

Barriers to accessing maternal and newborn care: a qualitative study in district Thatta, Pakistan

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Abstract

Background: Accessibility and utilization of health care play a significant role in preventing complications during pregnancy, labor, and the early postnatal period. However, multiple barriers can prevent women from accessing pregnancy and neonatal care. The aim of this study was to explore the multifaceted barriers that inhibit women to seek maternal and newborn health care in Thatta, Sindh, Pakistan.

Methods: This study employed an interpretive research design using purposive sampling approach. Pre-tested semi-structured interview guides were used for data collection. The data were collected through eight focus group discussions with men and women, and six in-depth interviews with lady health workers and analyzed through thematic analysis.

Findings: The study identified individual, socio-cultural, and structural level barriers that inhibit women from seeking maternal and newborn care. Individual barriers included: mistrust towards public health facilities, and inadequate symptom recognition. The two identified socio-cultural barriers were: aversion to biomedical interventions, and gendered imbalances in decision making. The structural barriers included: prohibitively expensive transportation services, and ineffective referral systems.

Conclusion and Suggestions: Increasing the coverage of healthcare service without addressing the multifaceted barriers that influence service utilization will not reduce the burden of maternal and neonatal mortality. As this study reveals, care seeking is influenced by a diverse array of barriers that are individual, sociocultural, and structural in nature. A combination of capacity development, health awareness, and structural interventions can address many if not all of these barriers.

Plain English Summary

Thatta is a rural district in the province of Sindh, Pakistan. Presently, the district has the highest reported maternal and neonatal health indicators across all LMICs. The last decade has seen concerted efforts to improve these indicators by enhancing access to health services through public private partnerships in the health care sector. Despite these efforts, progress has been stagnant, and services remain unused. To date, no study has provided an in-depth account of what stops individuals from utilizing health services in Thatta.

Addressing this gap, this paper seeks to depict the barriers that prevent people from using health care services in Thatta. To do so we use an inductive approach that incorporates semi structured interviews with LHWs and focus group discussions with men and women. Our study reveals six core barriers that inhibit service utilization; mistrust towards public health facilities; inadequate symptom recognition; aversion to biomedical interventions; gendered imbalances in decision making; prohibitively expensive transportation services; and ineffective referral systems.

In conclusion, we assert that enhancing service coverage without addressing these barriers will not adequately improve health indicators. Instead we recommend these barriers be tackled through a

combination of capacity development, health education, and structural interventions.

Introduction

Globally, about 85% of obstetric complications occur during labor and the early postnatal period(1). The World Health Organization points out that nearly 75% of maternal deaths caused by pre-eclampsia, sepsis, severe bleeding, unsafe abortion, and complications in childbirth can be prevented by providing high quality antenatal care, skilled attendance at birth, and timely referrals(2). Together these interventions make part of the World Health Organization (WHO) birth preparedness and complication readiness strategy for low and middle income countries (LMIC) (3). However, despite their efficacy, these interventions are yet to be successfully implemented in Pakistan, a country with the third highest burden of maternal, fetal, and child mortality in the world (4). Research from the country indicates that antenatal care is inadequate in coverage and quality; it is estimated that only 51% women receive antenatal care in Pakistan. Furthermore, the content of antenatal counselling fails to include numerous important facets relating to maternal and newborn health (5). For instance, according to a national survey, only 45%, 47% and 64% women reported receiving counseling on: early initiation of breastfeeding, exclusive breastfeeding, and nutritional needs during pregnancy, respectively. In addition, the same survey also reports that only 62% women in Pakistan delivered their baby in the presence of a skilled provider.

Health services utilization is particularly poor in rural areas of Pakistan where 41% of deliveries take place at the home and 38% are assisted by unskilled birth attendants(6). Moreover, pregnant women in rural Pakistan ignore obstetric care, (7) avoid consuming micronutrients, (8) and refuse vaccination against neonatal tetanus (9, 10). These factors could explain why maternal and neonatal health indicators are significantly worse in rural areas of the country. The prime example of this comes from the district of Thatta where the maternal (313/100,000 live births), neonatal (50.0/1,000 live births), and perinatal (95.2/1,000 births) mortality figures are the highest across low-middle income countries (11, 12). This trend is occurring despite concerted efforts by the government to improve the quality, coverage, and demand for health care services in rural Pakistan through the formation of public-private partnerships (13).

