

ORIGINAL RESEARCH

Existing practices of health workers and feasibility for implementation of the CLEAR Toolkit to address the Social Determinants of Health: A descriptive cross-sectional study in Pakistan

Prácticas actuales del personal de salud y aplicabilidad del conjunto de herramientas CLEAR para abordar los determinantes sociales de la salud: un estudio descriptivo transversal en Pakistán

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Received: December 4, 2023.

Accepted: June 28, 2024.

Conflicts of interest: none.

Abstract

The social determinants of health (SDH) are the conditions in which people are born, develop, live, and work. These conditions are made by disseminating wealth, power and resources at universal, nationwide and local levels. SDH are commonly accountable for health inequalities, and the imbalanced and preventable variances in health status observed within and among countries. The study focuses on exploring existing practices of healthcare workers in addressing SDH, and feasibility for implementing a Community Links Evidence to Action Research (CLEAR) toolkit designed to assist clinical decisions, which helps doctors, nurses, and other allied health personnel tackle the social causes of poor health in clinical practice.

Key Words: Social determinants of health, CLEAR toolkit, health care workers

Resumen

Los determinantes sociales de la salud (DSS) son las condiciones bajo las que las personas nacen, se desarrollan, viven y trabajan. Estas condiciones se crean mediante la distribución de la riqueza, el poder y los recursos a nivel mundial, nacional y local. Los DSS suelen ser responsables de las desigualdades sanitarias y de las variaciones desequilibradas y evitables del estado de salud que se observan dentro de los países y entre ellos. Este estudio se enfoca en explorar las prácticas actuales del personal sanitario para abordar los DSS y la viabilidad de aplicar un conjunto de herramientas de *Community Links Evidence to Action Research* (Evidencia a la Acción: Estudios dentro de la Comunidad Profesional, CLEAR) diseñadas para facilitar las decisiones clínicas, que apoyan a médicos, enfermeros y demás personal sanitario afín en abordar las causas sociales de la mala salud en la práctica clínica.

Palabras clave: determinantes sociales de la salud, conjunto de herramientas CLEAR, profesionales de la salud



Background

Health is "a state of physical, mental and social well-being, and not merely the absence of disease and infirmity" [1]. According to the WHO definition, mental and social well-being are the main components of health; without mental and social well-being, one cannot be healthy. "The social determinants of health are the conditions in which people are born, develop, live, and work" [2]. These conditions are made by disseminating wealth, power and resources at universal, nationwide and local levels [3,4]. SDH are commonly accountable for health inequalities, and the imbalanced and preventable variances in health status observed within and among countries [5]. The study focuses on implementing the Community Links Evidence to Action Research (CLEAR) toolkit, which is an assistance for clinical decisions, that helps doctors, nurses, and other health personnel to tackle the social causes of poor health in clinical practice [4,5].

The understanding of SDOH has gained momentum in the last few decades, shedding light on the complex interplay of various factors affecting health [6,7,8]. One of the inspirational works that brought attention to the significance of social determinants of health is the report by the World Health Organization's Commission on Social Determinants of Health, titled "Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health" (2008). This report emphasizes addressing social and economic inequalities to achieve health equity. It highlights that improving health outcomes requires tackling the social conditions in which people are born, grow, live, work, and age [8].

Various research papers and reports have explored interventions to address social determinants of health. The report "Fair Society, Healthy Lives: The Marmot Review" further emphasizes the need for action to tackle social determinants and create a fairer society to improve health outcomes [9]. Additionally, the conceptual framework proposed by Solar and Irwin in their paper "A Conceptual Framework for Action on the Social Determinants of Health" offers guidance on how to approach interventions and policies to address social determinants effectively [10].

Numerous studies have explored the association between social determinants and health outcomes, demonstrating how disparities in social conditions can lead to unequal health outcomes [11,12]. Therefore, efforts to address social determinants of health have resulted in various interventions and policies aimed at reducing health disparities and promoting health equity [10,13].

