



## Perceptions of Preconception Care among Pregnant Women at Masvingo General Hospital, Zimbabwe: A Qualitative Study

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ARTICLE INFO	ABSTRACT
<p><b>Article type:</b> Original article</p> <hr/> <p><b>Article History:</b> Received: 10-Jul-2019 Accepted: 30-Jan-2020</p> <hr/> <p><b>Key words:</b> Preconception Care Pregnancy qualitative study Thematic analysis</p>	<p><b>Background &amp; aim:</b> Preconception care (PCC) is the provision of biomedical, behavioral, and social health interventions for women and couples before conception occurs. Although it serves to close the gap of poor maternal health through promoting good behavior, risk assessment and management of chronic medical conditions, treatment of infections, and vaccinations, but it is still a challenge to most women of the childbearing age worldwide. The present study was performed to investigate the perceptions of women of the childbearing age regarding PCC.</p> <p><b>Methods:</b> A descriptive qualitative design was used on a purposive sample of eight pregnant women within the age range of 15-49 years attending Masvingo general hospital, Zimbabwe for antenatal care. The sample size was determined by data saturation. The data were collected within March 2018 to April 2018 through in-depth interviews, which were conducted in private rooms while detailed notes were taken. Thematic analysis was manually performed to analyse the data. Issues of trustworthiness was considered.</p> <p><b>Results:</b> Major themes identified were inadequate knowledge of PCC, recognition of the importance of PCC, barriers to PCC, and facilitators of PCC.</p> <p><b>Conclusion:</b> Women acknowledged the importance of PCC. However, there was a number of barriers to the full utilization of PCC, and it was a neglected aspect of maternal-child health. There is a need to promote the awareness of PCC to enable informed decision-making regarding the issues of fertility and pregnancy planning.</p>

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### Introduction

Preconception care (PCC) is the provision of biomedical, behavioral, and social health interventions for women and couples before conception occurs (1) to prevent later risks in the prenatal, intrapartum, and postnatal periods (2). The PCC enhances good behavior, risk assessment and management of chronic medical conditions, treatment of infections, and vaccinations (3,4). However, most women of the childbearing age in developing countries do not utilize PCC (5). This is compounded by the unavailability of skilled healthcare providers in

the hard to reach areas, as well as the lack of awareness of PCC.

Developed countries have better-organized health systems; therefore, they use broader policies and guidelines to direct the provision of PCC services within their healthcare systems.<sup>6</sup> The countries, such as Canada, United Kingdom, Spain, Australia, Hungary, and Netherlands, have various recommendations related to preconception health; nevertheless, less developed countries in Latin America, Africa, India, and Middle East tend to use targeted interventions (6).

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In Zimbabwe, PCC is almost nonexistent in public health institutions, compared to antenatal care and postnatal care. It is mostly provided in the private sector where the majority of the population fails to access it due to its costs. Zimbabwe similar to other Sub-Saharan African countries has a heavy burden of maternal, neonatal, and child mortality. According to the Zimbabwe Demographic and Health Survey, maternal mortality rose from 283 to 614 deaths per 100,000 live births within 1994 to 2014,<sup>7</sup> surpassing the Sub-Saharan African average of 510 mortalities per 100,000 live births (7). Many promotive and preventive cares are required to be offered to achieve the Sustainable Goal 3 which aims at the reduction of the global maternal mortality ratio to less than 70 deaths per 100,000 live births and neonatal mortality to at least 12 deaths per 1,000, and in children under 5 years to at least 25 per 1,000 live births (7). To the best of our knowledge, there have been no previous studies on PCC performed in Zimbabwe, and the present study was the first attempt in this regard. It was necessary to conduct a qualitative inquiry on PCC to investigate the perceptions of PCC in pregnant women within the age range of 15-49 years.

## Materials and Methods

The present study was conducted at Masvingo Provincial hospital, Zimbabwe. A descriptive qualitative design was used in this study. In-depth interviews were carried out with eight pregnant women. Data saturation determined the sample size of the present study. The maximum variation purposive sampling technique was used to select the participants. All pregnant women within the age range of 15-49 years attending Masvingo general hospital for antenatal care were included in the study. Very ill and institutionalized patients were excluded from the study. There was no sample attrition, and the study approval was granted by the Joint Research Ethics Committee of the Parirenyatwa Group of Hospitals, University of Zimbabwe College of Health Sciences, and Medical Research Council of Zimbabwe.

