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Factors influencing access to primary healthcare services for refugee children under five in the Palestinian West Bank: a qualitative study with female caregivers

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ABSTRACT

Background Palestinian refugee children under five face social, economic and political challenges that may affect their access to primary healthcare (PHC) services. This study aimed to explore barriers to and facilitators of access to PHC services for refugee children under five in the north of the West Bank.

Methods This qualitative study was conducted from May to September 2025. Semistructured interviews were conducted to explore the views of caregivers of children under the age of five in three refugee camps in the north of the Palestinian West Bank: Askar, Balata and Camp No. 1. The interview guide was formulated and the results were synthesised on the basis of the adapted Availability, Accessibility, Acceptability and Quality framework with incorporated elements from Levesque's framework. The methods, procedures and field work were pretested before data collection. Data were collected through in-person interviews at social community centres within the refugee camps and analysed via deductive thematic analysis.

Results All of the 20 participants interviewed were female caregivers. Thematic analysis revealed 22 barriers and 13 facilitators across eight themes. The main barriers were service and medication shortages, safety concerns from military incursions and inadequate communication of information. The main facilitators were short distance to health clinics, autonomous decision-making and trust in provider competence and service quality. Other, less frequently mentioned barriers were crowdedness, long waiting times and preferential treatment favouring staff's personal acquaintances. Additionally, participants suggested a stronger social media presence to disseminate information about health and healthcare services.

Conclusions and recommendations Access to PHC services for children under five is limited by interruptions of services and medications, lack of safety and inadequate information. Humanitarian response strategies should maintain stable supply chains for paediatric services. Digitalisation of communication should rely on a participatory, user-centred design involving caregivers and be supplemented by official social media presence.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Access to primary healthcare (PHC) services among refugee children in Palestine is limited by intersecting political and socioeconomic barriers, exacerbated by the recent war and the fragile healthcare system. No study has examined access to PHC services for refugee children under five in Palestinian refugee camps.

WHAT THIS STUDY ADDS

⇒ The study identified service interruptions, medication stockouts, lack of safety and inadequate communication as major barriers. It also revealed major facilitators, including physical proximity to clinics, female autonomy and trust in providers and services.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ The findings emphasise the need for safeguarding funding for paediatric services and addressing the structural and political determinants of low access. Digitalisation of communication and information dissemination should rely on a participatory, user-centred approach.

INTRODUCTION

Primary healthcare (PHC) was progressively conceptualised throughout the twentieth century, culminating in the Alma-Ata International Conference on PHC in 1978.[1] This conference marked a milestone in global health by symbolising international collaboration around the development and maintenance of PHC.[1] This was reinforced later by Sustainable Development Goal 3, which emphasises health and well-being for all people across age groups and promotes universal health coverage (UHC) while accounting for the social determinants of health (SDHs).[2] The WHO describes PHC as 'a whole-of-society approach' that delivers continuous and integrated preventive, promotive, therapeutic, rehabilitative and palliative services.[3] These services should be inclusive of all people across all age groups, using health promotion, prevention, screening and early intervention as cost-effective measures.[3] Historically, the global attention to PHC as a first point of contact and a comprehensive, community-based approach has been premised on a rights-based perspective. Ensuring access to acceptable, high-quality healthcare is predicated on human dignity, as all people have a right to attain the highest possible standard of health without discrimination. This right is articulated in the Universal Declaration of Human Rights (UDHR) and the International Covenant on Economic, Social and Cultural Rights, which also implies that states should provide equitable access to medical services and ensure the social and environmental conditions that are necessary for a healthy life.[4]

Yet, the right to health in war-affected settings is almost always compromised by several challenges. Wars worsen health outcomes through inflicting physical injuries, affecting mental well-being and increasing mortality and morbidity from non-communicable and infectious diseases.[5–7] In part, these impacts are often caused by the collapse of the healthcare system and limited access to health services due to siege, restriction on movement and attacks on healthcare practitioners and facilities.[8 9] This impact is particularly profound for children under five, whose development, protection and psychological well-being are entirely dependent on their caregivers.[10] This vulnerability is further compounded in contexts where access to healthcare services is severely limited before the eruption of wars.

Notably, the detrimental impact of these intersectional social determinants is especially pronounced among Palestinian refugee children, who live in worse political and socioeconomic conditions than those living in rural and urban areas elsewhere in the West Bank, reflecting socioeconomic disparities within the wider Palestinian population itself.[11] Around 912 879 registered refugees live in the West Bank, representing 26.3% of the population and 15% of all Palestinian refugees worldwide.[12 13] Although education and literacy levels are similar across locations, refugees live in poorer conditions and have higher unemployment, poverty, food insecurity and fertility rates.[11 14] In 2022, population density in the West Bank was estimated at 563 persons/km^2, whereas it reaches up to 215 289 persons/km^2 in the most densely populated camp.[15 16] Overcrowding extends to housing conditions, with nearly 10.6% of camp households living in housing units with three persons or more per room compared with only 6.4% of households in urban areas.[14]

