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A perspective of health care workers regarding sexual and reproductive health in disasters

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Abstract

Background: Disasters disrupt daily life, causing widespread destruction and challenges, including significant impacts on sexual and reproductive health (SRH). Healthcare workers play a critical role in disaster management, yet their preparedness in addressing SRH needs remains an area of concern.

Methodology: This study assessed healthcare workers' perceptions of SRH-related hazards in disaster settings. A population-based cross-sectional survey was conducted among 177 Master of Public Health (MPH) postgraduate students from Rawalpindi and Islamabad's postgraduate medical institutes. Data collection took place over three months, from December 2021 to March 2022. Preparedness was measured using a modified questionnaire adapted from the Minimal Initial Service Package (MISP) framework.

Results: Descriptive statistical analysis revealed that 52.5% of participants were male and 47.5% female. Awareness of MISP services was limited, with 9.6% unfamiliar with its general provisions, 32.8% reporting unavailability of services, and only 57.6% having access to necessary resources. Additionally, 55.4% of participants were aware of post-exposure prophylaxis for survivors of sexual violence and individuals diagnosed with HIV and other sexually transmitted infections (STIs).

Conclusion: The findings highlight a significant gap in SRH awareness and preparedness among healthcare workers. There is an urgent need to enhance training and capacity-building efforts, particularly in SRH, to ensure healthcare providers are adequately equipped to address these needs in disaster settings.

Keywords: Sexual and Reproductive Health, Healthcare Workers, Information, Education, and Communication (IEC), Intrauterine Contraceptive Device (IUCD)

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1. Introduction

Sound According to the United Nations report, a disaster is a significant disruption to the functioning of communities or society that has extensive human, substantial, economic, or environmental ramifications, surpassing the affected community's ability to manage the situation using its resources(1).

Natural disasters and epidemics strain fragile health systems, diverting resources from essential sexual and reproductive health (SRH) services, intimidating supply chains, and disrupting access to healthcare. Integrating SRH into disaster response plans is vital, yet there is insufficient evidence on effective interventions and policies in this context (2).

Globally, disaster situations are growing more often, and more destructive, and have a large impact on society's health and life. The quality of healthcare services, particularly hospital operating capability, is critical for health security. A well-established readiness program is required for healthcare systems, particularly hospitals, to respond effectively to catastrophes. A hospital's readiness for mass-casualty incidents and disaster response involves actions, programs, and systems that are created and executed ahead of time. These procedures are intended to give catastrophe victims the medical treatment they require while minimizing the detrimental impact of specific occurrences on medical services. These responsibilities include ensuring that medical professionals are properly trained, that logistics are properly safeguarded, and that the hospital has verified emergency response protocols in place(3).

Healthcare workers (HCWs) are still at the centre of healthcare resilience initiatives. Numerous research on different areas of HCWs' disaster readiness, including knowledge, experience, drill participation, disaster awareness, plan, perceived preparedness, and willingness to respond, have been published during the last two decades. However, there is a scarcity of data on whether aspects or capabilities of all-hazards preparation are truly deficient, particularly from the standpoint of HCWs. In addition, in highly populated metropolitan areas in Asia, which is recognized as the world's most disaster-prone region, there is a lack of evaluation of HCW's all-hazards preparation(4).

Preparing for and responding to disasters is an expensive endeavour. While it necessitates a significant investment of both money and time, the

events that occur are unforeseeable. These plans are not enacted for years at many institutions and HCWs which must deal with the day-to-day issues of patient care as well. With ever-increasing societal expectations of healthcare institutions, a significant amount of money, time, and energy is frequently given to patient-care activities that address acute needs. Low-incident activities, on the other hand, frequently rank low on the priority list despite their substantial effect (5).

This study evaluated the perceptions of healthcare workers regarding sexual and reproductive health in disasters. Understanding this was helpful for health authorities in developing new health policies that could result in safer patient care in the future. The study aims to improve the hazard preparedness of health workers.

