Reproductive Health

RESEARCH

Open Access

Exploring women's sexual and reproductive health needs in Zabol's suburbs, Iran: a qualitative study

Maryam Koochakzai[1], Zahra Behboodi Moghadam[2], Shahla Faal Siahkal[3], Mehrbanoo Amirshahi[1] and Elham Ebrahimi[4,5*]

Abstract

Background Suburban populations in developing countries are affected by poor environmental conditions affecting their ongoing health. Given the low reproductive health indicators of women residing in the suburbs of eastern Iran, planning to improve their health by assessing the needs of the target group through qualitative research is essential. The present study seeks to elucidate the views of women living in the suburbs of Zabol, Iran, regarding sexual and reproductive health needs.

Methods This qualitative study was conducted in healthcare centers in the suburbs of Zabol in 2023. The sample comprised 22 women, including 16 women of reproductive age (age 15–49 years) living in the suburbs and six key informants (service providers and people who were in close contact with these women). The sample was selected purposively with maximum variation. Data were collected through semi-structured, in-depth, individual interviews, which continued until data saturation was reached. The data were then analyzed using conventional content analysis.

Results The data analysis yielded seven categories (gender-based violence, psychological problems, women's lack of empowerment, barriers to equity in sexual and reproductive health, support seeking, sexual issues, and pregnancy, childbirth, and postpartum care needs) and 24 subcategories.

The results revealed that suburban women did not have adequate information or knowledge about their sexual and reproductive health or the available services, and most of them suggested that they required training.

Conclusion Women living in the suburbs of Zabol were faced with challenges in their sexual and reproductive health and well-being. It is crucial to provide these women with sexual and reproductive health education and services that are accessible and suitable to their conditions by targeted interventions aiming to improve their health and well-being.

The findings of the current study can serve as a basis for future health policymaking, planning, and research by providing evidence and strengthening the body of knowledge about this domain of health.

Keywords Sexual and reproductive health, Women's health, Suburban populations, Qualitative research, Iran

*Correspondence:
Elham Ebrahimi
ebrahimi_308@yahoo.com
Full list of author information is available at the end of the article

Introduction

With the increased rates of urbanization, living in the suburbs of cities has also become an emerging global problem, especially in developing countries [1, 2]. Women constitute half of the population and their health is at the core of families' functioning in these communities [3]. Therefore, every woman has a right to good sexual and reproductive health [4].

According to the definition of the International Conference on Population and Development held in Cairo in 1994, reproductive health refers to complete physical, psychological, and social well-being and all the aspects related to the reproductive system and its process and functioning. By definition, reproductive health refers to all the sensitive and key stages in ensuring the health of the family, especially women and girls, from birth to the end of life [5]. In 1995, the World Health Organization (WHO) combined sexual and reproductive health and suggested that sexual health should be part of reproductive health [6]. Focusing on the different dimensions of sexual and reproductive health at national and international levels can help promote the health of societies, as sexual and reproductive health constitutes one of the fundamental steps in ensuring the health of families and societies, revolving around women's health [5]. Furthermore, women's health directly affects long-term development plans in every country [1]. Consequently, investing in sexual and reproductive health is the most reliable and effective way to achieve equitable and sustainable development [7].

Despite the great importance of sexual and reproductive health and their various dimensions (reproductive health rights; safety and health during pregnancy, childbirth, and after childbirth; puberty health in girls and boys; family planning and contraception; premarital counseling; physical and mental health during menopause; women's empowerment; prevention and treatment of vaginal cancers; prevention and treatment of sexually transmitted infections and AIDS; nutrition and education of children and adolescents; men's participation in sexual and reproductive health) [8] in promoting women's health, literature shows that the indicators of sexual and reproductive health are lower among women living in the suburbs of cities compared to other women [9–11]. Women living in city suburbs face sexual and reproductive health problems, mainly domestic violence, physical violence during pregnancy and breastfeeding, malnutrition during pregnancy, being forced to perform heavy manual work during pregnancy, marriage and pregnancy at a young age, and inadequate prenatal and reproductive health care [1, 12, 13]. Despite such problems, these women rarely have access to reproductive health facilities [14]. The limited access to sexual and reproductive health services leads to unwanted pregnancies, unsafe abortions, sexually transmitted diseases (STDs), and ultimately increased morbidity and mortality in mothers [15]. A high rate of maternal mortality has been reported due to the lack of access to antenatal services in these regions [16]. It has also been demonstrated that women with poor economic status who suffer from housing instability and live in urban slums are exposed to intimate partner violence (IPV) and gender-based violence, contract sexually-transmitted infections, and have little access to sexual and reproductive health services [4, 17].

Moreover, the cultural norms and customs of poor areas restrict women's role to caring for family members at home and have led to gender discrimination. This discrimination prevents women and girls from participating in social activities, limits their access to health care, and reflects the poor structural conditions of these communities, including the lack of proper health facilities, lack of health insurance, limited public transportation options, and long distances from healthcare centers, which pose great challenges for equity in health and development [18, 19].

These customs have become moral norms, and in the suburbs, marriage at a young age, girls dropping out of school, promotion of patriarchy, and gender-based violence have become the norm and rule [19–21]. In Iran, women must obey their husband under any circumstances, which means that the law does not protect women against their husband's violence [22]; consequently, women's sexual and reproductive health is diminished, as mentioned in various studies [22, 23]. Moreover, some studies have discussed the unmet sexual and reproductive health needs in neighborhoods located on the suburbs of cities [11, 24, 25]. Still, there is little evidence about the opportunities and barriers to improving the sexual and reproductive health of adolescent girls and young women in slums [4].

According to the latest statistics, in June 2014, the population of Iran living in city suburbs was 9,739,123, which increased to 10,280,270 in October 2015 [1]. Given the considerable percentage of women living in suburbs in Iran and the barriers faced by them in achieving health and well-being, policy-makers and researchers should pay more attention to these women's health and take the necessary measures. According to the available documents, health indicators are much poorer among suburban women in Iran than other groups of Iranian women, and the sexual and reproductive health of this group is also affected by environmental, cultural, social, and economic factors [9, 26]. Since no detailed studies have been conducted on the sexual and reproductive health status of women living in the suburbs of cities in eastern Iran, any policy-making and interventions to promote their

health and well-being require accurate and precise information about the sexual and reproductive health needs and state of these women. Conducting a needs assessment in this group and examining their personal views, experiences, emotions, and feelings and their social interactions can be helpful in this regard and help determine their state and needs.

In other words, qualitative research aims to describe, understand, or explain phenomena or cultures [27]. Therefore, this qualitative study aimed to explain the needs related to various dimensions of sexual and reproductive health (such as safety and health during pregnancy, childbirth, and after childbirth; reproductive rights; empowerment; family planning; sexually transmitted diseases; screening for common cancers; and sexual health) among women living in the suburbs of Zabol in eastern Iran.

Methods

This qualitative study was designed based on the Consolidated Criteria for Reporting Qualitative Research (COREQ) [28] using conventional content approach according to the criteria proposed by Zhang and Wildemuth [29].

Samples/participants

This study seeks to explain the sexual and reproductive health needs of women in the suburbs of Zabol, eastern Iran, from 21 January 2023 to 6 July 2023. The participants included 16 Iranian women living in the suburbs of the city and six key informants. The research setting was the healthcare centers located in the suburbs of Zabol and other places chosen by the key informants, such as their workplace.

