Toward Resilient Maternal, Neonatal and Child Health Care: A Qualitative Study Involving Afghan Refugee Women in Pakistan

Health Services Insights
Volume 18: 1–14
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DOI: 10.1177/11786329241310733

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ABSTRACT

BACKGROUND: Afghan refugees in Pakistan, particularly in Quetta, Balochistan, encounter formidable barriers in accessing maternal, newborn, and child health (MNCH) services. These challenges have been intensified by the COVID-19 pandemic and entrenched systemic health inequities.

METHODS: This qualitative study, conducted from February to April 2023, aimed to assess the obstacles within health systems and community environments that hinder MNCH service access among Afghan refugees. The study involved 20 key informants through in-depth interviews and focus group discussions, including Afghan refugee women, community elders, health workers, and representatives from non-governmental organizations and government agencies. The research focused on experiences during the initial four waves of the COVID-19 pandemic (2020-2021), utilizing a conceptual framework integrating Health Emergency Disaster Risk Management (Health-EDRM) with primary health care.

FINDINGS: The study identified significant systemic barriers to accessing MNCH services, such as insufficient funding, inadequate health infrastructure, and discriminatory practices within the healthcare workforce. Additionally, community-level obstacles were prominent, including cultural and language differences, geographical isolation, and economic constraints. The integration of Health-EDRM into local health systems was minimal, with many stakeholders either needing to be made aware of or unengaged with the framework.

CONCLUSION: The findings highlight a critical need for comprehensive policy reforms, infrastructure enhancement, and community-centered approaches to address Afghan refugees' health needs effectively. Strengthening the integration of health-EDRM into health systems is crucial for enhancing resilience and ensuring continuous care during health emergencies. The study calls for concerted efforts to implement culturally sensitive health interventions that include disaster risk management components to improve MNCH outcomes among Afghan refugees in crisis-affected settings. Addressing systemic and community-level barriers makes creating a more resilient and equitable health system for vulnerable populations possible.

KEYWORDS: Women of reproductive age, Afghan refugees, maternal, neonatal and child health, continuity of care, health-EDRM framework

RECEIVED: October 22, 2024. **ACCEPTED:** December 13, 2024.

TYPE: Original Research

FUNDING: The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This manuscript results from a study conducted in the International PhD in Global Health Humanitarian Aid and Disaster Medicine framework jointly organized by the Università del Piemonte Orientale (UPO). Therefore, the cost of data collection was covered through the university's PhD funds.

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

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Reflexivity Statement

The authors included eight males and three females and spanned multiple levels of seniority. Four authors have extensive research experience in humanitarian studies and have worked on access to primary healthcare in Afghanistan. The lead author also had vast experience in Pakistan. Eight authors were experts in conducting qualitative and health system research, especially in low- and middle-income countries.

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Authors from the Trust for Vaccines and Immunization have a strong rapport with Pakistan's refugee community and long-standing partnerships with health departments in the province where the study was conducted.

Key Messages

- This study highlights the urgent need for a compassionate, holistic approach to healthcare for Afghan refugees in Pakistan, integrating the Health Emergency Disaster Risk Management (Health-EDRM) framework.
- Key barriers to MNCH services include limited funding, inadequate healthcare infrastructure, discriminatory practices, cultural and language differences, geographical isolation and economic constraints.
- Urgent reforms are needed in policies, healthcare infrastructure, and community engagement to ensure equitable access to quality healthcare for Afghan refugees.
- Integrating the Health-EDRM framework into local health systems is essential for building resilient health systems that provide continuous care during emergencies.

Introduction

Globally, an estimated 108.4 million people, predominantly women and children, are forcibly displaced due to conflict and persecution.[1] This group faces high maternal, newborn, and child health (MNCH) care disparities. The health crisis magnified health access and outcomes inequalities, particularly among displaced populations in low- and middle-income countries (LMICs). These conditions disrupt the continuity of care and accessibility, further hindering progress towards universal health coverage (UHC) and equitable primary health care (PHC).[2,3] These disparities are compounded by complex emergencies like the COVID-19 pandemic, which strained global health systems and heightened the urgency of addressing MNCH needs among vulnerable populations.[4,5] The impact of a pandemic on the economy, infrastructure, and health systems has exposed vulnerabilities, including inadequate health systems and growing social protection gaps for refugees.[6]

Building resilient systems and adopting an equitable health system approach is crucial to addressing these issues.[7] The intersection of global health crises and refugee movements underscores the urgency of robust health systems adapting to crises and maintaining primary health care services.[8-10] An effective health system is crucial for managing not only the routine healthcare needs of vulnerable populations, such as refugees, but also unexpected health emergencies that disproportionately impact them.[11] In 2019, the World Health Organization (WHO) launched the Health Emergency Disaster and Risk Management (Health-EDRM) framework in response to emerging global health challenges.[12] This initiative promotes a community-centered, cooperative approach designed to enhance the resilience of health systems against emergencies.[12] The health framework is designed to guide countries in integrating health considerations into their disaster risk management plans. It emphasizes preparedness, response, recovery, and mitigation activities to enhance health systems' resilience to emergencies and disasters, whether natural, biological, or human-made.[12] Specifically, integrating the Health-EDRM framework into PHC can bolster the infrastructure needed to support MNCH services in crisis-affected regions, enhancing overall community health resilience.[7] In many LMICs, the overall adoption of Health-EDRM with the national and regional plans requires considerable commitment and political will.[13,14] While some countries have made significant strides in aligning their public health systems with the Health-EDRM framework, challenges persist.[12] These include inadequate funding, lack of coordination among governmental and non-governmental entities, limited technical expertise, and insufficient health integration into broader disaster risk management policies.[15] Additionally, the COVID-19 pandemic exposed and exacerbated these challenges, highlighting the need for more robust health systems and better preparedness to handle such crises.[16]

Pakistan's situation is not very different from that of other LMICs. Political instability has long affected the country, and it is vulnerable to natural disasters, including frequent earthquakes and floods.[17] In addition, Pakistan is home to nearly 1.4 million Afghan refugees who were displaced because of prolonged conflict and war in Afghanistan.[1] They enter Pakistan primarily through Balochistan and Khyber Pakhtunkhwa, often fleeing conflict and instability.[18] Their arrival and stay are largely unregulated regarding healthcare oversight, as local authorities struggle to address their needs due to limited resources and policy constraints. Specifically, Balochistan hosts around 23% of the refugee population and is the least populated province in Pakistan.[18] The region is predominantly rural and underdeveloped, with a significant portion of its economy based on agriculture and livestock.[18] However, the province faces severe water scarcity issues, exacerbating living conditions. Moreover, the challenges are aggravated by the geographic isolation of the province and limited local resources, which complicate the delivery of consistent and effective health services.[19] Furthermore, it faces significant economic hardships and health system deficiencies that impair its ability to improve MNCH indicators.[19,20] Refugees face significant barriers to accessing health services, often far from their settlements and requiring extensive travel.[18] The available healthcare options include limited maternal and child health services, vaccination campaigns, and temporary health camps, which are insufficient to meet the comprehensive needs of refugees, particularly for antenatal and postnatal care.[18] Despite these gaps, the United

