., contract nursing) has turned out to be a temporary, very expensive, and partial solution to nurse shortages. What began as a phenomenon in the late 1970s in New Orleans to treat the annual, predictable surge in Mardi Gras patients expanded significantly during the height of the COVID-19 pandemic. With many signing bonuses in the tens of thousands of dollars and approximately $100- to $200-an-hour wages (two to five times the regular pay of staff nurses), travel nursing grew 35% in 2020 (Hansen & Tuttas, 2022a) and increased even more in 2021 (Hansen & Tuttas, 2022b).

TABLE 1 Composition of the unprecedented 100,000+ nurse workforce reduction in 2021 by age.

RNs ages <35	4.0% (of all RNs ages 35 and younger exited)
RNs ages 35–49	0.5% (of all RNs ages 35–49 exited)
RNs ages 50+	1.0% (of all RNs ages 50 and older exited)

Source: Auerbach et al. (2022).

For tens of thousands of nurses, travel nursing provided more pay, autonomy, and control that kept nurses working when many of them would have drastically reduced their hours, switched to another clinical setting, or quit altogether (Odom-Forren, 2022). The surge in travel nursing also led to increased animosity between travel nurses and some staff nurses and even accusations from hospital executives of price gouging (particularly by the staffing agencies that place travel nurses) (Yang & Mason, 2022). Yet years of insufficient support from hospital management and unsafe nurse-to-patient ratios had created crisis levels of burnout among hundreds of thousands of nurses (Wei et al., 2022) many of whose work-family balances had become unsustainable during the pandemic (Sahay & Wei, 2023). In 2019, travel nursing accounted for only 4.7% of hospitals' total nurse labor expenses, but that figure had increased to 39% by January 2022 (American Hospital Association, 2022).

Where some hospital executives see travel nursing as borderline price gouging, others see prices as a reflection of supply and demand and a consequence of many years of inadequate nurse staffing in hospitals (Bernstein, 2021). The underlying issue that permeates these problems and debates is that nurses' knowledge is undervalued as a commodity. Also, framing nursing as a noble "calling" and a "labor of love" enables healthcare administrators and senior hospital executives to exploit nurses and pay them less because clinicians "shouldn't do their work for the money, they should do it because they believe in their patients" (Stolzoff, 2023).

Hospitals have historically under-invested in nursing through cost-cutting measures like lowering hospital nurse staffing levels (i.e., patient-to-nurse staffing ratios), thus lowering labor costs. Reducing nurse skill mix, or the proportion of highly skilled nurses (i.e., registered nurses) to lower skilled nurses (i.e., licensed practical nurses) is an additional hospital administrative strategy to reduce financial labor costs (Needleman, 2017). Easily overlooked evidence shows that many hospitals under-invested in nursing resources well before the COVID-19 pandemic, suggesting that nursing workforce constraints did not stem from the global health crisis alone (Lasater et al., 2021a). Over 20 years of research before the pandemic contends that hospitals vary widely in their nurse staffing levels (i.e., nurse-to-patient staffing ratios), many operating chronically on razor-thin staffing margins (Aiken, 2002). Nurse shortages have grown so acute in some areas of the country that hospitals have turned to using Gig apps (similar to ride-hailing operations like Uber and Lyft) to adjust and offer premium pay to try to fill vacancies, especially overnight and holiday shifts (Evans, 2023).

Inadequate staffing is associated with worse patient outcomes (i.e., adverse events, healthcare-associated infections, increased mortality rates) (Hall et al., 2016), which contributes to more burnout and moral injury among nurses. Also, travel nurses are often less familiar with the systems that they work in on a transient basis and with less continuity of care, which can harm patients and require more assistance by staff nurses who are paid less, resulting in worse overall staff morale (Hansen & Tuttas, 2022b). In short, hospital administration strategies to dilute nursing resources through lower nurse staffing ratios and nurse skill mix have increasingly framed nursing as a commodity, as opposed to value drivers in healthcare. As a result, nurses have increasingly turned to travel nursing positions or left healthcare outright.

NURSE WORKFORCE SUSTAINABILITY AND VALUE

The desperation felt by many hospital administrators over unfilled nursing openings is likely to increase in the future. Workforce projections estimate shortages of approximately 78,000 nurses by 2025 and 64,000 nurses by 2030 (HRSA, 2022a). Other forecasts predict even larger nurse shortages, particularly in the South and West regions of the United States (Juraschek et al., 2019). Beyond travel nursing measures, organizations such as the American Hospital Association and the United States Senate Committee on Health, Education, Labor, and Pensions propose expanding nurse education programs and recruiting nurses internationally (US Senate Committee on Health, Education, Labor & Pensions, 2023). Convincing evidence suggests that expanding the nurse pipeline without investments in sustainable nurse working conditions may continue to drive high nurse turnover rates and vacancies. US schools of nursing graduated close to 1 million nurses in the past 10 years—in fact, more nurses were entering the profession in the past decade than in the past 3 years combined (HRSA, 2023). International recruitment, like travel nursing, is an acceptable approach to fill nurse vacancies; but, like travel nursing, to sustain a meaningful supply of nurses at the bedside longitudinally, hospital administrators must ultimately invest in the true value of nurses.

Many nurse workforce issues stem from how healthcare is paid for in the United States, which treats nurses more as a cost (part of the overhead room charge) than as a source of value (Polgreen, 2023). In other words, nursing services are largely invisible due to being historically billed as the "room and board" rate (Rutherford, 2012). Despite the range of services that registered nurses can provide such as initiating care protocols in emergency departments and conducting Medicare Wellness Visits (Bogrett & Carriel, 2018), their value is under-emphasized in the current healthcare financing system. Some nurses can bill for services such as diabetes education and APRNs (advanced practice nurses)—including clinical nurse specialists (CNSs), nurse practitioners (NPs), certified nurse midwives (CNMs), and certified registered nurse anesthetists (CRNAs)—can bill directly for select services. Yet much of their work is veiled from the public due to Medicare's payment structure that categorizes their work as indirect or "incident to" billing by a supervising physician (Patel et al., 2022).

Consequently, most nurses do not generate hospital revenue directly, as physicians do through ordering tests and procedures. The fee-for-service reimbursement model that has dominated US healthcare for decades (Schroeder & Frist, 2013) has been directed mostly by physicians whose medical authority and decision-making results in roughly one-third of total US healthcare spending (approximately $1.3 trillion in 2021) going to hospitals (Telesford et al., 2023). As a result, the professional and social contexts, business model, and basic "anatomy" of US healthcare tends to prioritize physicians and hospital care (Moses et al., 2013) while undervaluing nurses.

Yet, nurses are critical for providing quality patient care and supporting the work involved in tests and procedures (Welton et al., 2006). In fact, a robust evidence base demonstrates that when hospitals invest in better nurse work environments (i.e., nurse autonomy, interprofessional collaboration) and higher nurse-to-patient ratios, they experience cost savings from a hospital and payer (i.e., Medicare) perspective to reductions in 30-day mortality, hospital readmissions, and length of stay days (Lasater et al., 2021c). In short, the investment in safer work environments pays for itself through better nursing care. Proper nurse staffing levels have a positive association with hospitals' financial performance

(Everhart et al., 2013), yet only eight states publicly report nurse staffing patterns that would incentivize to improve staffing (de Cordova et al., 2019). And while all states have minimum standards of nurse staffing ratios for nursing homes, most of them have been found to be "generally well below the levels recommended by researchers and experts to consistently meet the ends of each resident" (Harrington et al., 2020).

PHYSICIAN SCARCITY: INCREASING RATES OF DEMORALIZATION, WITHDRAWAL, AND EARLY RETIREMENT

Before addressing the issue of physician burnout and its effect on physician scarcity, it is important to note that the United States already has one of the lowest per capita rates of practicing physicians—2.6 physicians per 1000 population—among all OECD countries. Only South Korea has fewer with 2.5 physicians per 1000 population (Papanicolas et al., 2018). The OECD average is 3.7 physicians per 1000 population (OECD, 2023).

Part of the problem originates in medical school (Morcos & Awan, 2023). Approximately one in six medical students start their studies with depressive symptoms, with the rate then increasing to one in five students by the end of their first semester (Pelzer et al., 2022). The overall rate of depression among all medical students is approximately one in four alongside an 11% prevalence rate of suicidality (Rotenstein et al., 2016). These levels of depression and suicidality among medical students are then coupled with exceedingly high levels of education debt upon graduation for at least two-thirds of all medical students as they begin residency (West et al., 2011). Medical residency—with all of its intensity, challenges to work-life balance, exhaustion, and modest overall pay for number of weekly hours worked—exacerbates the conditions that lead to depression, anxiety, and burnout. Before COVID-19, almost 30% of medical residents met the criteria for depression (Mata et al., 2015). The pandemic aggravated these rates of depression with decreased clinical experience, a reduction in the volume of cases, and the disruption of normal education activities for many residents (Chen et al., 2021).

From residency, many of these same problems expand into the physician workforce (Dyrbye et al., 2014). The National Academy of Sciences declared physician burnout a crisis in 2019 (National Academies of Sciences, Engineering, and Medicine, 2019). About 40%–50% of US physicians were experiencing burnout with 14% reporting suicidality (Yates, 2020). The first 6 months of the pandemic in 2020 worsened these statistics for hundreds of thousands of physicians: approximately one in three of them reported an intention to reduce their work hours and one in five physicians reported planning to leave their practice altogether (Sinsky et al., 2021).

The pandemic made things worse for many physicians. Emotional exhaustion, depersonalization, and disengagement among physicians increased significantly from 2020 to 2021 (Macaron et al., 2023). Two-thirds of physicians reported having at least one manifestation of burnout (a doubling of this figure from one-third the year before). The factors most associated with higher rates of physician burnout were being a woman, working longer hours, and practicing in emergency medicine, family medicine, or general pediatrics (Shanafelt et al., 2022). By 2022, the problem of burnout and despair reached the point that the US Surgeon General declared that the time for incremental change had passed and that bold, fundamental change was needed (Murthy, 2022). In March of 2022, President Biden signed the Dr. Lorna Breen Health Care Provider Protection Act named in honor of Dr. Lorna Breen who died by suicide on April 26, 2020 (Sindhu & Adashi, 2022). Medscape's 2023 report on physician burnout and depression survey (of more than 9000 physicians) found 53% burned out and 23% depressed (Medscape, 2023).

TABLE 2 Increasing physician scarcity: Estimated number of total active physicians by year.

2019	989,000
2020	1,070,000
2021	950,000

Sources: Becker's ASC Review, American Medical Association, Federation of State Medical Boards, the US Census Bureau, and the AAMC.

Many physicians today are languishing due to the bureaucratization that permeates their practices (Sinsky & Panzer, 2022). The burnout rhetoric is as much the exhausting circumstances physicians work under as disillusionment in the systems for which they work (Ofri, 2019a). The increasing influence and degree of avarice among nonphysician stakeholders in US healthcare (pharmaceutical firms, large health system, and hospital executives, for-profit nursing home and hospice companies, private equity investors in healthcare) (Berwick, 2023) coupled with information-related (EMR/EHR) stress (Friedberg et al., 2014; Woolhandler & Himmelstein, 2014) have led to concerning levels of dissatisfaction and despair among roughly half of all US physicians (Shanafelt et al., 2021). Endless series of pay-for-performance (McWilliams, 2022) and quality assessment and improvement initiatives (Rosenbaum, 2022a) add more administrative work to physicians' workloads and incentivize gaming of the systems (Rosenbaum, 2022b). This restructuring of healthcare organization and delivery for the purposes of expanded market share and reimbursement maximization leads to more physician disillusionment and disengagement (Hartzband & Groopman, 2020) in part because it decreases physician autonomy and relatedness that are key to professional well-being and personal motivation (Panagioti et al., 2017). The main threat is that "doctors are losing their calling, as the sanctity of the medical profession has been lost to corporate centralization and burnout" (Stanley, 2023).

Physician scarcity is likely to grow in the future, especially in rural areas of the United States (Liu & Wadhera, 2022). Growing rates of physician demoralization have contributed to increasing numbers of physicians working fewer hours each week and retiring early (Hu & Dill, 2021). This acceleration of physicians retiring and working less has occurred while the United States population has increased, so physician workforce hours per capita have come to lag population growth in the United States (Goldman & Barnett, 2023). Essentially, there are fewer total active physicians (Table 2), more of whom are working fewer hours each year and some of whom are retiring earlier while the total number of people in the United States continues to grow. These trends are especially worrisome given the existing deficit of Black and Hispanic physicians (Mora et al., 2022) and the projected shortage of 57,000 physicians by 2025 and 80,000 physicians by 2030 (HRSA, 2022b).

THE IMPACT OF LARGER HEALTH SYSTEMS AND PRIVATE EQUITY IN HEALTHCARE: TOO BIG TO CARE

Since the early 2000s, US healthcare has undergone seismic shifts in the organization and delivery of care due to waves of mergers, acquisitions, and consolidation. Most physicians went from working independently in private practices a generation ago to the majority of physicians now being employed by large hospital systems and corporate entities (Casalino, 2023; Moses et al., 2013). From 1975 to 2010, the total number of physicians grew by 150% while the number of healthcare administrators grew by 3200%, with the ratio of physicians to administrators increasing from 1:1 to 1:10 during this period (Cantelupe, 2018). This trend will likely continue, as the Bureau of Labor Statistics predicts "much faster than average" job growth for healthcare administrators from 2021 to 2031 (BLS, 2023).

This rise of "Big Med" has been shown to weaken physician autonomy (O'Hanlon, 2020), slightly lower income for physicians (Whaley et al., 2021), reduce wage growth for nurses (Allegretto & Graham-Squire, 2023; Prager & Schmitt, 2021), increase healthcare prices and spending for outpatient care (Curto et al., 2022; Neprash et al., 2015), increase the amount of hospital-based, high-intensity care (Post et al., 2023) and erode trust among patients and clinicians in healthcare systems that are "too big to care" (Platt & Nong, 2023). This erosion of trust is also partly due to no change or modest deteriorations in some patient-experience measures in hospitals after they had been acquired in a merger or acquisition (Beaulieu et al., 2020).

Public policy has indirectly promoted the growth of "Big Med" through the privatization of public health programs via both Medicare Advantage (that now covers half of all Medicare beneficiaries) and private managed care plans (that now cover three-quarters of all Medicaid beneficiaries). Private plans in Medicare and Medicaid have been found to result in more limited provider networks, more prior authorization requirements, and greater emphasis on cost control by healthcare providers (Levitt, 2023), which influences strategies for healthcare workforce replacement.

The significant increase of private equity in healthcare over the last decade represents a new level of corporatization around nurses and physicians. It is not a big leap from literal roaches in the operating room of one of the nation's largest for-profit hospital chains (HCA) (Hollowell, 2023) to seeing private equity as the metaphorical termites in healthcare (McDonough, 2022). The growth of private equity in healthcare has been massive since 2000 when roughly 78 transactions involved $5 billion to 2021 when around 1013 deals involved $151 billion (Matthews & Roxas, 2022; Pitchbook, 2023). Private equity can be appealing to hospitals and physician practices that are under-resourced, and particularly so for the increased number of them that have experienced acute financial pressures during the COVID-19 pandemic. It presents hospital executives with potential infusions of capital for financial stability and survival. It offers physicians capital to expand in an environment where smaller independent practices increasingly struggle to compete with large integrated health systems that can operate within both fee-for-service reimbursement and value-based bundled and capitated payment models (Casalino et al., 2019). Smaller primary care physician practices in particular struggle to accept greater financial risk-bearing arrangements for total spending on patient care that larger accountable care organizations can manage (Song et al., 2022). They also struggle to compete against larger corporate-owned primary care practices: retail-owned (e.g., Amazon), insurance-owned (e.g., United-Health Optum), and investor-backed (e.g., Oak Street Health—purchased by CVS Health in February 2023) (Shah et al., 2023).

The substantial increase of private equity investment in healthcare has accelerated consolidation, decreased competition, and made little to no difference and sometimes even decreased quality of care for some patients (Scheffler et al., 2021). Private equity acquisition of specialty physician practices such as dermatology, gastroenterology, and ophthalmology have been found to be associated with both changes in billing and coding as well as increases in: charges per claim, the volume of both new and old patient visits, overall utilization, and total spending (Singh et al., 2022). Similarly, private equity acquisitions of hospitals has been found to be associated with higher charge-to-cost ratios, higher operating margins and decreases in all-personnel, full-time-equivalent staffing ratios (particularly nurses) (Offodile et al., 2021).