The Palestinian healthcare system comprises four main providers: the public sector, the United Nations Relief and Works Agency (UNRWA), non-governmental organisations and the private sector.[17] Access to health services across these providers is limited by shared challenges, including political instability, governance failures, and restrictions on mobility and supplies.[18 19] Palestinian refugees living in the West Bank and Gaza are mainly served by the UNRWA health insurance scheme, which provides a limited package of services across its fields of operation.[20 21] Among these services, UNRWA delivers comprehensive child-health programmes that begin with pre-conception and antenatal services and proceed through newborn assessment, growth monitoring and nutritional surveillance, immunisation, periodic child check-ups and referral to specialised care.[21] In 2024, more than 200 000 children under five used UNRWA services, excluding Gaza, with immunisation coverage exceeding 99% for key vaccines.[21]

Despite service availability, access to healthcare services among refugee children under five may be more restricted than that of the rest of the Palestinians due to their disadvantaged conditions. Worse still, recent intensification of political instability has trapped refugees in a vicious cycle of financial hardships and deteriorating health outcomes.[21 22] Since 7 October 2023, camps have been increasingly prone to frequent military incursions, with complete shutdowns of several camps across the West Bank.[22] This intensification has undermined the precarious funding and service delivery model of UNRWA.[23] At the outset, the insurance scheme is characterised by poor efficiency and complete reliance on volatile donor support.[23] The impact of this volatility is exemplified by funding suspension following allegations of political involvement in the 2023 Gaza War, compromising the availability of human and physical resources.[23 24] In addition, this insurance scheme provides a narrower package of services than that of the governmental health insurance benefits.[21]

Previous studies conducted in conflicts across settings have documented shared barriers to accessing health services, including healthcare infrastructure damage, workforce shortages, transportation-related barriers and disrupted availability of services, medicines and equipment.[25–30] However, Palestine represents a special case with peculiar conflict characteristics, social conditions and health system structures. Unlike the infrastructure destruction seen in recent acute conflicts, the Palestinian West Bank has been a location of a long-standing conflict, characterised by a protracted, moderate-intensity nature with episodic intensifications.[31] In practice, access to health services is shaped by a chronic context of fragmented geography, mobility-restricting legal system and quadripartite health governance.[31–33] Therefore, access to services in such a distinct environment is expected to be shaped by structural barriers rather than being a temporary byproduct of acute conflict.

Multiple reports have reflected limited access to health services among Palestinian children.[18 34–39] However, no previous academic study has explored these factors in-depth using a qualitative design appropriate for exploratory purposes and from a caregivers' perspective. Moreover, none has specifically targeted refugee children, as a vulnerable group with a distinctive health system, nor children under five, who have specific biological and developmental needs. The historical disparities in the social, economic and political conditions, compounded by the recent surge in political events, might have exacerbated the availability, accessibility, acceptability and quality of health services for children as a vulnerable group. This qualitative study aims to explore the factors influencing access to PHC services among children under five in refugee camps located in Nablus city from a rights-based perspective.

METHODS

Study design

This was a qualitative study conducted from May 2025 to September 2025 in three refugee camps in the north of the Palestinian West Bank. Semistructured interviews (SSIs) were used to explore the views of caregivers of children under five. The study adopted a constructivist/interpretivist paradigm, which posits that reality is subjective, multiple and socially constructed. It emphasises the intertwined roles of both the researcher and the participant in generating knowledge, recognising the influence of the researcher's background, values and reflexivity on the research process.[40] The Standards for Reporting Qualitative Research were used to guide reporting.[41]

Study settings

The study included participants from three camps in Nablus city: Balata, Askar and Camp No. 1. These camps share contextual features that shape daily life, including high population density and unemployment rates and lack of safety. Askar is the only camp served by two primary health centres, whereas each of the other two camps has one. With nearly 33 000 registered refugees, Balata is the largest camp in the West Bank and is known for its extensive, active and cohesive community organisations. However, it experiences high unemployment rates and frequent incursions that disrupt mobility and services. Poor infrastructure and random physical expansion influence privacy and restrict movement.[42] Second, Camp No. 1, home to nearly 9700 registered refugees, is the smallest of the three included camps yet the most densely populated camp in the West Bank. It is, however, the least prone to military incursions compared with the other camps.[16] Third, Askar camp is also densely populated, with approximately 24 200 registered refugees living within a confined area.[43]

Population and sampling

The study included only caregivers of at least one child aged 5 years or younger who were registered with UNRWA as refugees in any of the three main camps included in the study. Convenience and snowball sampling methods were employed. The sample was maximally diversified by ensuring participation from all camps, aiming for an equal number of interviews. Although adequate sample size is debated in qualitative research literature, sample saturation was defined as the absence of first-time use of any unused code from the predefined codebook in four consecutive interviews after a minimum of 15 interviews, regardless of the interview location. Participants were recruited through coordination with a social centre in Balata camp, a mothers' school association in Askar camp and the main UNRWA nursery in Camp No. 1, using in-person and digital methods. These institutions facilitated the dissemination of WhatsApp-based invitations via caregivers' group chats.