Nations High Commissioner for Refugees (UNHCR) is critical in supporting healthcare initiatives by advocating for refugee health, coordinating services, and providing resources to bridge the gaps left by local authorities.[18] However, systemic challenges such as cultural barriers, affordability, and inadequate health infrastructure hinder consistent access to quality care. Addressing these barriers is essential to advancing global goals for sustainable development, particularly by improving health outcomes, reducing inequalities, and building resilient systems that ensure no vulnerable population is left behind.[18] Achieving these goals requires stronger policy frameworks, enhanced stakeholder coordination, and investments in inclusive and equitable healthcare systems for refugees. Further, in 2006, the Pakistani government took significant steps towards improving disaster preparedness by introducing the National Disaster Management Ordinance.[17] This ordinance was later superseded in 2010 by the National Disaster Management Act.[21-23] Furthermore, the 2017 National Action Plan for Disaster Risk Management elaborated on the disaster management framework, outlining Disaster Management Associations at national, provincial, and district levels.[19] However, integrating the Health-EDRM framework within existing health system frameworks has not been reported in the literature or other reports. Furthermore, commitment to the overall health of refugees in Pakistan is also generally lacking, and the health system often leaves these vulnerable groups behind.[24] These issues are rooted in the existing health system's lack of political will, multiple priorities, and structural limits.[22] Currently, no study has investigated the impact of COVID-19 on the continuity of MNCH care among Afghan refugees in Pakistan with the lens of exploring potential pathways to build a resilient health system through integrating the Health-EDRM framework. This study aimed to gather an in-depth understanding from both the refugee community and health workforce on the barriers to accessing MNCH care in general as well as during the peak waves of the COVID-19 pandemic and enquired about the potential pathways to build a resilient health system through an integration of the Health-EDRM framework with to existing health system to achieve UHC for vulnerable populations.

Methods

Research design

The study employed a qualitative exploratory design, which involved in-depth interviews (IDIs) and focus group discussions (FGDs) with Afghan refugee women, community elders and the health workforce (key informants) in Quetta, Balochistan., aimed at exploring crucial aspects that how these factors impact MNCH alongside the effects of global health crises like the COVID-19 pandemic. Specific to MNCH care, we explore all domains, that is, care during antenatal (ANC), intrapartum and postnatal period, childhood illness, family planning, vaccination, and nutrition.

Conceptual framework

Based on the existing literature (Figure 1), a guiding conceptual framework was developed,[2,11,19,25-31] which then resulted in an interview and FGD guide. This framework highlights the significant health challenges faced by vulnerable women and children who face displacement because of conflicts, particularly in LMICs. The limited availability of quality care and the challenges they face in access lead to a core issue of their exclusion from the agenda of UHC. Consequently, the overall state of health is compromised.[3,8,32] This exclusion perpetuates a vulnerability cycle, where poor health status and restricted access to primary health care continuously reinforce each other. Key issues identified include the baseline poor health status of women and children in LMICs, challenges related to displacement, the impact of the COVID-19 pandemic, and various barriers to accessing care. The framework suggests addressing these problems through the Health-EDRM, which integrates preparedness and continuity of care into a country's crisis response.[12] The framework emphasizes essential pillars such as policies, strategies, legislation, planning, coordination, human and financial resources, health infrastructure, risk communication, and monitoring and evaluation to ensure the continuity of care during emergencies.[12]

Study setting

The study was conducted in one of the union councils (UCs) of Quetta city, Kharotabad-1, one of the peri-urban squatter settlements.[33] Quetta, the capital of Balochistan, serves as a central hub for Afghan refugees due to its proximity to the Afghan border and shared cultural ties. The city hosts 0.3 million registered Afghan refugees who face significant challenges, including poor livelihoods, limited education and health services, and insecure social protection conditions.[33] While it is an urban area with basic services, much of its surrounding region is rural and lacks adequate infrastructure, posing challenges for refugees' access to consistent healthcare. Kharotabad-1 has a population of 67 782 and is one of the Super High-Risk UCs (SHRUC) in Pakistan for polio cases and positive environmental samples for poliovirus. UC Kharotabad-1 has no government health facility; only private health facilities are available.[33]

Participants and eligibility

The study collected data from two types of participants from the community: Afghan refugee married women of reproductive age (MWRA) and Afghan community elders or stakeholders. MWRA aged 18 to 49 years with the status of Afghan refugees who had at least one child aged 12 to 23 months from April 3, 2020 to November 29, 2021 and who provided written consent to participate were enrolled in the study. The eligibility criteria were explicitly formulated to capture participants' maternity experience during the initial four waves of the