Research from LMIC indicate that poor health service utilization could be related to the presence of certain cultural beliefs which impact maternal and newborn health seeking behavior (14–16). Studies from African and South Asian countries show that traditional belief systems, religious beliefs, and gender power dynamics play a role in hindering women from accessing and utilizing services (17). These behaviors can lead to poor compliance of antenatal and postnatal care(18), poor nutritional habits (19), home deliveries (20), lack of thermal care, and delayed initiation of breastfeeding (21).

Despite this mounting evidence, no study to date has conducted and in-depth exploration of the multi-faceted barriers to maternal and newborn health service utilization in rural Pakistan. Previous studies have determined the rates of service utilization without exploring the socio-cultural determinants of health seeking behavior (22–24). Addressing this gap, we designed this interpretive study to interact with

both community members and health care providers to identify the multifaceted barriers to health service utilization in rural Pakistan.

Methods

This study was conducted in Thatta, a rural district in the southern province of Pakistan and is categorized in the low human development index strata (25). We purposively selected this district as it reports the highest maternal and neonatal mortality across low- and middle-income countries(11,12). Considering the dearth of literature regarding barriers to accessibility and utilization of maternal and newborn health care in rural Pakistan, we employed a broad-scope interpretative study. Through this process we utilized in-depth interviews and focus group discussions (FGDs).

Study Participants

To get a broad perspective we included three categories of respondents: married men, married women of reproductive age, and lady health workers (LHWs) from lady health workers program (26). The criteria for recruiting men and women stipulated that they have at least one child under the age of five years. This ensured a strong recall of their pregnancy experience. In addition, we selected LHWs with a minimum of five years of experience working within the district.

Interview guides development

A semi-structured guide was initially developed for our in-depth interviews with LHWs. This guide was formulated after an extensive literature review using different keywords related to the determinants of health service utilization in LMICs. Following data collection with LHWs, we used the results to develop a two further semi-structured interview guides for FGDs with men and women. All interview guides were pilot tested in an adjacent district before data collection and were updated periodically as we learned more about the community. The major sections of the guides related to: perception on health facilities, health seeking practices, and social constraints. These themes had several probing statements to further explore health service utilization.

Data collection

Data were collected from March to July 2019. In total we conducted six in-depth interviews with LHWs, four FGDs with men and four FGDs with women (see table 1). During the first phase of the study, we conducted the in-depth interviews with lady health workers. The interviews were conducted face-to-face in Urdu at the local health facility by the first author (MA). After completing the in-depth interviews, we used the results to refine our semi-structured interview guide for FGDs. We then commenced the second phase of data collection which included male and female FGDs. All FGDs were conducted at a convenient location mutually agreed on by all participants. Each FGD session hosted 6-7 participants and was moderated by the first author (MA) with the help of two research assistants.

In-depth interviews lasted between 20 and 30 min, and focus group discussion lasted 40 to 50 min. All interviews and discussions were audio recorded and accompanied by written field notes. A debriefing session followed each interview and discussion to resolve any discrepancies in interpreting findings. Data collection was ceased upon reaching information saturation.

Ethical consideration

The ethics review committee of Aga Khan University, Karachi, Pakistan [AKU-ERC-2020-0479-8902] approved the study protocols of the Rural Health Program of the Department of Community Health Sciences that enable us to design this study. Moreover, verbal informed consent was obtained from all the study participants before conducting interviews.

Analysis

All the recorded interviews were transcribed verbatim by the first author into the English language. The transcribed interviews were counter-checked with written notes by two research assistants to ensure the data quality of transcripts. The inductive method was used to formulate the study themes (see fig.1); this approach refers to a detailed reading of raw data to derive concepts, themes, and interpretations of the participant's responses (27). A thematic analysis was carried out manually to analyze the data. A list of major themes was identified after detailed reading of transcripts of in-depth interviews and focus group discussions and field notes by the three co-authors (MA, ZHA, and SS). Interviews with health care providers, women and men were analyzed simultaneously for understanding and triangulation the study findings. Following this, data were filtered from the written notes 'meaning units' and labeled with a 'unique code' without losing the study context and respondent's identities. Codes were then analyzed and assembled into categories to capture the manifest meaning. During the analysis of data, new sub-themes also emerged from the main themes as unexplored new knowledge about the community (fig.1). We analyzed the data by utilizing the sociological approach and organized the themes into three broad categories such as: (1) individual, (2) socio-cultural, and (3) structural level barriers. To ensure the authenticity of the findings, the data were triangulated by multiple data sources (health care providers, men, women, and field notes) and data collection methods (FGDs and IDIs) to compare alternative perspectives and minimize the chance of any misleading information.