In conclusion, social determinants of health have evolved into a crucial area of research, shedding light on the interplay of nonmedical factors that significantly influence health outcomes. Understanding and addressing these determinants is vital for promoting health equity and reducing health disparities within populations. The existing research on addressing the SDOH has demonstrated the feasibility of implementing assessment systems to identify patients' social needs, resulting in improved ease of practice for the provider; however, several gaps in the literature warrant further investigation. Therefore, this study explored the existing practices of healthcare workers to address social determinants in Pakistan. Additionally, this study examined the effectiveness of the CLEAR toolkit, in a tertiary care teaching hospital, Mardan, Khyber Pakhtunkhwa, Pakistan.

Methodologies

The study was conducted in Medical Teaching Institution-Mardan Medical Complex (MTI-MMC) Hospital, a 500-bed teaching hospital in Mardan. A descriptive cross-sectional approach was employed. The survey consisted of structured questionnaires administered to healthcare workers by trained data collectors to gather information inquiring about and addressing SDH in their routine clinical practices. The survey also collected the health workers' opinions on using the CLEAR Toolkit in their clinical practice. Ethical approval for the study was obtained from the Institutional Review Board (IRB) of MTI-MMC and University of the Punjab. The study included doctors, and nurses who were directly involved in patient care. A total of 115 health workers were included in the study, representing the population size of health workers at MMC Hospital. Currently, there

are 487 health workers at the MMC Hospital (250 doctors and 237 nurses). Based on this total population, the sample size was 115 respondents to obtain an 8% margin of error with a 95% confidence level. The formula used for calculating the sample size is given below.

$$n = \frac{\frac{z^2 p(1-p)}{e^2}}{1 + \frac{z^2 p(1-p)}{e^2 N}}$$

Where z is the value of the z score at the 95% CI (1.96), p is the proportion of the population (0.5), e is the margin of error (0.08), N is the population size (487), and n is the sample size that is calculated as 115. A one a stage cluster sampling technique was used to enrol the healthcare workers in the study. Consent was obtained from each participant before the interview.

Data was analyzed using SPSS software version 23. Frequency and percentages were calculated for qualitative variables such as gender, education, and duration of experience. Means and standard deviation (SD) were used as quantitative variables.

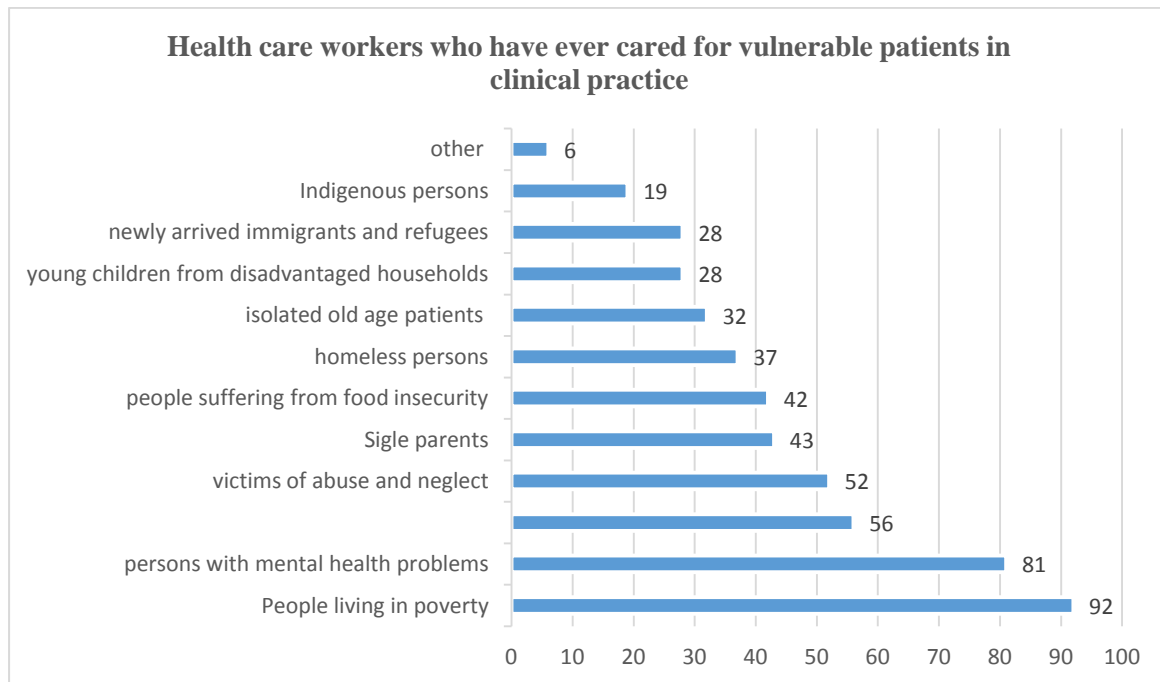
The distribution of the quantitative variables was checked using the Kolmogorov-Smirnov test. Bivariate association between HCWs having specific ways of asking about patient vulnerability and who assists their patients in addressing these SDHs. The 95% confidence interval was considered when the P value was < 0.05.