Time will tell if private equity acquisitions result in safer nursing staffing, but initial outcomes have not been encouraging (Cerullo et al., 2023). Private equity acquisitions of physician practices have been found to result in higher rates of physician turnover and increases in the number of advanced practice providers who are less expensive than physicians (Bruch et al., 2021). Private equity acquisitions of nursing homes and hospice providers, which have grown dramatically over the last 10 years (Braun et al., 2021a; General Accounting Office, 2023), have resulted in increased debt, decreased staffing, increased emergency department visits and hospitalizations, higher Medicare costs, and increases in short-term mortality of Medicare patients (Braun et al., 2021b; Geyman, 2022). And consolidation and expansion of private equity in healthcare has been found to be associated with an increase in both prices and spending with little-to-no discernible improvements in patient outcomes and sometimes actual decreases in quality of care (Gupta et al., 2021, Matthews et al., 2022).

DISCUSSION: TIME FOR PHYSICIANS TO COLLECTIVELY BARGAIN AND FORM AN ALLIANCE WITH NURSES?

There are a number of paths that clinicians can pursue in response to the threats to their personal and professional well-being. For example, there have long been calls to enact laws capping the number of patients a nurse should care for (Bartmess et al., 2021) in response to findings that understaffing leads to more nurse burnout and patient mortality (McHugh et al., 2021). Yet, only California has such a law (Donaldson & Shapiro, 2010), which is concerning given that hospitals with safe nurse staffing not only have better patient outcomes and lower mortality (Aiken et al., 2010), they also save money from reduced staff turnover (Lasater et al., 2021b). Hospitals with favorable working environments and adequate nurse staffing did not experience nurse shortages during the COVID-19 pandemic as those hospitals did that had unfavorable working conditions and understaffing (Aiken et al., 2023). Increased dependent-care programs (including on-site child care), expanded loan-repayment plans, mandated hospital nurse staffing policies, and providing career development initiatives could reduce the number of nurses who leave the profession, while federal policies could increase financial incentives for nurses to fill faculty shortages in nursing schools so that more qualified nurse applicants could be accepted (Costa & Friese, 2022).

For physicians, there have been exhortations to build more resilience (Fatima et al., 2022) expand mindfulness practices (Malik & Annabi, 2022) fund research on health workforce well-being (Melnick et al., 2023) and to incorporate more human-centered and participatory design methodologies in the healthcare settings (Benishek et al., 2023). Similar to many of the suggestions for improving morale and well-being for nurses, however, these responses seem overly individualistic and psychological in the context of the massive changes in the overall structure of US healthcare. These exhortations also appear disconnected from the reality that many physicians have lost trust in hospital and health system executives (Baron & Simpson, 2023). Larger, more systemic reactions seem necessary and supported by a growing body of evidence (Kuehn, 2023).

When the business of healthcare depends on exploiting doctors and nurses (Ofri, 2019b; Robbins et al., 2022), as well as indigent patients (Silver-Greenberg & Thomas, 2022) and nursing home and hospice patients (Kofman, 2022; Rafiei, 2022), when big nonprofit hospitals expand in wealthier areas while retreating from poorer ones (Evans et al., 2022), when charity hospitals exploit safety-net drug discount programs for major financial windfalls that do not benefit low-income patients or the clinicians who serve them (Thomas & Schulman, 2020; Welles et al., 2022), when 7 of the 10 most profitable hospitals in the United States (each earning more than $163 million in total patient care) are categorized as “nonprofit” (Bai & Anderson, 2016), when hospitals and health systems facilitate “brain drain” by recruiting nurses from low and middle income countries to try to fill vacant positions and reduce labor costs (Nolen, 2022; Peters et al., 2020), when private equity firms purchase physician practices and pressure “them to maximize income with aggressive billing practices while including non-disparagement agreements in their contracts that interfere with physicians' obligations to report problems with the quality of care" (Derse, 2022), and when salary differentials continue to grow to record levels between nonprofit hospital executives and clinicians (Du et al., 2018; Saini et al., 2022), then arguably the time has come for physicians to become activists (Mangione & Tykocinski, 2021), and to at least consider both collective bargaining and joining forces with nurses in a professional alliance.

Collective bargaining by physicians in the United States is uncommon primarily because few physicians are members of a union. The roughly 6%–8% of physicians who are in a union is even lower than the low overall rate of just 14.1% of the total US workforce in a public or private sector union (American Medical Association, 2021). Similarly, the prevalence of labor unionization among all healthcare workers—nurses, technicians, physicians, dentists, advanced practitioners, therapists—is only 13.2% in the United States, with nurses the highest at 17.5% (Ahmed et al., 2022).

Unions have long been portrayed as ethical quandaries for clinicians (Manthous, 2014; Thompson & Salmon, 2006). Physicians in particular have been strongly encouraged at every level of training to focus solely on what is best for their patients and to eschew activities and organizations (such as unions) that could perceived by the general public as self-serving and, thus, unprofessional (Cohen, 2000). Moreover, until this past decade, with whom would physicians have collectively bargained? Most physicians did not have employers; they mostly worked for themselves in private practices and contracted their services with local hospitals.

By 2022, though, the percentage of US physicians employed by hospitals and health systems (52.1%) or corporate entities (21.8%) now leaves almost three-quarters of all physicians as employees of some kind (Avalere Health Physicians Advocacy Institute, 2022). And physicians are increasingly discovering that renegotiating a second or third contract with a hospital or health system is harder than their first contract, as most metropolitan areas had experienced substantial consolidation even before the pandemic (Furukawa et al., 2020). This reality leaves both primary care physicians and specialists with fewer and fewer employment options alongside covenants-not-to-compete clauses in their contracts that are themselves "dominated by volume-based incentives designed to maximize health systems revenue" (Reid et al., 2022). With physicians increasingly managed by non-clinician businesspeople in employment arrangements that emphasize volume and revenue targets and involve growing numbers of hours each week with electronic medical records have come louder calls for physician unions as a tool for some amount of negotiating leverage (Bowling et al., 2022a).

Medical residents are among the leading voices calling for unionization and collective bargaining. They are building on the previous efforts of residents and interns in the late 1990s with the National Labor Relations Board (NLRB) to have the right to organize as protected employees (not students) and collectively bargain for better working conditions and to help take better care of their patients (Yacht, 2000).

Since spring 2021, residents at eight teaching hospitals have unionized at: the University of Massachusetts, U.C. Riverside, the University of California (San Francisco), the University of Illinois (Chicago), the Greater Lawrence Family Health Center, the University of Vermont, Stanford University, and the University of Southern California (Lin et al., 2022). In late February 2023, over a thousand medical residents and fellows at Penn Medicine requested that the University of Pennsylvania Health System recognize their union, the Committee of Interns and Residents/Service Employees International Union (CIR/SEIU) (Gooch, 2023a). In April 2023, medical residents and fellows at Mass General Brigham filed for official union election after their hospital system (MGB) declined to recognize their union voluntarily (Kettles & Maciejak, 2023). The house medical staff and both Penn and Mass General Brigham were joining residents and fellow physicians at Loma Linda University Health in California, physicians at Allina Health in Minneapolis, and clinicians at Providence Health and Services in Oregon who have un-ionized in 2023 (Gooch, 2023b). The last case in Oregon is the most intriguing. In this instance, physicians joined the Oregon Nurses Association and sought voluntary union recognition from Providence Health and Systems in accordance with the NLRB (Redden, 2023). In short, physicians joined forces with nurses and became members of a nurses' association for the purposes of building greater bargaining leverage with a large, multihospital health system.

Common among these increasing instances of physician unionization and nurse strikes (Tanne, 2023) across the United States are demands for better pay, working conditions, and environments for patient safety. These demands could serve to partially transcend the differences in interests between nurses and physicians, among primary care physicians and specialists, and the differences in perspective among junior physicians and senior physician leaders (Bowling et al., 2022b). Additionally, physicians do not have to go on strike to affect hospital and health system governance. They can "refuse to perform elective surgeries" or neglect "documentation to prevent effective billing." And even if they do strike, according to the American Medical Association, they can do so "on behalf of patient care, thereby making patients an end as well as a means" (Howard, 2020).

The reality is that more physicians are becoming employed in contractual arrangements that nurses have worked under for many decades. Their conditions of employment, work environments, professional pressures, as well as health and well-being concerns are becoming more similar and shared, as growing numbers of physicians and nurses are increasingly working for the same large hospitals, health systems, and private equity investors. While investors and health system managers understand profit as a primary motivator, physicians, and nurses tend to have more complex motivations and often respond more to measures of care outcomes and clinical performance than profit (Rosenbaum, 2022a). When health system leaders emphasize the need for clinicians to have the appropriate incentives such that they have enough "skin in the game" (a financial stake in a hospital or health system's performance), one can understand this physician's unspoken response: "What the hell do you mean skin in the game? We have our licenses, our livelihoods, our professions. Every single time we walk up to a patient, everything is on the line. I'll put some of my skin in the game if you put your name on the chart. Just put your name on the chart. If there's a lawsuit, you're on there. You come down and make a decision about my patient, then we'll talk about skin in the game" (Scheiber, 2016).

With the working conditions of US hospitals increasingly affecting both nurses and physicians, impactful change can be enacted through unified policy efforts aimed at improving hospital work environments and financing healthcare value over fee-for-service structures to improve patient outcomes and clinician retention. Evidence demonstrates that hospitals with greater interprofessional collaboration between nurses and physicians experience better patient care quality and safety outcomes. Furthermore, clinicians also experience better job outcomes such as reduced burnout, job dissatisfaction, and turnover intention when engaged in work environments that value interprofessional collaboration (Aiken et al., 2023). Developing alliances between clinician groups can not only advance necessary policy change but can serve as a protective factor to improve care quality and clinician job outcomes for the sustainability of a health workforce.

Ultimately, as more nurses and physicians struggle to find their careers both fulfilling and sustainable and with evidence that the best hospitals are run by clinicians (Bloom et al., 2012; Clay-Williams et al., 2017; Fares et al., 2018), nurses and physicians should consider what it may take for meaningful change in the finance, organization and delivery of healthcare in the United States. Who will be in charge of our health in the future—clinicians or their business managers? (Topol, 2019) Given current trends and trajectories, it will not be physicians and nurses unless they do something significant and unprecedented.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ETHICS STATEMENT

The article does not report primary data or raise issues related to informed consent and confidentiality. It did not require formal ethics committee review.

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REFERENCES

Ahmed, A. M., Kadakia, K., Ahmed, A., Shultz, B., & Li, X. (2022). Trends in labor unionization among US Health Care Workers, 2009-2021. *Journal of the American Medical Association*, *328*(24), 2404–2411.

Aiken, L. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *Journal of the American Medical Association*, *288*(16), 1987–1993. https://doi.org/10.1001/jama.288.16.1987

Aiken, L. H., Sloane, D. M., Cimiotti, J. P., Clarke, S. P., Flynn, L., Seago, J. A., Spetz, J., & Smith, H. L. (2010). Implications of the California nurse staffing mandate for other states. *Health Services Research*, *45*(4), 904–921.

Aiken, L. H., Sloane, D. M., McHugh, M. D., Pogue, C. A., & Lasater, K. B. (2023). A repeated cross-sectional study of nurses immediately before and during the COVID-19 pandemic: Implications for action. *Nursing Outlook*, *71*(1), 101903.

Allegretto, S. S., & Graham-Squire, D. (2023). *Monopsony in professional labor markets: Hospital system concentration and nurse wages*. Working Paper No. 197. https://www.ineteconomics.org/uploads/papers/WP_197-Allegretto-HospCons.pdf

American College of Healthcare Executives' Annual Survey. (2022). *Personnel shortages cited above financial challenges by CEOS as top issue confronting hospitals in 2021*. https://www.ache.org/-/media/ache/about-ache/news-releases/ache-2021-top-issues-press-release_printer-friendly.pdf

American Hospital Association. (2022). *Massive growth in expenses and rising inflation fuel continued financial challenges for America's hospital and health systems*. https://www.aha.org/system/files/media/file/2022/04/2022-Hospital-Expenses-Increase-Report-Final-Final.pdf

American Medical Association. (2021). *Issue brief: Collective bargaining for physicians and physician-in-training*. https://www.ama-assn.org/system/files/advocacy-issue-brief-physician-unions.pdf

Auerbach, D. I., Buerhaus, P. I., Donelan, K., & Staiger, D. O. (2022). A worrisome drop in the number of young nurses. Health Affairs Forefront. https://www.healthaffairs.org/do/10.1377/forefront.20220412.311784

Avalere Health Physicians Advocacy Institute. (2022). *COVID-19's impact on acquisitions of physician practices and physician employment 2019-2022*. http://www.physiciansadvocacyinstitute.org/Portals/0/assets/docs/PAI-Research/PAI%20Avalere%20Physician%20Employment%20Trends%20Study%202019-21%20Final.pdf

Bai, G., & Anderson, G. F. (2016). A more detailed understanding of factors associated with hospital profitability. *Health Affairs*, *35*(5), 889–897.

Baron, R. J., & Simpson, L. (2023). Understanding clinician trust in health care organizations should be a research priority. *JAMA Health Forum*, *4*(5), e231015.

Bartmess, M., Myers, C. R., & Thomas, S. P. (2021). Nurse staffing legislation: Empirical evidence and policy analysis. *Nursing Forum*, *56*(3), 660–675.

Beaulieu, N. D., Dafny, L. S., Landon, B. E., Dalton, J. B., Kuye, I., & McWilliams, J. M. (2020). Changes in quality of care after hospital mergers and acquisitions. *New England Journal of Medicine*, *382*(1), 51–59.

Benishek, L. E., Kachalia, A., & Daugherty Biddison, L. (2023). Improving clinician well-being and patient safety through human-centered design. *Journal of the American Medical Association*, *329*, 1149.

Bernstein, L. (2021). *As Covid persists, nurses are leaving staff jobs—and tripling their salaries as travelers*. Washington Post. https://www.washingtonpost.com/health/covid-travel-nurses/2021/12/05/550b15fc-4c71-11ec-a1b9-9f12bd39487a_story.html

Berwick, D. M. (2023). Salve lucrum: The existential threat of greed in US health care. *Journal of the American Medical Association*, *329*(8), 629–630.

Bloom, N., Sadun, R., & Van Reenen, J. (2012). Does management really work? *Harvard Business Review*, *90*(11), 77–80.

BLS. (2023). *Occupational outlook handbook: Medical and health service managers*. https://www.bls.gov/ooh/management/medical-and-health-services-managers.htm

Bogrett, H., & Carriel, M. (2018). The case for utilizing RNs in medicare annual wellness visits. *The Journal of Nursing Administration*, *48*(2), 75–78.

Bowling, D. S., Richman, B. D., & Schulman, K. A. (2022a). Collective bargaining: physician unions and their implications for health care. *Health Services Research*, *57*(6), 1214–1217.

Bowling, D. S., Richman, B. D., & Schulman, K. A. (2022b). The rise and potential of physician unions. *Journal of the American Medical Association*, *328*(7), 617–618.

Braun, R. T., Jung, H. Y., Casalino, L. P., Myslinski, Z., & Unruh, M. A. (2021b). Association of private equity investment in US nursing homes with the quality and cost of care for long-stay residents. *JAMA Health Forum*, *2*(11), e213817.

Braun, R. T., Stevenson, D. G., & Unruh, M. A. (2021a). Acquisitions of hospice agencies by private equity firms and publicly traded corporations. *JAMA Internal Medicine*, *181*(8), 1113–1114.

Bruch, J., Gondi, S., & Song, Z. (2021). COVID-19 and private equity investment in health care delivery. *JAMA Health Forum*, *2*(3), e210182.

Buerhaus, P. (2021). Current nursing shortages could have long-lasting consequences: Time to change our present course. *Nursing Economics*, *39*(5), 247–250.

Buerhaus, P., Staiger, D., & Auerbach, D. (2009). *The future of the nursing workforce in the U.S.: Data, trends, and implications*. Jones and Bartlett Publishers.

Cantelupe, J. (2018). *The rise (and rise) of the healthcare administrator*. Athenalsight. https://www.athenahealth.com/knowledge-hub/practice-management/expert-forum-rise-and-rise-healthcare-administrator

Casalino, L. P. (2023). Health systems-the present and the future. *Journal of the American Medical Association*, *329*(4), 293–294. https://doi.org/10.1001/jama.2022.24141

Casalino, L. P., Saiani, R., Bhidya, S., Khullar, D., & O'Donnell, E. (2019). Private equity acquisition of physician practices. *Annals of Internal Medicine*, *170*(2), 114–115.

Cerullo, M., Yang, K. K., McDevitt, R. C., Maddox, K. J., Roberts, J. W., & Offodile II, A. C. (2023). *Research: What happens when private equity firms buy hospitals?* Harvard Business Review. https://hbr.org/2023/03/research-what-happens-when-private-equity-firms-buy-hospitals

Chen, S. Y., Lo, H. Y., & Hung, S. K. (2021). What is the impact of the COVID-19 pandemic on residency training: A systematic review and analysis. *BMC Medical Education*, *21*(1), 618.