Results

Based on our analyses we identified three broad categories of barriers impacting the utilization of maternal and newborn healthcare services. These were conceptualized through the socio-ecological framework as individual, socio-cultural, and structural level barriers (figure 1). These findings were divided into further subthemes and are presented below. The background characteristics of lady health workers are illustrated in table 2. The socio-demographic characteristics of community participants are presented in table 03.

1. Individual barriers

Individual barriers refer to the personal beliefs and attitudes held by individuals that impact their ability to utilize health services. These included: mistrust towards public health facilities and inadequate symptom recognition.

Mistrust towards public health facilities

Both public and private health facilities are available within district Thatta. The public health facilities present in the district include: district hospitals, rural health centers, basic health units and dispensaries. In addition, several private hospitals and clinics also provide pregnancy and delivery care services to women. While many participants were keen to receive free treatment from public health facilities they did so as a last resort and often cited the poor treatment they received

“We are poor and so we visit public health facilities to get free treatment. However, we face long waiting times, and the doctors treat us very poorly. Imagine waiting for four hours and then the doctor only gives you 30 seconds of his time” (Men, 34 years, FGD).

It is likely that repeated cases of poor treatment have made individuals skeptical of the intentions of the staff. This was illustrated by a female respondent who felt that the hospital was sabotaging her attempts to get an ultrasound

“I went to a public health facility for an ultrasound. The staff told me that the machine was not working, and I had to come again. Later, I found out that they are not operating the machine because the operator had decided to leave work early (Woman, 29 years, FGD).

Further building on this notion of skepticism a male participant highlighted his views on the medication dispensed at public health facilities

“No matter what illness you go to the public hospital for they give you the same medication. Hypertension...diabetes...stomach pain it is the same medicine every time. What is worse is that these medicines don’t work. When we go to the private clinic, we get a different medicine and it always works” (Woman, 29 years, FGD).

These excerpts indicate that the residents of Thatta are reluctant to use public health facilities due to repeated experiences of inadequate service delivery. It is likely that these experiences have created a notion of mistrust which has further exasperated the issue of service utilization.

Inadequate Symptom Recognition

Inadequate symptom recognition was another individual level barrier to service utilization. In short, this refers to the inability for mothers to recognize complications in their early by ignoring bodily signs. This is illustrated in the account provided below

“My face and hands were swollen for weeks and I was having headache and abdominal pain, but I thought it was nothing and just a part of pregnancy. It was only after my body starting shaking that I

went to the hospital” (Woman, 24 years, FGD).

By not being in the habit of recognizing symptoms women often neglect routine visits to the hospital and only to seek the doctor in case of a severe emergency. This was indicated in the account of a LHW who stated:

“Women do not go to any doctor or any clinic during pregnancy. They only go when something severe happens such as bleeding. They (pregnant women) take abdominal pain and headaches as a routine part of life and ignore them” (LHW, 48 years, FGD).

These results indicate that the inability to recognize illness symptoms along with an attitude that positions doctors as last minute saviors prevents service utilization in Thatta.

2. Socio-cultural barriers

Socio-cultural barriers refer to certain man-made constructs that stem from cultural norms and values. While these constructs need not be universally held by all members of society, they exert their influence on health seeking behavior and service utilization. In this study we identified two such barriers: aversion towards biomedical interventions, and gendered imbalances in decision making.

Aversion to biomedical interventions

Many respondents held the view that all forms of biomedical interventions have certain side effects. They felt that while in the short run these interventions may alleviate symptoms, in the long run they would cause other complications. In contrast, they felt that home remedies were ideal as they would address the underlying problem without causing any side effects. This was illustrated by a man having five children who stated:

“The local cure (Desi Ilaj) is always the best approach. If you take these medicines and injections, you will be worse off than you were. They (doctors) fix things in the short term. Using herbs such as Kalonji and Moringa are best” (Man, 48 years, FGD).