Results

Out of the 115 health workers in the survey, the response rate varied for different questions. The mean age of the participants was 27.625±6.18 years. Of the total participants, the majority were male (n=72/115, 62%), doctors were (n=61/115, 52.2%) followed by nurses (n=38/115, 32%) and 104 (90.4) had ≤ 5 years of experience.

When healthcare workers were asked about their involvement in caring for patients with one or more social determinants of health (SDH), the SDH identified poverty (80%), mental health (70%), substance abuse (49%), and victims of abuse and neglect (45%). Figure 1 shows the identified SDH.

Figure 1. Healthcare workers who have ever cared for vulnerable patients in clinical practice



Healthcare workers were also asked to describe one vulnerable patient they had cared for. These patients often had multiple overlapping vulnerabilities, including unemployment, financial problems, legal issues, childcare challenges, addictions, mental health problems, abusive relationships, and experiences of discrimination. The details of these patients are presented in Table 1.

Table 1 Examples of vulnerable patients cared for by family doctors and trainees

- An unmarried girl with mental health problems due to physical bullying by male fellows.
- An infected, poor couple was referred to me for treatment; although the couple could benefit from assisted reproduction, the poor couple opted to adopt a baby.
- A patient who could not afford health expenses due to poverty, did not undergo expensive procedures and investigation for the patient's complex disease.
- A male was admitted with a history of hypertension and SOB and diagnosed four years ago, but he did not take medicines due to lack of purchase power, and in addition, he was homeless.
- A female with depression due to family restrictions on her education was not allowed for further studies.
- A male patient had social problems (jobless) and was depressed, which resulted in poor health.
- A girl had an overdose of antidepressants due to complex household and social issues
- An older adult with a disability told me while taking down his history that he has been isolated and neglected, due to which his health problems worsened.
- A 50-year-old female with multiple health issues, is a widow with three children and depends on her brother.
- Domestic abuse patient who attempts suicide by eating wheat pills

Healthcare workers are asking and acting on social determinants

Most respondents agree that it is the health workers' role to address their patient's underlying social issues (n=75/115, 67.6%). However, almost the same percentage of health workers (n=71/115, 61.7%) had specific ways of asking their patients about potentially sensitive topics (Table 2), such as poverty, food insecurity, family violence and other social conditions that can lead to or exacerbate health problems.

Table: 2 Examples of how health workers ask patients about social determinants of health

- Are you/your husband employed?
- Is your salary enough to fulfill your and your family's needs?
- How many dependent members are in your family?
- What are your eating habits?
- Are you eating fruits, meat and milk daily?
- Can you take this medication for one month for Rs. 1000/?
- Is your husband/ family supportive?
- Do all family members sit together for lunch or dinner?

A significant finding of this study, as depicted in Table 3, is that health workers who employ specific approaches to inquire about the social determinants of poor health report a higher likelihood of successfully assisting their patients in addressing these issues.

Table: 3 Bivariate association between HCW having specific ways of asking patient vulnerability and who give care for vulnerable population

Do you have specific ways of asking patients about potentially sensitive topics such as poverty, structural racism, food insecurity, family violence and so forth?	In caring for patients who are vulnerable or marginalized, was there anything you said or did that you considered particularly helpful for these patients?			Total	P- Value
	Yes	No	Unsure		
	Yes	51	10	8	.011
	No	12	10	8	
	Unsure	10	2	4	
Total		73	22	20	115

- a. Two cells (22.2%) had an expected count less than 5. The minimum expected count is 2.48.
- b. The standardized statistic is 2.171
- c. Fisher's exact test p value is less than 0.05.