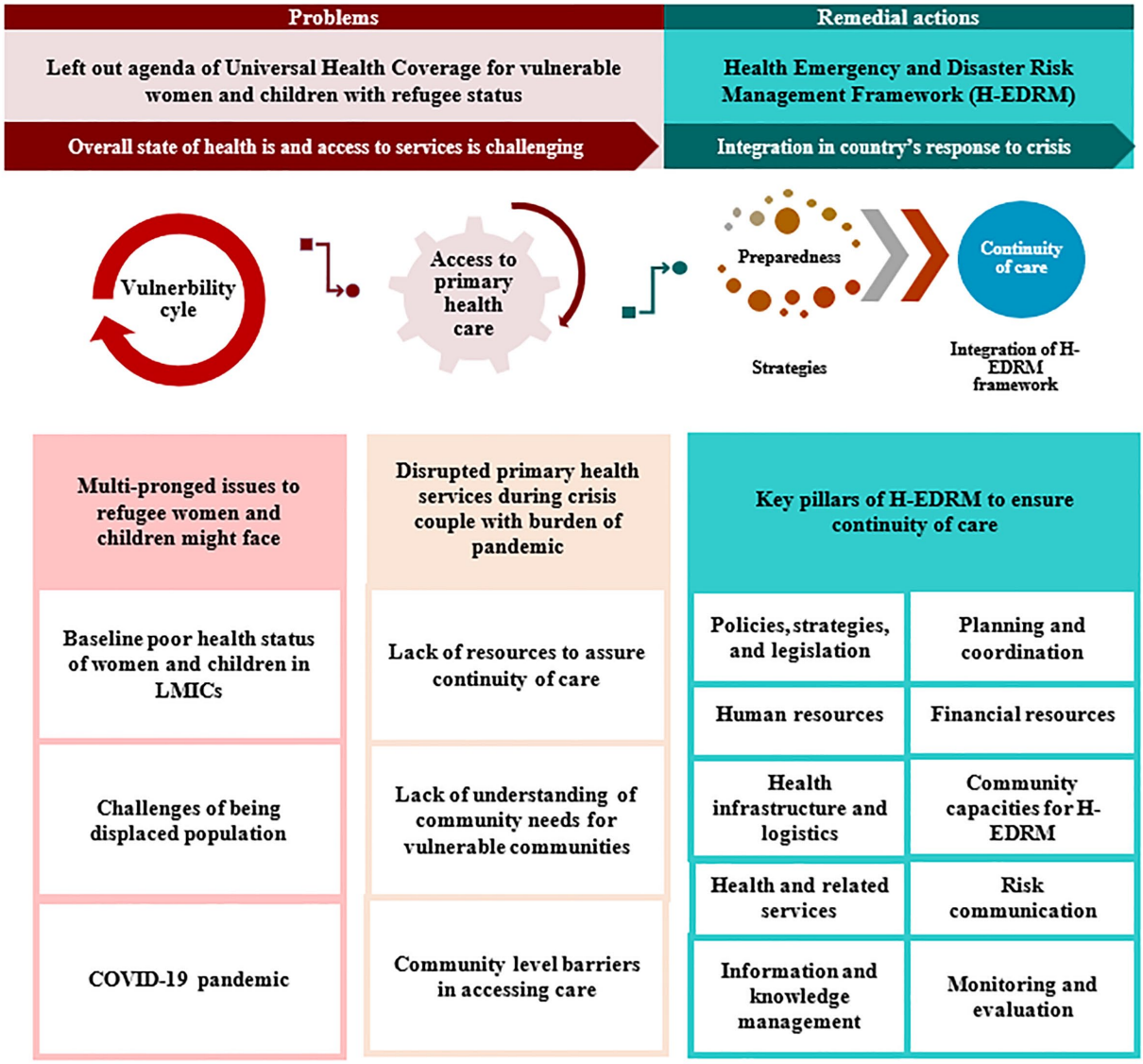

Figure 1. Conceptual framework of study.

COVID-19 pandemic in Pakistan, that is, the abovementioned period. All those interviewed were residents of the same community since before the pandemic. As for key informants, stakeholders who were crucial in delivering health services to refugees, the population, and the host communities were invited. Key informants were actors working in the health sector (program staff, policymakers, and practitioners from local and international non-governmental organizations (NGOs) and United Nations (UN) agencies) engaged in MNCH care in Balochistan during the COVID-19 pandemic. Participants were purposively recruited from a contacts list combining information from the authors' networks.

Sample size

The sample size was determined based on the principle of thematic saturation, where no new themes emerged after successive interviews and FGDs.

Interview guide and data collection

We used an adapted version of the interview guide developed by Rodo et al,[4] including components derived from the Health-ERDM framework.[12] A separate guide was designed for Afghan refugee women and key informants to capture different angles. The interview guide was designed to assess the impact of COVID-19 on MNCH among Afghan refugees in Balochistan. It examined service utilization, including antenatal, intrapartum, postnatal care, vaccination, child health consultations, and nutrition programs, focusing on disruptions and adaptations during the pandemic. Data was gathered on funding diversions, out-of-pocket expenses, and community perceptions of healthcare services. The study also explored integrating the Health-EDRM framework, highlighting gaps in emergency preparedness, workforce capacity, and infrastructure readiness. Stakeholder coordination, including government, donors, NGOs, and community engagement, was

assessed to understand systemic barriers and opportunities for enhancing healthcare resilience.

The interviews lasted for approximately 1 hour. Interviews with Afghan refugee women were conducted in Pashto and Dari, while Urdu or English were used with key informants. We pilot-tested the guide in different communities in Karachi to improve the rigor of our questions and probes. Data was collected through semi-structured interviews, except for one FGD with a group of NGO representatives. FGDs facilitated gathering communal insights and shared experiences, whereas in-depth interviews allowed for a deeper exploration of individual viewpoints and experiences. The interviews were tape-recorded and later transcribed and translated into English languages independently by a third party.

This study employed a qualitative approach to capture the diverse perspectives of Afghan refugee women and healthcare providers. While the core of this study focuses on the experiences of Afghan women in accessing MNCH services, the inclusion of healthcare providers offers unique insights into the barriers within the healthcare system that directly impact refugee women's access to care. These multiple perspectives are integral to mapping the barriers across healthcare's demand (refugee women) and supply (healthcare providers) sides. Thematic analysis was performed separately for each group to ensure that their distinct viewpoints were adequately represented in the findings. By analyzing these different perspectives separately before integrating them, we ensure that the voices of Afghan refugee women remain the central focus while also acknowledging the systemic challenges voiced by stakeholders involved in MNCH service delivery for refugees.

Data analysis

Thematic analysis was performed on the interview transcripts, adopting Braun and Clarke's six phases.[34] The inductive analysis was performed independently by two researchers (YS and AM) manually using Microsoft Excel. The process began with familiarization with the data, wherein researchers immersed themselves thoroughly to understand its depth and breadth. This initial engagement helped identify meaningful chunks of data during the second phase, which was the development of initial codes, where data were organized into concise, meaningful groups. In the third phase, these codes were used to identify potential themes, which were broader patterns that emerged across the dataset. These themes were then reviewed and refined in the fourth phase, ensuring they accurately reflected the dataset and remained distinct yet cohesive. The fifth phase involved a deeper analysis, during which researchers clarified the specifics of each theme and refined their definitions and names, ensuring each theme was clearly articulated and supported by data. The final phase, interpreting the data, was where the significance of the themes of the research question was explored, and conclusions were drawn, providing a rich and detailed account of the data.[34]

Ethics considerations

Ethical approval was obtained from the Segreteria Tecnico-Scientifica Comitato Etico Interaziendale di Novara (Reference Number: CE214/2022) and the National Bioethics Committee of Pakistan (Reference Number: 4-87/NBC-843/22/559). The research team obtained written informed consent in a local language in a regional language, and household decision-makers were also informed about the purpose of the study, considering family values in the community. Where applicable, the signatures of both participant and witness were taken. Otherwise, thumb impressions were recorded. Every participant was given a unique study ID, and the participant's anonymity was maintained. Data confidentiality was assured as all data was stored in a locker and only accessible to the study team. Among the eligible participants, the research team obtained written informed consent in a local language. Once transcribed, the soft copy of the deidentified data is uploaded to the university's central server, which is password-protected and only accessible to the lead investigators.