As a possible result of this belief, our interviews revealed that pregnant women rarely take advantage of nutritional supplements such as: folic acid, vitamins, and iron pills that are provided free of cost by the LHWs and at the time of antenatal visits.

“During our door to door visits, we provide free folic acid and iron tablets. Pregnant women usually refuse because they think the micronutrients will cause pregnancy complications” (LHW, 37 years, IDI).

When we questioned pregnant mothers on their reluctance to use vitamins and supplements, they highlighted that these pills would abnormally increase the size of their fetus and eventually cause a difficult delivery. According to a woman:

“Vitamin pills increase the size of the fetus. Since they have started giving us these pills, we are having to deliver our babies through cesarean. I cannot afford such a complicated delivery, I have no money” (Woman, 39 years, IDI).

The aversion towards biomedical interventions was not limited to vitamins and supplements. Our interviews also revealed that mothers were hesitant to get vaccinated against tetanus injections. In particular, they felt that the vaccine would result in miscarriages and stillbirths.

“We should not be vaccinating pregnant mothers. Their bodies cannot take what is in these injections. I will only get vaccinated in the 7th month of my pregnancy because it will cause an abortion in the first two trimesters” (Woman, 29 years, FGD).

To sum up, many commonly held practices such as dietary supplementation and vaccination that are considered essential to maternal and newborn health are not practiced in Thatta. Instead pregnant mothers and their families show an apprehension towards biomedical interventions and associate them with negative consequences.

Gendered imbalances in decision making

Our research revealed gendered differences in selecting the place of delivery. For example, all the interviewed men preferred home deliveries, whereas most of the women aspired to deliver their babies at health facilities. Primarily, males preferred to have their children delivered at home for financial reasons.

“I prefer that my wife deliver our child at home because the Dai charges only 500-1,000 rupees. If I were to take her to the hospital, I would have to spend close to 10,000 rupees for a routine delivery and more in case of any complications (Man, 48 years, FGD).

Building on this point another man stated:

“I will try and have the baby delivered at home and if there are any complications then I will rush my wife to the hospital” (Man, 40 years, FGD).

In contrast to male respondents, women emphasized the importance of safeguarding the health of their child and depicted a preference for institutional deliveries. According to one mother:

“I would like to deliver all my children at the hospital. The medicine, injections and trained staff that are available at private health facilities are better than what we get from TBAs at home” (Woman, 33 years, FGD).

Our research also indicated that many women are unable to exert their influence on this vital decision. Despite desiring to deliver their babies at medical institutions, they face resistance from their husbands who exert their authority.

“Many women confide in me that they would like to deliver their children at the private hospital, but they are not permitted. They ask me to speak to their husbands. Sometimes they listen but usually the man refuses” (LHW, 45 year, IDI).

Similarly, another woman reported

“I have had a really big argument with my mother-in-law and my husband over the delivery of our second child. I want to go to the private medical clinic, but they will not let me. They say that it is too expensive and ask me why I should get special treatment” (Woman, 40 year, FGD).

Despite having a strong desire to utilize health services, many women are prevented from doing so. This occurs through a combination of financial constraints and uneven power relations.

3. Structural barriers

Structural barriers refer to the presence of macro-level factors such as policies, practices, and procedures that prevent people from accessing health services. In our study we identified two such barriers: prohibitively expensive transportation services, and ineffective referral systems.

Prohibitively expensive transportation services

Both men and women pointed out that they were unable to access care during pregnancy because of prohibitively expensive transportation services. While the basic health unit is located in close proximity to rural residents, patients are often referred to the district hospitals for scans and treatment. These can be located 20-100km away from these villages. With no public transportation facilities present, patients must hire private transportation services which are costly. This point was highlighted by a man who stated:

“When I go to the field to sell my labor, they pay me Rs.400 for the day. If I have to transport my wife to the district hospital it will cost me Rs. 1500. These are nearly my wages for the whole week (Man, 40 year, FGD).

In many cases families have to sell off important assets in order to afford access to basic services. According to one woman:

“When we found out that our child was positioned the wrong way, we knew that this would be a complicated delivery and that we would have to make many visits to the hospital. In anticipation my husband sold one of our goats so that we could have some money to make arrangements” (Woman, 32 years, FGD).