Clay-Williams, R., Ludlow, K., Testa, L., Li, Z., & Braithwaite, J. (2017). Medical leadership, a systematic narrative review: Do hospitals and healthcare organisations perform better when led by doctors? *BMJ Open*, *7*(9), e014474.

Cohen, J. J. (2000). White coats should not have union labels. *New England Journal of Medicine*, *342*(6), 431–434.

Costa, D. K., & Friese, C. R. (2022). Policy strategies for addressing current threats to the U.S. nursing workforce. *New England Journal of Medicine*, *386*(26), 2454–2456.

Curto, V., Sinaiko, A. D., & Rosenthal, M. B. (2022). Price effects of vertical integration and joint contracting between physicians and hospitals in Massachusetts. *Health Affairs*, *41*(5), 741–750.

de Cordova, P. B., Pogorzelska-Maziarz, M., Eckenhoff, M. E., & McHugh, M. D. (2019). Public reporting of nurse staffing in the United States. *Journal of Nursing Regulation*, *10*(3), 14–20.

Derse, A. R. (2022). The physician-patient relationship. *New England Journal of Medicine*, *387*(8), 669–672.

Donaldson, N., & Shapiro, S. (2010). Impact of alifornia mandated acute care hospital nurse staffing ratios: A literature synthesis. *Policy, Politics & Nursing Practice*, *11*(3), 184–201.

Du, J. Y., Rascoe, A. S., & Marcus, R. E. (2018). The growing executive-physician wage gap in major US nonprofit hospitals and burden of nonclinical workers on the US healthcare system. *Clinical Orthopaedics & Related Research*, *476*(10), 1910–1919.

Dyrbye, L. N., West, C. P., Satele, D., Boone, S., Tan, L., Sloan, J., & Shanafelt, T. D. (2014). Burnout among U.S. medical students, residents, and early career physicians relative to the general U.S. population. *Academic Medicine*, *89*(3), 443–451.

Evans, M. (2023). *Nurse shortage pushes hospitals into the Gig economy*. Wall Street Journal. https://www.wsj.com/articles/nurse-shortage-hospitals-hiring-gig-economy-dc94bdb2

Evans, M., Rust, M., & McGinty, T. (2022). *Big nonprofit hospitals expand in wealthier areas, shun poorer ones*. Wall Street Journal. https://www.wsj.com/articles/nonprofit-hospitals-deals-tax-breaks-11672068264

Everhart, D., Neff, D., Al-Amin, M., Nogle, J., & Weech-Maldonado, R. (2013). The effects of nurse staffing on hospital financial performance: Competitive versus less competitive markets. *Health Care Management Review*, *38*(2), 146–155.

Fares, Y., Fares, J., Kurdi, M., & Bou Haidar, M. (2018). Physician leadership and hospital ranking: Expanding the role of neurosurgeons. *Surgical Neurology International*, *9*, 199.

Fatima, A., Lim, C., Osuntoki, I., Chakraborty, T., & Hui, E. (2022). Inspiring doctors': Building resilience and community among junior doctors. *Future Healthcare Journal*, *9*(Suppl. 2), 72–73.

Friedberg, M. W., Chen, P. G., Van Busum, K. R., Aunon, F., Pham, C., Caloyeras, J., Mattke, S., Pitchforth, E., Quigley, D. D., Brook, R. H., Crosson, F. J., & Tutty, M. (2014). Factors affecting physician professional satisfaction and their implications for patient care, health systems, and health policy. *Rand Health Quarterly*, *3*(4), 1.

Furukawa, M. F., Kimmey, L., Jones, D. J., Machta, R. M., Guo, J., & Rich, E. C. (2020). Consolidation of providers into health systems increased substantially, 2016-18. *Health Affairs*, *39*(8), 1321–1325.

Galanis, P., Vraka, I., Fragkou, D., Bilali, A., & Kaitelidou, D. (2021). Nurses' burnout and associated risk factors during the COVID-19 pandemic: A systematic review and meta-analysis. *Journal of Advanced Nursing*, *77*(8), 3286–3302.

General Accounting Office. (2023). *Nursing homes: CMS should make ownership information more transparent for consumers*. https://www.gao.gov/assets/gao-23-104813.pdf

Geyman, J. (2022). Private equity looting of U.S. health care: An under-recognized and uncontrolled scourge. *International Journal of Health Services: Planning, Administration, Evaluation*, *53*(2), 207314221134041.

Goldman, A. L., & Barnett, M. L. (2023). Changes in physician work hours and implications for workforce capacity and work-life balance, 2001-2021. *JAMA Internal Medicine*, *183*(2), 106–114.

Gooch, K. (2023a). *Penn medicine physicians seek union recognition*. Becker's Hospital Review. https://www.beckershospitalreview.com/hr/whats-next-for-penn-medicine-physicians-seeking-unionization.html

Gooch, K. (2023b). *Physicians are seeking union elections: Where and why*. Becker's Hospital Review. https://www.beckershospitalreview.com/hr/physicians-are-seeking-union-elections-where-and-why.html

Gupta, A., Howell, S. T., Yannelis, C., & Abhinav, G. (2021). *Does private equity investment in healthcare benefit patients? Evidence from nursing homes*. National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w28474/w28474.pdf

Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare staff wellbeing, burnout, and patient safety: A systematic review. *PLoS One*, *11*(7), e0159015.

Hansen, A., & Tuttas, C. (2022a). Lived travel nurse and permanent staff nurse pandemic work experiences as influencers of motivation, happiness, stress, and career decisions: A qualitative study. *Nursing Administration Quarterly*, *46*(3), 245–254.

Hansen, A., & Tuttas, C. (2022b). Professional choice 2020-2021. *Nurse Leader*, *20*(2), 145–151.

Harrington, C., Dellefield, M. E., Halifax, E., Fleming, M. L., & Bakerjian, D. (2020). Appropriate nurse staffing levels for U.S. nursing homes. *Health Services Insights*, *13*, 1178632920934785.

Hartzband, P., & Groopman, J. (2020). Physician burnout, interrupted. *New England Journal of Medicine*, *382*(26), 2485–2487.

Hollowell, A. (2023). *Unsafe conditions threaten patient safety at Florida Hospital, physician says*. Becker's Hospital Review. https://www.beckershospitalreview.com/hospital-physician-relationships/physicians-allege-unsafe-conditions-at-hca-hospital-in-florida-roaches-bloody-sinks-and-hanging-wires.htmlhttps://www.beckershospitalreview.com/hospital-physician-relationships/physicians-allege-unsafe-conditions-at-hca-hospital-in-florida-roaches-bloody-sinks-and-hanging-wires.html

Howard, D. (2020). What should physicians consider prior to unionizing? *AMA Journal of Ethics*, *22*(3), E193–E200.

HRSA. (2022a). *Primary care workforce: Projections, 2020-2035*. https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/Primary-Care-Projections-Factsheet.pdf

HRSA. (2022b). *Physician workforce: Projections, 2020-2035*. https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/Physicians-Projections-Factsheet.pdf

HRSA. (2023). *Nursing workforce survey data, 1980-2020*. https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data

Hu, X., & Dill, M. J. (2021). Changes in physician work hours and patterns during the COVID-19 pandemic. *JAMA Network Open*, *4*(6), e2114386.

Juraschek, S. P., Zhang, X., Ranganathan, V., & Lin, V. W. (2019). Republished: United States registered nurse workforce report card and shortage forecast. *American Journal of Medical Quality*, *34*(5), 473–481.

Kettles, C., & Maciejak, J. (2023). *MGH Housestaff file for official union election after hospital system declines to recognize union*. The Harvard Crimson.

Kofman, A. (2022). *How hospice became a for-profit hustle*. The New Yorker. https://www.newyorker.com/magazine/2022/12/05/how-hospice-became-a-for-profit-hustle

Kuehn, B. M. (2023). Physicians are more burned out than ever-here's what can be done about it. *Journal of the American Medical Association*, *329*, 785.

Lasater, K. B., Aiken, L. H., Sloane, D. M., French, R., Martin, B., Alexander, M., & McHugh, M. D. (2021b). Patient outcomes and cost savings associated with hospital safe nurse staffing legislation: An observational study. *BMJ Open*, *11*(12), e052899.

Lasater, K. B., Aiken, L. H., Sloane, D. M., French, R., Martin, B., Reneau, K., Alexander, M., & McHugh, M. D. (2021a). Chronic hospital nurse understaffing meets COVID-19: An observational study. *BMJ Quality & Safety*, *30*(8), 639–647.

Lasater, K. B., McHugh, M., Rosenbaum, P. R., Aiken, L. H., Smith, H., Reiter, J. G., Niknam, B. A., Hill, A. S., Hochman, L. L., Jain, S., & Silber, J. H. (2021c). Valuing hospital investments in nursing: Multistate matched-cohort study of surgical patients. *BMJ Quality & Safety*, *30*(1), 46–55.

Levitt, L. (2023). Increasingly privatized public health insurance programs in the US. *JAMA Health Forum*, *4*(3), e231012.

Lin, G. L., Ge, T. J., & Pal, R. (2022). Resident and fellow unions: Collective activism to promote well-being for physicians in training. *Journal of the American Medical Association*, *328*(7), 619–620.

Liu, M., & Wadhera, R. K. (2022). Primary care physician supply by county-level characteristics, 2010-2019. *Journal of the American Medical Association*, *328*(19), 1974–1977.

Macaron, M. M., Segun-Omosehin, O. A., Matar, R. H., Beran, A., Nakanishi, H., Than, C. A., & Abulseoud, O. A. (2023). A systematic review and meta analysis on burnout in physicians during the COVID-19 pandemic: A hidden healthcare crisis. *Frontiers in Psychiatry*, *13*, 1071397.

Malik, H., & Annabi, C. A. (2022). The impact of mindfulness practice on physician burnout: A scoping review. *Frontiers in Psychology*, *13*, 956651.

Mangione, S., & Tykocinski, M. L. (2021). Virchow at 200 and lown at 100—Physicians as activists. *New England Journal of Medicine*, *385*(4), 291–293.

Manthous, C. A. (2014). Labor unions in medicine: The intersection of patient advocacy and self-advocacy. *Medical Care*, *52*(5), 387–392.

Mata, D. A., Ramos, M. A., Bansal, N., Khan, R., Guille, C., Di Angelantonio, E., & Sen, S. (2015). Prevalence of depression and depressive symptoms among resident physicians: A systematic review and meta-analysis. *Journal of the American Medical Association*, *314*(22), 2373–2383.

Matthews, S., & Roxas, R. (2022). Private equity and its effect on patients: A window into the future. *International Journal of Health Economics and Management*, 1–12. https://doi.org/10.1007/s10754-022-09331-y

McDonough, J. (2022). *Quarterly opinion: Termites in the house of health care*. The Milbank Quarterly. https://www.milbank.org/quarterly/opinions/termites-in-the-house-of-health-care/

McHugh, M. D., Aiken, L. H., Sloane, D. M., Windsor, C., Douglas, C., & Yates, P. (2021). Effects of nurse-to-patient ratio legislation on nurse staffing and patient mortality, readmissions, and length of stay: A prospective study in a panel of hospitals. *The Lancet*, *397*(10288), 1905–1913.

McHugh, M. D., Kutney-Lee, A., Cimiotti, J. P., Sloane, D. M., & Aiken, L. H. (2011). Nurses' widespread job dissatisfaction, burnout, and frustration with health benefits signal problems for patient care. *Health Affairs*, *30*(2), 202–210.

McWilliams, J. M. (2022). Pay for performance: When slogans overtake science in health policy. *Journal of the American Medical Association*, *328*(21), 2114–2116.

Medscape. (2023). *I cry but no one cares': Physician burnout & depression report 2023*. https://www.medscape.com/viewarticle/987748

Melnick, E. R., Sinsky, C. A., & Shanafelt, T. (2023). Funding research on health workforce well-being to optimize the work environment. *Journal of the American Medical Association*, *329*, 1145.

Mora, H., Obayemi, A., Holcomb, K., & Hinson, M. (2022). The national deficit of black and hispanic physicians in the US and projected estimates of time to correction. *JAMA Network Open*, *5*(6), e2215485.

Morcos, G., & Awan, O. A. (2023). Burnout in medical school: A medical student's perspective. *Academic Radiology*, *30*(6), 1223–1225.

Moses, H., Matheson, D. H. M., Dorsey, E. R., George, B. P., Sadoff, D., & Yoshimura, S. (2013). The anatomy of health care in the United States. *Journal of the American Medical Association*, *310*(18), 1947–1963.

Murthy, V. H. (2022). Confronting health worker burnout and Well-Being. *New England Journal of Medicine*, *387*(7), 577–579.

National Academies of Sciences, Engineering, and Medicine. (2019). *Taking action against clinician burnout: A systems approach to professional well-being*. The National Academies Press.

Needleman, J. (2017). Nursing skill mix and patient outcomes. *BMJ Quality & Safety*, *26*(7), 525–528.

Neprash, H. T., Chernew, M. E., Hicks, A. L., Gibson, T., & McWilliams, J. M. (2015). Association of financial integration between physicians and hospitals with commercial health care prices. *JAMA Internal Medicine*, *175*(12), 1932–1939.

Nolen, S. (2022). *Rich countries lure health workers from low-income nations to fight shortages*. New York Times. https://www.nytimes.com/2022/01/24/health/covid-health-worker-immigration.html

O'Hanlon, C. E. (2020). Impacts of health care industry consolidation in Pittsburgh, Pennsylvania: A qualitative study. *Inquiry: A Journal of Medical Care Organization, Provision and Financing*, *57*, 46958020976246.

Odom-Forren, J. (2022). Travel nursing: Price gouging or supply and demand? *Journal of Perianesthesia Nursing*, *37*(2), 153–154.

OECD. (2023), *Doctors (indicator)*.

Offodile, A. C., Cerullo, M., Bindal, M., Rauh-Hain, J. A., & Ho, V. (2021). Private equity investments in health care: An overview of hospital and health system leveraged buyouts, 2003-17. *Health Affairs*, *40*(5), 719–726.

Ofri, D. (2019a). The covenant. *Academic Medicine*, *94*(11), 1646–1648.

Ofri, D. (2019b). *The business of health care depends on exploiting doctors and nurses*. New York Times. https://www.nytimes.com/2019/06/08/opinion/sunday/hospitals-doctors-nurses-burnout.html?smid=url-share

Palmer, E. (2020). *Voices from the pandemic's front lines*. New York Times. https://www.nytimes.com/2020/05/11/reader-center/coronavirus-healthcare-workers.html

Panagioti, M., Panagopoulou, E., Bower, P., Lewith, G., Kontopantelis, E., Chew-Graham, C., Dawson, S., van Marwijk, H., Geraghty, K., & Esmail, A. (2017). Controlled interventions to reduce burnout in physicians: A systematic review and meta-analysis. *JAMA Internal Medicine*, *177*(2), 195–205.

Papanicolas, I., Woskie, L. R., & Jha, A. K. (2018). Health care spending in the United States and other high-income countries. *Journal of the American Medical Association*, *319*(10), 1024–1039.

Patel, S. Y., Huskamp, H. A., Frakt, A. B., Auerbach, D. I., Neprash, H. T., Barnett, M. L., James, H. O., & Mehrotra, A. (2022). Frequency of indirect billing to Medicare for nurse practitioner and physician assistant office visits. *Health Affairs*, *41*(6), 805–813.

Pelzer, A., Sapalidis, A., Rabkow, N., Pukas, L., Günther, N., & Watzke, S. (2022). Does medical school cause depression or do medical students already begin their studies depressed? A longitudinal study over the first semester about depression and influencing factors. *GMS Journal for Medical Education*, *39*(5), 58.

Peters, A., Palomo, R., & Pittet, D. (2020). The great nursing brain drain and its effects on patient safety. *Antimicrobial Resistance & Infection Control*, *9*(1), 57.

Pitchbook. (2023). *Healthcare services report: PE trends and investment strategies*. https://files.pitchbook.com/website/files/pdf/Q4_2022_Healthcare_Services_Report.pdf

Platt, J., & Nong, P. (2023). An ecosystem approach to earning and sustaining trust in health care-too big to care. *JAMA Health Forum*, *4*(1), e224882.

Polgreen, L. (2023). *Nurses are burned out and fed up, with good reason*. New York Times. https://www.nytimes.com/2023/01/18/opinion/nurses-strike-pay-staffing-ratios.html.

Post, B., Alinezhad, F., Mukherjee, S., & Young, G. J. (2023). Hospital-physician integration is associated with greater use of cardiac catheterization and angioplasty. *Health Affairs*, *42*(5), 606–614.

Prager, E., & Schmitt, M. (2021). Employer consolidation and wages: Evidence from hospitals. *American Economic Review*, *111*(2), 397–427.