The data were collected within the first of

March to the third of April 2019. Informed consent was obtained from all the participants. In-depth interviews following a semi-structured interview guide were conducted in private rooms, and no names appeared on filled-in forms. The interviews were audiotaped while detailed notes were taken and each interview lasted for an average of 45 min.

Thematic analysis as recommended by Miles and Huberman (8) and Braun and Clarke (9) was used to analyze the data and conducted by the researcher and coresearcher. The thematic analysis involved data organizing, familiarizing, transcribing, coding, developing a thematic framework, reviewing themes, indexing, displaying, interrelating, and reporting. The trustworthiness of the research process was ensured by confirming credibility, dependability, confirmability, and transferability (10). Member checking, peer debriefing, persistent observing, prolonged engaging, and thick describing of the process were performed in this study. Major identified themes were the recognition of the importance of preconception care, inadequate knowledge of PCC, barriers to PCC, and facilitators of PCC.

## Results

This section presents the findings of the current study. A total of eight pregnant women participated in the study. Four major themes were identified through the analysis.

The themes and their subthemes were inadequate awareness (i.e., inadequate knowledge of PCC, awareness of only the human immunodeficiency virus [HIV] screening as PCC, and confusion of PCC with antenatal care), importance of PCC (i.e., benefits of PCC), barriers to PCC (i.e., lack of knowledge, financial problems, and health system barriers), and facilitators of PCC (i.e., health education, social support, and provision of free services). Table 1 tabulates the summary of the demographic characteristics of the participants.

Table 2 presents the codes as they developed into subthemes and ultimately into major themes.

**Table 1:** Demographic characteristics (n=8)

Variable	Frequency (%)
<b>Age in years</b>	
15-20	1 (12.5)
21-30	4 (50.0)
31-40	2 (25.0)
41-43	1 (12.5)
<b>Marital status</b>	
Married	8 (100)
<b>Level of education</b>	
Secondary	7 (87.5)
Tertiary	1 (12.5)
<b>Occupation</b>	
Unemployed	4 (50.0)
Self-employed	4 (50.0)
<b>Parity</b>	
1	6 (75.0)
2	1 (12.5)
3 and above	1 (12.5)
<b>Religion</b>	
Christianity	8 (100)

***Inadequate knowledge of preconception care***

All participants had inadequate knowledge of PCC. They were only aware of HIV screening before pregnancy. However, they were not aware of other conditions screened for and other aspects of PCC. Some subjects even misunderstood PCC to be antenatal care.

"My perception was only to know your HIV status" (Participant 5, 31 years, para 1 gravida 2).

"I can just say I was not aware of a training program where a woman attends when she is actually not pregnant" (Participant 1, 27 years old, para 1 gravida 2).

***Acceptance of preconception care importance***

All the participants acknowledged the idea of PCC to improve their health and that of their unborn neonates. They cited the importance of HIV screening in the prevention of vertical transmission to the neonate. Some reported the improvement of the woman health status and that of the neonate through the identification and management of health problems.

"The advantage that is there is when one tests HIV, positive treatment is given to prevent mother to child transmission of HIV and if the test is negative, she is advised to maintain the status by not cheating. If one has high blood pressure, again treatment is given so that the

unborn baby is not affected" (Participant 3, 25 years old, para 1 gravida 2).

"I think it is good because you will know your health status, especially about HIV, sexually transmitted infections, cancer, blood pressure, and diabetes mellitus" (Participant 4, 43 years old, para 4 gravida 5).

***Barriers of preconception care***

A number of barriers to PCC were reported in this study. The reported barriers were lack of finances, lack of social support, and fear of HIV status. Transport to the healthcare system, required tests, and medications bore costs if one has a medical condition. All the participants were either unemployed or self-employed which posed a challenge to pay their costs. The participants also reported the lack of support from spouses and in-laws regarding access to PCC.

Some subjects believed that pregnancy is sacred and should be kept secret; therefore, they fail to openly show that they are planning to become pregnant. This is illustrated in the following excerpts. Most participants mentioned that they did not undergo screening before pregnancy because they were afraid of the awareness of their HIV status. They feared that their spouses would accuse them of infidelity in case of positive HIV findings resulting in the breakdown of their marriages.