The responses from these interviews indicate that despite the presence of clinics and government hospitals, pregnant women in Thatta are not able to access services due to expensive transportation services.

Ineffective referral systems

The basic health unit located in close proximity to the village serves as the first point of contact with the health system. It is from the basic health unit that patients are referred to other health facilities based upon their needs. However, due to a lack of coordination between different levels of health facilities, patients are often left frustrated and eventually opt for home-based care. According to a mother:

“When I went to the basic health unit, I was referred to the district hospital for ultrasound scan. We took four days to arrange money for my visit and when we reached the hospital, we were told that they had not functional ultrasound machine” (Woman, 32 years, FGD).

Further highlighting this point, a man shared his experience:

Whenever the basic health unit refers us to a doctor he is not present. We make arrangements for transportation and accommodation only to find out that these services are unavailable. At the end it is best to just opt for home care (Man, 32 years, FGD).

To conclude, our interviews indicate that a lack of coordination between various levels of health facilities leads to a weak and ineffective referral system. This leads to a highly frustrating experience for patients and eventually poor service utilization.

Discussion

To our best knowledge, this is the first study that explores the multifaceted barriers pregnant women face in utilizing maternal and newborn healthcare services in Thatta, Sindh. To this end, we used an interpretive methodology to identify the individual, socio-cultural, and structural level barriers that inhibit maternal and newborn health services utilization. The individual barriers unearthed by this study included: mistrust towards public health facilities and inadequate symptom recognition. The identified socio-cultural barriers were: aversion to biomedical interventions, and gendered imbalances in decision making. Lastly, the identified structural barriers were: prohibitively expensive transportation services, and ineffective referral systems (Figure 1).

Individual barriers

Our interviews reported that mothers have a trust deficit towards public health facilities. They cited the apathetic attitude of staff and poor service delivery as major reasons for avoiding these facilities. This finding is consistent with a national survey which reported that only 32.6% of patients attend public health facilities in Pakistan (23). Different studies have also pointed out that private health facilities are preferred in Pakistan due to better facilities and quality of care (24–26). Similarly, Mahrooj et. al. identifies deficiency of facility resources, indifferent attitude and non-availability of the staff as factors that lead to poor antenatal uptake at public health facilities (5).

Our study also indicates that women in Thatta show inadequate symptom recognition. They are unable to detect the presence of pregnancy complications in their early stages. It is only when these symptoms reach acute proportions that they are galvanized into seeking care. Studies from South Asia point to several reasons for this including: distance to health facilities, societal negligence of women's health, and lack of decision-making power. While all of these factors may be pervasive, our study indicates that the distance to the health facility may play a role in delayed symptom recognition. For example, the closest health facility to a village is the basic health unit (28). Studies from rural Pakistan report that basic health units have limited facilities and are staffed by apathetic healthcare providers (29,30). Therefore, in order to get quality treatment, women either go to a private clinic or travel to the nearest city (29). According to our interviews, both these choices are prohibitively expensive. Therefore, it is possible that women may downplay their symptoms and avoid a financial loss by seeking care only in acute situations.

Sociocultural barriers

A large proportion of our respondents were apprehensive towards biomedical interventions. They reported that in comparison to local remedies, biomedical interventions cause negative effects. In particular, they were averse to availing micronutrients and vaccinations citing that both may cause pregnancy complications. Vaccinations for neonatal tetanus is low in Pakistan and according to a national survey, only 48% of rural women were protected against neonatal tetanus in Sindh (29).

To understand this phenomenon, one must take into account that biomedicine is one of several concurrently running medical systems in the region. Biomedical explanations must compete with accounts coming from: Ayurvedic, Unani, and Indian medicine influences (31). In all medical systems other than biomedicine illness arises from a disbalance in the body's humoral fluids, which causes excessive heat or coldness within the body(32). From the perspective of a medical practitioner, a vaccine or nutritional supplement is boosting the body's immunity. However, from the perspective of a rural mother influenced by Ayurvedic or Unani medicine, the same supplement could be disbalancing the body and producing excess heat. This can explain why some mothers associate micronutrients and vaccines with pregnancy complications.