Most healthcare workers in this study (n=75/115) agreed that addressing the social determinants of health is their role. They recognized the importance of addressing these social factors in improving health outcomes. Additionally, most healthcare workers (n=82/115) expressed interest in receiving a course or training on effectively addressing the social determinants of health. This highlights their willingness to enhance their knowledge and skills to better serve their patients and communities.

Healthcare worker's impression of the CLEAR toolkit

Through observing the responses of health care workers, most respondents had positive perceptions of the CLEAR toolkit. They determined that the CLEAR toolkit is clearly written (92%, N=115), easy to understand (83.8%,

N=115), and relevant to their work (90.3%, N=115), as shown in Figure 2. In addition, the respondents agreed that implementation of the CLEAR toolkit has the potential to effectively tackle the societal factors affecting the health outcomes of the patients. They also expressed that the toolkit could help address the social causes of poor health (88.6%, N=115), with many agreeing that it would change how they practice. Furthermore, the toolkit inspired them to take on larger social actions related to social determinants of health.

Most respondents agreed that the CLEAR toolkit should be distributed to various healthcare professionals and students. The most common recipients of the toolkit were doctors (97, 83.3%) and nurses (85, 73.9%), while the least common were outreach workers (37, 32%) as illustrated in figure 3.

Figure 2. Healthworkers' first impressions of the CLEAR Toolkit

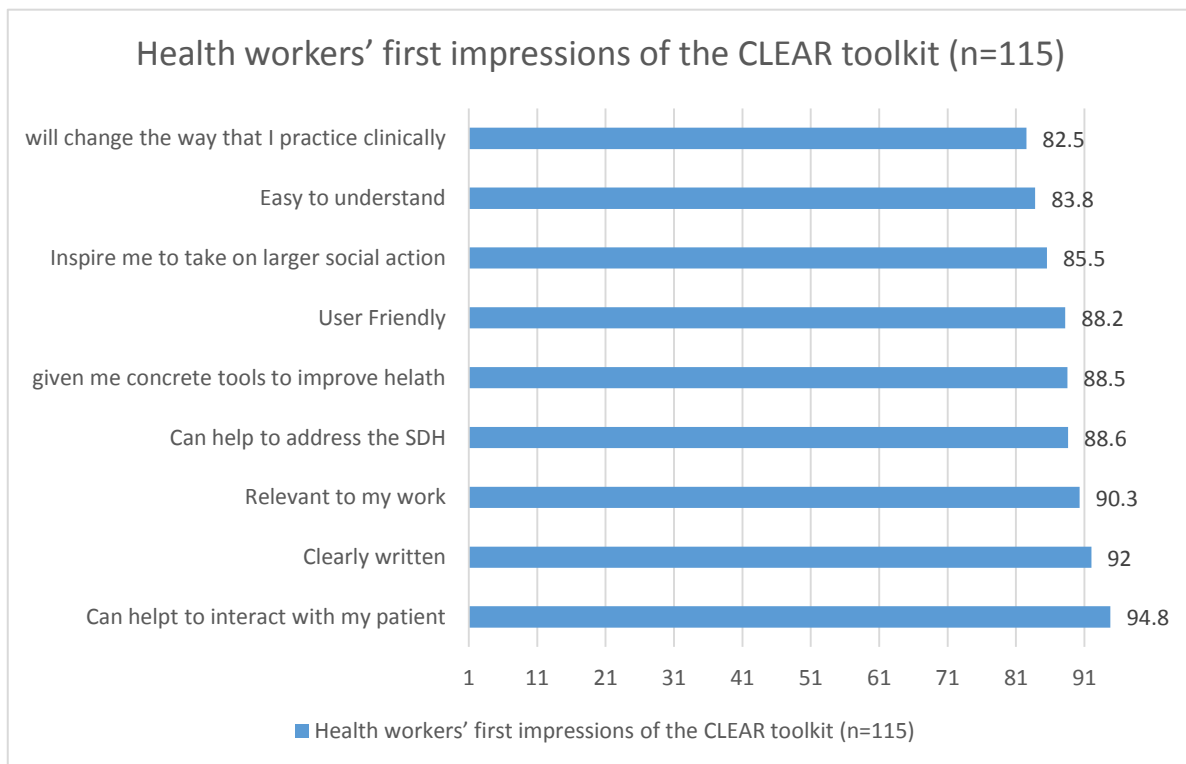
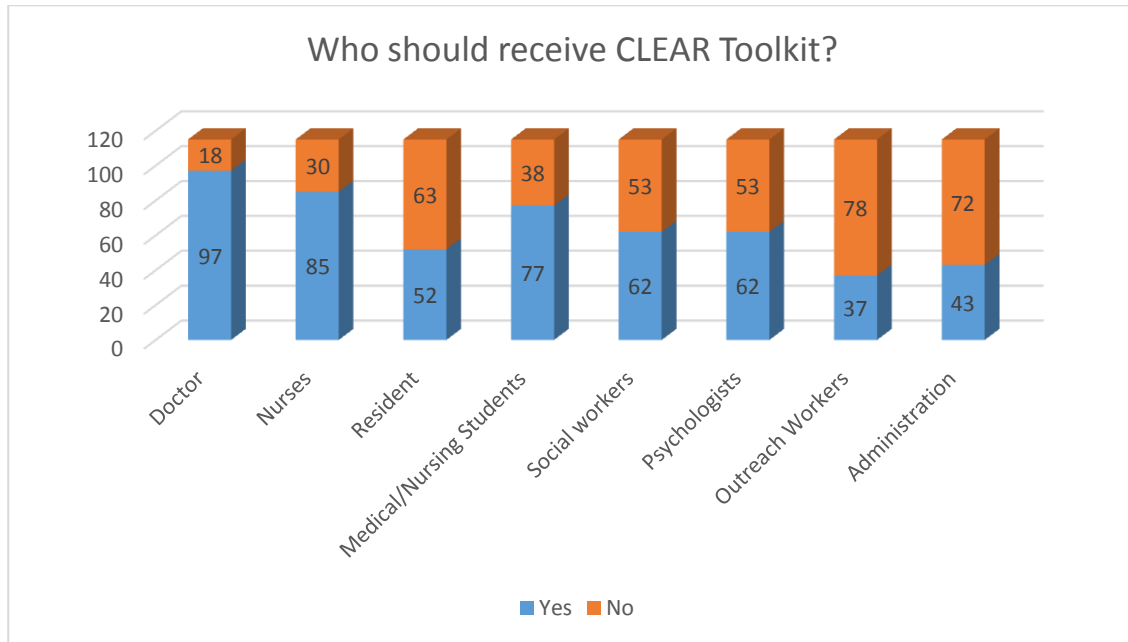