Results

General description

A total of 20 key informants were involved in the qualitative study; overall, 11 IDIs and one FGD were conducted from February 25, 2023 to April 30, 2023. Across various respondent categories were MWRA, community elders, governmental staff, academics, INGOs representatives, and NGO staff. The gender distribution was nearly balanced, with a slight female predominance. The average age of participants ranged from 26 to 42 years, reflecting a diverse age group across the different respondent categories (Table 1).

The thematic analysis revealed two main sections: (1) Overall barriers to accessing MNCH care and (2) the Current state of Health-EDRM.

Barriers to accessing MNCH care

The thematic analysis uncovered various challenges shaping Afghan refugee women's healthcare experiences in Balochistan. The barriers are further classified as health system and community-related barriers (Figure 2).

Health system barriers resulted in poor utilization of care

Policies and funding issues. The "limited funding" available severely affects the health system's capacity to address the specific needs of Afghan refugees. This financial constraint leads to inadequate service coverage and poor healthcare quality, significantly affecting MNCH care availability and accessibility.

> Because there weren't enough funds given for refugee health care, Afghan refugees might not have had enough help or services when

Table 1. Demographic information of participants.

TYPE OF RESPONDENT	TYPE OF DATA TOOL	TOTAL PARTICIPANTS	MALE	FEMALE	AVERAGE AGE (YEARS)
Governmental staff	IDI	2	1	1	42
Academia	IDI	2	1	1	38
Community elder	IDI	1	0	1	45
Mother	IDI	6	0	6	31
INGO	FGD	3	1	0	36
NGO staff	FGD	6	3	2	29

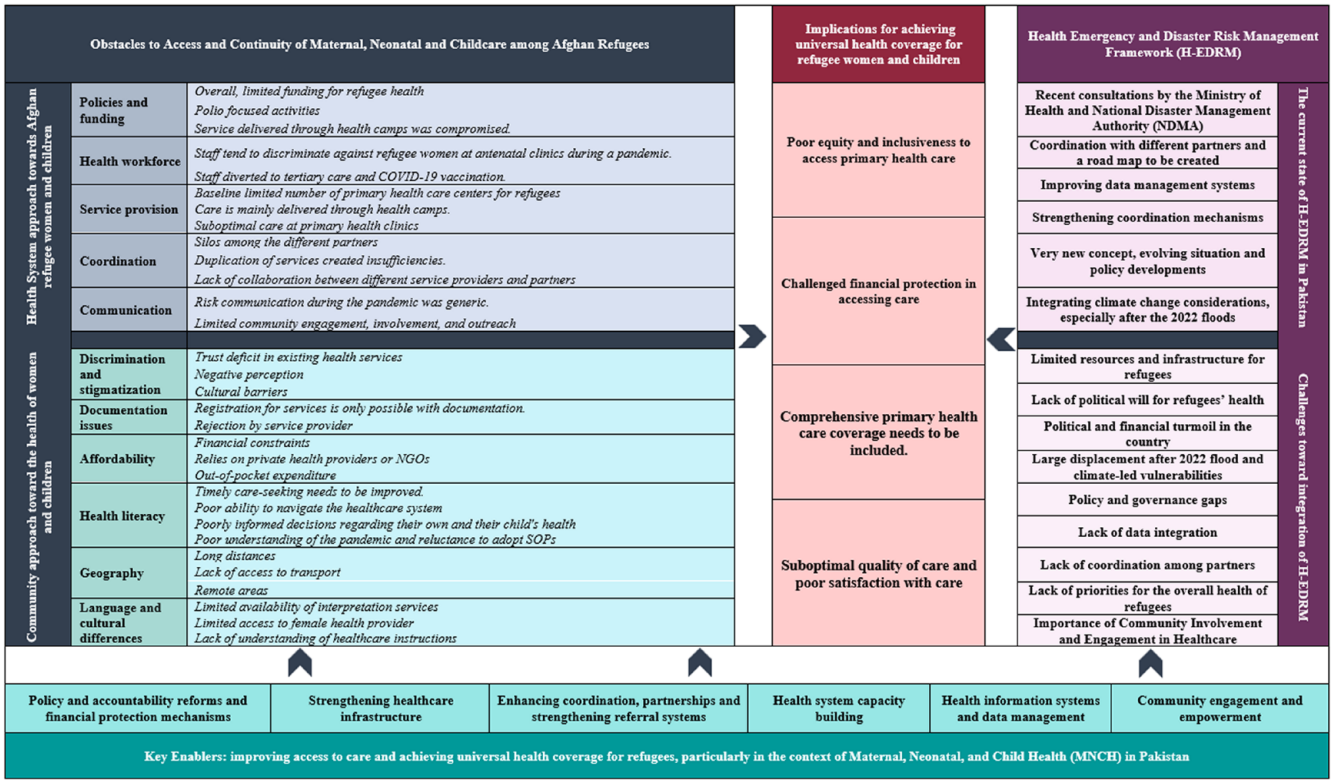

Figure 2. Thematic analysis.

> they had health problems; we have seen this during the COVID-19 pandemic. (INGO staff)

Further, the emphasis "only on polio eradication activities" during COVID-19 diverted resources and attention from other essential preventive services, leaving significant gaps in service provision for Afghan refugees.

> We are trying our best, but the truth is that we are only focused on polio. Polio, Polio, Polio! Everyone is just obsessed with it. Our main goal is to eliminate polio, and we are not considering other issues. This is what we all worried about during COVID. (NGO staff)

In addition, the heavy reliance on "health camps for service delivery" often compromised care continuity and quality. These temporary services/clinics are set up to provide healthcare services in areas where permanent health facilities are scarce or non-existent. These camps were not equipped to provide comprehensive MNCH services, leading to gaps in care and unmet health needs among the refugee population.