Rafiei, Y. (2022). *When private equity takes over a nursing home*. The New Yorker. https://www.newyorker.com/news/dispatch/when-private-equity-takes-over-a-nursing-home

Redden, J. (2023). *Providence responds to unionization vote*. Portland Tribune. https://www.portlandtribune.com/business/nearly-200-providence-health-care-providers-vote-to-unionize/article_7bbe93f4-b7a0-11ed-a303-f3d8295d4edd.html

Reid, R. O., Tom, A. K., Ross, R. M., Duffy, E. L., & Damberg, C. L. (2022). Physician compensation arrangements and financial performance incentives in US health systems. *JAMA Health Forum*, *3*(1), e214634.

Robbins, R., Thomas, K., & Silver-Greenberg, J. (2022). *How a sprawling hospital chain ignited its own staffing crisis*. https://www.nytimes.com/2022/12/15/business/hospital-staffing-ascension.html?smid=url-share

Rosenbaum, L. (2022a). Peers, professionalism, and improvement—Reframing the quality question. *New England Journal of Medicine*, *386*(19), 1850–1854.

Rosenbaum, L. (2022b). Reassessing quality assessment—The flawed system for fixing a flawed system. *New England Journal of Medicine*, *386*(17), 1663–1667.

Rotenstein, L. S., Ramos, M. A., Torre, M., Segal, J. B., Peluso, M. J., Guille, C., Sen, S., & Mata, D. A. (2016). Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: A systematic review and meta-analysis. *Journal of the American Medical Association*, *316*(21), 2214–2236. https://doi.org/10.1001/jama.2016.17324

Rutherford, M. M. (2012). Nursing is the room rate. *Nursing Economics*, *30*(4), 193–199.

Sahay, S., & Wei, W. (2023). Work-family balance and managing spillover effects communicatively during COVID-19: nurses' perspectives. *Health Communication*, *38*(1), 1–10.

Saini, V., Garber, J., Brownlee, S., & Nonprofit Hospital, C. E. O. (2022). Compensation: How much is enough? Health Affairs Forefront. https://www.healthaffairs.org/do/10.1377/forefront.20220208.925255/

Scheffler, R. M., Alexander, L. M., & Godwin, J. R. (2021). *Soaring private equity investment in the healthcare sector: Consolidation accelerated, competition undermined and patients at risk*. White Paper, Nicholas C. Petris Center, University of California, Berkeley School of Public Health. https://www.antitrustinstitute.org/wp-content/uploads/2021/05/Private-Equity-I-Healthcare-Report-FINAL-1.pdf

Scheiber, N. (2016). *Doctors unionize to resist the medical machine*. New York Times. https://www.nytimes.com/2016/01/10/business/doctors-unionize-to-resist-the-medical-machine.html

Schroeder, S. A., & Frist, W. (2013). Phasing out fee-for-service payment. *New England Journal of Medicine*, *368*(21), 2029–2032.

Shah, S., Rooke-Ley, H., & Fuse Brown, E. C. (2023). Corporate investors in primary care—Profits, progress, and pitfalls. *New England Journal of Medicine*, *388*(2), 99–101.

Shanafelt, T. D., Dyrbye, L. N., West, C. P., Sinsky, C., Tutty, M., Carlasare, L. E., Wang, H., & Trockel, M. (2021). Suicidal ideation and attitudes regarding help seeking in US physicians relative to the US working population. *Mayo Clinic Proceedings*, *96*(8), 2067–2080.

Shanafelt, T. D., West, C. P., Dyrbye, L. N., Trockel, M., Tutty, M., Wang, H., Carlasare, L. E., & Sinsky, C. (2022). Changes in burnout and satisfaction with work-life integration in physicians during the first 2 years of the COVID-19 pandemic. *Mayo Clinic Proceedings*, *97*(12), 2248–2258.

Silver-Greenberg, J., & Thomas, K. (2022). *They were entitled to free care. Hospitals hounded them to pay*. New York Times. https://www.nytimes.com/2022/09/24/business/nonprofit-hospitals-poor-patients.html?smid=url-share.

Sindhu, K. K., & Adashi, E. Y. (2022). The Dr Lorna breen health care provider protection act: A modest step in the right direction. *JAMA Health Forum*, *3*(9), e223349.

Singh, Y., Song, Z., Polsky, D., Bruch, J. D., & Zhu, J. M. (2022). Association of private equity acquisition of physician practices with changes in health care spending and utilization. *JAMA Health Forum*, *3*(9), e222886.

Sinsky, C. A., Brown, R. L., Stillman, M. J., & Linzer, M. (2021). COVID-related stress and work intentions in a sample of US health care workers. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, *5*(6), 1165–1173. https://doi.org/10.1016/j.mayocpiqo.2021.08.007

Sinsky, C. A., & Panzer, J. (2022). The solution shop and the production line—The case for a frameshift for physician practices. *New England Journal of Medicine*, *386*(26), 2452–2453.

Song, Z., Chokshi, D. A., & Press, M. J. (2022). Primary care and financial risk—Navigating the crossroads. *New England Journal of Medicine*, *387*(4), 292–294.

Stanley, M. P. H. (2023). *Doctors are losing their calling: The sanctity of the medical profession has been lost to corporate centralization and burnout*. Wall Street Journal. https://www.wsj.com/articles/doctors-are-losing-their-calling-union-mass-general-brigham-resident-suicide-depression-representation-burnout-7f72ab6

Stolzoff, S. (2023). *Please don't call my job a calling*. New York Times. https://www.nytimes.com/2023/06/05/opinion/employment-exploitation-unions.html

Tanne, J. H. (2023). New York city nurses end strike after securing better staffing and higher pay. *BMJ*, *380*, p113.

Telesford, I., Rakshit, S., McGough, M., Wager, E., & Amin, K. (2023). *Health Spending: How has U.S. spending on healthcare changed over time?* Peterson-KFF Health System Tracker. https://www.healthsystemtracker.org/chart-collection/u-s-spending-healthcare-changed-time/

Thomas, S., & Schulman, K. (2020). The unintended consequences of the 340B safety-net drug discount program. *Health Services Research*, *55*(2), 153–156.

Thompson, S. L., & Salmon, J. W. (2006). Strikes by physicians: A historical perspective toward an ethical evaluation. *International Journal of Health Services*, *36*(2), 331–354.

Topol, E. (2019). *Why doctors should organize: Meeting the challenges of modern medicine will require more than seeing patients*. The New Yorker. https://www.newyorker.com/culture/annals-of-inquiry/why-doctors-should-organize

U.S. Senate Committee on Health, Education, Labor & Pensions. (2023). *Examining health care workforce shortages: Where do we go from here?* https://www.help.senate.gov/hearings/examining-health-care-workforce-shortages-where-do-we-go-from-here

Wei, H., Aucoin, J., Kuntapay, G. R., Justice, A., Jones, A., Zhang, C., Santos Jr. H. P., & Hall, L. A. (2022). The prevalence of nurse burnout and its association with telomere length pre and during the COVID-19 pandemic. *PLoS One*, *17*(3), e0263603.

Welles, C. C., Tong, A., Brereton, E., Steiner, J. F., Wynia, M. K., Powe, N. R., Chonchol, M., Hasnain-Wynia, R., & Cervantes, L. (2022). Sources of clinician burnout in providing care for underserved patients in a safety-net healthcare system. *Journal of General Internal Medicine*, *38*(6), 1468–1475.

Welton, J. M., Fischer, F. H., DeGrace, S., & Zone-Smith, L (2006). Hospital nursing costs, billing, and reimbursement. *Nursing Economics*, *24*(5), 239–245.

West, C. P., Shanafelt, T. D., & Kolars, J. C. (2011). Quality of life, burnout, educational debt, and medical knowledge among internal medicine residents. *Journal of the American Medical Association*, *306*(9), 952–960.

Whaley, C. M., Arnold, D. R., Gross, N., & Jena, A. B. (2021). Physician compensation in physician-owned and hospital-owned practices. *Health Affairs*, *40*(12), 1865–1874.

Woolhandler, S., & Himmelstein, D. U. (2014). Administrative work consumes one-sixth of U.S. physicians' working hours and lowers their career satisfaction. *International Journal of Health Services*, *44*(4), 635–642.

Yacht, A. C. (2000). Collective bargaining is the right step. *New England Journal of Medicine*, *342*(6), 429–431.

Yang, Y. T., & Mason, D. J. (2022). COVID-19's impact on nursing shortages, the rise of travel nurses, and price gouging. Health Affairs Forefront. https://www.healthaffairs.org/do/10.1377/forefront.20220125.695159/

Yates, S. W. (2020). Physician stress and burnout. *The American Journal of Medicine*, *133*(2), 160–164.

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COMMENTARY

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"Health promotion governance": A framework for operationalizing the Ottawa charter mechanisms in health system governance

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Abstract

According to the Geneva Charter for well-being, health is a political choice and governments have crucial roles in providing the prerequisites of health and well-being for people in societies. To initiate the creation of sustainable well-being in societies, the health systems of all countries must be governed by a health promotion approach. To propose a "health promotion governance framework," we apply the concepts of good governance and the Ottawa Charter strategies/action areas to health system governance. To implement the good governance components within health systems, policymakers need to apply the three Ottawa Charter's strategies. Applying these strategies, the policymakers will be led to perform the five mechanisms through community-based interventions for health promotion. As a result, they will achieve a health system with "health-promoting governance." Such a system can act so effective, efficient, equitable, and inclusive that it brings about better health outcomes. In this way, the proposed "health promotion governance framework" might be helpful in giving reality to the governance of health promotion in health systems, which is the first step in creating sustainable well-being in societies.

KEYWORDS

good governance, health promotion, health system governance, Ottawa Charter

Key points

- According to the Geneva Charter for well-being, health is a political choice and governments have a crucial role to play in promoting it.
- To initiate the creation of sustainable well-being within societies, health systems must be governed by a health promotion approach.

- We propose that good governance and the Ottawa Charter's principles can serve as a framework to promote health within health systems.

BACKGROUND

According to the Geneva Charter for well-being, health is a political choice, and governments have a crucial role to play in promoting it (WHO, 2022). Health system governance is a major concern in many countries, owing to growing pressure to produce results and an increased sense of responsibility in the health sector at a time when many resources are being invested in health systems (Siddiqi et al., 2009). In spite of this acknowledgment, what constitutes health governance and how it contributes to making well-being frameworks stick are questions that policymakers continue to wrestle with (Abotsi, 2018).

WHAT DO WE MEAN BY GOOD GOVERNANCE AND ITS APPLICATION IN THE HEALTH SYSTEM?

Good governance is defined as a structure of policies, values, and institutions through which a community manages its politics, economy, and social issues through governmental, private, and civil sectors (Avelino et al., 2014). According to Pacific (2002), the UNDP introduced key elements of good governance, which include: participation, rule of law, transparency, accountability, equity, efficiency and effectiveness, responsiveness, and consensus orientation, as related to good public governance (Figure 1). The first and most significant components of good governance are health governance and community prosperity; within these, health is considered a human right and one of the most important determinants of equity and social welfare (Kickbusch & Buckett, 2010).

APPLICATION OF HEALTH PROMOTION PRINCIPLES IN HEALTH SYSTEM GOVERNANCE

The Ottawa Charter for health promotion (WHO, 1986) introduced a systems approach to health and its development, which comprises five concrete mechanism areas for action: (1) Building healthy public policy, (2) Creating supportive environments for health, (3) Strengthening

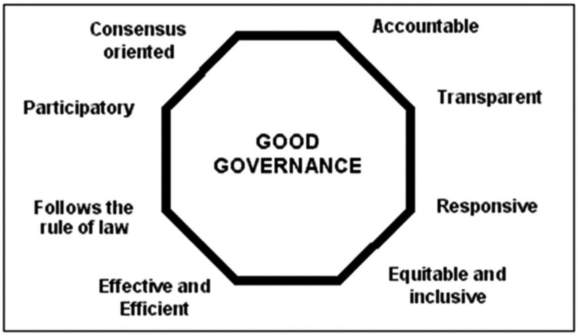

FIGURE 1 Characteristics of good governance (uNEsCaP, 2002, modified by Seppala 2004).

community actions, (4) Developing personal skills, and (5) Reorienting health services. These mechanisms can be applied using the three key strategies of advocacy, enabling, and mediation.

One of the challenges of health promotion in the 21st century is regaining focus on the political and social factors affecting health. This not only requires promoting empowerment and capacity building within individuals and communities but also necessitates a change in the structures and processes through which the social decisions are made (Szreter, 2003). Achieving such goals is possible only by adhering to the concepts and principles of health promotion in the health system governance (WHO. Regional Office for South-East Asia, 2008).

THE OTTAWA CHARTER AND GOOD HEALTH SYSTEM GOVERNANCE

Good governance guarantees the reduction of corruption, takes into account the opinions of minorities, and hears the voices of the most vulnerable groups in decision-makings (Subhan Mollick et al., 2018); it is also responsive to the present and future needs of society (Weiss, 2000). Imbalanced distribution of power among the populace is one of the prime sources of health disparities (McCartney et al., 2021). Power is considered a key concept of community empowerment, and health promotion works within the scope of power struggles (Bacchi, 2016). From a health promotion perspective, the broad allocation of power to the general public is an enabling act provided by policymakers and professionals (Labonte, 1994). Accomplishing these goals necessitates political commitment and institutional capacity in the health system, which are regarded as foundations of good health system governance (Houngbo et al., 2017).

Corruption, for instance, should be considered as the most exhibitive governance-related threat (Woro & Supriyanto, 2013). Furthermore, low levels of accountability and transparency, lack of motivation for responsiveness and performance, and poor citizen engagement in health proceedings might result in decreased system-level effectiveness (Brinkerhoff & Bossert, 2008).

Health promotion policy merges varied, supplementary approaches, such as legislation, financial measures, taxation, and structural change. This is a proportionate measure that leads to social policies being more equitable (Lee et al., 2011).

Differences in the structure, content, and management of health system governance have resulted in great variations in health outcomes. Thus, the construction of a persuasive and practical framework is paramount for assessing the performance of health system governance (Murray et al., 1999). Various frameworks have been implemented in an attempt to evaluate health system governance; notable examples include Abimbola et al.'s (2014) multilevel framework of common pool resources, Berlan and Shiffman's (2012) health workers' accountability framework, Kirigia and Kirigia's (2011) health development governance framework, and Smith et al.'s (2012) cybernetic framework. In spite of this, however, none of these are universally applicable, as the concept of governance in the health system is too complex (Pyone et al., 2017).

There is a lack of attention to the Ottawa Charter in all previously developed health governance frameworks. which may explain why, 35 years after its development, the Ottawa Charter has not assumed a prominent role within many global health systems, particularly those of developing countries (Mcqueen & De Salazar, 2011; Potvin & Jones, 2011).

To take a step forward, we propose an extended version of the good governance framework developed by the United Nations, putting forward the Ottawa Charter action areas and strategies in the framework (Figure 2). In our framework, namely the "health promotion governance framework in the health system," we used the good governance concepts and principles as the basis, considering that governance for health follows the governance innovations that have been shown to address the precedence determinants of health and summarizes them as strategic approaches to clever governance for health (Kickbusch & Gleicher, 2011).

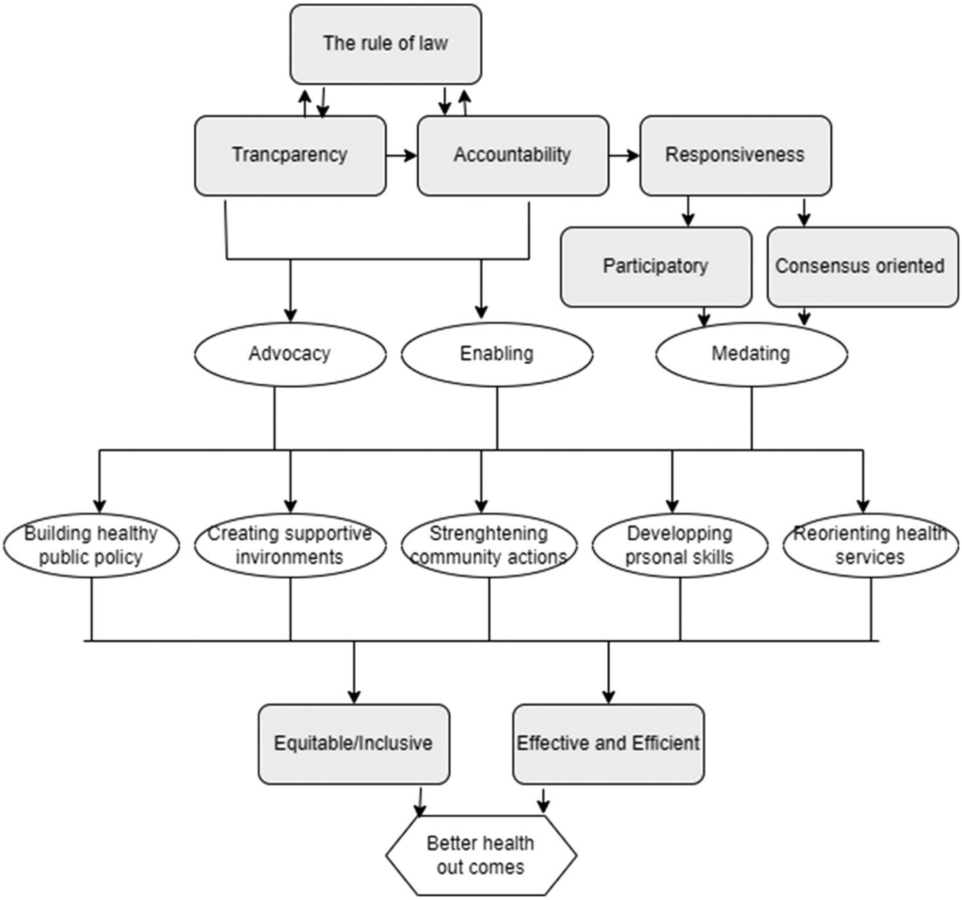

FIGURE 2 The proposed "health promotion governance framework."