Maximum variation purposive sampling was used to achieve a comprehensive understanding of the needs of the women residing in city suburbs. These women's different perceptions and experiences were accessed by way of the maximum variation strategy, i.e., the participants were selected from a diverse background in terms of age, education, socioeconomic status, occupation, gravidity and parity, age at marriage, and the spouse's education and age.

We used health liaisons to reach women who might not visit health centers at all. In Iran, health liaisons convey health messages to people who do not visit health centers and establish a close and honest relationship with women [30]. Therefore, we used the assistance of health liaisons to get to know more people, have better access to women, and gain their trust for participating in the study and being interviewed. To increase the women's participation, we offered them a small sum of money as compensation for their time. These measures reduced selection bias and nonresponse bias and allowed us to communicate with different groups in the target population [31].

This study also interviewed key informants as the study participants in addition to the women living in the suburbs of the city. Key informants are informed people who provide a certain perspective on the research subject and their opinions help develop the researcher's insight into a more accurate understanding and reduce potential bias [32].

The key informants included four health service providers (to gain a deep understanding of common views on reproductive and sexual health needs between health service providers and the suburban women), a health sociologist, and a religious expert (who had at least 2 years of work experience in the suburbs and a close relationship with suburban women). Sampling of the key informants was also performed purposively with maximum variation in terms of age, education, and occupation.

The inclusion criteria were:

(1) Married women aged 15–49 years, living in the suburbs of Zabol, visiting the selected healthcare centers, with no diagnosis of psychological or physical illness, being able to speak Persian as well as the local language of the area, and being willing to participate in the study.
(2) Key informants (healthcare workers, including midwives working in the health sector, family health specialists, sociologists, and religious experts) who had the most contact with women living in the suburbs, had at least two years of work experience in these areas, and were willing to be interviewed.

Exclusion criteria: Refusing to participate in or continue the interviews for any reason.

Data collection

The data were collected through semi-structured, in-depth, individual interviews. The suburban women were interviewed on site at the healthcare centers. The key informants were interviewed with prior arrangement in a location of their choosing. Before conducting the interviews, the researcher explained the objectives of the research, the confidentiality of the data, and the voluntary nature of participation in the study to the participants and received their informed written and verbal consent for participation and having their interviews audio-recorded.

All the interviews were conducted by the first author (MK), a PhD student in sexual and reproductive health who had taken qualitative research courses. All the interviews were held individually and face-to-face in a private room.

The research team and the participants did not have any prior contact. The participants did not know any of the researchers, but they all knew that the interviews were conducted for research purposes and the relationship established was solely for the sake of this research.

The mean duration of each interview was about 54 min with the women living in the suburbs and about 58 min with each key informant, and all the interviews were audio-recorded with participants' permission. If a participant did not consent to being audio-recorded, notes were taken instead. Field notes were also taken by MK after each interview.

Overall, 26 participants were invited to the interviews, but one of the key informants did not accept the invitation due to their lack of time and three women living in the suburbs did not wish to attend the interviews.

Although only a few people refused to participate, to reduce the nonresponse bias, the research team tried to eliminate any chance of inappropriate timing and place of the interviews and resolve other possible barriers to participation. As for the three people who were not willing to participate, we examined their files at the health center and consulted the health liaisons and specialists of the center; eventually, we realized that they did not differ from the willing candidates in terms of personal and demographic characteristics.

Although data saturation was achieved with 19 interviews, three additional interviews were held to be on the safe side. three additional interviews were also conducted to ensure data saturation.

The authors developed the interview questions. Three interviews were conducted as a pilot. The data from these three interviews were included in the final analysis. All the interviews began with general questions, followed by probing questions to elicit more detailed information. Some of the questions were as follows:

Questions related to the women living in the suburbs of the city:

(1) What are your needs and concerns regarding your reproductive health?
(2) What are your needs and concerns regarding your sexual health?
(3) Do the services provided to you in healthcare centers meet your needs? Please elaborate on your answer.

Questions related to the key informants:

(1) In your opinion, what are the sexual and reproductive health needs and concerns of women living in the suburbs?
(2) In your opinion, which needs of women living in the suburbs are not met in healthcare centers?

Probing questions:

"What do you mean?" or "Could you elaborate on your answer?"

The interviews were conducted in Persian and were then translated into English by a bilingual translator for publication. A bilingual translator ensured the quality of the translation to preserve the meanings and concepts. Finally, 22 in-depth individual interviews were conducted with 16 women living in the suburbs of the city and six key informants (Table 1).

Data analysis

The conventional content analysis of the interviews was performed according to the stages proposed by Zhang and Wildemuth [29], as follows:

(1) Data preparation (conducting and transcribing the interviews): The recorded interviews were converted into text format (MK). All the interviews were transcribed to show a clear model of participants' thoughts, behaviors, ideas, and experiences.
(2) Definition of the unit of analysis: Each interview transcript was entered into the qualitative data analysis software as an unit of analysis. Before coding, the entire text was read several times so that the researcher (MK) could get fully familiarized with the data. Then, the transcripts were coded by identifying the meaning units.
(3) Development of categories and the coding plan: A plan was made for the development of the categories and sub-categories. The categories were inductively extracted from the codes. The codes were first classified into subcategories based on their similarities, and then, the subcategories were classified based on their relationships with each other to form the categories. The classifications were organized such that they had internal consistency and external inconsistency.
(4) Testing the coding plan in a sample transcript: The researcher coded a sample transcript to check the consistency of the coding by the two research team members (EE) and (ZB). If there was any disagreement about the coding and classification, the research team would discuss and resolve it.
(5) Coding the entire text: After the researcher and two members of the research team agreed on the consistency of the coding, a replicable process was obtained and the coding process was extended to the entire text. The researcher constantly moni-

Table 1 The demographic characteristics of the participants (women living in the suburbs and key informants) (N = 22)

No.	Age (year)	Level of education	Occupation	Age at marriage/ work experience (year)
1	32	Primary school	Housewife	16
2	24	B.Sc	Employee	23
3	37	Primary school	Housewife	16
4	34	High school	Housewife	18
5	37	High school	Housewife	24
6	23	Primary school	Housewife	15
7	32	B.Sc	Employee	25
8	25	Primary school	Housewife	21
9	27	High school	Housewife	21
10	23	B.Sc	Housewife	22
11	36	B.Sc	Employee	26
12	31	B.Sc	Employee	24
13	24	Primary school	Housewife	16
14	25	Primary school	Housewife	17
15	19	Primary school	Housewife	15
16	41	Primary school	Housewife	16
Characteristics of key informants				
1	32	B.Sc. of Midwifery	Midwife at a healthcare center	9
2	28	M.Sc. of Midwifery	Family health specialist	6
3	39	B.Sc. of Midwifery	Midwife at an OB-GYN clinic	17
4	53	M.Sc. of Midwifery	Midwifery manager of the Deputy for Treatment	30
5	48	Ph.D. in Medical and Health Sociology	Professor at Tehran University	17
6	36	M.A. in Quranic Studies	Seminary teacher	8

tored the coding to ensure that there was an agreement between the codes extracted based on the researcher's inferences, the comments of the participants, and the views of the research team.

(6) Evaluation of coding consistency: After coding the entire text, the coding consistency was re-evaluated. During the analysis process, the researcher checked the consistency of coding, including the initial codes, their placement in subcategories, and the development of categories with other individuals, including two members of the research team (EE and ZB) and qualitative research experts.