Our interviews revealed that male respondents preferred to deliver their children at home whereas female respondents were inclined towards having deliveries at private medical institutions. However, in most cases it was the will of the male that prevailed as deliveries took place at home. This occurred because private health facilities are prohibitively expensive for rural families and males exerted their agency to push their wives towards delivering children at home. This finding is consistent with data from Pakistan which indicates that 41% of deliveries in rural areas take place at home (6). Similarly, Mcnojia et al. also cite that husbands restrict wives from visiting doctors during pregnancy in Thatta, Sindh(33). A reason for this phenomenon may stem from the fact that conventional gender norms in Pakistan dictate that men are responsible to financially provide for the family (34) . As a result, they hold the final authority on most economic decisions.

Structural barriers

Our respondents indicated that getting patients to the hospital was a significant barrier to health service utilization. This was because in all cases patients had to arrange private transportation for routine check-ups. In addition, essential equipment for pregnancy check-ups such as ultrasound machines are only present in district level hospitals which can be located anywhere between 20 to 70 km from rural villages (33). The average cost to arrange a private vehicle across this distance in Thatta is 2000 rupees (13US\$) for a round trip. Given that the average daily income for a household is 500 rupees (3US\$) this cost is likely too much to bear and results in missed appointments.

A poor referral system serves as a further disincentive to service utilization. As indicated above, arranging transportation is an expensive and difficult task for most rural households. The first institutional contact for an individual living in a rural area is the basic health unit from where expecting mothers are referred to a larger facility such as a hospital for more sophisticated treatment (35). As indicated above, many of these facilities are located far away and require costly transportation arrangements. Our research indicates that despite making these difficult arrangements, patients are not able to get the care they need. This occurs because of numerous gaps within the referral system. For example, our interviews revealed that patients were not able to complete their referral visits due to: defunct equipment, absent doctors, and unplanned facility closure. Better coordination between different levels of institutions within the referral system can ensure that this information can be shared with patients beforehand. This would prevent the wastage of resources and would ensure that patients are not discouraged from seeking care at public health institutions.

Our qualitative data had limitations due to the fact that participants were purposively selected, and they shared their personal experiences about seeking care. By its very nature, our sample has limited external validity which prevents us from making inferences about the whole population. Although our findings, based on a limited purposive sample, are consistent with the findings of numerous studies using greater sample size, further research with higher external and internal validity would be greatly desirable.

Conclusions

The rural district of Thatta located in Sindh, Pakistan has the worst maternal and newborn health indicators across all LMICs. Moreover, this phenomenon is occurring at a time where more resources are being put towards increasing health services in the area. Research indicates that maternal-newborn health is highly influenced by multifaceted barriers. However, to date no study has provided an in-depth understanding of what prevents health service utilization in Thatta. Using an interpretive research methodology based on in-depth interviews and focus group discussions we unearthed six barriers that were individual, sociocultural, and structural in nature. The individual barriers identified in this study can be addressed through a combination of capacity development and health education sessions. For example, a training program emphasizing empathetic care and supply chain management would address the trust deficit many patients associate with public health facilities. At the same time the content of health education sessions can be adjusted according to the findings of this study so that mothers can have better symptom recognition and more autonomy over health-related decisions. Moreover, these sessions

could also be used to address the sociocultural barriers identified in this study. An emphasis can be placed on highlighting the benefits of supplements and vaccinations and negative beliefs associated with their consumption can be clarified. Lastly, a well-coordinated referral system and a network of subsidized ambulance services would address the structural barriers of this study and put public health facilities within the reach of patients.

Abbreviations

AKU: Aga Khan University; ERC:Ethic Review Committee; FGD:Focus Group Discussion; IDIs:In-depth Interviews; LHW:Lady Health Worker; LMIC:Low and middle income countries; TBA:Traditional Birth Attendant; TT:Tetanus Toxoid; WHO:World Health Organization

Declarations

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Authors' contributions

MA and SS conceptualized and designed the study. MA and SS oversaw data collection. MA, IN, and FA conducted data analysis. MA, ZHA prepared the first draft of the manuscript. ZHA, SS, SS and ZF reviewed the manuscript several times and provided critical feedback. All authors (MA, ZHA, SS, IN, FA, ZF and SS) read and approved the final version of the manuscript.