THE PRINCIPLES OF HEALTH PROMOTION GOVERNANCE FRAMEWORK

The rule of law

As the foundational component of good governance, the rule of law is the neutral and impartial utilization of permanent and foreseeable laws, statutes, rules, and regulations with no regard for political considerations and/or social situations (Nanda, 2006). According to the health promotion paradigm, the law establishes the relative responsibilities of the people, the local and national governments, and organizations applying health promotion activities (Kumar & Preetha, 2012). The rule of law is increasingly recognized as a basic determinant of health, which affects other political, socioeconomic, and cultural factors related to health outcomes (Pinzon-Rondon et al., 2015).

All stakeholders in the health system, public and private, as governance system, are accountable to the law. Accountability forces government organizations to explain and make clear their performance in attaining goals, and satisfying the needs of the people, in accordance with the standards and obligations (Paschke et al., 2018).

TRANSPARENCY

Transparency is a key element of an effective and efficient health system (Ford et al., 2019). Free societies require that openness, accountability, and honesty define government transparency, and information is shared liberally with citizens (Vian, 2020).

The rule of law, accountability, and transparency constitute juridical issues at some levels in an interactive manner, yielding a more effective and broadly supported government (Macchia, 2016). The transparency and accountability inherent in good governance promotes various regulatory practices across the rule of law (Kessy, 2020). In this regard, health systems and governments also have obligations to provide clarity on the rules and consequences of healthcare delivery processes, as well as expose any interests that may affect decisions of healthcare policymakers and providers (Vian, 2020).

RESPONSIVENESS

Responsiveness is one of the key aspects of accountability and responsive governance is central to successful health systems (Rajan et al., 2019). Attaining such responsiveness requires public cooperation and engagement in decision-making to advance public services, improve general satisfaction, and to contribute to better health outcomes and population well-being (Marshall et al., 2021).

PARTICIPATORY AND CONSENSUS-ORIENTED HEALTH SYSTEM GOVERNANCE

Participatory and consensus-oriented health system governance mechanisms facilitate community participation in public health policy processes to increase citizen empowerment (Jafari et al., 2019), which enables individuals in the community to attain their fullest health potential (Rajan et al., 2019).

Within a health system that tries to implement the abovementioned good governance components, health policymakers need to apply three Ottawa Charter strategies for promoting community health: advocacy, enabling, and mediating (Saan & Wise, 2011) which are reflected in the five action areas outlined in the Charter (WHO, 1986). Applying these strategies, policymakers will be led to perform the five mechanisms through community-based interventions for health promotion. This application facilitates the attainment of a health system with “health promoting governance,” and that is effective, efficient, equitable, and inclusive in ways that enable better health outcomes and support community health.

ADVOCACY

The activities of assuring access to health services, system navigation, and resource mobilization; addressing health inequities; and constructing desired changes in a health system through policy and beyond are known as health advocacy (Hubinette et al., 2017). Effective health system governance requires policies that are interactive, harmonious, and that extend across sectors beyond the health sector. It should also be supported by mechanisms and structures that facilitate cooperation (Mitchell & Shortell, 2000). Moreover, transparency and accountability help minimize vulnerability to unethical practices and corruption (Vian, 2020), thus promoting public trust in other government institutions. Consequently, this approach forms a basis from which the health system can effectively mediate and advocate for other sectors of the government (Barbazza & Tello, 2014).

ENABLING

The high level of transparency and accountability in health system governance encourages people to participate in networks and groups to identify public health priorities and articulate their needs more effectively. Allowing individuals and communities to voice their demands enables them to monitor health services and benefit equally from them (Astuti & Supriyanto, 2013). Furthermore, supportive environments providing equal access to health information and life skills are essential for enabling individuals as well as the communities of which they are a part (Fry & Zask, 2017).

MEDIATING

Public health organizations and their partners in sectors such as education, transportation, and housing need to act to improve people's environments. In this regard, the mediating role of the health system is undeniable (Saan & Wise, 2011). The health system is an effective mediator, especially when it is ruled by participatory and consensus-oriented health system governance (Siddiqi et al., 2009).

BUILDING HEALTHY PUBLIC POLICY

The health consequences of policies should be accurately predicted to advance healthy public policy (Kemm, 2001). To achieve an efficient and effective health system, integrated public policies are necessary for addressing the social determinants of health and promoting health equity. These strategies should cover a broad spectrum of health determinants that involve the entire community (Brown et al., 2013).

CREATING SUPPORTIVE ENVIRONMENTS

People in communities interact closely with different environments they come into contact with. The social, physical, political, and economic health needs of people should be supported by safe environments (Thompson et al., 2018). According to the social ecological framework, working at different levels is necessary to construct supportive and enabling environments. This requires an assurance of supportive environments for making healthy choices (Akhtar-Schuster et al., 2011). By doing so, health system governance can facilitate equitable access to good health equally for all people, and it is therefore known as an effective and efficient health system government (Burches & Burches, 2020).

STRENGTHENING COMMUNITY ACTIONS

The purpose of strengthening community action is to help people identify their capacity to act to create healthy and safe communities (Stanhope & Lancaster, 2014). Engaging partners from other sectors, identifying opportunities for intersectoral collaboration, negotiating agendas, mediating the different interests of various sectors, and facilitating effective partnership working across sectors are all the core elements of implementing health-promoting governance (Chu, 2000). This allows government to provide the structure for the common actions within health and non-health sectors, including both public and private stakeholders, and citizens to achieve good health with equitable conditions in society (Mcqueen & De Salazar, 2011).

DEVELOPING PERSONAL SKILLS

People cannot reach their full health potential unless they gain control over factors that influence their health. This must be equal for both women and men according to health system governance (Saan & Wise, 2011). Such governance allows people to gain personal knowledge and recognize environments that give them control over their health, and make healthier decisions (Wiljer & Hakim, 2019). Being equipped with this skillset permits people to obtain information and resources, noting social justice principles (DeMatthews & Mawhinney, 2014).

EFFECTIVE AND EFFICIENT HEALTH SYSTEM GOVERNANCE

Effective and efficient public health can only be attained by appropriate public health policies supported by equitable political obligations that promote and support equity and health among all (Blanchet et al., 2017). Policy-making at all levels across sectors can make a critical difference in improving population health, supporting the view that a “Health in All Polices” approach is needed to effectively improve population health and reduce health inequities (Kickbusch & Gleicher, 2012).

Effective and efficient health promoting governance in the health system aims to make social, political, environmental, cultural, behavioral, and biological factors favorable for health through building healthy public policy, strengthening community actions, developing personal skills, and reorienting health services (Kumar & Preetha, 2012). To do so, the system needs to recognize different interests in all sectors of the government, create a suitable context to accomplish lifelong learning that enables people to take control over their health to attain better health, and facilitate community involvement in the health promotion process (Saan & Wise, 2011; WHO, 1986).

EQUITABLE AND INCLUSIVE HEALTH SYSTEM GOVERNANCE

Health promotion policies and practices, from the use of public policy mechanisms and intersectoral engagement to organizational change, can reduce health inequities, developing individual skills through health education, health literacy promotion, and re-orienting health services to integrate a focus on promotion and primary prevention, including the use of new technologies for improving health (Nanda, 2006).

BETTER HEALTH OUTCOMES

Health outcomes are the result of an array of social, cultural, economic, environmental, and geographical factors, in addition to health sector interventions (Muhammad & Ahmad, 2021). The association between health system governance and health outcomes can be either direct (e.g., increased mortality due to natural disasters due to the recklessness of health system governance) (Ciccone et al., 2014), or indirect (e.g., through stronger cross-sectoral governance that affects health and income growth) (Klomp & De Haan, 2008). Adhering to the principles of the Ottawa Charter can improve health outcomes (Kickbusch & Gleicher, 2012) and guide communities toward health.

CHARACTERISTIC FEATURES OF THE PROPOSED FRAMEWORK

In this paper, we explored how the Ottawa Charter's framework of strategies/action areas and principles of good governance can be applied to health system governance. Fry and Zask (2017) suggested that the Charter's framework is not being utilized sufficiently, most likely due to a lack of awareness of its foundations and related evidence. To make the Charter's concepts more understandable and applicable for health policymakers, we combine them with the principles of good governance, integrating the Ottawa Charter health promotion concepts with the principles of good governance. We believe that the interpretation of the Ottawa Charter's concepts in the form of good governance principles should be more understandable and usable for health policymakers. We acknowledge that successful delivery of the health system requires effective governance, and the role of governance as a key element in providing practical solutions for strengthening the health system is critical (Brinkerhoff & Bossert, 2014). Therefore, the substantiation of health system goals and policies needs a model of good governance in the health system which can achieve a commensurate movement with a systematic and comprehensive perspective (Pyone et al., 2017).

CONCLUSION

This framework provides a roadmap for implementing good governance principles in health systems by adhering to the strategies and action areas set out in the Ottawa Charter. The implementation of these strategies and action areas is pivotal to establishing and maintaining good governance in health systems, particularly in developing and transitional countries. Low- and middle-income countries are currently experiencing exponential growth in financial resources for health (Woro & Supriyanto, 2013). The health systems in such countries often fail to promote health in an effective, efficient, and equitable way, mainly due to a lack of investment, and poor design and management practices (Kannampallil et al., 2011). This approach will be beneficial to health policymakers, intermediaries, and health practitioners in identifying the most promising entry points for system-level governance interventions and contributing to the appropriate design of policies that consider the potential impact they have on the entire health system (Siddiqi et al., 2009).

AUTHOR CONTRIBUTIONS

Fatemeh Saadati and Haidar Nadrian conceptualized the study and its design. Fatemeh Saadati drafted the article. Haidar Nadrian critically revised the article.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ETHICS STATEMENT

As the paper does not report primary data or raise issues related to informed consent and confidentiality, it did not require formal ethics committee review.

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REFERENCES

Abimbola, S., Negin, J., Jan, S., & Martiniuk, A. (2014). Towards people-centred health systems: A multi-level framework for analysing primary health care governance in low-and middle-income countries. *Health Policy and Planning*, *29*(Suppl. 2), ii29–ii39.

Abotsi, A. K. (2018). Influence of governance indicators on illicit financial outflow from developing countries. *Contemporary Economics*, *12*(2), 139–151.

Akhtar-Schuster, M., Thomas, R. J., Stringer, L. C., Chasek, P., & Seely, M. (2011). Improving the enabling environment to combat land degradation: Institutional, financial, legal and science-policy challenges and solutions. *Land Degradation & Development*, *22*(2), 299–312.

Astuti, S. J. W., & Supriyanto, S. (2013). Enhancing trust, transparency and accountability in the local development process. *Bisnis & Birokrasi Journal*, *20*(1), 36–43.

Avelino, G., Barberia, L. G., & Biderman, C. (2014). Governance in managing public health resources in Brazilian municipalities. *Health Policy and Planning*, *29*(6), 694–702.

Bacchi, C. (2016). Problematizations in health policy: Questioning how "problems" are constituted in policies. *Sage Open*, *6*(2), 215824401665398.

Barbazza, E., & Tello, J. E. (2014). A review of health governance: Definitions, dimensions and tools to govern. *Health Policy*, *116*(1), 1–11.

Berlan, D., & Shiffman, J. (2012). Holding health providers in developing countries accountable to consumers: A synthesis of relevant scholarship. *Health Policy and Planning*, *27*(4), 271–280.

Blanchet, K., Nam, S. L., Ramalingam, B., & Pozo-Martin, F. (2017). Governance and capacity to manage resilience of health systems: Towards a new conceptual framework. *International Journal of Health Policy and Management*, *6*(8), 431–435.

Brinkerhoff, D. W., & Bossert, T. J. (2008). *Health governance: Concepts, experience, and programming options*. Health Systems.

Brinkerhoff, D. W., & Bossert, T. J. (2014). Health governance: Principal–agent linkages and health system strengthening. *Health Policy and Planning*, *29*(6), 685–693.

Brown, C., Harrison, D., Burns, H., & Ziglio, E. (2013). *Governance for health equity*. WHO Regional Office for Europe.

Burches, E., & Burches, M. (2020). Efficacy, effectiveness and efficiency in the health care: The need for an agreement to clarify its meaning. *International Archives of Public Health and Community Medicine*, *4*(1), 1–3.

Chu, C. (2000). Health-promoting workplaces—International settings development. *Health Promotion International*, *15*(2), 155–167.

Ciccone, D. K., Vian, T., Maurer, L., & Bradley, E. H. (2014). Linking governance mechanisms to health outcomes: A review of the literature in low-and middle-income countries. *Social Science & Medicine*, *117*, 86–95.

DeMatthews, D., & Mawhinney, H. (2014). Social justice leadership and inclusion: Exploring challenges in an urban district struggling to address inequities. *Educational Administration Quarterly*, *50*(5), 844–881.

Ford, E., Boyd, A., Bowles, J. K. F., Havard, A., Aldridge, R. W., Curcin, V., Greiver, M., Harron, K., Katikireddi, V., Rodgers, S. E., & Sperrin, M. (2019). Our data, our society, our health: A vision for inclusive and transparent health data science in the United Kingdom and beyond. *Learning Health Systems*, *3*(3), e10191.

Fry, D., & Zask, A. (2017). Applying the Ottawa Charter to inform health promotion programme design. *Health Promotion International*, *32*(5), 901–912.

Houngbo, P. T., Coleman, H. L. S., Zweekhorst, M., De Cock Buning, T., Medenou, D., & Bunders, J. F. G. (2017). A model for good governance of healthcare technology management in the public sector: Learning from evidence-informed policy development and implementation in Benin. *PLoS One*, *12*(1), e0168842.

Hubinette, M., Dobson, S., Scott, I., & Sherbino, J. (2017). Health advocacy. *Medical Teacher*, *39*(2), 128–135.

Jafari, F., HajiNabi, K., Jahangiri, K., & Riahi, L. (2019). Good governance in the health system: A qualitative study. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, *7*, 1127–1141.

Kannampallil, T. G., Schauer, G. F., Cohen, T., & Patel, V. L. (2011). Considering complexity in healthcare systems. *Journal of Biomedical Informatics*, *44*(6), 943–947.

Kemm, J. (2001). Health impact assessment: A tool for healthy public policy. *Health Promotion International*, *16*(1), 79–85.

Kessy, A. T. (2020). The demand and supply sides of accountability in local government authorities in Tanzania, *Public Integrity 22*(6), 606–625.

Kickbusch, I., & Buckett, K. (2010). Implementing health in all policies: Adelaide 2010. In I. Kickbusch, & K. Buckett (Eds.), *Adelaide: Health in All Policies Unit* (pp. 11–24). SA Department of Health.

Kickbusch, I., & Gleicher, D. E. (2011). *Governance for health in the 21st century: A study conducted for the WHO Regional Office for Europe*. World Health Organization.

Kickbusch, I., & Gleicher, D. E. (2012). *Governance for health in the 21st century*. World Health Organization. Regional Office for Europe. https://apps.who.int/iris/handle/10665/326429

Kirigia, J. M., & Kirigia, D. G. (2011). The essence of governance in health development. *International archives of medicine*, *4*(1), 1–3.

Klomp, J., & De Haan, J. (2008). Effects of governance on health: A cross-national analysis of 101 countries, *Kyklos: Jahrbuch des Instituts fur Geschichte der Medizin an der Universitat Leipzig 61*(4), 599–614.

Kumar, S., & Preetha, G. S. (2012). Health promotion: An effective tool for global health, *Indian Journal of Community Medicine 37*(1), 5.