2. Materials & Methods

The study utilized convenient sampling for data collection through questionnaires from a population based on a cross-sectional survey compromises students of master in public health in 2022. Students participated from Shifa International Hospital and Armed Forces Post Graduate Medical Institute, Rawalpindi. Ethical approval was taken from the review board of the National University of Medical Sciences (NUMS, AFPGMI) the total of 177 HCWs were selected from the institutes of (Rawalpindi, Islamabad), and the sample was calculated by employing the "Sample Size Calculation Formula $n=(Z2\cdot p\cdot(1-p))/e2$" according to Shabbir et al the practices of nurses were poor about disaster preparedness i.e., 83.3%(6). The measurement of preparedness multi-faceted approach is a Modify Questionnaire that is taken from MISP (Minimal initial service package, a set of measures that must be taken within 48 hours after the commencement of crisis), in which first part includes demographics, and the second section containing questions about MISP objectives. The objective is to evaluate stakeholders' preparedness for implementing Sexual and Reproductive Health (SRH) in emergencies or disaster scenarios. The objectives were based on General readiness, Gender-Based Violence, Preventing transmission of HIV and other STIs, Maternal Child Health and Prevention, for the perception and knowledge of emergency responders regarding unintended Pregnancies, and Adolescent Health. In this study, 3-point Likert Scale and SPSS version 2022 are used for analysis. Percentage and frequency have been measured of demographic information. First, we took consent from participants, and then data were collected in the form of a questionnaire. The questionnaire consists of two sections: Demographic information and questions related five objectives of MISP in SRH. It is to be noted that this questionnaire has been utilized in several studies, where its reliability and validity have been approved.

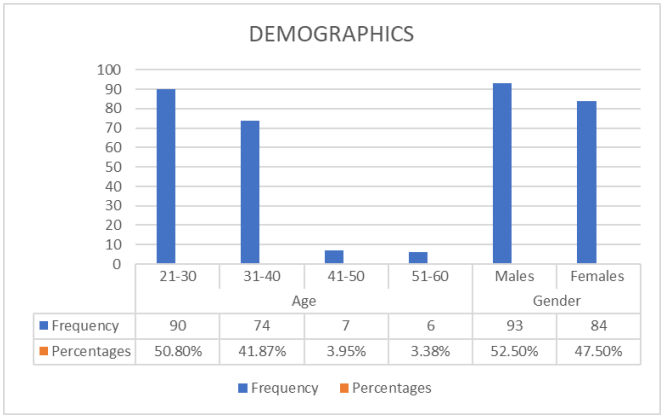

Figure 1: Sociodemographic characteristics of the study population

3. Results

The overall demographic data shows the mean age of doctors, healthcare workers, and administrators who participated is 31.92% and a standard deviation of 6.595 for a total of 177 participants. It contains the participant's demographic information, as well as his or her expertise and practices in the event of a tragedy or emergency preparation. The survey included 52.5% males and 47.5% of females. The graph below shows the demographic details.

The MISP objectives were covered in a specific sub-section that identifies which section needs to be strengthened more for hazard perception.

Minimum Initial Services Package (MISP) general services:

The first objective of MISP contains the 3 questions regarding general services that include the remote delivery of services 57.6%(yes), training 52.5%, and barriers regarding sexual and reproductive health 56.5% only (Table 1).

Prevent sexual violence and respond to the needs of survivors:

The second objective includes 5 questions regarding gender-based violence and the availability of health referral facilities for survivors. Table 2 shows that only 6.8% of practice encountered GBV victims while 20.3% know the referral health facility available in their health care setting. 30.5% of violent victims referred to health facilities and only 21.5% know about safe health facilities for SV survivors.

Table 1: Minimum Initial Services Package (MISP) General Services

Sr. No	Questions		Frequency	Percentage
1	Support remote delivery of services during disaster.	Yes	102	57.6%
		No	58	32.8%
		Don't Know	17	9.6%
2	Health care training curriculum include MISP or any other program to train the staff.	Yes	93	52.5%
		No	66	37.3%
		Don't Know	18	10.2%
3	Barriers for marginalized group to access SRH services	Yes	100	56.5%
		No	53	29.9%
		Don't Know	24	13.6%

Table 2: Prevent sexual violence and respond to the needs of survivors:

Sr. No	Questions		Frequency	Percentage
1	Ever encountered GBV	Yes	12	6.8%
		No	72	40.7%
		Don't Know	93	52.5%
2	Victim of violence referred to any health facility.	Yes	54	30.5%
		No	58	32.8%
		Don't Know	65	36.7%
3	Referral health facility available.	Yes	36	20.3%
		No	104	58.8%
		Don't Know	37	20.9%
4		Yes	38	21.5%
		No	60	33.9%

	Safe health facilities to receive and provide survivors of SV with appropriate health care.	Don't Know	79	44.6%
5	Access of the information of sexual violence survivor.	Yes	28	15.8%
		No	49	27.7%

Prevent the transmission of and reduce morbidity and mortality due to HIV and other Sexually Transmitted Diseases STIs:

The third objective includes questions about safe blood transfusion (Table 3) i.e. only 68.9% have this facility in their healthcare setting while 66.7% got standard precautions. 55.4% had awareness about post-exposure prophylaxis and plans about PPE and IPC while only 46.3% had IEC material about HIV/STI services.