(7) Drawing conclusions from the coded data, reporting methods, and results: The characteristics and dimensions of the categories and the relationships between them were determined. Themes were extracted from the data throughout the analysis. MAXQDA software, version 18, was used for data analysis.

Rigor and trustworthiness of the study

The criteria proposed by Lincoln and Guba (1985) were used to ensure the trustworthiness of this study [33], including credibility, dependability, transferability, and confirmability [34]. The credibility of the results was strengthened by spending sufficient time on data collection, ensuring the diversity of the participants, and member checks, during which the transcripts and codes were returned to the participants to clarify any ambiguous codes. Dependability and conformity were improved through external audits and peer checks. The research team, including four qualitative research experts (ZB, SHF, MA, and EE) who had published numerous qualitative research papers, and two external supervisors, reviewed and revised the transcripts, codes, and categories to find any disagreements in the coding process. Transferability was enhanced through purposive maximum variation sampling (in terms of demographic characteristics). A detailed description of the data collection

and analysis processes was provided. For confirmability, the researchers put aside all their assumptions and thoughts and precisely documented all the stages of the research, including data collection, analysis, and coding.

In order to ensure that the results of the study are an impartial and honest reflection of participants' views, the research team (MK, ZB, SHF, MA, and EE) put aside all their personal beliefs, experiences, and cultural background and used strategies such as reflective notes, peer checks, and triangulation to reduce researcher bias [31].

Results

Sixteen women living in the suburbs and six key informants participated in this study. The data analysis revealed that the suburban women were in the age range of 19–41 years, with a mean age of 29.6 ± 3.20 years. Most of them had high school or lower levels of education and were a housewife. Their mean age of marriage was 19 years. The key informants were in the age range of 32–53 years, with a mean age of 39.3 years, and all of them had university education (four provided reproductive and sexual health services, including three with a bachelor's degree and one with a master's degree in midwifery; one informant with a PhD in sociology of health and medicine; and one with a master's degree in Quranic sciences).

The demographic characteristics of the participants are presented in Table 1. The results of the conventional content analysis yielded seven categories (gender-based violence, psychological problems, women's lack of empowerment, barriers to equity in sexual and reproductive health, support seeking, sexual issues, and pregnancy, childbirth, and postpartum care needs) and 24 subcategories (Table 2).

Gender-based violence

Women and girls who live in the suburbs of Zabol are exposed to sexual exploitation, discrimination, forced marriage, child marriage, and abuse by men. It is necessary to pay attention to and support this group against this type of violence.

Sexism

One of the problems common in the marginalized areas of eastern Iran is sexism and preferring infant boys to girls. One participant noted:

"I don't wish to get an ultrasound, because if this child that I'm pregnant with is a girl again, I can't stand my

Table 2 Categories and subcategories

Category	Subcategory
Gender-based violence	Sexism
	Sexual violence
	Physical violence
	Psychological violence
Psychological problems	Pregnancy and postpartum depression
	Fear and worries
Women's lack of empowerment	Empowerment for sexual and reproductive self-care
	Desire for independence
Barriers to equity in sexual and reproductive health	Healthcare providers' negative attitudes
	Cultural barriers
	Lack of access to healthcare services
	Shortage of skilled personnel in healthcare centers
	Lack of facilities and equipment in healthcare centers
Support-seeking	Spousal and family support
	Healthcare providers' support
	Governmental and charitable organizations' support
Sexual issues	Sex education and counseling
	Women's sexual satisfaction
	Training STD prevention methods
Pregnancy, childbirth, and postpartum care needs	Pre-pregnancy counseling
	Attention to nutrition and health during pregnancy
	Proper care and referral during pregnancy
	Maintaining maternal dignity during childbirth
	Access to and training in family planning methods after childbirth

in-laws saying that I can only have girls, while they want boys" (Participant 8).

Sexual violence

Sexual violence was a common category in the city suburbs. Sometimes, women refuse to express the existence of such violence, mainly when one partner does not consent to sexual activities.

One of the participants expressed the experience of sexual violence committed by her husband:

"There have been many times when I haven't wanted to have sex, but my husband asked me for sex, and I had to submit to this forced sex to prevent a fight. I didn't enjoy this kind of sex at all" (Participant 3).

Physical violence

In the suburbs of the city, due to the poor socioeconomic status, men's physical violence against women is a reflection of the many pressures and stresses imposed on them. This type of violence can happen to any woman, regardless of education, race, and family status.

One participant described her experience of physical violence and said:

"My husband beats me up all the time. He doesn't care that I'm pregnant. Especially when his job is in trouble and he has no work, it gets worse and he beats me more" (Participant 1).

Psychological violence

According to the present study, psychological violence exists in marginalized areas of cities in the form of causing fear through intimidation, undermining the sense of self-worth through constant criticism, making accusations, and different forms of verbal abuse. One of the participants stated:

"My husband accuses and curses me all the time –he even curses my parents. He doesn't care that they are my family. I'm very upset by this. It unsettles me when he accuses me of things and curses my family" (Participant 1).

Psychological problems

In the suburbs of cities, mental health is a concept that goes beyond the mere absence of psychological disorders; rather, it has a larger scope, such as ensuring mental health and growth, prevention of psychological disorders, and appropriate treatment and rehabilitation.

Pregnancy and postpartum depression

According to the study findings, depression during pregnancy and after childbirth comprise one of the needs that mandate further attention among women living in city suburbs. One participant complained of fatigue and depression due to the non-cooperation of her in-laws during pregnancy:

"My in-laws don't help me with the housework at all. Cleaning and cooking have become very difficult for me now that I'm pregnant. My mother has passed away, and I'm alone here. I'm really tired and depressed" (Participant 5).

One of the key informants also discussed the need to pay attention to women's depression:

"Many women here suffer from anxiety and depression during pregnancy and after childbirth due to economic problems and their living conditions; these problems harm their health and the health of their child. It is absolutely necessary to provide psychological counseling to these women during pregnancy and after childbirth" (Key informant 3).

Fear and worry

Girls and women living in the suburbs often have higher levels of anxiety and fear due to sexism, lack of understanding on the part of their husband, lack of education and knowledge about sexual and reproductive health, and economic and cultural problems. One participant expressed the fear and worries she had experienced the first time she had had sex due to her lack of awareness:

"I remember that I was terrified and nervous for the first sex after marriage, and I was afraid that there would be a problem because I had absolutely no information about sexual relations. When we were single, we were too embarrassed to ask our mothers about this, so I was very worried" (Participant 4).

Women's lack of empowerment

One of the basic needs of women living in the suburbs is empowerment. Many women emphasized this issue and expressed aspects of their life that somehow led to their lack of empowerment. According to our study, the participants found factors such as enhanced access to financial resources, independence in making reproductive decisions, and improved health status through better awareness and education to be effective in empowering women residing in city suburbs.

Empowerment for sexual and reproductive self-care

Empowering women through the promotion of awareness and training about sexual and reproductive self-care is one of the needs of women living in the suburbs. One of the participants said:

"As I have a low literacy, I don't know anything about women's diseases. I need classes in health centers to teach us what to do to improve our health" (Participant 16).

According to a key informant:

"In city suburbs, because the literacy level is low, women's awareness and information must be promoted through education in order to improve their sexual and reproductive health and thus empower them" (Key informant 2).