Labonte, R. (1994). Health promotion and empowerment: Reflections on professional practice, *Health Education Quarterly 21*(2), 253–268.

Lee, J. H., & Sadana, R., Commission on Social Determinants of Health. (2011). *Improving equity in health by addressing social determinants*. World Health Organization.

Macchia, M. (2016). 12. the rule of law and transparency in the global space. *Research Handbook on Global Administrative Law*, *1*, 261–281.

Marshall, A. I., Kantamaturapoj, K., Kiewnin, K., Chotchoungchatchai, S., Patcharanarumol, W., & Tangcharoensathien, V. (2021). Participatory and responsive governance in universal health coverage: An analysis of legislative provisions in Thailand. *BMJ Global Health*, *6*(2), e004117.

McCartney, G., Dickie, E., Escobar, O., & Collins, C. (2021). Health inequalities, fundamental causes and power: Towards the practice of good theory. *Sociology of Health & Illness*, *43*(1), 20–39.

Mcqueen, D. V., & De Salazar, L. (2011). Health promotion, the Ottawa Charter and 'developing personal skills': A compact history of 25 years. *Health Promotion International*, *26*(Suppl. 2), ii194–ii201.

Mitchell, S. M., & Shortell, S. M. (2000). The governance and management of effective community health partnerships: A typology for research, policy, and practice. *The Milbank Quarterly*, *78*(2), 241–289.

Muhammad, M. A., & Ahmad, M. (2021). Health aid and health outcomes in Nigeria: The role of governance. *Health Economics & Outcome Research: Open Access*, *7*(4), 1–4.

Murray, C. J., & Frenk, J. (1999). *A WHO framework for health system performance assessment*. WHO.

Nanda, V. P. (2006). The "good governance" concept revisited. *The Annals of the American Academy of Political and Social Science*, *603*(1), 269–283.

Paschke, A., Dimancesco, D., Vian, T., Kohler, J. C., & Forte, G. (2018). Increasing transparency and accountability in national pharmaceutical systems. *Bulletin of the World Health Organization*, *96*(11), 782–791.

Pinzon-Rondon, A. M., Attaran, A., Botero, J. C., & Ruiz-Sternberg, A. M. (2015). Association of rule of law and health outcomes: An ecological study. *BMJ Open*, *5*(10), e007004.

Potvin, L., & Jones, C. M. (2011). Twenty-five years after the Ottawa Charter: the critical role of health promotion for public health. *Canadian Journal of Public Health*, *102*, 244–248.

Pyone, T., Smith, H., & van den Broek, N. (2017). Frameworks to assess health systems governance: A systematic review. *Health Policy and Planning*, *32*(5), 710–722.

Rajan, D., Mathurapote, N., Putthasri, W., Posayanonda, T., Pinprateep, P., de Courcelles, S., Bichon, R., Ros, E., Delobre, A., & Schmets, G. (2019). Institutionalising participatory health governance: Lessons from nine years of the National Health Assembly model in Thailand. *BMJ Global Health*, *4*(Suppl. 7), e001769.

Saan, H., & Wise, M. (2011). Enable, mediate, advocate. *Health Promotion International*, *26*(Suppl. 2), ii187–ii193.

Siddiqi, S., Masud, T. I., Nishtar, S., Peters, D. H., Sabri, B., Bile, K. M., & Jama, M. A. (2009). Framework for assessing governance of the health system in developing countries: Gateway to good governance. *Health Policy*, *90*(1), 13–25.

Smith, P. C., Anell, A., Busse, R., Crivelli, L., Healy, J., Lindahl, A. K., Westert, G., & Kene, T. (2012). Leadership and governance in seven developed health systems. *Health Policy*, *106*(1), 37–49.

Stanhope, M., & Lancaster, J. (2014). *Population-centered health care in the community public health nursing-e-book*. Elsevier Health Sciences.

Subhan Mollick, A., Khalilur Rahman, M., Nabiul Islam Khan, M., & Nazmus Sadath, M. (2018). Evaluation of good governance in a participatory forestry program: A case study in Madhupur Sal forests of Bangladesh. *Forest Policy and Economics*, *95*, 123–137.

Szreter, S. (2003). The population health approach in historical perspective. *American Journal of Public Health*, *93*(3), 421–431.

Thompson, S. R., Watson, M. C., & Tilford, S. (2018). The Ottawa Charter 30 years on: Still an important standard for health promotion. *International Journal of Health Promotion and Education*, *56*(2), 73–84.

Vian, T. (2020). Anti-corruption, transparency and accountability in health: Concepts, frameworks, and approaches. *Global Health Action*, *13*(supp 1), 1694744.

Weiss, T. G. (2000). Governance good governance & global governance: Conceptual & actual challenges'. *Third World Quarterly*, *21*(5), 795–814.

WHO. (1986). *Ottawa charter for health promotion*.

WHO. (2022). *Well-being and health promotion*.

WHO. Regional Office for South-East Asia. (2008). *Regional strategy for health promotion for South-East Asia*.

Wiljer, D., & Hakim, Z. (2019). Developing an artificial intelligence–enabled health care practice: Rewiring health care professions for better care. *Journal of Medical Imaging and Radiation Sciences*, *50*(4), S8–S14.

Woro, S. J., & Supriyanto, S. (2013). Enhancing trust, transparency and accountability in the local development process. *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*, *20*(1), 20–36.

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COMMENTARY

WMHP WORLD MEDICAL & HEALTH POLICY WILEY

"Health promotion governance": A framework for operationalizing the Ottawa charter mechanisms in health system governance

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Abstract

According to the Geneva Charter for well-being, health is a political choice and governments have crucial roles in providing the prerequisites of health and well-being for people in societies. To initiate the creation of sustainable well-being in societies, the health systems of all countries must be governed by a health promotion approach. To propose a "health promotion governance framework," we apply the concepts of good governance and the Ottawa Charter strategies/action areas to health system governance. To implement the good governance components within health systems, policymakers need to apply the three Ottawa Charter's strategies. Applying these strategies, the policymakers will be led to perform the five mechanisms through community-based interventions for health promotion. As a result, they will achieve a health system with "health-promoting governance." Such a system can act so effective, efficient, equitable, and inclusive that it brings about better health outcomes. In this way, the proposed "health promotion governance framework" might be helpful in giving reality to the governance of health promotion in health systems, which is the first step in creating sustainable well-being in societies.

KEYWORDS

good governance, health promotion, health system governance, Ottawa Charter

Key points

- According to the Geneva Charter for well-being, health is a political choice and governments have a crucial role to play in promoting it.
- To initiate the creation of sustainable well-being within societies, health systems must be governed by a health promotion approach.

- We propose that good governance and the Ottawa Charter's principles can serve as a framework to promote health within health systems.

BACKGROUND

According to the Geneva Charter for well-being, health is a political choice, and governments have a crucial role to play in promoting it (WHO, 2022). Health system governance is a major concern in many countries, owing to growing pressure to produce results and an increased sense of responsibility in the health sector at a time when many resources are being invested in health systems (Siddiqi et al., 2009). In spite of this acknowledgment, what constitutes health governance and how it contributes to making well-being frameworks stick are questions that policymakers continue to wrestle with (Abotsi, 2018).

WHAT DO WE MEAN BY GOOD GOVERNANCE AND ITS APPLICATION IN THE HEALTH SYSTEM?

Good governance is defined as a structure of policies, values, and institutions through which a community manages its politics, economy, and social issues through governmental, private, and civil sectors (Avelino et al., 2014). According to Pacific (2002), the UNDP introduced key elements of good governance, which include: participation, rule of law, transparency, accountability, equity, efficiency and effectiveness, responsiveness, and consensus orientation, as related to good public governance (Figure 1). The first and most significant components of good governance are health governance and community prosperity; within these, health is considered a human right and one of the most important determinants of equity and social welfare (Kickbusch & Buckett, 2010).

APPLICATION OF HEALTH PROMOTION PRINCIPLES IN HEALTH SYSTEM GOVERNANCE

The Ottawa Charter for health promotion (WHO, 1986) introduced a systems approach to health and its development, which comprises five concrete mechanism areas for action: (1) Building healthy public policy, (2) Creating supportive environments for health, (3) Strengthening

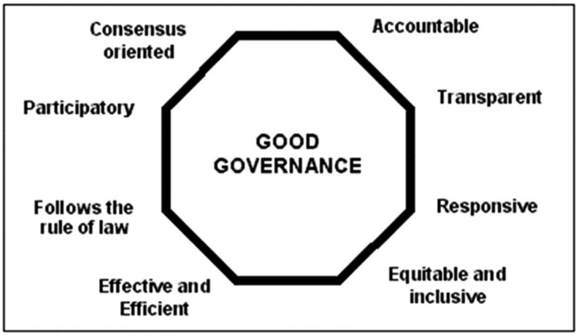

FIGURE 1 Characteristics of good governance (uNEsCaP, 2002, modified by Seppala 2004).

community actions, (4) Developing personal skills, and (5) Reorienting health services. These mechanisms can be applied using the three key strategies of advocacy, enabling, and mediation.

One of the challenges of health promotion in the 21st century is regaining focus on the political and social factors affecting health. This not only requires promoting empowerment and capacity building within individuals and communities but also necessitates a change in the structures and processes through which the social decisions are made (Szreter, 2003). Achieving such goals is possible only by adhering to the concepts and principles of health promotion in the health system governance (WHO. Regional Office for South-East Asia, 2008).

THE OTTAWA CHARTER AND GOOD HEALTH SYSTEM GOVERNANCE

Good governance guarantees the reduction of corruption, takes into account the opinions of minorities, and hears the voices of the most vulnerable groups in decision-makings (Subhan Mollick et al., 2018); it is also responsive to the present and future needs of society (Weiss, 2000). Imbalanced distribution of power among the populace is one of the prime sources of health disparities (McCartney et al., 2021). Power is considered a key concept of community empowerment, and health promotion works within the scope of power struggles (Bacchi, 2016). From a health promotion perspective, the broad allocation of power to the general public is an enabling act provided by policymakers and professionals (Labonte, 1994). Accomplishing these goals necessitates political commitment and institutional capacity in the health system, which are regarded as foundations of good health system governance (Houngbo et al., 2017).

Corruption, for instance, should be considered as the most exhibitive governance-related threat (Woro & Supriyanto, 2013). Furthermore, low levels of accountability and transparency, lack of motivation for responsiveness and performance, and poor citizen engagement in health proceedings might result in decreased system-level effectiveness (Brinkerhoff & Bossert, 2008).

Health promotion policy merges varied, supplementary approaches, such as legislation, financial measures, taxation, and structural change. This is a proportionate measure that leads to social policies being more equitable (Lee et al., 2011).

Differences in the structure, content, and management of health system governance have resulted in great variations in health outcomes. Thus, the construction of a persuasive and practical framework is paramount for assessing the performance of health system governance (Murray et al., 1999). Various frameworks have been implemented in an attempt to evaluate health system governance; notable examples include Abimbola et al.'s (2014) multilevel framework of common pool resources, Berlan and Shiffman's (2012) health workers' accountability framework, Kirigia and Kirigia's (2011) health development governance framework, and Smith et al.'s (2012) cybernetic framework. In spite of this, however, none of these are universally applicable, as the concept of governance in the health system is too complex (Pyone et al., 2017).

There is a lack of attention to the Ottawa Charter in all previously developed health governance frameworks. which may explain why, 35 years after its development, the Ottawa Charter has not assumed a prominent role within many global health systems, particularly those of developing countries (Mcqueen & De Salazar, 2011; Potvin & Jones, 2011).

To take a step forward, we propose an extended version of the good governance framework developed by the United Nations, putting forward the Ottawa Charter action areas and strategies in the framework (Figure 2). In our framework, namely the "health promotion governance framework in the health system," we used the good governance concepts and principles as the basis, considering that governance for health follows the governance innovations that have been shown to address the precedence determinants of health and summarizes them as strategic approaches to clever governance for health (Kickbusch & Gleicher, 2011).

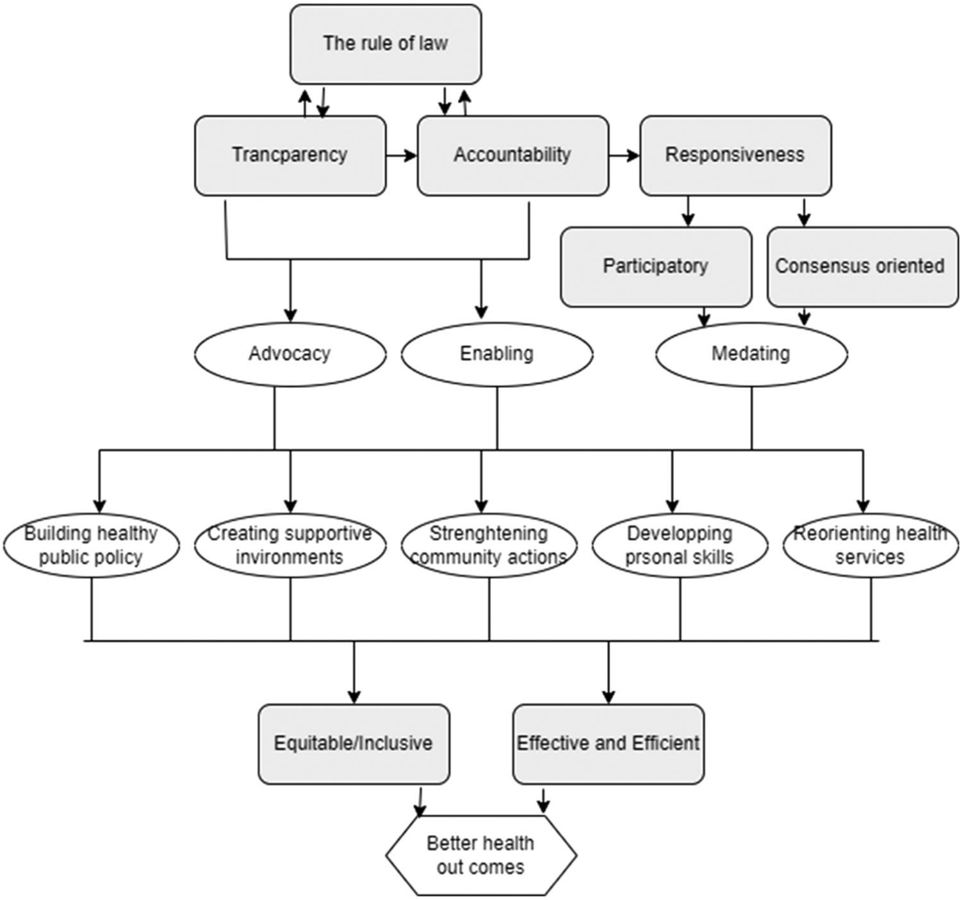

FIGURE 2 The proposed "health promotion governance framework."

THE PRINCIPLES OF HEALTH PROMOTION GOVERNANCE FRAMEWORK

The rule of law

As the foundational component of good governance, the rule of law is the neutral and impartial utilization of permanent and foreseeable laws, statutes, rules, and regulations with no regard for political considerations and/or social situations (Nanda, 2006). According to the health promotion paradigm, the law establishes the relative responsibilities of the people, the local and national governments, and organizations applying health promotion activities (Kumar & Preetha, 2012). The rule of law is increasingly recognized as a basic determinant of health, which affects other political, socioeconomic, and cultural factors related to health outcomes (Pinzon-Rondon et al., 2015).

All stakeholders in the health system, public and private, as governance system, are accountable to the law. Accountability forces government organizations to explain and make clear their performance in attaining goals, and satisfying the needs of the people, in accordance with the standards and obligations (Paschke et al., 2018).

TRANSPARENCY

Transparency is a key element of an effective and efficient health system (Ford et al., 2019). Free societies require that openness, accountability, and honesty define government transparency, and information is shared liberally with citizens (Vian, 2020).

The rule of law, accountability, and transparency constitute juridical issues at some levels in an interactive manner, yielding a more effective and broadly supported government (Macchia, 2016). The transparency and accountability inherent in good governance promotes various regulatory practices across the rule of law (Kessy, 2020). In this regard, health systems and governments also have obligations to provide clarity on the rules and consequences of healthcare delivery processes, as well as expose any interests that may affect decisions of healthcare policymakers and providers (Vian, 2020).

RESPONSIVENESS

Responsiveness is one of the key aspects of accountability and responsive governance is central to successful health systems (Rajan et al., 2019). Attaining such responsiveness requires public cooperation and engagement in decision-making to advance public services, improve general satisfaction, and to contribute to better health outcomes and population well-being (Marshall et al., 2021).

PARTICIPATORY AND CONSENSUS-ORIENTED HEALTH SYSTEM GOVERNANCE

Participatory and consensus-oriented health system governance mechanisms facilitate community participation in public health policy processes to increase citizen empowerment (Jafari et al., 2019), which enables individuals in the community to attain their fullest health potential (Rajan et al., 2019).