Framework

The interview guide and the result synthesis were based on the Availability, Accessibility, Acceptability and Quality (AAAQ) framework, which conceptualises access to services using a rights-based approach.[44] The AAAQ framework was adapted to suit the sociopolitical and cultural contexts of Palestine and to better answer the type of research question. Given that the AAAQ framework focuses on the supply side of health systems, it was complemented with contextual codes, in addition to elements from Levesque's Conceptual Framework of Access to Health, which is one of the most widely used frameworks in access research.[45] Particularly, a fifth analytical domain was added to describe the social and environmental condition of the demand side, including factors such as gender, autonomy and social responsibility. In addition, other elements were integrated within the four original AAAQ domains. These additions included health beliefs under acceptability, transportation under physical accessibility, insurance under financial accessibility and care coordination and continuity under quality. The adapted framework was developed and revised using iterative team discussions and was later pretested. The framework structure, adaptation process and sources of codes are detailed in figure 1.

Data collection

Data were collected through in-person interviews conducted in quiet, private rooms at social community centres within the refugee camps. An interview guide was developed on the basis of the adapted framework to explore barriers and facilitators of children's access to PHC services (online supplemental file 1).[46] A pre-prepared checklist was used to pretest participant recruitment and sampling, the interview guide, study conduct and data analysis.[47] Researchers received formal training on using the guide according to a validated curriculum. Interviews were conducted by two females and one male interviewers, all of whom held a medical degree but were neither refugee camp residents nor workers at any of the UNRWA facilities. The interviews were conducted face-to-face and audio-recorded via Apple Voice Memos.

Data analysis

Recordings were transcribed verbatim in Arabic within 72 hours of each interview. A deductive thematic analysis was conducted using a codebook developed on the basis of the adapted AAAQ framework. No codes emerged or merged during analysis. Issues related to