Independence seeking

Women living in the suburbs are looking for financial independence and autonomy in making reproductive decisions. One of the participants expressed her need for financial empowerment as follows:

"If I want to buy something, I should ask my father-in-law for money so that we can buy what we need. I'm embarrassed to say that I want to buy underwear, bras, or stuff I want to eat during pregnancy, so I can't buy them. But if I had a job and earned money, I wouldn't have these problems" (participant 15).

Another participant said the following about autonomy in making reproductive decisions:

"I'd like to decide on the number of children I want to have or even the method of contraception myself; I don't want my husband alone to make the decisions" (Participant 6).

Barriers to equity in sexual and reproductive health

Women living in the suburbs are limited in exercising their sexual and reproductive rights, not only because of poverty and unequal gender relations, but also due to certain barriers to achieving equity in sexual and reproductive health, including the negative view held by service providers, cultural barriers, lack of access to healthcare services, lack of skilled personnel, and lack of facilities, as these rights are not distributed equally.

Healthcare providers' negative views

A 32-year-old woman with tears in her eyes said that health workers' looks of contempt at her have prevented her from receiving proper healthcare, and this treatment leads to self-limiting reactions and avoidance of healthcare and treatment seeking. According to her:

"Healthcare workers see us as miserable. When we visit them, they don't provide us with good care and look down on us. I get disappointed and don't want to visit here anymore because they look down on us" (Participant 1).

Cultural barriers

Lack of attention to cultural considerations when providing services was another barrier to equity in sexual and reproductive health in city suburbs. One of the participants mentioned:

"I wear a good luck charm on my stomach to save my baby because I have had a miscarriage. But when I come to receive care, they make fun of me and say that I'm superstitious because of doing this, so I don't come here to get pregnancy care a lot" (Participant 8).

Lack of access to healthcare services

An important problem in city suburbs is the lack of access to healthcare services, which prevents equity in health. In this regard, one of the participants noted:

"Our house is far from the clinic, and since we don't have a car, it's very difficult for us to walk all this way. Usually, although I need to come to the clinic, I give up and don't visit at all because of how difficult it is to get here" (Participant 11).

Shortage of adequate skilled personnel in healthcare centers

Women living in the suburbs admitted that the lack of skilled and experienced personnel reduces the quality of care. One of the participants said:

"During my labor pain, one of the midwives kept examining me and hurt me with these examinations. I felt that she was not skilled enough and couldn't take care of me properly. I think that they should recruit skilled midwives to work in childbirth facilities" (Participant 7).

Lack of facilities and equipment in healthcare centers

The lack of facilities and equipment in healthcare centers in city suburbs was another barrier to equity in healthcare. One participant stated:

"During this pregnancy, my baby's movements have decreased a lot, and I have to go to the center of the city to get a non-stress test, because we don't have the device here at this health center. It's challenging for me to get there because I can't afford to travel to the city" (Participant 13).

Support seeking

The results revealed that all-around support for women living in the suburbs in achieving sexual and reproductive health is an essential need.

Spousal and familial support

The results showed that in city suburbs, more attention should be paid to the facilitators and barriers of gaining family support due to the greater problems faced by women in these areas and the need for emotional support from the family and spouse.

One of the participants said:

"Since I live with my in-laws, I would very much like my husband to stay with me after childbirth and not leave me alone with his mother; I don't feel comfortable with her at all. I want my husband to be by my side and take care of me" (Participant 8).

Healthcare providers' support

An important issue in receiving sexual and reproductive health services in healthcare centers in city suburbs was the right to be respected as a human being and to receive emotional and psychological support from the service providers.

One of the participants said:

"Midwives should encourage women to give birth naturally and sympathize with them. When I gave birth in the maternity ward, I really needed the midwife who cared for me to support me emotionally and mentally so that I could endure the pains of childbirth better. I wanted her to take my hand when I had pain; that would've been better" (Participant 14).

Governmental and charitable organizations' support

One of the participants discussed the need for support from the government and charitable organizations to meet their health needs:

"If the government gave pregnant women at least a basket full of groceries, well, I could have better nutrition during pregnancy; I really can't afford meat and legumes" (Participant 16).

Sexual issues

Most of the participants believed that sexual issues are an aspect of health that is neglected in city suburbs. They discussed the need for sexual counseling and education, paying attention to women's sexual satisfaction, and teaching methods of STD prevention.

Sex education and counseling

Lack of awareness about sexual issues is a common problem in city suburbs that affects women's sexual health. Regarding the need for sex education and counseling, one of the participants noted,

"At school, they didn't teach us anything about sex; they said that because we're single, we don't need any training. But it's necessary to teach boys and girls about unprotected sex so that they don't get harmed" (Participant 10).

Women's sexual satisfaction

Women living in city suburbs face many socioeconomic problems, and paying more attention to sexual satisfaction makes them happy and satisfied and increases their quality of life.

The sociologist key informant stated:

"I think the most important need that is ignored in the suburbs of cities is the mental aspect of sexual relations –I mean, sexual dissatisfaction. Sexual satisfaction acts like a shock absorber and increases people's resilience against problems in life. So, addressing this issue can alleviate these women's pain" (key informant 5).

Training STD prevention methods

Another issue that both the participants and the key informants acknowledged was the increase in STDs in these regions due to the lack of adequate training and non-supply of condoms in healthcare centers. According to one participant:

"Condoms and all methods of contraception have been removed from the healthcare centers and aren't provided to us, and this means the transmission of STDs to women. There's no training on this issue either. It is certainly an essential need and the methods must be taught and made available to women" (Participant 9).

Pregnancy, childbirth, and postpartum care needs

The need for pre-pregnancy counseling, attention to gestational nutrition and health, proper care and referral during pregnancy, maintaining the mother's dignity during childbirth, and access to and training on family planning methods after childbirth were some of the obvious needs highlighted by the women.

Pre-pregnancy counseling

The participating women mentioned that pre-pregnancy counseling is necessary in these areas due to their high maternal and neonatal mortality rates compared to in other regions.

One of the participants said:

"I had my first pregnancy at the age of 17. If someone had informed me in advance about [the importance of] age at first pregnancy or had told me what conditions I must meet before getting pregnant, my first child wouldn't have been born prematurely. Now, I can't forget that bad memory no matter what. It was very difficult. My child was hospitalized in the NICU for about one month and then died" (Participant 1).

Attention to nutrition and health during pregnancy

Food insecurity is another problem facing pregnant women in the suburbs of cities in eastern Iran. A key informant discussed this subject and said:

"Women living in the suburbs are in a lower status on the socioeconomic ladder compared to their peers and often suffer from food insecurity. Service providers should provide more training to women so that they are less likely to suffer from malnutrition" (key informant 5).

Appropriate care and referral in pregnancy

A key informant mentioned the need for the proper and timely referral of pregnant women by the healthcare workers as an essential need and said:

"One of the issues in healthcare centers is that high-risk women are not referred on time, and there are pregnant women with high blood pressure who come to the

hospital with seizures because they are referred late" (Key informant 4).

One of the participants mentioned the need for education about warning signs during pregnancy:

"In the last month of my pregnancy, I didn't know that the warm water leaking from me was actually the amniotic fluid and that I had to go to the maternity ward quickly so that my baby would be fine. It's better to explain these things to the pregnant woman so that she can go to the hospital on time" (Participant 14).

Maintaining the mother's dignity during childbirth

The results showed that a pleasant childbirth with dignity was one of the needs of women, as failure to maintain the mother's dignity disrupts the childbirth process.