Figure 3. Who should receive CLEAR toolkit?



Discussion

The initial findings of this study specify that frontline health workers consider several groups of patients as more socially vulnerable than others, including patients with poverty, mental health problems, patients with substance abuse, and patients who were victims of abuse and neglect, as a SDH. Available research validates the identification of similar categories of socially vulnerable populations, including individuals with mental health problems, individuals experiencing poverty, those facing substance abuse or other dependencies, isolation, and victims of abuse and neglect [3,14,15].

Considering the social vulnerabilities of patients as a part of optimizing their health outcomes is significant, as research indicates that susceptibility and exposure to various vulnerabilities including domestic violence and abuse, significantly influence individuals' mental well-being, corroborating and reinforcing the outcomes revealed by the current study [16,17]. Parallel to this, it is also evident from past studies that health is a complete state of physical, mental, social and

spiritual well-being (WHO, 1948), with all the dimensions of health interrelated. Therefore, the resolution of the SDH should be given utmost consideration.

When the healthcare workers were asked about their responsibility to address their patients' social issues, most healthcare workers also agreed that it is their role and social responsibility to address and respond to the SDH related to their patients (65.2%). Studies previously conducted also identify that healthcare workers consider that asking for and acting on the SDH is the responsibility of health workers [4,5,17]. The literature suggests that additional efforts of healthcare workers to go beyond medical treatment to provide comprehensive support to patients to address their physical health and emotional, financial, and social well-being bring positive outcomes [18]. It highlights the essential role that healthcare workers play in fostering a culture of care and empathy through assisting patients via organizational support.