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Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Ethics approval and consent to participate

The ethics review committee of Aga Khan University, Karachi, Pakistan [AKU-ERC-2020-0479-8902] approved the study protocols of the Rural Health Program of the Department of Community Health Sciences that enable us to design this study. Moreover, verbal informed consent was obtained from all the study participants before conducting interviews. Voluntary participation and the right to ask any questions and to decline participation at any time were emphasized during the data collection.

Consent for publication

Not applicable

Competing interests

The authors declare that they have no competing interests.

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Tables

Table: 1 Study participants (n=60)

Stakeholders	Total Interviews ¹	Total FGD ² participants	Total Participants
Women	-	28 (4 sessions)	28
Men	-	26 (4 sessions)	26
LHW ³	6	-	6
Total3	6	54 (8 sessions)	60

¹In-depth Interviews; ²Focus Group Discussions; ³Lady Health Workers

Table 02: Background characteristics of healthcare workers (n=6)

Code	Type of healthcare providers	Education	Type of employment	Age in years	Working experience in years
1	LHW	Matric	Public sector	48	19
2	LHW	Middle	Public sector	45	19
3	LHW	Matric	Public sector	39	15
4	LHW	Intermediate	Public sector	54	24
5	LHW	Matric	Public sector	33	12
6	LHW	Matric	Public sector	37	14

Table 03: Background characteristics of community participants (n=54)

Socio-demographic variables	Categories	f (%)
Gender	Male	28 (51.9%)
	Female	26 (48.1%)
Age	15-24 years	14 (25.9%)
	25-34 years	19 (35.2%)
	35 and above	21 (38.9%)
Education	Illiterate	32 (59.3%)
	Primary	13 (24.0%)
	Middle and above	9 (16.7%)
Number of children	2-3	23 (42.6%)
	4-5	19 (35.2%)
	6 and more	12 (22.2%)