> Health camps might not have been able to give steady and full healthcare because they didn't have enough resources, people, or money. This made it hard to give Afghan refugees the care they needed. But we are doing everything we can to help them. (INGO staff)

The health workforce involved in service delivery. The precautionary measures taken by healthcare staff during the pandemic were perceived as discriminatory by Afghan refugees, who already faced existing biases within the healthcare system. This

perception intensified the challenges among the refugee population. The perceived discrimination contributed to low coverage of ANC, particularly during the pandemic and often limited access to essential prenatal services, leading to adverse maternal and neonatal health outcomes. The health measures aimed to safeguard public health; the implementation may have inadvertently mirrored or exacerbated existing prejudices against refugees, thus affecting their access to necessary healthcare services.

> During the COVID-19 pandemic, we went to a public hospital, but they wouldn't help me because I didn't have a mask and was coughing. They told us to take a COVID-19 test, but we said no. Then, we went to a private clinic where I had my baby. There, they treated me like I was the one who spread the disease. (Afghan women)

The health worker mentioned:

> When we put restrictions during the pandemic like mask and social distancing at our facility, everyone, including refugees, thought that we were discriminating against them. Refugee women perceive that we are trying to avoid them and don't want to provide service to them, which is why we are asking for all these precautions. We tried to create awareness. (Government staff)

Further, the "redirection of health staff" to tertiary care facilities and COVID-19 vaccination campaigns have decreased the number of healthcare providers available to address the MNCH needs of Afghan refugees. This diversion impacts the quality and accessibility of care, leaving refugees with even fewer healthcare options.

> During the pandemic, not just in Quetta or Pakistan but worldwide, everyone focused on just one illness. Other health issues were ignored, and we transferred most of our staff to hospitals. We weren't ready when the pandemic first hit. We didn't know how to test for it or how to handle it. At first, we didn't get any advice on what to do, but over time, we did start getting some directions. (Health Department)

Service provision for refugees. The "baseline scarcity of primary healthcare" centers dedicated to serving the refugee population directly limits access to essential MNCH services. This shortage challenges the health system's ability to provide accessible and equitable care to Afghan refugees, even more so during an emergency.

> They are refugees, and it seems like nobody cares about them, not even the government, which appears indifferent to its citizens. From Chaman to Pishin and Pishin to Quetta, healthcare services are lacking. There's also a lack of basic living infrastructure, even for us locals. Considering this, it's hard to imagine what the government could do for refugees. (NGO staff)

Similarly, the care provided at the available primary health clinics is often suboptimal, lacking quality and scope. This inadequacy in service provision fails to meet the comprehensive health needs of Afghan refugee women and children, compromising their overall health outcomes.

> Many women seek healthcare at public hospitals, private clinics, or private hospitals. Basic Health Units (BHUs) aren't very good and offer only a few services. Often, they run out of medicine. Our refugee sisters especially look for places to get plenty of medicines. (INGO staff)

> There isn't a specific plan just for Afghan refugees, but we do have initiatives in place, like the ones in Kharotabad you mentioned, aimed at tackling major health risks. There is no government facility there. Given the many people moving around in these areas, our health department has suggested to our partners, such as WHO and UNICEF, that we run health camps and weekend shifts to address gaps in our regular health services. These camps and special efforts help ensure everyone gets the vaccinations they need, care for mothers and children, and support for any other health issues that might arise. (Representative of academia)

Coordination among healthcare providers and NGOs. The health system's fragmented approach is characterized by sectors working in "silos and duplication" of services among different partners, creating inefficiencies and resource wastage. The lack of streamlined coordination between service providers leads to suboptimal care and missed opportunities for comprehensive service delivery. This lack of coordinated service delivery has created gaps in care, with refugees often receiving overlapping services from different organizations without a cohesive healthcare plan.

> There's quite a bit of overlap in our efforts. For instance, if we focus on nutrition, you'll notice another organization doing the same. This seems a common practice among NGOs here; they tend to concentrate on areas with available funding. (NGO staff)

"Lack of collaboration" between different healthcare providers and partners has further divided care for Afghan refugees, which hinders the development of integrated and effective healthcare strategies, limiting the potential for a unified response to the refugees' health needs.

> All the NGOs prefer to operate independently. Despite efforts to unite them on a single platform, achieving consensus is challenging. They choose to work solo rather than collaboratively. (INGO staff)

Communication with refugees. During the pandemic, the "generic nature of risk communication" failed to address the specific concerns and circumstances of the refugee population, resulting in inadequate preparedness and response within the refugee communities. The inconsistent and unreliable flow of health information within the system delayed effective communication and response strategies, hampered the timely dissemination of critical health information to refugees, and compromised the effectiveness of health interventions.

> There is a big problem: very little we do for their health awareness. We only do these things for vaccinations, especially polio. As a result, many other services lack proper information flow. COVID is a good example; our community and refugees have many myths and misconceptions about all the precautions we tried to impose. Because of this, we faced a lot of confusion and issues we faced at our facilities and camps (NGO staff)

The health system's "limited efforts in engaging" with the Afghan refugee community have stalled the establishment of trust and the effective delivery of health services. Community involvement is important for understanding specific health needs and cultural sensitivities and designing well-received and effective interventions.

> We all understand the importance of communicating with the community and our partners on the ground, yet we often neglect to practice this. At times, we behave as if we are inexperienced, withholding information from our partners as if to say: "This is my project; why should I share?" This mindset makes us forget that our primary objective is to effectively connect and engage with the community. (INGO staff)

Community barriers to accessing care

Discrimination and stigmatization felt by refugees. "Discrimination and stigmatization" prevail against Afghan refugees. Negative perceptions and cultural barriers compound this.

> Doctor behavior with us is coarse. If they see us and hear us speaking (XYZ) language, they start yelling at us. (Community woman)

The "negative perception of the healthcare system" from Afghan women has led to a reluctance to seek medical help. Cultural differences between Afghan refugees and healthcare providers lead to misunderstandings and inadequate care. The lack of culturally sensitive approaches and communication barriers worsen these challenges, making it difficult for refugees to access and utilize healthcare services effectively.

> There are cultural differences. I am not saying that this is something new for us; our community also has similar issues, like they don't give much attention to pregnancy care. They only sought care if there was a problem. But refugees sometimes have more of these issues which are hard to address. (NGO staff)

Documentation issues. The requirement for "documentation to access health services" presents a significant barrier for refugees, many of whom lack the necessary legal documents. This bureaucratic obstacle resulted in refugees being sent away from health services. Also, refugees often face rejection at healthcare facilities due to documentation requirements, i.e., registration or identification cards, capacity constraints, or discriminatory practices. This rejection denies them essential healthcare services and reinforces the perception of exclusion and marginalization within the healthcare system.