Earlier studies have demonstrated that health workers who actively engaged in assisting their

vulnerable patients have employed various approaches [3,19,20]. Addressing these sociocultural barriers requires a multifaceted approach that involves culturally sensitive healthcare delivery, community engagement, education, and policy changes. Healthcare systems should strive to understand and respect diverse cultural perspectives, adapt interventions to the cultural context, and promote health equity for all patients. This might involve training healthcare professionals in cultural competence, providing interpreter services, creating culturally relevant educational materials, and collaborating with community leaders to foster trust and cooperation.

However, almost the same percentage of health workers (n=71/115, 61.7%) had different ways of inquiring their patients about possibly sensitive issues, such as poverty, food insecurity, domestic violence and other social conditions that can lead to or worsen health problems.

In addition, another significant finding of this study (with a P value of less than 0.05) was that health workers who employ specific approaches to inquire about the social determinants of poor health, report a higher likelihood of successfully assisting their patients in addressing these issues. These results align with previous research that highlighted similar trends. Earlier studies have demonstrated that health workers who actively engaged in assisting their vulnerable patients have employed various approaches [3,4,19,21]. There is an increasing prevalence of efforts aimed at addressing socioeconomic determinants of health, both within the framework of the healthcare system and outside [22].

The toolkit's introduction was a valuable step in helping health workers initiate discussions about social issues and identify appropriate referrals for support. However, it is crucial to have strong organizational support to ensure the successful implementation of a social determinants approach in clinical practice. Adapting the toolkit to different settings is necessary, and local insights from health worker trainers and community group organizers can inform this process. This adaptation will help establish effective referral pathways and strengthen connections with the community, ultimately improving patient support. A few

studies have been conducted on the learning outcomes of the CLEAR toolkit, which demonstrated that the CLEAR toolkit proved beneficial for addressing the social problems of patients belonging to low socioeconomic backgrounds and easy to understand and convey to other fellows and colleagues [3].

Consistent with the results of the present study, previous studies also indicate that to address the socioeconomic problems of communities, there is a need to rehabilitate ill people to become productive members of society and contribute to the country's development. Furthermore, public awareness initiatives can enhance care awareness and quality. Health organizations often utilize awareness campaigns to boost disease identification and diagnosis [23,24].

Overall, the study highlights the importance of addressing social determinants in healthcare and the need for ongoing support and resources to assist health workers in this important aspect of their practice.

Conclusion

Social determinants such as living conditions, environmental factors, and lifestyle choices play a crucial role in determining an individual's health status. By recognizing these factors and providing appropriate guidance and interventions, healthcare workers can empower individuals to make healthier choices and prevent the onset of chronic diseases. By understanding the broader societal factors that impact health, healthcare professionals can engage with local communities, policymakers, and other stakeholders to advocate for policies and initiatives that address social determinants and improve health outcomes for all Pakistanis. This collaborative approach can lead to sustainable changes in social and environmental conditions that have a long-term positive impact on health. Conclusively, the training of healthcare workers regarding the SDH in the context of Pakistan has a range of important benefits. By addressing health disparities, promoting preventive care, engaging with communities, and providing holistic patient-centered care, healthcare professionals can improve the overall health and well-being of individuals and communities in Pakistan.

Limitations and Recommendations

The study was conducted in one hospital with small a sample size due to resource constrains. In exploring an existing component, this study did not provide the patient perspectives. There is a need to foster the incorporation of the SDOH approach in routine clinical care, encompassing the employment of clinical decision aids as just one integral component of a multifaceted strategy to promote behavioural shifts among health workers and to enhance health and social outcomes for vulnerable patients.

Training healthcare workers regarding SDH and its importance in improving the health and social outcomes of the broader community should be an integral part of the healthcare system, as it will help address broader health inequities. Training on health literacy in undergraduate and postgraduate medical and nursing curricula should be introduced for continuing medical education and fostering knowledge and skill development.

Further studies using the CLEAR toolkit in clinical settings should be conducted as these are essential to assess its impact on patient care and outcomes, as this study only assesses the outcomes of the interventions.

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ISSN: 1557-7112