One of the participants said:

"The doctors and midwives did not treat me well at all in the maternity ward. They shouted at me and kept saying, 'Why did you get pregnant in the first place? Now, you should bear the pain of childbirth too'. These words made my pain even worse. They don't respect us at all. When I think about that day, I get sick, and I don't want to go to the maternity ward again" (Participant 13).

Access to and training in family planning methods after childbirth

The participating women were not at all happy with the policy of removing contraceptives from healthcare centers in the country. They believed that their information about contraception was inadequate and they demanded the supply of contraceptives in healthcare centers and more training on this subject.

One of the participants said:

"At the health center, they don't give us contraceptives anymore, and there's no training at all. So, very often, we have unwanted pregnancies. Because many people can't afford contraceptives, and if they do, they don't know how to use them properly. I think they should teach these methods to all women because they're necessary" (Participant 1).

Discussion

The results revealed that the sexual and reproductive health needs of women living in city suburbs include the elimination of any "gender-based violence", "psychological problems", "barriers to equity in sexual and reproductive health" and instead focusing on "women's lack of empowerment", "support seeking", "sexual issues", and "pregnancy, childbirth, and postpartum care needs".

Gender-based violence was a sexual and reproductive health need of women extracted in this study, which should be addressed. Consistent with our results, women in other parts of the world also suffer from violence in various forms [21, 35, 36], including sexism and sexual, physical, and psychological violence [17]. One of the aspects of women's resentment in our study is sexism and preference for having male offspring. This gender inequality is the leading cause of violence against women and young girls, which is often reinforced by the discriminatory social norms and structures [37, 38]. In a study in Nepal, the results showed that identifying the gender of the fetus leads to violence against young pregnant women before the birth of the child [17].

According to our results, women's refusal to have sex during pregnancy leads to sexual violence by the husband, which is confirmed by the results of studies conducted in Nepal and Zimbabwe [17, 39]. Sexual violence from the husband during pregnancy can have serious physical and mental health consequences, such as substance abuse, premature birth, fetal distress, postpartum hemorrhage, preeclampsia, low birth weight, postpartum depression, and the risk of maternal and fetal death [40, 41].

The similarity between the findings of the cited studies and our results can be attributed to the existence of more violence in poor neighborhoods due to social, cultural, and economic structures. Poverty, low education, exposure to parental violence, childhood abuse, men's unemployment, drug use, women's acceptance of violence, gender norms, and social norms that support violence in poor communities create and intensify violence in them [42, 43].

Most of the women who were victims of sexual, physical, and psychological violence by their husband in this study were trapped in violent relationships due to their economic dependence and poverty. In support of this finding, a study of US women aged 18 years and older found that women who had experienced food insecurity were at a higher risk of experiencing intimate partner violence than women who reported food security over the past 12 months [17, 44].

Moreover, women in the suburbs of Zabol refuse to report their husband's violence because they are afraid it might affect their family life. These findings are similar to the results of a study carried out in Egypt. These phenomena can be rooted in the cultures of Iranians and Arabs, which emphasize loyalty, dignity, and reputation (honor) of the family [21].

According to the political and civil laws of Iran, women must obey their husband under all circumstances, which means that the law does not protect women against spousal violence [22]. Therefore, these laws and policies must be amended in order to achieve gender equality. The key components of interventions to prevent gender-based violence for policy-makers are manifold, including interventions at the structural level (economic

empowerment of women by the government), interpersonal level (counseling and home visits), and individual level (social empowerment, brief psychological intervention for depression, addressing gender norms, including group training or training workshops for men and boys to prevent violence against women and girls) [45]. Further women's health studies are needed to provide evidence-based interventions in low- and middle-income countries, especially in suburban areas, which are more vulnerable to gender-based violence.

According to the findings of our study, psychological and emotional problems, such as postpartum depression, fear, and worry, affect the health of women living in the suburbs. The psychological dimension of these women's suffering includes issues related to self-confidence, lack of self-belief, and a high level of helplessness, which are mainly caused by cultural factors. Therefore, it is necessary to identify the factors affecting the vulnerability of these women and to address their mental health challenges. In line with our findings, the results of other studies in India also show a 33–45% prevalence of psychological problems in the residents of urban slums; the higher prevalence of these psychological disorders compared to other Indian studies can be partially explained by the demographic characteristics of the subjects, i.e., women living in urban slums and seeking medical care [46, 47].

It was also found that women living in the suburbs are limited in exercising their sexual and reproductive rights, not only because of poverty and unequal gender relations, but also due to the barriers to equity in sexual and reproductive health, including service providers' negative views, cultural barriers, lack of access to healthcare services, shortage of skilled personnel, and lack of facilities. According to our findings, the negative attitude of healthcare providers is the main reason for the lack of access to the highest standards of sexual and reproductive health (SRH) services. As shown in the interview with a 32-year-old woman in this study, the contemptuous attitude of healthcare workers prevented them from receiving proper healthcare, thus leading to self-limiting reactions and avoidance of healthcare and treatment seeking. In line with our findings, in a study conducted in tea gardens in Bangladesh, barriers such as distance from healthcare facilities, transportation system shortages, lack of awareness, shortage of skilled human resources, and lack of equipment and supplies were mentioned as the reasons for not achieving maternal and neonatal health in marginalized areas of the tea gardens [48]. The similarity in these findings could be due to the similar socioeconomic status of the participants of these studies.

Therefore, skilled and qualified human resources are needed to achieve equity in sexual and reproductive health, and continuous coaching and training are also vital for maintaining the skills of the healthcare workers in city suburbs. Moreover, it is necessary to have sufficient medication and equipment for SRH services [49]. Therefore, paying attention to these factors affects the ability of marginalized communities in Iran to achieve optimal healthcare and promote sexual and reproductive health. The geographical context and poor health-seeking behaviors in marginalized communities lead to deprivations and emphasize the existing inequalities; thus, identifying the barriers to accessing healthcare faced by women living in the suburbs helps healthcare policymakers make changes according to the needs of this subgroup of women [49].

Various forms of interventions, including training of health workers, monitoring and screening patients, financing and health insurance coverage, allocating sufficient resources, supplying products, equipment, and drugs, and improving the infrastructure, can help policymakers promote access to sexual and reproductive health services [50]. In addition, it is better to inform policymakers that educational interventions through workshops and videos can increase awareness about sexual health services. Gender equality and educational interventions in science, technology, engineering, and mathematics (STEM), especially among school girls, can help them better understand gender equality [51].

Another point raised in this study is the need to empower women in terms of reproductive and sexual self-care and financial independence. Women's empowerment can be defined as women's ability to make decisions and act accordingly [52]. Women's empowerment is achieved only when their rights are seen as equal to those of men. Many inequalities are related to cultural beliefs, e.g., a woman cannot travel without a male family member, which limits access to health care [53].

As recommended by the WHO, there is ample opportunity to promote empowerment through education. Despite the significance of this category, in many cases, women living in the suburbs of eastern Iran are negligent about many issues, especially with regard to reproductive and sexual self-care. The poor knowledge and training in this area is the main reason for this negligence; therefore, by identifying the gaps in knowledge and raising awareness among women living in the suburbs, misconceptions can be dispelled, participation encouraged, and more robust accountability mechanisms set in place [4]. Similarly, the results of a study in Iran showed that empowering teenage girls living in poverty to achieve optimal sexual and reproductive self-care requires promoting their sexual and reproductive knowledge, life skills, spirituality, and ethics as well as the strengthening of family-adolescent interactions [54].