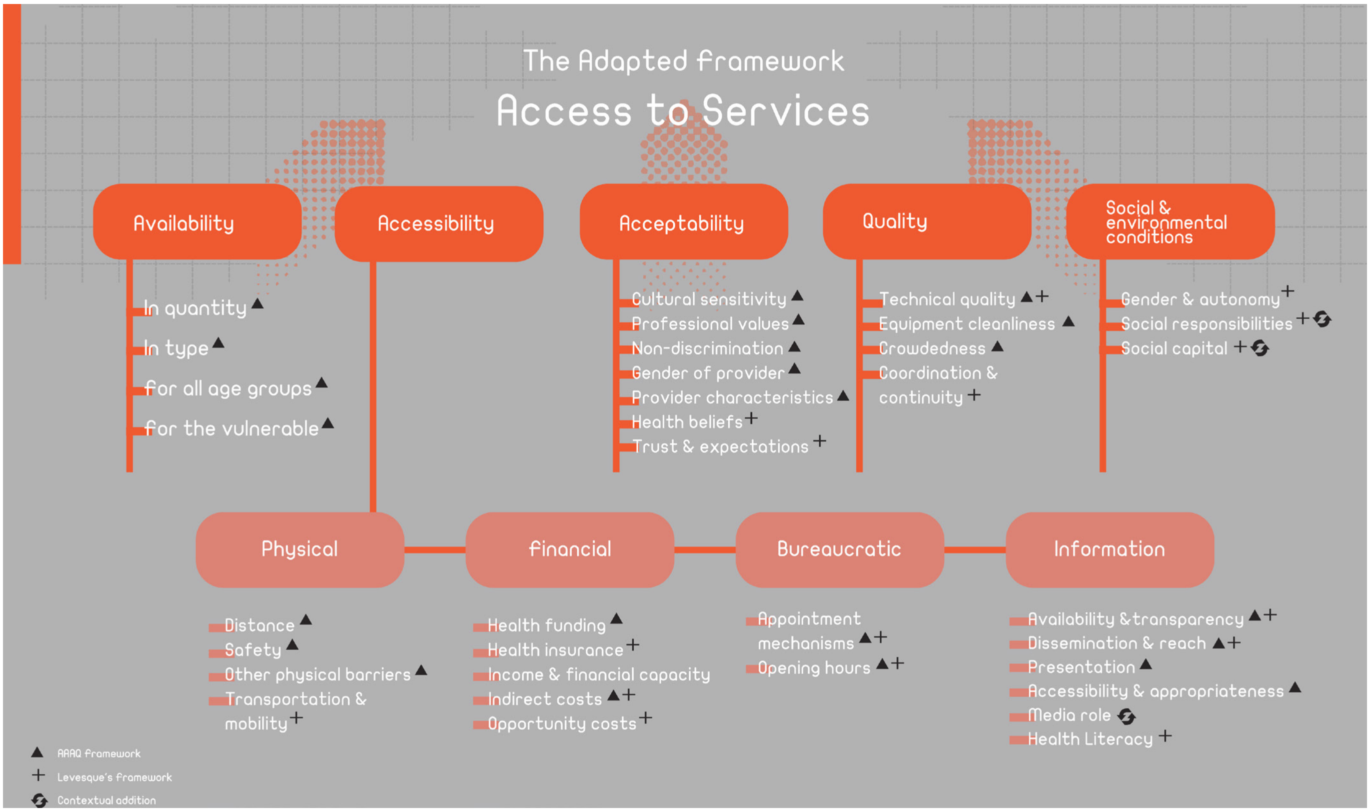

Figure 1 The adapted Availability, Accessibility, Acceptability and Quality (AAAQ) framework adapted with elements from Levesque's framework, with illustration of framework structure, adaptation process and sources of codes.

data coding and categorisation were discussed in team meetings and resolved by consensus. Data analysis started with data familiarisation, followed by descriptive coding that labels data with nouns or noun phrases.[48 49] A descriptive coding style is suitable for access research and ensures consistency across data sources. Codes were then categorised under corresponding themes in the adapted AAAQ framework.[49] Microsoft Word (V.16.78) was used to manually and independently code Arabic transcripts in English. Analysis was then cross-checked by two other researchers and disagreements were resolved by consensus among the two researchers or consulting other researchers when needed.

Study rigour and trustworthiness

For rigour and trustworthiness, the study followed Guba's principles:[50] transferability was enhanced by providing thick descriptions of the context, methods and participants and detailing clear limitations to enable assessment of applicability across settings. Dependability and confirmability were ensured through the maintenance of audit trails by each researcher, coupled with external reviews by independent researchers who had no involvement in the study. Credibility was supported by peer debriefing, using research journals for reflexivity, and triangulating investigators to cross-verify findings. These credibility methods were used to challenge and standardise interpretations across researchers, as researcher positionality might have been influenced by familiarity of the research team with the Palestinian context and the rights-based framing. Moreover, participants were informed that interviewers were not service providers to minimise social desirability bias.

Quality assurance

Multiple measures were implemented to ensure the quality of data collection. The research team was recruited through a competitive process to ensure competence based on academic qualifications, communication skills and research experience. All members speak the local dialect of Arabic, the language of participants, and they were familiar with the local political context and health-system characteristics, given their medical background. The research team received formal training on conducting interviews in a responsive, friendly, non-judgmental approach that allows flexible use of the guide. This was followed by pretesting the tools, sampling, recruitment and coordination procedures. Standardised transcription rules were developed to ensure consistency across transcribers. After data collection, audio-recordings and transcripts were audited for quality and accuracy.

Ethical considerations

The research was bound by respect for autonomy, including matters of voluntariness, informed consent, confidentiality and anonymity. Before obtaining written informed consent, the purpose, nature, procedures and potential risks and benefits were adequately explained

Table 1 Demographic characteristics of study participants

Characteristics	Category	Frequency (n)	Percentage (%)
Age	Mean=36 (years old); SD=12; range=24–48		
Gender	Female	20	100
	Male	0	0
Camp	Askar	8	40
	Balata	7	35
	Camp No. 1	5	25
Education level	Did not receive primary education	0	0
	Primary	5	25
	Secondary	8	40
	Undergraduate degree or above	7	35
Employment status	Employed	5	25
	Unemployed	15	75

to all participants, including voluntary participation and confidentiality. The names were deidentified in transcripts. Quotations were labelled with abbreviated combinations of site and anonymised participant identifiers, with BC, AC and NC referring to Balata, Askar and Camp No. 1, respectively. Interviewers were trained and guided to pause the interviews and follow the appropriate health and protection measures if signs of distress or safety risk were identified. However, no protection issues were encountered during the interviews.

RESULTS

Characteristics of participants

Saturation was reached after 20 interviews, as the final first-time code emerged in the 16th interview and no new codes were used in the four interviews thereafter. Of the 20 participants interviewed, all were female caregivers aged between 24 and 48 years old (mean=36; SD=12). Most resided within refugee camps, with only one participant living in a nearby urban location. Of those, eight were from Askar, seven from Balata and five from Camp No. 1. Over one-third of participants had an undergraduate-level of education (35%, n=7), while 25% (n=5) and 40% (n=8) had primary-level and secondary-level education, respectively. Most participants were unemployed (75%, n=15) (table 1).

Qualitative findings

Thematic analysis revealed 22 barriers and 13 facilitators across eight themes. The main barriers were the unavailability of some services and medications, the absence of safety resulting from military incursions and inadequate communication of health and healthcare information. The main facilitators were short distance to health clinics, autonomous decision-making in seeking care, and trust and satisfaction with provider competence and quality of paediatric services (table 2).