Within a health system that tries to implement the abovementioned good governance components, health policymakers need to apply three Ottawa Charter strategies for promoting community health: advocacy, enabling, and mediating (Saan & Wise, 2011) which are reflected in the five action areas outlined in the Charter (WHO, 1986). Applying these strategies, policymakers will be led to perform the five mechanisms through community-based interventions for health promotion. This application facilitates the attainment of a health system with “health promoting governance,” and that is effective, efficient, equitable, and inclusive in ways that enable better health outcomes and support community health.

ADVOCACY

The activities of assuring access to health services, system navigation, and resource mobilization; addressing health inequities; and constructing desired changes in a health system through policy and beyond are known as health advocacy (Hubinette et al., 2017). Effective health system governance requires policies that are interactive, harmonious, and that extend across sectors beyond the health sector. It should also be supported by mechanisms and structures that facilitate cooperation (Mitchell & Shortell, 2000). Moreover, transparency and accountability help minimize vulnerability to unethical practices and corruption (Vian, 2020), thus promoting public trust in other government institutions. Consequently, this approach forms a basis from which the health system can effectively mediate and advocate for other sectors of the government (Barbazza & Tello, 2014).

ENABLING

The high level of transparency and accountability in health system governance encourages people to participate in networks and groups to identify public health priorities and articulate their needs more effectively. Allowing individuals and communities to voice their demands enables them to monitor health services and benefit equally from them (Astuti & Supriyanto, 2013). Furthermore, supportive environments providing equal access to health information and life skills are essential for enabling individuals as well as the communities of which they are a part (Fry & Zask, 2017).

MEDIATING

Public health organizations and their partners in sectors such as education, transportation, and housing need to act to improve people's environments. In this regard, the mediating role of the health system is undeniable (Saan & Wise, 2011). The health system is an effective mediator, especially when it is ruled by participatory and consensus-oriented health system governance (Siddiqi et al., 2009).

BUILDING HEALTHY PUBLIC POLICY

The health consequences of policies should be accurately predicted to advance healthy public policy (Kemm, 2001). To achieve an efficient and effective health system, integrated public policies are necessary for addressing the social determinants of health and promoting health equity. These strategies should cover a broad spectrum of health determinants that involve the entire community (Brown et al., 2013).

CREATING SUPPORTIVE ENVIRONMENTS

People in communities interact closely with different environments they come into contact with. The social, physical, political, and economic health needs of people should be supported by safe environments (Thompson et al., 2018). According to the social ecological framework, working at different levels is necessary to construct supportive and enabling environments. This requires an assurance of supportive environments for making healthy choices (Akhtar-Schuster et al., 2011). By doing so, health system governance can facilitate equitable access to good health equally for all people, and it is therefore known as an effective and efficient health system government (Burches & Burches, 2020).

STRENGTHENING COMMUNITY ACTIONS

The purpose of strengthening community action is to help people identify their capacity to act to create healthy and safe communities (Stanhope & Lancaster, 2014). Engaging partners from other sectors, identifying opportunities for intersectoral collaboration, negotiating agendas, mediating the different interests of various sectors, and facilitating effective partnership working across sectors are all the core elements of implementing health-promoting governance (Chu, 2000). This allows government to provide the structure for the common actions within health and non-health sectors, including both public and private stakeholders, and citizens to achieve good health with equitable conditions in society (Mcqueen & De Salazar, 2011).

DEVELOPING PERSONAL SKILLS

People cannot reach their full health potential unless they gain control over factors that influence their health. This must be equal for both women and men according to health system governance (Saan & Wise, 2011). Such governance allows people to gain personal knowledge and recognize environments that give them control over their health, and make healthier decisions (Wiljer & Hakim, 2019). Being equipped with this skillset permits people to obtain information and resources, noting social justice principles (DeMatthews & Mawhinney, 2014).

EFFECTIVE AND EFFICIENT HEALTH SYSTEM GOVERNANCE

Effective and efficient public health can only be attained by appropriate public health policies supported by equitable political obligations that promote and support equity and health among all (Blanchet et al., 2017). Policy-making at all levels across sectors can make a critical difference in improving population health, supporting the view that a “Health in All Polices” approach is needed to effectively improve population health and reduce health inequities (Kickbusch & Gleicher, 2012).

Effective and efficient health promoting governance in the health system aims to make social, political, environmental, cultural, behavioral, and biological factors favorable for health through building healthy public policy, strengthening community actions, developing personal skills, and reorienting health services (Kumar & Preetha, 2012). To do so, the system needs to recognize different interests in all sectors of the government, create a suitable context to accomplish lifelong learning that enables people to take control over their health to attain better health, and facilitate community involvement in the health promotion process (Saan & Wise, 2011; WHO, 1986).

EQUITABLE AND INCLUSIVE HEALTH SYSTEM GOVERNANCE

Health promotion policies and practices, from the use of public policy mechanisms and intersectoral engagement to organizational change, can reduce health inequities, developing individual skills through health education, health literacy promotion, and re-orienting health services to integrate a focus on promotion and primary prevention, including the use of new technologies for improving health (Nanda, 2006).

BETTER HEALTH OUTCOMES

Health outcomes are the result of an array of social, cultural, economic, environmental, and geographical factors, in addition to health sector interventions (Muhammad & Ahmad, 2021). The association between health system governance and health outcomes can be either direct (e.g., increased mortality due to natural disasters due to the recklessness of health system governance) (Ciccone et al., 2014), or indirect (e.g., through stronger cross-sectoral governance that affects health and income growth) (Klomp & De Haan, 2008). Adhering to the principles of the Ottawa Charter can improve health outcomes (Kickbusch & Gleicher, 2012) and guide communities toward health.

CHARACTERISTIC FEATURES OF THE PROPOSED FRAMEWORK

In this paper, we explored how the Ottawa Charter's framework of strategies/action areas and principles of good governance can be applied to health system governance. Fry and Zask (2017) suggested that the Charter's framework is not being utilized sufficiently, most likely due to a lack of awareness of its foundations and related evidence. To make the Charter's concepts more understandable and applicable for health policymakers, we combine them with the principles of good governance, integrating the Ottawa Charter health promotion concepts with the principles of good governance. We believe that the interpretation of the Ottawa Charter's concepts in the form of good governance principles should be more understandable and usable for health policymakers. We acknowledge that successful delivery of the health system requires effective governance, and the role of governance as a key element in providing practical solutions for strengthening the health system is critical (Brinkerhoff & Bossert, 2014). Therefore, the substantiation of health system goals and policies needs a model of good governance in the health system which can achieve a commensurate movement with a systematic and comprehensive perspective (Pyone et al., 2017).

CONCLUSION

This framework provides a roadmap for implementing good governance principles in health systems by adhering to the strategies and action areas set out in the Ottawa Charter. The implementation of these strategies and action areas is pivotal to establishing and maintaining good governance in health systems, particularly in developing and transitional countries. Low- and middle-income countries are currently experiencing exponential growth in financial resources for health (Woro & Supriyanto, 2013). The health systems in such countries often fail to promote health in an effective, efficient, and equitable way, mainly due to a lack of investment, and poor design and management practices (Kannampallil et al., 2011). This approach will be beneficial to health policymakers, intermediaries, and health practitioners in identifying the most promising entry points for system-level governance interventions and contributing to the appropriate design of policies that consider the potential impact they have on the entire health system (Siddiqi et al., 2009).

AUTHOR CONTRIBUTIONS

Fatemeh Saadati and Haidar Nadrian conceptualized the study and its design. Fatemeh Saadati drafted the article. Haidar Nadrian critically revised the article.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ETHICS STATEMENT

As the paper does not report primary data or raise issues related to informed consent and confidentiality, it did not require formal ethics committee review.

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REFERENCES

Abimbola, S., Negin, J., Jan, S., & Martiniuk, A. (2014). Towards people-centred health systems: A multi-level framework for analysing primary health care governance in low-and middle-income countries. *Health Policy and Planning*, *29*(Suppl. 2), ii29–ii39.

Abotsi, A. K. (2018). Influence of governance indicators on illicit financial outflow from developing countries. *Contemporary Economics*, *12*(2), 139–151.

Akhtar-Schuster, M., Thomas, R. J., Stringer, L. C., Chasek, P., & Seely, M. (2011). Improving the enabling environment to combat land degradation: Institutional, financial, legal and science-policy challenges and solutions. *Land Degradation & Development*, *22*(2), 299–312.

Astuti, S. J. W., & Supriyanto, S. (2013). Enhancing trust, transparency and accountability in the local development process. *Bisnis & Birokrasi Journal*, *20*(1), 36–43.

Avelino, G., Barberia, L. G., & Biderman, C. (2014). Governance in managing public health resources in Brazilian municipalities. *Health Policy and Planning*, *29*(6), 694–702.

Bacchi, C. (2016). Problematizations in health policy: Questioning how "problems" are constituted in policies. *Sage Open*, *6*(2), 215824401665398.

Barbazza, E., & Tello, J. E. (2014). A review of health governance: Definitions, dimensions and tools to govern. *Health Policy*, *116*(1), 1–11.

Berlan, D., & Shiffman, J. (2012). Holding health providers in developing countries accountable to consumers: A synthesis of relevant scholarship. *Health Policy and Planning*, *27*(4), 271–280.

Blanchet, K., Nam, S. L., Ramalingam, B., & Pozo-Martin, F. (2017). Governance and capacity to manage resilience of health systems: Towards a new conceptual framework. *International Journal of Health Policy and Management*, *6*(8), 431–435.

Brinkerhoff, D. W., & Bossert, T. J. (2008). *Health governance: Concepts, experience, and programming options*. Health Systems.

Brinkerhoff, D. W., & Bossert, T. J. (2014). Health governance: Principal–agent linkages and health system strengthening. *Health Policy and Planning*, *29*(6), 685–693.

Brown, C., Harrison, D., Burns, H., & Ziglio, E. (2013). *Governance for health equity*. WHO Regional Office for Europe.

Burches, E., & Burches, M. (2020). Efficacy, effectiveness and efficiency in the health care: The need for an agreement to clarify its meaning. *International Archives of Public Health and Community Medicine*, *4*(1), 1–3.

Chu, C. (2000). Health-promoting workplaces—International settings development. *Health Promotion International*, *15*(2), 155–167.

Ciccone, D. K., Vian, T., Maurer, L., & Bradley, E. H. (2014). Linking governance mechanisms to health outcomes: A review of the literature in low-and middle-income countries. *Social Science & Medicine*, *117*, 86–95.

DeMatthews, D., & Mawhinney, H. (2014). Social justice leadership and inclusion: Exploring challenges in an urban district struggling to address inequities. *Educational Administration Quarterly*, *50*(5), 844–881.

Ford, E., Boyd, A., Bowles, J. K. F., Havard, A., Aldridge, R. W., Curcin, V., Greiver, M., Harron, K., Katikireddi, V., Rodgers, S. E., & Sperrin, M. (2019). Our data, our society, our health: A vision for inclusive and transparent health data science in the United Kingdom and beyond. *Learning Health Systems*, *3*(3), e10191.

Fry, D., & Zask, A. (2017). Applying the Ottawa Charter to inform health promotion programme design. *Health Promotion International*, *32*(5), 901–912.

Houngbo, P. T., Coleman, H. L. S., Zweekhorst, M., De Cock Buning, T., Medenou, D., & Bunders, J. F. G. (2017). A model for good governance of healthcare technology management in the public sector: Learning from evidence-informed policy development and implementation in Benin. *PLoS One*, *12*(1), e0168842.

Hubinette, M., Dobson, S., Scott, I., & Sherbino, J. (2017). Health advocacy. *Medical Teacher*, *39*(2), 128–135.

Jafari, F., HajiNabi, K., Jahangiri, K., & Riahi, L. (2019). Good governance in the health system: A qualitative study. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, *7*, 1127–1141.

Kannampallil, T. G., Schauer, G. F., Cohen, T., & Patel, V. L. (2011). Considering complexity in healthcare systems. *Journal of Biomedical Informatics*, *44*(6), 943–947.

Kemm, J. (2001). Health impact assessment: A tool for healthy public policy. *Health Promotion International*, *16*(1), 79–85.

Kessy, A. T. (2020). The demand and supply sides of accountability in local government authorities in Tanzania, *Public Integrity 22*(6), 606–625.

Kickbusch, I., & Buckett, K. (2010). Implementing health in all policies: Adelaide 2010. In I. Kickbusch, & K. Buckett (Eds.), *Adelaide: Health in All Policies Unit* (pp. 11–24). SA Department of Health.

Kickbusch, I., & Gleicher, D. E. (2011). *Governance for health in the 21st century: A study conducted for the WHO Regional Office for Europe*. World Health Organization.

Kickbusch, I., & Gleicher, D. E. (2012). *Governance for health in the 21st century*. World Health Organization. Regional Office for Europe. https://apps.who.int/iris/handle/10665/326429

Kirigia, J. M., & Kirigia, D. G. (2011). The essence of governance in health development. *International archives of medicine*, *4*(1), 1–3.

Klomp, J., & De Haan, J. (2008). Effects of governance on health: A cross-national analysis of 101 countries, *Kyklos: Jahrbuch des Instituts fur Geschichte der Medizin an der Universitat Leipzig 61*(4), 599–614.

Kumar, S., & Preetha, G. S. (2012). Health promotion: An effective tool for global health, *Indian Journal of Community Medicine 37*(1), 5.

Labonte, R. (1994). Health promotion and empowerment: Reflections on professional practice, *Health Education Quarterly 21*(2), 253–268.

Lee, J. H., & Sadana, R., Commission on Social Determinants of Health. (2011). *Improving equity in health by addressing social determinants*. World Health Organization.

Macchia, M. (2016). 12. the rule of law and transparency in the global space. *Research Handbook on Global Administrative Law*, *1*, 261–281.

Marshall, A. I., Kantamaturapoj, K., Kiewnin, K., Chotchoungchatchai, S., Patcharanarumol, W., & Tangcharoensathien, V. (2021). Participatory and responsive governance in universal health coverage: An analysis of legislative provisions in Thailand. *BMJ Global Health*, *6*(2), e004117.

McCartney, G., Dickie, E., Escobar, O., & Collins, C. (2021). Health inequalities, fundamental causes and power: Towards the practice of good theory. *Sociology of Health & Illness*, *43*(1), 20–39.

Mcqueen, D. V., & De Salazar, L. (2011). Health promotion, the Ottawa Charter and 'developing personal skills': A compact history of 25 years. *Health Promotion International*, *26*(Suppl. 2), ii194–ii201.

Mitchell, S. M., & Shortell, S. M. (2000). The governance and management of effective community health partnerships: A typology for research, policy, and practice. *The Milbank Quarterly*, *78*(2), 241–289.

Muhammad, M. A., & Ahmad, M. (2021). Health aid and health outcomes in Nigeria: The role of governance. *Health Economics & Outcome Research: Open Access*, *7*(4), 1–4.

Murray, C. J., & Frenk, J. (1999). *A WHO framework for health system performance assessment*. WHO.

Nanda, V. P. (2006). The "good governance" concept revisited. *The Annals of the American Academy of Political and Social Science*, *603*(1), 269–283.

Paschke, A., Dimancesco, D., Vian, T., Kohler, J. C., & Forte, G. (2018). Increasing transparency and accountability in national pharmaceutical systems. *Bulletin of the World Health Organization*, *96*(11), 782–791.

Pinzon-Rondon, A. M., Attaran, A., Botero, J. C., & Ruiz-Sternberg, A. M. (2015). Association of rule of law and health outcomes: An ecological study. *BMJ Open*, *5*(10), e007004.

Potvin, L., & Jones, C. M. (2011). Twenty-five years after the Ottawa Charter: the critical role of health promotion for public health. *Canadian Journal of Public Health*, *102*, 244–248.

Pyone, T., Smith, H., & van den Broek, N. (2017). Frameworks to assess health systems governance: A systematic review. *Health Policy and Planning*, *32*(5), 710–722.

Rajan, D., Mathurapote, N., Putthasri, W., Posayanonda, T., Pinprateep, P., de Courcelles, S., Bichon, R., Ros, E., Delobre, A., & Schmets, G. (2019). Institutionalising participatory health governance: Lessons from nine years of the National Health Assembly model in Thailand. *BMJ Global Health*, *4*(Suppl. 7), e001769.

Saan, H., & Wise, M. (2011). Enable, mediate, advocate. *Health Promotion International*, *26*(Suppl. 2), ii187–ii193.

Siddiqi, S., Masud, T. I., Nishtar, S., Peters, D. H., Sabri, B., Bile, K. M., & Jama, M. A. (2009). Framework for assessing governance of the health system in developing countries: Gateway to good governance. *Health Policy*, *90*(1), 13–25.