Therefore, to strengthen the empowerment of women, the key components for policymakers can include the formulation of policies to eliminate gender inequalities in education, employment, access to health and care services [52]; eliminating gender-based violence [42]; training and empowering female healthcare workers to provide quality services [55]; including diverse populations and samples to develop and improve measures of women's empowerment [56]; attracting men's participation in improving reproductive health by removing cultural barriers, e.g., negative attitudes, false beliefs, and sexist and patriarchal attitudes [5]; and designing and developing comprehensive measures to deal with different dimensions of women's reproductive empowerment at different levels [56].

One study also found that the motivation for skill acquisition has the most significant effect on the economic empowerment of women living in the suburbs [57].

Social support is another need expressed by women living in the suburbs that is considered a key factor for psychosocial protection and maintaining and improving women's sexual and reproductive health outcomes. Women's social support networks have important causal effects on their reproductive behaviors. According to the literature, high levels of social support can help women make the best decisions for their reproductive health needs [58]. Therefore, understanding and addressing modifiable factors in support and health systems are essential for ensuring that women's reproductive and sexual support needs are met.

Another point raised in this study was the necessity of addressing sexual issues. Most of the participants believed that sexual health education is a necessity in today's society and emphasized the role of family and school in this regard.

The women, especially those with a lower economic or educational level, believed that schools should be a pioneer in providing sexual health education, as they can offer more reliable information to young people. The lack of in-depth sex education and negotiation skills in primary and high schools puts younger age groups at risk. Furthermore, evidence indicates that sex education is more effective when it is provided to young people before they become sexually active [59].

In Iran as a conservative country, there are still some cultural barriers to promoting sexual health education for adolescents, young people, and women. The findings of our study are in line with the results of a study in India demonstrating that social and cultural norms prevent people from discussing sexual desires [60].

Consequently, sex education among marginalized young women must be a priority of the healthcare system, because it reduces high-risk behaviors, unwanted pregnancies, and STDs and improves sexual and reproductive health [61].

The results of this study also showed limitations in information and education about pregnancy and childbirth among pregnant women residing in city suburbs. The lack of access to a pleasant childbirth experience with dignity somehow endangers women's rights to quality SRH services in accordance with public health standards and human rights. Consistent with these findings, other studies have also revealed that the barriers to accessing prenatal and childbirth services in city suburbs include the economic status of the household, the quality of hospital care, traditional beliefs and social taboos, high costs of modern services, lack of awareness, trust in the traditional system, lack of access to modern services, and lack of transportation facilities [1, 62].

Another need expressed in the present study was related to the postpartum period. A serious problem in this period is the lack of family planning services and education about contraceptive methods for the postpartum period, which is caused by the enactment of new population policies in Iran. The respondents stated that the little information they had received about contraceptive methods came from the staff of non-governmental organizations, and they had not received any information on this subject from the staff of healthcare centers. The enforcement of such policies compromises people's sexual and reproductive rights, often leading to unwanted pregnancies and higher rates of unsafe abortions [60]. The importance of promoting the use of condoms and dual protection, which is emphasized in HIV and STD prevention programs, is often neglected by the implementation of such policies. A South African study also showed the importance of this issue [63]. Without corrective measures, such policies and programs, which are proposed without any prior planning or consideration for the objective of improving sexual and reproductive health and the rights of young people, will never be in the interest of women from disadvantaged communities, and it is essential to revise these policies in a way as to improve women's health and well-being.

The findings of the current research demonstrate the importance of gender-based violence, current psychological problems, women's need for empowerment, the need to access reproductive and sexual health services, attention to removing barriers to equality in sexual health, including cultural barriers, and care needs during pregnancy, childbirth, and after childbirth, which are common challenges in suburban areas of different countries [64–67].

As for the studied domains, it is necessary to conduct more research in different settings, including other

suburban areas in Iran and middle- and low-income countries, to better understand the influencing factors. The main research priorities include creating and investing in multipurpose preventive technologies, addressing violence against adolescent girls, early pregnancy (especially in the context of early marriage), improving emergency care for mothers and infants, promoting health assessments and improving health interventions for young women, such as with regard to contraception, more focus on acceptance and barriers to family planning, and improving access to health services and care for mothers and children during and after childbirth in suburban areas [67].

Limitations and strengths of the study

The strengths of the present study included conducting interviews with key informants in addition to women living in the suburbs of a major city in eastern Iran. This study was conducted on Iranian women of reproductive age, and may thus form a basis for comparisons; however, due to the research approach chosen, the results may not be generalizable. Future studies should be conducted in other cultures and contexts to improve the transferability of the current findings.

Conclusion

This study sheds light on the sexual and reproductive health needs of marginalized women in eastern Iran, a region that has remained considerably deprived in educational, cultural, social, and economic domains due to its distance from the capital of the country. The findings demonstrate that the violation of fundamental rights for education, equal opportunities, participation, and lack of access to the highest standards of sexual and reproductive health (SRH) are important barriers to the health and rights of marginalized women. Furthermore, structural phenomena such as social and economic classifications, gender norms, and cultural beliefs contribute to this marginalization and increase women's vulnerability. As such, cooperation is recommended between governmental programs and civil society organizations active in women's rights and health to promote access to equitable services based on human rights in this vulnerable population.

Besides, women empowerment programs and sexual and reproductive health plans should be developed by experts to address the needs of women living in the suburbs and their specific challenges and barriers, so that the health and well-being of these vulnerable women can be improved.

Abbreviations

WHO	World Health Organization
SRH	Sexual and reproductive health
HIV	Human immunodeficiency virus
STDs	Sexually transmitted diseases
IPV	Intimate partner violence
PHD	Philosophiae Doctor
COREQ	Consolidated criteria for reporting qualitative research
NICU	Neonatal intensive care unit
B.Sc.	Bachelor of Science
M.Sc.	Master of Science
M.A	Master of Arts

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12978-024-01934-7.

Additional file 1.

Acknowledgements
This study was funded by Tehran University of Medical Sciences in Tehran, Iran. The authors would like to express their gratitude to all the participants, without whose cooperation this study could not be conducted.

Author contributions
All the authors contributed to the design of study including the development of the interview guide. MK carried out the collection of data, transcription and lead the writing process. SHF contributed to the field work. MK, ZB, SHF, MA and EE contributed to the analysis. All authors were involved in developing and writing of the paper.

Funding
This work was financially supported by Tehran University of Medical Sciences.

Availability of data and materials
No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate
Sampling was performed after obtaining approval from the Research Council of the Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, as well as permission from their Ethics Committee (IR.TUMS.FNM.REC.1401.067). The confidentiality of the data was guaranteed and informed written consent was obtained from all the participants. Moreover, the participants were free to refuse or withdraw from participation at any stage of the research process. All the interviews were recorded with participants' permission, and all the audio files were securely stored on password-protected computers. No harm, injury, or possible conflict of interest existed for the participants. The researchers publish the results of this study in a general form and maintain participants' anonymity.

Consent for publication
Written consent was obtained from all the participants in the study.

Competing interests
The authors declare no competing interests.

Author details
[1]Department of Midwifery, Nursing and Midwifery School, Zabol University of Medical Sciences, Zabol, Iran. [2]Department of Midwifery and Reproductive Health, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran. [3]Islamic Azad University, Marand Branch, Marand, Iran. [4]Nursing and Midwifery Care Research Center, Department of Midwifery and Reproductive Health, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran. [5]Obstetrics and Gynaecology Department, Baharloo Hospital, Tehran University of Medical Sciences, Tehran, Iran.