> Sometimes staff at health facilities ask for a registration card. If the woman has no document or in case the document is expired, this could block them from getting health care. (Community Elder)

Affordability. The high reliance on private health providers puts a considerable "financial burden" on refugee families. This economic barrier makes it difficult for many to afford the healthcare services they urgently need.

> People here don't see primary health care as a good choice, and it's not just me saying this; it's the general belief. If they have the means, they opt for private hospitals, and if they know someone inside the system, they lean toward government hospitals. While we can offer guidance, we're aware of the poor state of health facilities. (INGO staff)

The insufficient public healthcare infrastructure has forced Afghan refugees to rely on private NGOs or healthcare providers. This dependency has led to significant out-of-pocket expenditures, making healthcare access financially burdensome for the refugee population.

> I heard from someone that they don't have medicines or X-ray facilities available and were advised to see a private doctor for these services. I'm unsure about the details; my husband was talking to them. We end up spending a lot on our healthcare. We also attend health camps if they're close by. (Community women)

Health literacy. A lack of "health literacy" characterized by difficulties accessing the healthcare system and making informed health decisions delays refugees seeking timely and appropriate care. This gap in knowledge and understanding further marginalizes Afghan refugees within the health system.

> Awareness among the refugees is quite low. Firstly, they often have trouble understanding us, and secondly, they're not very open to listening to what we say. The issue is that the community is generally reluctant to engage. (NGO staff)

Further, Afghan refugees "limited familiarity with the local healthcare system," not speaking the local language and cultural differences lead to delayed or missed care.

> The lack of targeted health education and limited access to information among refugee women lead to suboptimal healthcare utilization. (Representative of Academia)

> The general lack of clear, accessible information about the pandemic and associated safety protocols has resulted in a poor understanding and reluctance among Afghan refugees to adopt standard operating procedures (SOPs). (Representative of health department)

This knowledge gap posed significant public health risks and prevented compliance with the preventive measures suggested by the guidelines during the pandemic.

Geographical accessibility. The "geographical challenges" of long distances to health facilities, lack of transportation, and the remote location of many refugee settlements pose significant hurdles in accessing healthcare services, making it difficult for refugees to receive timely MNCH care.

> The area where we've settled is on the city's outskirts, as you know. Families with many members or those with relatives in Pakistan are in a better situation. However, the situation is quite different for us here without such connections; we have very little. (Community elder)

Moreover, transportation barriers significantly hinder Afghan refugees' ability to access healthcare facilities, especially those living in remote areas or with limited financial means. This lack of access to transport intensifies the challenges of reaching timely and adequate healthcare services. The distance to healthcare facilities and the need for transportation and infrastructure limit the availability and continuity of care for refugees.

Language and cultural barriers. The limited availability of "language interpretation services" and "culturally sensitive care," particularly the availability of female health providers, creates significant barriers to effective communication and understanding between healthcare providers and Afghan refugee women, further complicating their healthcare access and discouraging many women from seeking necessary medical attention.

> We face a problem: our language is different, and they don't have anyone who speaks their same language. When I was in Karachi, this was also a huge problem. But we came back here, and it's all the same; no one helps us understand. (Community women)

Afghan refugees necessitate female health providers, particularly for maternal and reproductive health services.

> Having predominantly male staff is a significant issue, especially since we are working in a Pashtun community with strict traditions regarding gender roles. This challenge was even more pronounced during the COVID-19 pandemic when staffing issues were exacerbated. (Representative of health department)

Current state and challenges in integrating health-EDRM lack of awareness

Many NGO respondents needed to be made aware of the Health-EDRM framework, reflecting gaps not just in awareness but also in documenting and disseminating essential public health strategies. Those who were aware emphasized the need for comprehensive documentation to track the integration process and identify challenges that might hinder its success—the integration of the framework in the local health system. A few respondents have mentioned attending meetings held by the Ministry of Health and the National Disaster and Management Authority (NDMA) to set the strategic direction for Health-EDRM. According to them, these meetings focus on identifying gaps in the current system, proposing solutions to enhance the resilience of health services, and ensuring that the specific needs of vulnerable populations like Afghan refugee women are addressed in MNCH care plans. Nevertheless, the level of integration of programs targeting the needs of refugees still needs to be determined.

> Indeed, recently, the MoH and the NDMA organized a meeting with partners to talk about Health-EDRM. I participated in this discussion. They also brought in academics, which is a positive step. However, this initiative is still very new, so perhaps we'll learn more about its progress and impact in the coming months. (Representative of academia)

Lack of coordination and response

Key informants emphasized that this framework is essential for refugees as it ensures that health services are resilient and responsive to emergencies, providing continuous MNCH care even in crises.

> The WHO may be taking some action, but I'm not certain. After the experiences with COVID-19 and the floods, there's much talk about prioritizing disaster preparedness, yet I'm not convinced any substantial measures are being taken. The flood-affected regions, particularly in many parts of Balochistan, remain in dire straits. This isn't just my observation; it's a widely acknowledged fact. (Representative of academia)

However, due to a lack of implementation, it was highlighted that effective coordination among government agencies, NGOs, INGOs, and community representatives is critical for a whole-of-health-system approach to health emergency management, which is missing. Developing a comprehensive road map involves aligning strategies, pooling resources, and setting clear roles and responsibilities for all stakeholders to improve MNCH care for Afghan refugees.

> We lack a proper emergency response system, as recent crises like the pandemic and floods show. Both private and public hospitals, including civil hospitals, were unprepared for emergencies, such as a measles outbreak. There's a general lack of preparedness at the provincial level. We're discussing establishing an emergency response mechanism with provincial governments to ensure we're ready for future emergencies, knowing our roles, communication channels, resource allocation, and action plans. (INGO staff)

Need for robust data and reporting

They also mentioned the need for robust data management systems, which are foundational for effective health-EDRM. These systems enable real-time monitoring, rapid response to health emergencies, and informed decision-making. There has been a recent shift in implementing better databases to optimize data collection nationwide.

> Enhancing data and reporting systems involves leveraging technology to collect, analyze, and share health data, mainly focusing on MNCH indicators; this can be implemented among Afghan refugee populations. (INGO staff)

Effective Health-EDRM requires comprehensive data integration across various sectors and stakeholders. Integrated data systems are necessary to ensure informed decision-making and coordinated responses.

> This is a great limitation in an existing system where the health department is still struggling with digitalizing data. People here don't want to use it because you will be monitored and in trouble if you start using it. We have implemented it for immunization and other programs as well. Then they also need to maintain manual registers, so they lost the interest. (NGO staff)

Acute humanitarian needs

Importantly, the floods in Pakistan in 2022 were stated as a critical time, which created a huge demand for integrating climate change adaptation and mitigation strategies into Health-EDRM.