Prevent excess maternal and new-born morbidity and mortality:

The fourth objective gives information about the availability of Gynaecologists, safe Delivery care, and the availability of trained Lady Health Workers (LHW) to manage High-risk pregnancies at the healthcare facility. Table 4 shows nursery for initial new-born care and Resuscitation is 71.8%, post-abortion care in health centres and hospitals is 64.4%, supplies and commodities for clean delivery and immediate new-born care is 65.5% where access to a health facility, and the existence of IEC materials on priority maternal and neonatal services for pregnant women is 60.5%.

Table 3: Prevent the transmission of and reduce morbidity and mortality due to HIV and other STIS:

Sr. No	Questions		Frequency	Percentage
1	Is there blood transfusion in place in the health facility you work?	Yes	122	68.9%
		No	33	18.6%
		Don't Know	22	12.4%
2	Does health facility you work practice standard precaution regarding HIV and STI?	Yes	118	66.7%
		No	31	17.5%
		Don't Know	28	15.8%
3	Are you aware that post exposure prophylaxis is given to survivors of SV, HIV and STI in your health facility	Yes	98	55.4%
		No	41	23.2%
		Don't Know	38	21.5%
4		Yes	98	55.4%
		No	45	25.4%

	Are there any plans of PPE and IPC for sexual and reproductive health during epi/pandemic in your work place	Don't Know	34	19.2%
5	Does the health facility you work have any IEC material about HIV/STI services	Yes	82	46.3%
		No	63	35.6%
		Don't Know	32	18.1%

Table 4: Prevent excess maternal and new-born morbidity and mortality:

Sr. No	Questions		Frequency	Percentage
1	Is the gynecologist available near your health facilitate/work place	Yes	135	76.3
		No	28	15.8
		Don't Know	14	7.9
2	Is safe delivery care available	Yes	134	75.7
		No	29	16.4
		Don't Know	14	7.9
3	Are trained lady health workers available	Yes	122	68.9
		No	41	23.2
		Don't Know	14	7.9
4	Is nursery available for initial new born care and resuscitation	Yes	127	71.8
		No	36	20.3
		Don't Know	14	7.9
5	Is there availability of post-abortion care	Yes	114	64.4
		No	43	24.3
		Don't Know	20	11.3
6	Is there availability of supplies and commodities for clean delivery	Yes	116	65.5
		No	41	23.2

		Don't Know	20	11.3
7	Existence of IEC on priority maternal and neonatal services for pregnancy women available or not	Yes	107	60.5
		No	38	21.5
		Don't Know	32	18.1

Prevent unintended pregnancies:

The 5th objective of MISP gives us knowledge about the long-acting reversible (Pills, IUCD) and short-acting contraceptive methods at primary health care facilities i.e., 61%. The availability of Permanent Contraceptive methods (Vasectomy, Tubal Ligation, etc.) in the healthcare setting is 50.8%. The healthcare staff like Nurses and Lady Health Workers (LHW) trained in counseling the patients about the side effects of contraceptive methods in the health facility is64.4% only while the existence of Information, Education, and Communication (IEC) material and counseling facilities available on Contraceptive choice is 54.8% (Table 5).

Adolescent health:

This part includes the question "Is there availability of Adolescent need services like for example healthy transition into adulthood and age-appropriate sexuality education and mental health services in a safe and supportive environment in the healthcare facility or where you work only 33.9% got the facility? Table 6 shows only 31.1% of people are aware of the IEC material and counseling facilities available on adolescent Health.

These results give an overview of the possible preparedness and allow stakeholders to identify SRH preparation strengths as well as areas that need to be strengthened.