Received: 15 November 2023 Accepted: 10 December 2024
Published online: 18 December 2024

References

1. Mahmoodi Z, Arabi M, Kabir K, Yazdkhasti M, Kamrani MA, Tourzani ZM, et al. Educational needs on safe motherhood from the perspective of suburban women: a qualitative study. Heliyon. 2021;7(3): e06582.
2. Statz M, Evers K. Spatial barriers as moral failings: What rural distance can teach us about women's health and medical mistrust. Health Place. 2020;64: 102396.
3. Abdi F, Rahnemaei FA, Shojaei P, Afsahi F, Mahmoodi Z. Social determinants of mental health of women living in slum: a systematic review. Obstetr Gynecol Sci. 2021;64(2):143–55.
4. McGranahan M, Bruno-McClung E, Nakyeyune J, Nsibirwa DA, Baguma C, Ogwang C, et al. Realising sexual and reproductive health and rights of adolescent girls and young women living in slums in Uganda: a qualitative study. Reprod Health. 2021;18(1):1–11.
5. Khani S. A review on various aspects of male involvement in women's sexual and reproductive health. J Mazandaran Univ Med Sci. 2017;27(152):99–116.
6. Khani S, Moghaddam Banaem L, Mohammadi E, Vedadhir A, Hajizadeh E. The most common sexual and reproductive health needs in women referred to healthcare and triangle centers of Sari-2013. J Mazandaran Univ Med Sci. 2014;23(1):41–53.
7. Moghaddam-Banaem L, Khani S, Mohamadi E, Vedadhir A-A, Hajizadeh E. Non-responding health system to women's sexual and reproductive health needs: a mixed method study. J Mazandaran Univ Med Sci. 2018;28(160):88–105.
8. UNFPA. The sexual-reproductive-health [Internet]. [Updated 04 April 2022]. http://www.unfpa.org/sexual-reproductive-health#sthash.edAdokQ2.dpuf.
9. Bagherinia M, Dolatian M, Mahmoodi Z, Ozgoli G, Alavi MH. Prevalence of genital human papillomavirus in suburban women: a systematic review and meta-analysis. Iran J Obstetr Gynecol Infertil. 2023;26(7):80–93.
10. Juliastuti D, Dean J, Fitzgerald L. Sexual and reproductive health of women living with HIV in Muslim-majority countries: a systematic mixed studies review. BMC Int Health Hum Rights. 2020;20(1):1–12.
11. Seidu A-A, Ameyaw EK, Ahinkorah BO, Baatiema L, Dery S, Ankomah A, et al. Sexual and reproductive health education and its association with ever use of contraception: a cross-sectional study among women in urban slums. Accra Reprod Health. 2022;19(1):1–10.
12. Lewington J, Geddes R, Gabagaya G. Female empowerment to improve sexual and reproductive health outcomes and prevent violence in adolescent girls and young women in Uganda: evidence reviews for policy. Afr Health Sci. 2022;4(4):413–27.
13. Ninsiima AB, Michielsen K, Kemigisha E, Nyakato VN, Leye E, Coene G. Poverty, gender and reproductive justice. A qualitative study among adolescent girls in Western Uganda. Cult Health Sex. 2020;22(1):65–79.
14. Nahar S, Banu M, Nasreen HE. Women-focused development intervention reduces delays in accessing emergency obstetric care in urban slums in Bangladesh: a cross-sectional study. BMC Pregnancy Childbirth. 2011;11(1):1–10.
15. Thin Zaw PP, Liabsuetrakul T, Htay TT, McNeil E. Equity of access to reproductive health services among youths in resource-limited suburban communities of Mandalay City, Myanmar. BMC Health Serv Res. 2012;12:1–12.
16. Amendah DD, Mutua MK, Kyobutungi C, Buliva E, Bellows B. Reproductive health voucher program and facility based delivery in informal settlements in Nairobi: a longitudinal analysis. PLoS ONE. 2013;8(11): e80582.
17. Deuba K, Mainali A, Alvesson HM, Karki DK. Experience of intimate partner violence among young pregnant women in urban slums of Kathmandu Valley, Nepal: a qualitative study. BMC Womens Health. 2016;16:1–10.
18. Schnake-Mahl AS, Sommers BD. Health care in the suburbs: an analysis of suburban poverty and health care access. Health Aff. 2017;36(10):1777–85.
19. Mohammadi M, Sadqal S, Assariarani A, Rocnoldeineftekhari A. Analysis of the effects of marginalization on women's health in metropolitan cities Tehran, Mashhad, Tabriz and Kermanshah. Geogr Dev. 2022;20(68):87–115.
20. Khayat S, Dolatian M, Fanaei H, Navidian A, Mahmoodi Z, Kasaeian A. Women's reproductive health status in urban slums in Southeast Iran in 2017: a cross-sectional study. J Midwif Reprod Health. 2020;8(1):2070.
21. El-Nimr NA, Gouda SM, Wahdan IMH. Violence against women in a slum area in Helwan, Cairo, Egypt: a community based survey. J Res Health Sci. 2020;20(1): e00466.
22. Moeini B, Rezapur-Shahkolai F, Jahanfar S, Naghdi A, Karami M, Ezzati-Rastegar K. Utilizing the PEN-3 model to identify socio-cultural factors affecting intimate partner violence against pregnant women in Suburban Hamadan. Health Care Women Int. 2019;40(11):1212–28.
23. Rahpaymaelizehee S, Fallahi B, Kojouri RJ. The national policy of Iran toward violence against women. Espaço Jurídico J Law. 2015;16(2):321–32.
24. Begum S, Nair S, Donta B, Prakasam C. Prevalence of unmet need for contraception in urban slum communities, Mumbai. Int J Reprod Contracept Obstet Gynecol. 2014;3(3):627–30.
25. Yadav K, Agarwal M, Shukla M, Singh JV, Singh VK. Unmet need for family planning services among young married women (15–24 years) living in urban slums of India. BMC Womens Health. 2020;20(1):1–17.
26. Khayat SDM, Fanaei H, Navidian A, Mahmoodi Z, Kasaeian A. Study of lifestyle, the most important challenge and its related factors in suburban women. J Health. 2021;11(5):663–752.
27. Austin Z, Sutton J. Qualitative research: getting started. Can J Hosp Pharm. 2014;67(6):436.
28. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007;19(6):349–57.
29. Zhang Y, Wildemuth BM. Qualitative content analysis, in Wildemuth BM, editor, Applications of social research methods to questions in information and library science. 2009; p. 1–12.
30. Nodehi HK, Khalesi N, Nasiripour AA, Dehkordi PR. Strategic analysis of community participation in primary health care in Iran and presentation of promotion strategies using internal and external environment assessment techniques. Asia Pac J Health Manag. 2021;16(1):77–85.
31. Johnson J, Adkins D, Chauvin S. Qualitative research in pharmacy education. Am J Pharm Educ. 2020;84(1):138–46.
32. Lokot M. Whose voices? Whose knowledge? A feminist analysis of the value of key informant interviews. Int J Qual Methods. 2021;20:1609406920948775.
33. Lincoln YS, Guba EG. Naturalistic inquiry. Los Angels: Sage; 1985.
34. Denzin NK, Lincoln YS. The Sage handbook of qualitative research. Los Angels: Sage; 2011.
35. Samarasekera U, Horton R. Prevention of violence against women and girls: a new chapter. The Lancet. 2015;385(9977):1480–2.
36. Edwards KM, Changilwa P, Waterman E, Bikeri C, Mweru C, Khayanje N, et al. A promising approach to preventing gender-based violence and HIV among slum-dwelling youth in Nairobi, Kenya. Violence Against Women. 2022;28(6–7):1379–97.
37. Carter J. Patriarchy and violence against women and girls. Lancet. 2015;385(9978):e40–1.
38. George AS, Amin A, de Abreu Lopes CM, Ravindran TS. Structural determinants of gender inequality: why they matter for adolescent girls' sexual and reproductive health. BMJ. 2020;368:16985.
39. Sharma S, Mehra D, Akhtar F, Mehra S. Evaluation of a community-based intervention for health and economic empowerment of marginalized women in India. BMC Public Health. 2020;20(1):1–16.
40. Durand-Zaleski I. The French health care system. International profiles of health care systems. 2008; p. 59–67.
41. Ludermir AB, Lewis G, Valongueiro SA, de Araújo TVB, Araya R. Violence against women by their intimate partner during pregnancy and postnatal depression: a prospective cohort study. Lancet. 2010;376(9744):903–10.
42. Daruwalla N, Machchhar U, Pantvaidya S, D'Souza V, Gram L, Copas A, et al. Community interventions to prevent violence against women and girls in informal settlements in Mumbai: the SNEHA-TARA pragmatic cluster randomised controlled trial. Trials. 2019;20(1):1–12.
43. World Health Organization. London School of Hygiene and Tropical Medicine. Preventing intimate partner and sexual violence against women:

taking action and generating evidence, vol. 94. Geneva: World Health Organization; 2010.
44. Ricks JL, Cochran SD, Arah OA, Williams JK, Seeman TE. Food insecurity and intimate partner violence against women: results from the California Women's Health Survey. Public Health Nutr. 2016;19(5):914–23.
45. Sabri B, Sellke R, Smudde M, Bourey C, Murray SM. Gender-based violence interventions in low-and middle-income countries: a systematic review of interventions at structural, community, interpersonal, individual, and multiple levels. Trauma Violence Abuse. 2023;24(5):3170–86.
46. Nair AR, Shivanna YKG, Illimoottil JP, Rachana A, Mahasampath GS, Abraham S, et al. Common mental disorders among women and its social correlates in an urban marginalized populace in South India. Int J Soc Psychiatry. 2022;68(7):1394–402.
47. Sathyanarayana RK, Manjunatha S. Common mental disorders among women of reproductive age group in an urban area in Bengaluru. Int J Community Med Public Health. 2019;6(4):1768–73.
48. Biswas A, Doraiswamy S, Abdullah ASM, Purno NH, Rahman F, Halim M. Exploring the perceptions, practices and challenges to maternal and newborn health care among the underprivileged teagarden community in Bangladesh: a qualitative study. Sex Reprod Health Matters. 2020;28(1):1758443.
49. Shibli H, Aharonson-Daniel L, Feder-Bubis P. Perceptions about the accessibility of healthcare services among ethnic minority women: a qualitative study among Arab Bedouins in Israel. Int J Equity Health. 2021;20(1):117.
50. Bouaddi O, Zbiri S, Belrhiti Z. Interventions to improve migrants' access to sexual and reproductive health services: a scoping review. BMJ Glob Health. 2023;8(6): e011981.
51. Guthridge M, Kirkman M, Penovic T, Giummarra MJ. Promoting gender equality: a systematic review of interventions. Social Just Res. 2022;35(3):318–43.
52. Htun NMM, Hnin ZL, Khaing W. Empowerment and health care access barriers among currently married women in Myanmar. BMC Public Health. 2021;21:1–9.
53. Tyer-Viola LA, Cesario SK. Addressing poverty, education, and gender equality to improve the health of women worldwide. J Obstet Gynecol Neonatal Nurs. 2010;39(5):580–9.
54. Alimoradi Z, Kariman N, Simbar M, Ahmadi F. Empowerment of adolescent girls for sexual and reproductive health care: a qualitative study. Afr J Reprod Health. 2017;21(4):80–92.
55. Krubiner CB, Salmon M, Synowiec C, Lagomarsino G. Investing in nursing and midwifery enterprise: empowering women and strengthening health systems—a landscaping study of innovations in low-and middle-income countries. Nurs Outlook. 2016;64(1):17–23.
56. Vizheh M, Muhidin S, Behboodi Moghadam Z, Zareiyan A. Women empowerment in reproductive health: a systematic review of measurement properties. BMC Womens Health. 2021;21:1–13.
57. Mousavi F, Barekat G, Hosseinpiur M. Presenting an empowerment hybrid model for marginalized women. Psychol Achieve. 2021;28(2):137–56.
58. Clarke S, McKenzie H, Lamaro Haintz G, Graham M. Social support and women's reproductive decision making: Testing emergent fit of "optimizing support for the preservation of self." Qual Health Res. 2020;30(7):975–87.
59. Boonstra HD. Advancing sexuality education in developing countries: evidence and implications Evidence-based approaches to sexuality education. Milton Park: Routledge; 2015. p. 370–80.
60. Khanna R, Sheth M, Talati P, Damor K, Chauhan B. Social and economic marginalisation and sexual and reproductive health and rights of urban poor young women: a qualitative study from Vadodara, Gujarat, India. Sex Reprod Health Matters. 2022;29(2):2059898.
61. Renzaho A, Kamara JK, Doh D, Bukuluki P, Mahumud RA, Galukande M. Do Community-based livelihood interventions affect sexual and reproductive health and rights of young people in slum areas of Uganda: a difference-in-difference with kernel propensity score matching analysis. J Urban Health. 2022;99(1):164–89.
62. Salami K, Dumbili E, Ezeah P. Determinants of maternal and child healthcare service utilization among recently pregnant mothers in Ubulu-Okiti, Delta State Nigeria. Int J Sociol Family. 2013;39:115–27.
63. Pleaner M, Milford C, Kutywayo A, Naidoo N, Mullick S. Sexual and reproductive health and rights knowledge, perceptions, and experiences of adolescent learners from three South African townships: qualitative findings from the girls achieve power (GAP year) trial. Gates Open Res. 2022;6:60.
64. Korri R, Hess S, Froeschl G, Ivanova O. Sexual and reproductive health of Syrian refugee adolescent girls: a qualitative study using focus group discussions in an urban setting in Lebanon. Reprod Health. 2021;18(1):130.
65. Meherali S, Louie-Poon S, Idrees S, Kauser S, Scott S, Salami B, et al. Understanding the sexual and reproductive health needs of immigrant adolescents in Canada: a qualitative study. Front Reprod Health. 2022;4: 940979.
66. Wado YD, Bangha M, Kabiru CW, Feyissa GT. Nature of, and responses to key sexual and reproductive health challenges for adolescents in urban slums in sub-Saharan Africa: a scoping review. Reprod Health. 2020;17:1–14.
67. Nmadu AG, Mohamed S, Usman NO. Barriers to adolescents' access and utilisation of reproductive health services in a community in northwestern Nigeria: a qualitative exploratory study in primary care. Afr J Prim Health Care Family Med. 2020;12(1):1–8.

Publisher's Note