Availability

All participants reported that they had utilised healthcare services at UNRWA clinics. Participants were aware of the availability of most preventive and curative healthcare services, including immunisations, vitamins and iron supplements, growth and development monitoring, and treatment services. However, awareness of nutrition services was low, with only four participants mentioning them. Some services were frequently interrupted, especially the provision of vitamins and iron supplements.

Accessibility

Physical accessibility

All participants reported that clinics were geographically close and within walking distance. Yet, physical accessibility was often limited by frequent and unpredictable military incursions and associated lack of safety, pushing caregivers to postpone or cancel visits altogether. However, participants commended clinic staff for their organisational flexibility in responding to these frequent incursions, including involving patients in rescheduling appointments.

Economic accessibility

Although health services are free at the point of use, many families reported medication shortages (n=16), leading them to purchase medications privately. Participants noted that the ongoing war amplified medication-related costs by restricting UNRWA funding and reducing household income, making it even more difficult for them to afford medications when they were unavailable in the clinics. A minority of participants (n=6), however, reported that they were enrolled in alternative insurance schemes that entitled them to free medications.

Bureaucratic/administrative accessibility

Vaccination and routine check-up appointments were recorded in paper booklets, while outpatient consultations could be booked via same-day registration.

Table 2 Thematic analysis of the factors influencing access to health services among children under five*

	Code	
Theme	**Barrier**	**Facilitator**
Availability	► Age-inclusive availability	► Service availability in type ► Service availability in quantity
Physical accessibility	► Safety	► Distance and geographical location
Economic accessibility	► Income and financial capacity ► Opportunity costs	► Service funding model
Bureaucratic/administrative accessibility	► Appointments mechanism ► Opening hours ► Waiting time	► Appointments mechanism ► Opening hours
Information accessibility	► Information dissemination and reach ► Media role ► Information presentation	► Information availability and transparency ► Health literacy
Acceptability	► Cultural sensitivity ► Professional values ► Non-discrimination ► Gender of provider ► Provider characteristics ► Health and healthcare beliefs ► Trust and expectations	► Professional values ► Health and healthcare beliefs
Quality	► Technical quality ► Crowdedness ► Coordination and continuity	► Equipment/cleanliness
Social and environmental conditions	► Social responsibilities ► Living conditions	► Social capital ► Gender and autonomy

*Codes are derived from the thematic analysis based on both Levesque's framework and the AAAQ's framework for health access.
AAAQ, Availability, Accessibility, Acceptability and Quality.

Participants viewed these appointment mechanisms as clear, effective and easy to navigate. Only a few mentioned a recently developed phone app (n=4), citing usability issues, including difficulties in navigating and technical problems. Among those who did not know about the app, opinions were mixed—some preferred the conventional booking system while others believed that digitalisation can improve efficiency. In addition, opening hours (7:30–14:30) were generally acceptable but sometimes inflexible for working caregivers, often resulting in lost work time or missed appointments. Almost all participants cited subjectively long waiting times, extending to 4 hours, as a barrier to timely care.

Information accessibility

The participants' narrative reflected a pattern of obtaining general information on service availability, opening hours and locations from family and neighbours. Other specific details on services, such as vaccination schedule, follow-up mechanisms and health information, were mostly received through direct communication with clinic staff. One participant described this pattern by saying:

> We learned about health services from people around us: from relatives and from our surrounding community. But I think the staff is supposed to provide us with information, for example through Facebook or something, posting updates every once in a while… I wish they do so, but they don't. (AC-7).

Once contact with services is made, health information is communicated through three channels: face-to-face interaction, written information in the Maternal and Child Health Handbook and the phone app. However, the majority said they had not used the app for the reasons mentioned above. Of note, some suggested creating an official social media page to provide information about health and health services. A participant said:

> Because nowadays everyone uses these things, Facebook and Instagram and all that. At least they should be on Facebook, which is the most suggested option. I [wish] if there were an official page clearly posting announcements or something like that. (AC-1).

As an alternative source of information, participants (n=10) reported using search engines, social media platforms and/or artificial intelligence (AI) tools, particularly when they were not satisfied with the information received from healthcare centres. The most frequently mentioned AI tool used to obtain health information was 'ChatGPT' as described by a 25-year-old mother, "[I use] ChatGPT. I take photos of everything and send them. Yes, yes, I feel that it gives the correct information." (AC-2). Other participants reported using Google search engine and YouTube videos to seek missed information or answers to questions that had been inadequately addressed by healthcare providers.