Smith, P. C., Anell, A., Busse, R., Crivelli, L., Healy, J., Lindahl, A. K., Westert, G., & Kene, T. (2012). Leadership and governance in seven developed health systems. *Health Policy*, *106*(1), 37–49.

Stanhope, M., & Lancaster, J. (2014). *Population-centered health care in the community public health nursing-e-book*. Elsevier Health Sciences.

Subhan Mollick, A., Khalilur Rahman, M., Nabiul Islam Khan, M., & Nazmus Sadath, M. (2018). Evaluation of good governance in a participatory forestry program: A case study in Madhupur Sal forests of Bangladesh. *Forest Policy and Economics*, *95*, 123–137.

Szreter, S. (2003). The population health approach in historical perspective. *American Journal of Public Health*, *93*(3), 421–431.

Thompson, S. R., Watson, M. C., & Tilford, S. (2018). The Ottawa Charter 30 years on: Still an important standard for health promotion. *International Journal of Health Promotion and Education*, *56*(2), 73–84.

Vian, T. (2020). Anti-corruption, transparency and accountability in health: Concepts, frameworks, and approaches. *Global Health Action*, *13*(supp 1), 1694744.

Weiss, T. G. (2000). Governance good governance & global governance: Conceptual & actual challenges'. *Third World Quarterly*, *21*(5), 795–814.

WHO. (1986). *Ottawa charter for health promotion*.

WHO. (2022). *Well-being and health promotion*.

WHO. Regional Office for South-East Asia. (2008). *Regional strategy for health promotion for South-East Asia*.

Wiljer, D., & Hakim, Z. (2019). Developing an artificial intelligence–enabled health care practice: Rewiring health care professions for better care. *Journal of Medical Imaging and Radiation Sciences*, *50*(4), S8–S14.

Woro, S. J., & Supriyanto, S. (2013). Enhancing trust, transparency and accountability in the local development process. *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*, *20*(1), 20–36.

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BOOK REVIEW

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Communicating Through a Pandemic: A Chronicle of Experiences, Lessons Learned, and a Vision for the Future

By Amelia Burke-Garcia, PhD, New York: Productivity Press (Routledge). 2023. pp. 196. Kindle Edition. ISBN 978-1-003-26752-2

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As the world recovers from the COVID-19 public health emergency, the need to improve crisis communications has become clear. One expert speaking to the National Academies of Sciences, Engineering, and Medicine noted “the lack of preparedness to communicate effectively in the digital age [was] one of the largest failures in the COVID-19 pandemic response efforts” (National Academies of Sciences, Engineering, and Medicine, 2023a). Another noted risk communicator Peter Sandman, assessed several communication failures such as public health officials' being overly “reassuring” at earlier stages but subsequently overreacting (Sandman, 2020). By contrast, some communication successes, including at the state and local levels, also have been recognized (Sauer et al., 2021).

With this background, it is informative to read Dr. Amelia Burke-Garcia's analysis of pandemic communications. Garcia is Director of Digital Strategy & Outreach at NORC, which describes itself as an “objective, nonpartisan research organization that delivers insights and analysis decision-makers trust” and is affiliated with the University of Chicago (NORC, n.d.).

She writes extensively about her own experiences during the pandemic, stating that “[a]t its core, this is *my* pandemic story, but I hope it may help you with yours” (p. 14). In Chapter 8, Garcia describes her experience working with colleagues on the Centers for Disease Control and Prevention's (CDC) and CDC Foundation's *How Right Now* campaign, which Garcia describes as a “[m]ental health and coping communication campaign.” This effort, which began in August 2020, aimed to reach vulnerable adults during COVID and still is supported by CDC (p. 147, *see also*, Burke-Garcia et al., 2021 https://www.cdc.gov/howrightnow/).

Garcia emphasizes the importance of “context” in pandemic communications efforts, observing that “[w]e have all been through the same pandemic, and yet, we have not experienced it in quite the same way” (p. 1). The importance of understanding people's differing experiences is highlighted in Chapters 6 and 7 in which Garcia explains that the pandemic impacted people disproportionately based on such factors as their occupation and economic status, age (e.g., older adults, children and youth), race/ethnicity, whether or not

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they were parents or caregivers, immigration and incarceration status, and employment as essential or health care workers.

In many ways, Garcia's discussion echoes findings of the Department of Health and Human Services COVID Health Equity Task Force which, in its final 2021 report, notes the importance especially of reaching underserved communities and hopes that in the future "[c]ommunity expertise and effective communication will be elevated in health care and public health." (Health Equity Task Force, Office of Minority Health, HHS, 2021).

This is all the more important because, as Garcia notes, "COVID is not unique" and "is just one pandemic in a long line of other pandemics that have emerged over the last two decades" (p. 7). Garcia devotes Chapter 2 to recounting past communication challenges as the 1918 influenza pandemic, HIV/AIDS, 2009 H1N1 influenza, and Zika Virus (2015). She remarks on the "similarity of communication strategies" used across these pandemics and relays lessons learned such as the importance of "frequent and consistent communication," such "tailored resources" as fact sheets and videos and educational resources for health professionals (pp. 31, 36–37). In Chapter 3, she also offers helpful crisis and risk communication examples from the private sector. Lessons learned include the importance of acting fast the appropriate use of humor, and response consistency.

According to Garcia, private sector examples are not perfectly applicable to the dynamic environments associated with pandemics. CDC therefore has developed tools such as the Crisis and Emergency Risk Communication (CERC) Framework (https://emergency.cdc.gov/cerc/), which includes the well-known advice, "Be first, be right, be credible" (pp. 50–54). In contrast to CERC, other approaches such as the Extended Parallel Processing Method do take risk perception by intended audiences into account. But even with such additional tools, an increasingly "complex" media environment still can undermine public trust and credibility, making it easier to share and amplify misinformation (p. 64). COVID and other pandemics also may be complex. In Chapter 5, "Phases of Messaging," Garcia explains that as the COVID pandemic and knowledge about COVID evolved, messaging about such topics as masking were altered accordingly, contributing to "confusion and distrust (pp. 76–77, 80–81, 84).

Perhaps the most interesting moments of the book are in Chapter 10, the book's final chapter, when Garcia relates some of her key lessons learned from COVID and other challenges, and offers advice for the future. This is the importance of taking "a more nimble, responsive, inclusive, and collaborative" approach to communication, understanding how people view "pandemic-related topics and information" on an ongoing basis, and efforts to address mis- and dis-information. As is often the case, such efforts will require policy changes, staff, and funding.

While Garcia's insights and obvious dedication to her communications work strengthen her book, it is not without limitations. Some readers may appreciate Garcia's first person, conversational tone, but others, preferring a more standard academic approach, may not. While acknowledging potential long-term impacts of the pandemic, Garcia does not discuss long COVID, including the communications challenges associated with this serious public health challenge (Alwan, 2021; Laestadius et al., 2022; National Academies of Sciences, Engineering, and Medicine, 2023b). Another curious omission was a lack of discussion about the 1976 swine flu crisis, an abortive nationwide vaccination campaign which even roughly 45 years later influenced public and policymaker perceptions of COVID vaccine development (Bliss et al., 2020; Fineberg, 2009; National Academies of Sciences, Engineering, and Medicine, 1978; Sencer & Millar, 2006). Lastly, it is unfortunate that the references and notes sections for the electronic/Kindle edition often include only Web links, without accompanying reference titles, authors, or dates, which will make it less useful for researchers and scholars.

Despite these limitations, I enjoyed reading *Communicating Through a Pandemic* and appreciated Garcia's perspectives, insight, and the personality that emerges from her stories and discussion. Her lessons and insights are applicable postpandemic and to other communication challenges such as confronting misinformation and educating the public about the health impacts of climate change (Ford et al., 2022; Smith et al., 2023). Overall, Garcia provides a valuable reference for public health professionals seeking to connect with their audiences in today's challenging health and policy environment.

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REFERENCES

Alwan, N. A. (2021). The teachings of long COVID. *Communications Medicine*, *1*, 15.

Bliss, K. E., Morrison, J. S., & Larson, H. J. (2020, September 4). *The risks of misinformation and vaccine hesitancy within the Covid-19 crisis*. Center for Strategic and International Studies. https://www.csis.org/analysis/risks-misinformation-and-vaccine-hesitancy-within-covid-19-crisis

Burke-Garcia, A., Johnson-Turbes, A., Mitchell, E. W., Vallery Verlenden, J. M., Puddy, R., Mercado, M. C., Nelson, P., Rabinowitz, L., Xia, K., Wagstaff, L., Feng, M., Caicedo, L., & Tolbert, E. (2021). How right now? Supporting mental health and resilience amid COVID-19. *Traumatology*, *27*(4), 399–412.

Fineberg, H. V. (2009). Swine flu of 1976: Lessons from the past. An interview with Dr Harvey V Fineberg. *Bulletin of the World Health Organization*, *87*(6), 414–415.

Ford, J. D., Zavaleta-Cortijo, C., Ainembabazi, T., Anza-Ramirez, C., Arotoma-Rojas, I., Bezerra, J., Chicmana-Zapata, V., Galappaththi, E. K., Hangula, M., Kazaana, C., Lwasa, S., Namanya, D., Nkwinti, N., Nuwagira, R., Okware, S., Osipova, M., Pickering, K., Singh, C., Berrang-Ford, L., … Wright, C., COVID Observatory. (2022). Interactions between climate and COVID-19. *The Lancet Planetary Health*, *6*(10), e825–e833.

Health Equity Task Force, Office of Minority Health, HHS. (2021). https://www.minorityhealth.hhs.gov/health-equity-task-force

Laestadius, L. I., Guidry, J. P. D., Bishop, A., & Campos-Castillo, C. (2022). State Health Department communication about long COVID in the United States on Facebook: Risks, prevention, and support. *International Journal of Environmental Research and Public Health*, *19*(10), 5973.

National Academies of Sciences, Engineering, and Medicine. (1978). *The swine flu affair: Decision-making on a slippery disease*. https://nap.nationalacademies.org/catalog/12660/the-swine-flu-affair-decision-making-on-a-slippery-disease

National Academies of Sciences, Engineering, and Medicine. (2023a). Applying lessons learned from COVID-19 research and development to future epidemics: Proceedings of a Workshop. Washington, DC: The National Academies Press. https://nap.nationalacademies.org/catalog/27194/applying-lessons-learned-from-covid-19-research-and-development-to-future-epidemics

National Academies of Sciences, Engineering, and Medicine. (2023b). *What we heard: Engagement report on the working definition for long COVID*. https://www.nationalacademies.org/our-work/examining-the-working-definition-for-long-covid

NORC. (n.d.). *Who we are*. NORC. https://www.norc.org/about/who-we-are.html

Sandman, P. (2020). *Commentary: Public health's share of the blame: US COVID-19 risk communication failures*. Center for Infectious Disease Research and Policy. https://www.cidrap.umn.edu/covid-19/commentary-public-healths-share-blame-us-covid-19-risk-communication-failures

Sauer, M. A., Truelove, S., Gerste, A. K., & Limaye, R. J. (2021). A failure to communicate? How public messaging has strained the COVID-19 response in the United States. *Health Security*, *19*(1), 65–74.

Sencer, D. J., & Millar, J. D. (2006). Reflections on the 1976 swine flu vaccination program. *Emerging Infectious Diseases*, *12*(1), 23–33.

Smith, R., Chen, K., Winner, D., Friedhoff, S., & Wardle, C. (2023). A systematic review of COVID-19 misinformation interventions: Lessons learned. *Health Affairs*, *42*(12), 1738–1746.

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BOOK REVIEW

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A new chapter in the fight for menstrual justice

By Anita Diamant, New York, London, Toronto, Sydney, and New Delhi: Scribner. 2021. pp. 170. ISBN: 978-1-9821-4430-2 (e-book)

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Is menstruation just a natural process? Anita Diamant says a “big NO” in her new book, *Period. End of Sentence: A New Chapter in the Fight for Menstrual Justice*. Anita Diamant, the celebrated writer and activist, problematizes the politics of menstrual justice and rejects menstrual silencing, distancing, agony, violence, and shame. Based on such understanding, this book provides a collection of personal experiences, tales, and poems to explore the lives of 800 million menstruating women on planet Earth. Thematically, the book discusses menstrual politics in the larger contexts of the menstrual periods, hygiene, period poverty, and commercialization of women's bodies.

Structurally, the book is divided into five different parts dealing with the sociocultural and socioeconomic aspects of menstruation and explores how menstruation is detached from its natural forms and becomes part of patriarchy, religion, and power. Politically, the book stands for menstrual equality by critically approaching socioreligious systems, patriarchy, racism, and capitalism. Diamant painstakingly presents what can be termed as a “bird's eye view” of menstruation's transition since ancient times. Nothing much has changed, she demonstrates, and our approaches to the issue of menstrual justice are still primitive.

Part 1 examines how curse, shame, and stigma constitute menstruation's social elements. Diamant demonstrates a striking continuity from antiquity in characterizing menstrual periods as a curse. The book shows that the ancient Roman scholar Pliny the Elder viewed menstruation as a curse, but *The Lancet*, an esteemed medical journal, also expressed similar viewpoints in the 1920s. To Diamant, such negative characterization of menstruation is part of every society and person. Diamant quotes Gandhi to prove her argument, who once argued that menstruation is a “distortion of women's soul because of their sexuality.” Diamant confirms that no drastic transformation must be expected in modern times, as menstruating women are forced to undergo primitive approaches.

Further, the book demonstrates that even in modern times, ostracism dominates the social space of menstruation, and such discourses influence women's lives. Diamant quotes extensively from case studies to prove her arguments. She argues that the perfect example of menstrual ostracism is in Nepal, where menstruating women are forced to observe *chhaupadi*, an ancient custom. In this old Hindu custom, menstruating women are “barred from sleeping under the same roof as their families.” On further inquiry, the book examines how colonization changed the premodern practices of women's lives, especially by eradicating worldwide customs. Diamant draws that Flower Dance (Hoopa Valley Tribes), Waiwhero (New Zealand) Bashali (Pakistan) are some of the essential traditional approaches to menstruation. Still, they lost their sanctity in the wake of European colonization.

Part 3 deals with one of the essential menstruation issues—Period Poverty. Diamant shows that period poverty is an unbearable reality. The book demonstrates that while menstruating women spend $17,000 on an average during their life, period poverty is not just the lack of period products. Instead, it is a condition where menstruating women experience inadequate sociocultural and socioeconomic support to have a decent menstrual period. Further, Diamant brings to analyze the lives of women facing period poverty in different situations. Women in the garment factories of Bangladesh and the sugarcane fields in the Beed region of Maharashtra (India) are cited as examples of period poverty. Based on such case studies, the book theorizes that the 6600 hysterectomies during 2016 and 2019 in Beed show how period poverty affects women's lives, especially in marginalized sectors. Delving further into contemporary society, part 3 presents the atrocious practices that the US prisons are fated to experience. Diamant's study demonstrates that historically, all the US prisons were made to accommodate men, but women were also incarcerated over the years. Though the prisons were made for men, the world's large percentage of women prisoners are now in the United States, and they are forced to acclimatize with the prisons primarily meant for male inmates. To Diamant, such deranged structural adjustments lead women inmates to severe physical and mental trauma. To prove her claim, Diamant quotes a report in 2015 which shows the evidence of deliberate harassment of women during menstrual periods in the New York prison.

Part 4 examines the transition of menstruation as a public affair. One of the fascinating side effects of this, Diamant demonstrates, is the rise of the menstrual business. The book presents a fascinating history of period adjacent products and period products. Diamant shows that the history of menstrual products is intertwined with profit, business, social activism, philanthropy, and compassion. In modern times, menstruation is a multimillion industry where corporate competition dominates the markets. Diamant adds that such corporate domination impacts women's lives, but the presence of nonprofit organizations and individuals does resist corporatism. Diamant goes on to detail the contributions of Arunachalam Muruganantham, Hindo Kposowa, Tim Katz, and others in creating a more menstrual-friendly world through their efforts. In part 5, the book calls for a more sustainable approach to menstruation. To Diamant, the announcement of a new shade named Period by Pantone, the global arbiter of color, is a sign of relief. This is so because time changes positively for periods. Further, part 5 shows that earlier secrecy ruled the world of menstruation but no longer is it so. Finally, this section also demonstrates how television channels, advertisements, comedy programs, and so on, engage with the issue of menstruation and discuss the issue of seeing red positively.

Overall, the book stands for gender justice and advocates that states, societies, institutions, and individuals should formulate menstrual policies to develop a stigma-less and curse-less world of menstruators. The book explains how cultural taboos such as shame, impurity, and indecency are produced and reflected in women's lives and seeks ways to eradicate such issues. Diamant suggests that global policies include menstrual leave, tax-free tampons, free menstrual products, and awareness programs.