Figures

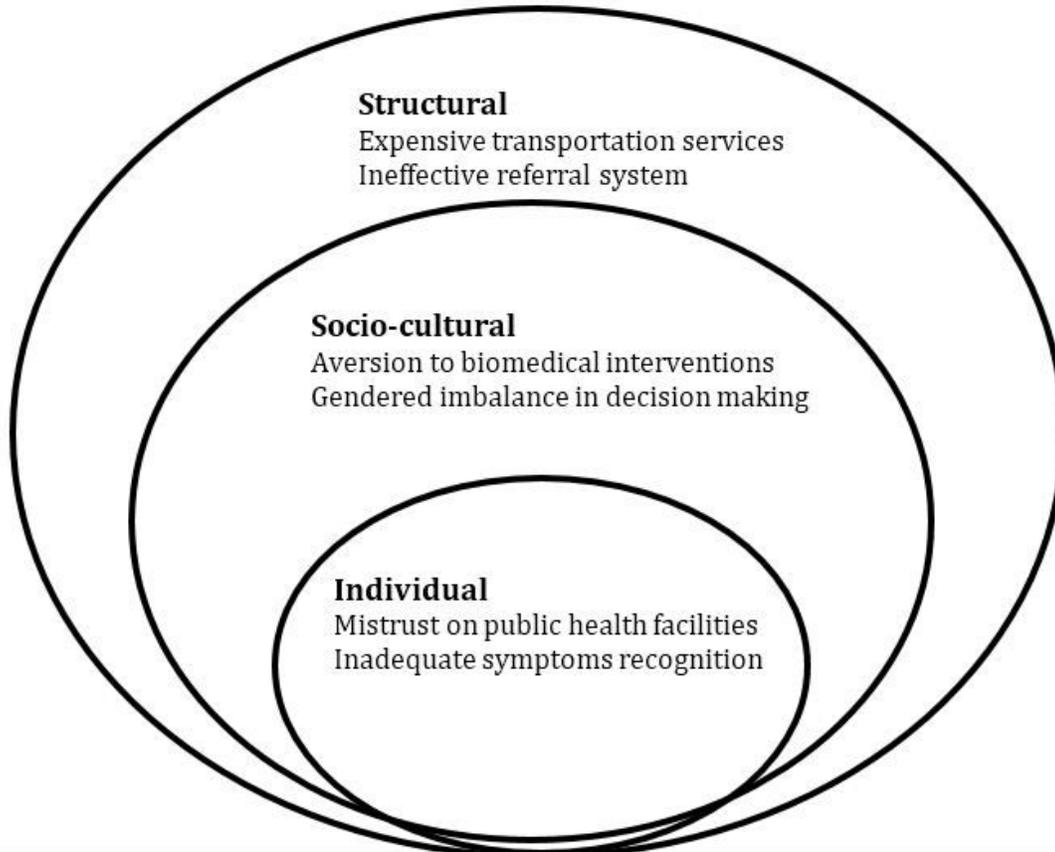


Figure 1

Socio-ecological model highlighting major health seeking barriers identified in this study

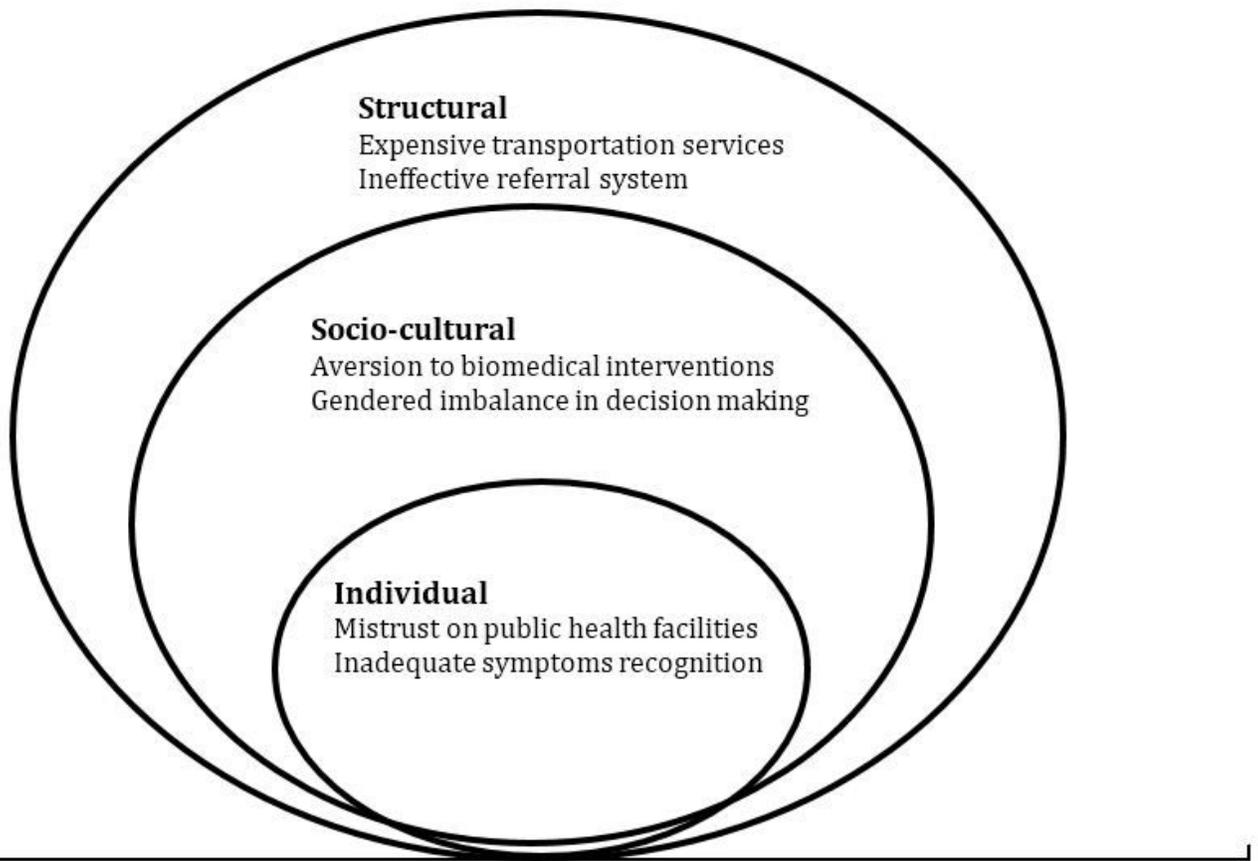


Figure 1

Socio-ecological model highlighting major health seeking barriers identified in this study