Acceptability

Healthcare services were generally viewed as culturally acceptable and respectful of community norms, as providers were familiar with and sensitive to local traditions and family roles. The majority described staff as respectful, compassionate and professional and reported clear and easy-to-understand communication. Nevertheless, a few noted occasional lapses in respectful communication during a heavy workload (n=4). Some also mentioned occasions of preferential treatment in favour of individuals who personally knew staff and were allowed to bypass their turn (n=4), consequently extending the waiting time for other patients. A participant described an occasion of preferential treatment, saying: “an employee came to them and he told them, ‘I just need a medical consultation and I want to register and go in directly.’ and they agreed to do that, just because they knew him… It’s favoritism and connections.” (AC-5). Another participant described another type of gained benefit: “Sometimes, if [staff] know someone well, they take extra care of them. I mean, if he is their friend, maybe…maybe they might give him extra medications…and if the patient is his cousin, maybe they might give him even more.” (BC-3). Apart from these remarks, participants reported that waiting times were fair and based on turn-taking and that staff do not discriminate based on socioeconomic status or residence. Some participants described instances of mutual accommodation, where patients prioritised those with urgent needs or long travel distances.

Nearly all participants expressed a preference for senior healthcare providers. Concerning provider gender, the majority reported that they were indifferent to gender as long as the provider is competent, while a minority favoured male providers, who were perceived as more experienced and decisive.

Notably, all participants viewed vaccination as essential and indispensable. Trust in primary care providers for treating mild illnesses was common across participants, but many preferred private consultations for severe conditions, despite the financial burden, citing medication shortages and limited diagnostic capacity as main reasons. Beliefs about health and healthcare influenced health-seeking behaviours and trust in providers, as one mother said,

> He was crying, and they just examined him quickly and gave him only paracetamol. Later, when I took him to a private doctor, he said the child had an ear infection. I don’t know if the first doctor missed it or what. In the clinic, they usually avoid giving antibiotics unless it’s severe. (BC-3).

Quality

Most participants commended the quality of care, describing diagnostic and therapeutic practices as evidence-based and effective. They also described the centres as equipped for basic paediatric care, including adequate and clean equipment. In contrast, crowdedness was frequently mentioned as a barrier, with long waiting times being an associated source of frustration, especially on busy vaccination days and during seasonal illness peaks. Moreover, several participants reported frequent interruptions in internet connectivity (n=4), which occasionally delayed service delivery and extended waiting time. As one mother explained:

> When the internet goes down—may God spare you—it becomes a real problem. It cuts off a lot here, and since everything is digitalized, you just have to wait until the system reconnects. (AC-4).

While follow-up and referral systems were implemented, continuity of care was sometimes compromised by medication shortages. This often pushed families to either purchase medications privately or seek alternative private care altogether.

Social and environmental conditions

Social capital

Most caregivers indicated that detailed information about managing their children’s health and accessing child health services is first introduced by family members after marriage, particularly their mothers and mothers-in-law.

> My mother-in-law and my mother told me about this. We didn’t know about this when we were kids, but they told us. (BC-1).

Additionally, participants noted that social networks may provide financial support for seeking private care when UNRWA services were unavailable, although some mothers may feel embarrassed and reluctant to ask for financial help.

Gender, autonomy and social responsibilities

The interviews suggested that mothers are the main decision-makers. They are typically assigned the responsibilities of managing and following health matters, making decisions and accompanying their children to appointments, partly because husbands are usually at work during the day. Shared decision-making was more notable in matters needing therapeutic, outpatient consultation than in routine care, such as vaccination. While child health was framed as a domestic responsibility of mothers, participants mentioned other competing responsibilities and household duties that override non-urgent, routine appointments. As one mother explained:

> It’s very difficult, I mean, I have young children and the house is far away, so I'm saying I have to go there just for a drop or to weigh something, so that’s it. (AC-4).

DISCUSSION

Palestinian refugee children under five are prone to intersecting vulnerabilities resulting from adverse social, economic and political conditions.[11] These vulnerabilities may limit access to PHC services, especially since this age group is dependent on caregiver assistance. Therefore, this qualitative study explored factors influencing access to PHC services for children under five in refugee camps in the West Bank. The study identified major interrelated barriers: frequent interrupted services, medication shortages, lack of safety resulting from military incursions and unsatisfactory communication of health and healthcare information. On the other hand, geographical proximity, autonomy in seeking care, trust in provider competence and satisfaction with basic paediatric services were the most frequently reported facilitators.

While some barriers identified in this study are in line with findings from other global conflict zones, the mechanisms through which they manifest in Palestinian refugee camps are distinct. In many recent global conflicts, barriers to accessing health services were created by acute shocks resulting from direct damage during high-intensity warfare. In contrast, the barriers identified in the Palestinian cases probably predate the recent escalation and persist within a protracted framework of occupation and violence.[25 27 29 51–53] In both Yemen and Sudan, for example, attacks on personnel and the collapse of healthcare and transportation infrastructures often led to complete unavailability of services.[25 52 53] By 2019, half of health facilities in Yemen were still functional, while in 2023, only one-third were operational in Sudanese conflict zones.[25 52 53] However, disrupted supply chains for vaccines and essential drugs were frequently reported barriers across all these settings, including this study.[25 52 53] Geographical and financial barriers have also been commonly reported in multiple conflicts across Sub-Saharan countries, yet in a different way than in Palestine. In these contexts, the geographical barriers stem from the physical destruction of healthcare and transportation infrastructures and a lack of transportation means.[26 27] In Palestine, the geographical barrier, as described by participants, is not a product of the physical erasure of health facilities nor of the transportation routes thereto. Rather, this barrier was described as a consequence of unpredictable incursions superimposed on a context of long-standing mobility control within a condensed area compared with other conflict areas.