> Assessing and addressing the specific vulnerabilities of Afghan refugees to climate-related health risks, ensuring that MNCH services are resilient to environmental changes and natural disasters. (Representative of academia)

Acute humanitarian needs, especially in flood-hit areas, highlighted the shortage of resources and infrastructure dedicated to refugee care, hindering effective emergency management. Pakistan's crisis response plans and the ongoing displacement from the 2022 floods underscore the broader context of political and financial instability that complicates Health-EDRM efforts.

> The catastrophic floods significantly increased vulnerabilities, underscoring the need to integrate climate resilience into refugee health strategies. However, the scale of displacement and economic loss is huge, greatly impacting all sectors. We depend on more aid, which we all know is not sustainable. (Representative of academia)

Need for policy and governance structure

The informants stressed the need for more robust policy frameworks and governance structures to apply Health-EDRM for refugees, among other challenges, effectively.

> There are a lot of macro-level gaps in this area, and we know it's not easy. We see the performance of our political leaders and the health department's poor performance. Issues are everywhere, and with these issues, whatever you plan and do is just not practical. (NGO staff)

The competing national priorities and the complex sociopolitical landscape have led to refugees' health not being at the forefront of policy agendas. Still, it has emerged as one of the major issues.

> Refugees are not part of any agenda; leadership and politicians might not include them in such plans. That's the fact and part of the problem. However, in Balochistan, the issues are complex. Everyone knows how people are deprived here. They don't listen to their people. Haven't you seen it on social media? I don't want to say more. . . (Community elder)

Community engagement for planning and integration of Health-EDRM

Engaging refugee communities in Health-EDRM planning and implementation is crucial for successfully implementing an integration plan. This involvement ensures culturally sensitive and effective health interventions. The absence of such involvement may lead to misaligned health services that do not fully meet the needs of the refugee population.

> I have been working for this community for many years and always try to address the problems our community faces, but I know nothing will happen. We are refugees who will listen to our problems, no one, not the government here, they are busy, but we will keep trying. (Community elder)

The multiplicity of actors involved in refugee care necessitates improved coordination mechanisms. Without them, efforts are less cohesive, resulting in inefficiencies and gaps in service delivery.

> The key issue is coordinating with all partners for long-term disaster plans, yet without clear documentation of roles, resources, and strategic directions, these efforts are fragmented and inefficient. The government needs policies that mandate better documentation and data sharing to ensure effective planning and resource allocation. (INGO staff)

Discussion and Continuity MNCH Care

This research highlighted the significant hurdles faced by Afghan refugee women in accessing essential MNCH care. The issue is mainly related to health systems and community environments, critically affecting the delivery and accessibility of essential health services to one of the most vulnerable cohorts within the refugee community. The core issue stems from limited funding, which restricts healthcare services' availability and quality, as highlighted in the findings. During the COVID-19 pandemic, the focus shifted almost entirely to polio vaccination or the COVID-19 infection, dismissing other crucial healthcare needs. The healthcare services provided to Afghan refugee women in Quetta differ significantly from those available to the local population. While the refugee population often relies on temporary health camps and services provided by NGOs, the local population has better access to more stable, albeit limited, public health facilities. However, during the COVID-19 pandemic, the focus on polio

eradication campaigns affected both populations similarly by redirecting healthcare resources away from maternal and neonatal care. This redirection, compounded by the scarcity of health infrastructure in Balochistan, further strained an already overburdened system. Exploring these distinctions provides greater context for understanding how Afghan refugees, as a marginalized group, face even more severe healthcare challenges. Moreover, healthcare camps, often the only source of care in remote areas, need help providing continuous, quality care due to resource constraints. Discriminatory practices within the healthcare workforce further alienate refugee women, limiting their access to the care they need. Primary healthcare facilities are scarce, and those available often need more quality and breadth of services. The lack of coordination among healthcare providers leads to duplicated efforts and inefficiencies, while cultural and language barriers between healthcare providers and the refugee community complicate communication and service delivery. The geographical remoteness of refugee settlements and the financial burden of healthcare pose additional challenges to accessing timely and adequate care. Lastly, although not substantial, the redirection of healthcare staff to manage COVID-19 cases has weakened the system's ability to meet the broad healthcare needs of the refugee community.

These findings converge with existing literature, underscored by a global resonance in the challenges displaced populations face in accessing healthcare.[35] Our study's financial constraints and resource limitations echo the broader discourse on healthcare provision for refugee women.[25] Similarly, the theme of discrimination from the healthcare workforce aligns with the narrative presented by other authors, who revealed the detrimental impact of provider's biases on healthcare accessibility for marginalized groups.[36-38] Furthermore, the suboptimal health system approach, its duplications and inefficiencies resulted in the lack of integrated healthcare strategies in refugee settings.[4,27] This also highlights the need for a concerted global effort towards more inclusive and equitable healthcare policies and practices.[28]

The study findings show significant gaps in the journey toward UHC, especially for refugee populations. The enormous challenges and barriers identified—ranging from health system limitations to community-level obstacles—underscore the critical unique needs of refugees.[39] The overall impact on UHC is negative and pushing the agenda behind it. Health-EDRM in such contexts becomes vital, emphasizing the need for resilient PHC systems to respond to complex emergencies. The integration of emergency preparedness into MNCH services emerges as a crucial element in advancing UHC in humanitarian crisis contexts,[40] ensuring that vulnerable populations, such as Afghan refugees, have access to essential health services without financial hardship, even in times of crisis. The PHC system often falls short of comprehensive coverage, leaving critical services out of reach for this vulnerable population.[29] Financial protection is another vital concern: the high out-of-pocket costs of healthcare services deter many from seeking care, exacerbating the risk of untreated health conditions.[30] Moreover, the quality of available care is frequently suboptimal, marred by inadequate facilities and a scarcity of skilled healthcare professionals.[30,41]

Implication of Health-EDRM Framework

Integrating the Health-EDRM framework and fortifying health system resilience necessitates a multifaceted approach encompassing strategic policy interventions and robust operational guidelines.[13] Despite respondents' varying levels of awareness about the framework, its significance in bolstering the resilience of health services, particularly for Afghan refugees, is clear. This may be an evolving strategic direction emphasizing the necessity for a robust emergency and disaster preparedness system that addresses the unique needs of vulnerable populations.[7,14] Yet, the limited resources, political will, and infrastructural deficits are crucial barriers.[7] Notably, the catastrophic floods of 2022 exposed acute vulnerabilities and underscored the imperative of weaving climate resilience into refugee health strategies.[42] The dialogue around Health-EDRM reveals a mixture of efforts towards better coordination, data management, and community engagement. Yet, systemic inefficiencies, governance gaps, and a pressing need for more inclusive policy frameworks need to improve these.[7]