Table 5: Prevent unintended pregnancies:

Sr. No	Questions		Frequency	Percentage
1	Is there availability of long acting and short acting contraceptive at primary health care available or not	Yes	108	61.0
		No	45	25.4
		Don't Know	24	13.6
2	Is there availability of permanent contraceptive methods at your work place	Yes	90	50.8
		No	57	32.2
		Don't Know	30	16.9
3	Are the healthcare staff trained about the use and side effects or not?	Yes	114	64.4
		No	41	23.2
		Don't Know	22	12.4
4		Yes	97	54.8

	IEC material and counselling services on contraceptive available in your health facility or not	No	48	27.1
		Don't Know	32	18.1

Table 6: Adolescent health:

Sr. No	Questions		Frequency	Percentage
1	IS There availability of adolescence need services-in your locality or workplace	Yes	60	33.9
		No	83	46.9
		Don't Know	34	19.2
2	Are the people aware about IEC regarding adolescence health services or not?	Yes	55	31.1
		No	86	48.6
		Don't Know	36	20.3

4. Discussion

Gender-based violence especially directed towards women is prevalent, as men are still considered as the sole bread earner of any household, this in the pretext of patriarchy is still relevant in Pakistan. Consequently, the hostile workplace does not favor women(7).

In one of the conducted in Sindh the percentage of women, who had faced threats during their professional duties, was 37%. whereas 22% had faced physical harassment/violence in their workplaces(8) and this is still underreported(7). In our study, 6.8 % admitted the confrontation of gender-based violence at the workplace whereas a large percentage,52%, said that they don't know about it. The very low percentage can be ascribed to 52 % of male participants. The lower percentage can be attributed to the underreporting of violence as referred to above. Similarly, a small chunk of respondents, i.e., 15% knew about any percent regarding access to health facilities regardless of their status as healthcare workers.

Pakistan is a vulnerable country facing rising poverty rates, low literacy levels, particularly among women, and a decline in safe sex practices. In one study that is conducted in one of the health institutions of Karachi all health professionals had a thorough knowledge of HIV awareness and spread. knowledge among nurses was moderate(9) which to some extent corroborates our study, only 55% of respondents knew about prophylaxis for HIV and STI survivors, and it's an alarming thing. And 21 % do not know about prophylaxis at all which in health workers should be addressed. These results are much less from similar developing countries like Sri Lanka where its awareness is above 80 percent(10). These percentages are also not if we compare the presence of blood transfusion facilities which is available in 68%, in this case, 55 % is not a big difference.

Pakistan is one of six countries that collectively account for 50% of global maternal deaths (11) but with consistent progress indicators has improved, but maternal mortality is still one of the highest in South Asia(12). Antenatal care (ANC) is a field of Preventive Medicine focused on providing essential information and support to expectant mothers for a healthy pregnancy, secure delivery, hygienic childbirth, and postnatal care. Pakistan is among the nations with a significant maternal mortality rate(13). According to the National Demographics Survey of Pakistan, 70% of women in the country do not receive ANC, while 23% seek assistance from doctors, 3% from nurses, Lady Health Visitors, and Family Social Workers, and 4% from either trained or untrained birth attendants(14). Our study does not corroborate the above results it could be because of the study setting in an urban population but

on the other hand According to a recent National Institute of Population Studies.

In Pakistan, 86% of women accessed antenatal care from a qualified provider, 69% of births were overseen by skilled birth attendants, and 66% of deliveries occurred in a medical facility(15). In our study, the percentage of availability of gynecologists is 76% whereas the presence of safe delivery practices has been quoted 75%. However, a more recent study on maternal care services in Pakistan found that the overall quality was lacking(16) this need for improvement has also been pointed out by Mubeen et al (14). Participants indicated that 64% of post-abortion care services were available, while another recent investigation highlighted insufficient services, noting that various socio-cultural, financial, and political obstacles hinder the effective provision and use of post-abortion care services(17).

Conclusion

The study concludes that there is a lack of sexual and reproductive health knowledge in the healthcare facilities. Similarly, there is a basic requirement for informed medical personnel, which is lacking particularly in the area of sexual and reproductive health. Public health plays a crucial role in implementing the MISP objectives and there is a high need of creating an integrated and comprehensive health care system that focuses on early treatment and multi- disciplinary approach in health care centers. This may be accomplished without necessitating any fundamental shifts in institutional policy development.

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