Frequent stockouts of essential medications, particularly iron, vitamins and other nutritional supplements, were reported as a major barrier, which aligns with UNRWA's annual reports. Hormones, vitamins and minerals accounted for 4.9% of total drug expenditure in 2022, but this dropped to only 1% in 2023 due to a resource shift towards emergency procurement following the war.[54 55] For young children, failure to address medication stockouts may increase the risk of several paediatric conditions, such as malnutrition, anaemia and developmental delays.[56–58] Stockouts forced caregivers to turn to private pharmacies, incurring out-of-pocket costs and rendering some services seemingly free yet not effectively available. This resulted in discontinuity of care and weakened financial protection, erecting a barrier to achieving UHC, which rests on comprehensive coverage, equitable service provision and sufficient financial protection.[59]

In addition to supply constraints, participants reported that frequent military incursions further limited access by undermining safety and mobility, pushing caregivers to postpone or cancel visits. In essence, the political instability and military actions seem to undermine the AAAQ elements of the right to health by reducing the availability of essential paediatric services and medications, impeding physical accessibility and compromising the quality and continuity of care. Frequent disruptions to safety, mobility, services and supplies also exacerbated financial hardship and undermined economic accessibility.

Particularly for children, these failures violate obligations under the Convention on the Rights of the Child, the amended Palestinian Basic Law of 2003 (Article 29) and the Palestinian Child Law No. 7 of 2004, all of which affirm the right to the highest attainable standard of health, including access to essential medicines.[60–62] Under international humanitarian law, occupying powers are obliged to safeguard civilian health and allow the provision of medical care, including safe passage for personnel and supplies.[63] Therefore, humanitarian contingency plans should insulate child services from political volatility by outlining a response strategy that prioritises timely procurement of essential paediatric medicines. In the short term, voucher schemes can mitigate the financial burden of stockouts by enabling families to obtain medications from private providers when public supplies fail, thus bridging the gap between service availability and financial protection.[64–66] In Yemen, voucher schemes were especially effective in improving access of a vulnerable population to reproductive health services.[66] This does not imply that such short-term solutions or a standard contingency plan would be a technical fix given the extraordinary political targeting of agencies, large-scale violence and erosion of legal norms. Because these reported shortages reflect political and structural violations of the right to health and not mere operational inefficiencies, donors and the international community should assume responsibility and uphold neutrality to ensure stable health funding for children.

Broadly, military incursions and service interruptions, as described by participants, can be framed as symptoms of a broader settler colonial structure that is embedded in long-term practices of forced displacement, population fragmentation, spatial sequestration and active violence.[67] This is manifested in the genesis and maintenance of the overcrowded biopolitical spaces in which Palestinian refugees live today, which originated in their forced displacement in 1948 and are sustained through ongoing spatial sequestration today.[68] Following their forced displacement, refugee populations experienced successive political and military events, including the occupation of the West Bank after the Six-Day War in 1967, the two uprisings in 1987 and 2000 and the recent escalation of events in 2023. Throughout this period, refugees were subject to settler colonial practices, which are a structure of protracted political domination and control that systematically shapes the socioeconomic and physical environment. Settler colonial practices represent a foundational SDH that explains and reinforces the impact of downstream SDHs, such as education, employment, poverty, access to healthcare and poor housing.[69] As highlighted by the WHO, such structural framing is key to understanding how political and military practices undermine children's right to health and create health disparities.[70]

Additionally, this study revealed a lack of official information sharing and reliance on informal, traditional methods. Participants also reported that information received from healthcare staff was sometimes inadequate. Effective communication and information sharing are essential for empowering caregivers to advocate for their needs, make informed consent, and participate in their children's care. The right to health information is articulated across several articles in the UDHR. As human rights are interdependent and indivisible, the UDHR represents a single, universal vision towards a common standard of achievement. Essentially, this right is emphatically articulated in Article 19, which affirms the freedom to seek, receive and impart information through any media. Articles 25 and 27 reinforce and complement this principle by emphasising the right to health and the use of scientific advancement in its fulfilment, while highlighting the entitlement of mothers and children to special care.

Addressing communication and information inadequacy, participants labelled usability problems in the app, including navigation and technical difficulties, and recommended creating social media communication channels. In light of the participants' preference for informal channels, their limited digital literacy and reported usability issues, improving communication needs a participatory, user-centred, multichannel approach that engages both caregivers and providers in all design phases to ensure that solutions are grounded in actual needs and experiences.[71–74] While this participatory recommendation was based on participants' experiences and needs that were articulated in this study, future studies should actively involve service users in research design and execution to better integrate lived experiences.