Strength and Limitations

Given its qualitative nature, the study did not use formal power analysis to calculate the sample size. This is a potential limitation, mitigated by ensuring data saturation. While effective for capturing in-depth insights, this approach may have missed broader perspectives, particularly variations between urban and rural contexts. Future studies should incorporate stratified sampling to encompass diverse geographic and socio-economic settings, enhancing the comprehensiveness of findings. There is a potential risk of recall bias as more than 2 years have passed from the initial waves of the pandemic to the time of the interviews. Qualitative studies typically address recall bias through methods like cross-validation of information across different types of participants and by focusing on consistent themes across various narratives. The study also used a combination of in-depth interviews and focus group discussions to capture a broad range of experiences and perspectives, which can help mitigate some aspects of recall bias. However, this remains the major limitation. Further, the study's findings, derived from a single UC in Quetta, Balochistan, may not fully represent broader refugee or Pakistani contexts. However, the insights provide valuable lessons applicable to similar resource-constrained settings, highlighting critical barriers and strategies for improving MNCH services. Expanding future research to diverse regions would enhance generalizability and address varying refugee experiences across Pakistan.

Recommendations

Achieving equitable and resilient healthcare for refugees in Pakistan, particularly in the realm of MNCH, hinges on addressing systemic barriers through strategic enablers.[43-47] These include policy and accountability reforms to ensure financial protection and safeguard UHC, alongside investments in strengthening healthcare infrastructure.[48] Enhanced coordination among stakeholders, partnerships across sectors, and capacity building within health systems are critical for delivering comprehensive, culturally sensitive care. Integrating robust health information systems and data management frameworks enable evidence-based decision-making while empowering communities to foster trust, participation, and long-term sustainability. Together, these enablers create a roadmap for improving access to MNCH services, ensuring no vulnerable population is left behind in Pakistan's pursuit of health equity and universal health coverage. Based on this study's findings, a set of targeted recommendations is proposed to address the multifaceted challenges Afghan refugees face in accessing MNCH services within the context of Health-EDRM in Pakistan.

(1) *Policy and accountability reforms*: Robust policies are essential to ensure equitable health services and protect refugees from catastrophic health expenses. These reforms should explicitly include refugee health needs and create clear accountability structures to monitor policy implementation effectively.

(2) *Strengthening healthcare infrastructure*: Improving access to quality healthcare requires upgrading facilities in refugee-dominant areas. This involves equipping health centers with necessary medical supplies and ensuring they are resilient to health emergencies and disasters. Better coordination among health providers, humanitarian organizations, and government agencies and more robust referral systems will optimize resources and ensure seamless patient care.

(3) *Capacity building*: Training healthcare personnel to deliver culturally competent care, address refugee-specific health needs, and prepare for emergencies is critical. This will improve the quality of care and build trust with the refugee community.

(4) *Enhancing health information systems*: Establishing robust data management systems is vital for real-time monitoring of health indicators and effective resource allocation. These systems will track disease outbreaks and the impact of health interventions among refugees.

(5) *Community engagement and empowerment*: Involving Afghan refugees in the planning and delivering health services is critical to addressing their unique needs and improving service use. Engaging community leaders and networks can enhance health education, improve literacy, and promote preventive health behaviors among refugees.

Conclusion

In conclusion, this study underscores the critical need for a holistic and compassionate approach to healthcare for Afghan refugees in Pakistan, integrating Health-EDRM into the health system. The challenges highlighted through this research demand urgent action and collaborative efforts to ensure equitable access to quality healthcare for one of the most vulnerable populations. The recommendations offer a roadmap towards a more resilient, inclusive, and effective health system. As we move forward, it is imperative that all stakeholders, from policymakers to healthcare providers and humanitarian organizations, unite in their efforts to transform these insights into tangible improvements in the lives of Afghan refugees. In doing so, we uphold the fundamental right to health and affirm our collective commitment to humanity, ensuring no one is left behind in our pursuit of a healthier, more equitable world. To extend the results of this study to other areas of Pakistan, researchers would need to consider regional variations in health infrastructure, cultural norms, and economic conditions. Strategies include adapting the health interventions to local contexts, engaging local stakeholders in the planning and implementation phases, and conducting pilot studies in different regions to tailor approaches based on local needs and resources. The study's findings emphasize the need for policy reforms and community-centered approaches, which could be adapted to different contexts across Pakistan with local-specific adjustments.

Reflexivity statement

The authorship team consisted of eight males and three females, spanning multiple levels of seniority. While predominantly male, the team included individuals with extensive experience in humanitarian studies, MNCH, and health system research in LMICs, particularly in contexts involving vulnerable populations such as Afghan refugees. Recognizing the potential influence of gender imbalance on interpreting women's experiences, the research process actively incorporated strategies to mitigate bias. For example, female researchers designed the study tools, interviewed women participants, and analyzed gender-sensitive themes. This ensured that women's voices and perspectives were central to the findings. Additionally, the authors' long-standing engagement with Pakistan's refugee communities and established trust with regional health departments facilitated culturally sensitive and inclusive research practices. By leveraging the team's diverse expertise, the study prioritized an equitable representation of experiences to provide a holistic understanding of MNCH challenges in refugee settings.

Author Contributions

Conception or design of the work: Yasir Shafiq; Data collection: Yasir Shafiq, Saba Noor, Abdullah Jan, Ameer Muhammad; Data analysis and interpretation: Yasir Shafiq and Ameer Muhammad; Drafting the article: Yasir Shafiq and Ameer Muhammad; Critical revision of the article: Yasir Shafiq, Ameer Muhammad, Kantesh Kumar, Zabin Wajid Ali, Saba Noor, Zamir Hussain Suhag, Rehman Tahir, Abdullah Jan, Luca Ragazzoni, Francesco Barone-Adesi, Martina Valente. All the authors approved the final version of the manuscript before submission.

Ethical Approval

Ethical approval was obtained from the Segreteria Tecnico-Scientifica Comitato Etico Interaziendale di Novara (reference number: CE214/2022) and the National Bioethics Committee of Pakistan (Ref: No.4-87/NBC-843/22/559).

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SUPPLEMENTAL MATERIAL

Supplemental material for this article is available online: Qualitative Interview Guide and ISSM COREQ.

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