Importantly, the codesign process should adopt plain language, simple navigation, offline operability and repeated testing with end-users. Given the reported frequent interruptions in internet connectivity, offline-capable solutions should be prioritised to maintain access during these interruptions. *Shifra* provides an example of a successful application developed through participatory codesign to deliver health information to refugee populations, combining offline operability and icon-based, simplified navigation.[75] Another approach to overcome limited digital illiteracy is meeting users on their preferred platforms, such as WhatsApp, which has been used successfully in conflict settings such as Syria and Yemen.[76–79] This is especially suitable to conflict settings because such an approach relies on low cost and functionality with limited internet connectivity. To ensure inclusion of those with limited digital access and skills, these digital approaches can be complemented by print materials, such as health leaflets and the Mother and Child Health Handbook.

Participants also mentioned that they had been increasingly using AI-based tools, such as ChatGPT. However, reliance on such tools may introduce risks related to privacy and inaccurate information, especially since generative AI tools may provide responses that can be difficult to verify and interpret.[80] The participatory design and social media strategies should address these privacy-related and information-related risks in the development process, especially when AI-related elements are integrated.

Despite these barriers, participants reported several facilitators. First, autonomy regarding seeking care was devoid of gender-based restrictions, although the study might have missed households where fathers play more prominent roles in childcare due to the limited sample size. Second, most participants lived within walking distance of health facilities, mitigating mobility-related barriers. However, this might not apply to residents of other refugee camps in the cities of Tulkarm and Jenin where tens of thousands of residents had been displaced elsewhere.[81] Third, most participants viewed healthcare providers as competent and the quality of services as adequate. Overall, these facilitators lend a foundation upon which the structural barriers can be improved.

Strengths and limitations

This study has several limitations. First, transferability is limited because it was conducted in three refugee camps in the north of the West Bank. This is due to the safety concerns and severe restrictions imposed on mobility in the recent war, limiting accessibility to refugee camps in other cities. However, the included camps are among the largest in the West Bank, hosting nearly 70 000 refugees.[16 42 43] These camps share cultural and demographic characteristics similar to other camps across the West Bank but may differ from those in neighbouring countries. Still, transferability might be limited to the camps that have been shut down and whose residents were displaced during the war. Second, only females could be interviewed despite the repeated attempts to recruit male caregivers through the same channels used for female recruitment. While this limitation may be partly ascribed to their daytime work, it reflects a prevailing norm whereby females are assigned childcare responsibilities and are, therefore, more available and interested to participate. Males should be recruited in future studies to triangulate female perspectives, especially in relation to employment, gendered expectations and patient-provider interactions. Moreover, the sample might have missed caregivers who could not participate due to social or professional responsibilities, or were not invited because they do not attend the social centres through which participants were recruited. Inclusion of healthcare providers was also constrained by logistical and organisational barriers. This is further complicated by the use of snowball sampling in which selection bias may result from recruiting participants with similar experiences and complaints, potentially influencing the findings by masking alternative perspectives across families and camps. Furthermore, the study did not collect child-related characteristics, which limited the ability to explore differences in access patterns among subgroups of children. Importantly, integrating children's perspectives could have enriched the findings by providing insights into their perceptions of safety, emotional well-being and healthcare encounters. Alternatively, caregiver voices may emphasise protection, responsibility or services over emotional experiences. Nevertheless, this study is the first to explore factors influencing access to healthcare among Palestinian refugee children, providing an evidence base for policies and humanitarian interventions. Through its methodology, analysis and interpretations, the study offers a comprehensive explanatory model that situates access within the realities of war and broader political structures. Its contextual sensitivity is further reinforced by adopting a rights-based framework and linking lived experiences to international legal and health standards. From a health-management perspective, the present qualitative analysis serves as a tool to generate hypotheses for subsequent quantitative assessment and informing service planning.

CONCLUSIONS

Palestinian refugee children under five face social, economic and political challenges that may affect their access to PHC services. This study used SSIs to explore factors influencing access to PHC services for these children in the West Bank. Repeated interruptions of services and medications, compromised safety and suboptimal communication of health and healthcare information were the major barriers. The major facilitators were physical proximity to clinics, autonomy in seeking care for children and trust in provider competence and services. Humanitarian response strategies should shield child health services from political volatility and maintain stable supply chains for essential paediatric medications. Responding to communicative gaps requires a participatory and user-centred approach, where both caregivers and providers are involved in design and testing. This app should be complemented by official social media pages, given the popularity of online communication. Moreover, these social media and app recommendations should consider offline components, given the reported internet outages. Addressing these structural and communicative barriers is key to realising children's right to health and to enhancing progress towards UHC.

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