**Table 2:** Themes, sub-themes and codes

Codes	Sub-themes	Themes
Not aware of preconception activities. Ignorance of PCC programs. Not aware of the existence of PCC programs. Unaware of the existence of PCC. Lack of PCC awareness. Lack of knowledge of the interventions included in preparing pregnancy. Not aware of what needs to be screened. Not well informed about HIV and syphilis prevention. Not knowing of preconception activities. Unaware of screening for blood pressure and blood sugar levels	Not aware of PCC	Inadequate awareness
Screening for infection periodically. Check-up for uterus health and other infections. Aware of HIV screening only. Need for screening of the current disease and cancer. Understanding confined to knowing HIV status. Screening for cervical cancer and infection. Need for cancer check-ups. Women need HIV screening.	PCC only confined to HIV and cancer screening	
Not coming for antenatal care but deciding to come when in labour. Not booking for antenatal care. Booking early for antenatal care when pregnant. Coming for screening of foetal well-being and pregnancy complications.	PCC misunderstood for antenatal care	
Promotes preparedness of pregnancy. Help to establish HIV status before pregnancy. Commenced on treatment if they are HIV positive to prevent mother to child transmission of HIV. Medical conditions are treated and stabilised. Know health status with regards to HIV infection, sexually transmitted infection, cancer, blood pressure and diabetes mellitus. Help women to take precautions and live as advised up to time of delivery. Improves health of the woman and that of unborn baby. Good for the baby, women and husband in case of sexually transmitted infection.	PCC benefits	Importance of PCC
Women are misinformed about risk lifestyles and behaviours. Women lack knowledge of what needs to be screened. Lack of knowledge of the benefits resulting in seeking care when already pregnant. Lack of knowledge of PCC interventions. Not prioritising PCC screening. Seeking medical care when in problems. Not coming for screening if treatment is not for free.	Lack of knowledge	Barriers
Lack of funds for screening. Lack of funds for buying medication. PCC restricted to private care which is expensive. Lack of money for consultation. Transport costs discourage women to go for preconception screening. Blood pressure and blood sugar screening are a challenge due to lack of funds.	Financial Problems	
Some husbands are difficult to convince to go for testing. Men not willing to accompany their wives for screening. Some religion does not allow followers to go to hospital. Some husbands are abusive. Some women are forced not to go to hospital. Failure of provision of their basics and what the women need during pregnancy. Stress from what is done to them by the people they stay with. Couples afraid to go separately for HIV screening in case of positive HIV results. Some women are afraid of knowing their HIV status. Fear of denial following HIV positive results. Fear of marriage disruption in case of positive HIV results.	Lack of support	
Long distance to clinics causes women not to visit clinics before pregnancy. Shortage of staff at clinics. Negative attitudes from nurses.	Health care system barriers	
Outreach programs to people's residential areas. In towns nurses to have mobile clinics. Health education and screening for medical conditions to be included in outreach programs. Involvement of representatives to give health education. Giving health talks on PCC at public gatherings. In rural areas the headman to mobilise people to go for health talks on PCC at local clinics. Health education on PCC before attending to patients. Use of fliers to disseminate PCC information.	Health education	Facilitators
Motivating husbands to go for regular check-ups together. The headman to mobilise people to go for health talks at clinics. Positive attitudes of nurses. Encouragement from peers within families. Religion to support medical care.	Social support from husbands, peers and community	
Free counselling services. Provision of resources for PCC. Provision of free drugs. Free PCC screening services.	Provision of free services tests and medications	

"We wish that after screening if there are health problems, let them give us medication so that the ailments are treated. If medication is not supplied, we won't come because of the lack of funds. Transport costs discourage women to go for screening before pregnancy and they will prefer to postpone medical exam up to the time when they are already pregnant" (Participant 2, 20 years old, para 1 gravida 2).

"It is available here and there but because of the lack of funds, its accessibility is restricted and makes it almost nonexistent for both those with money and those without. As for cancer, it is screened for free. We do not have the resources even if you wish to go for screening" (Participant 4, 43 years old, para 4 gravida 5).

#### **Facilitators of preconception care**

The participants acknowledged the idea of PCC screening for the management and stabilization of health problems before a woman becomes pregnant. Most subjects mentioned health education as a way of empowering women and their spouses regarding PCC so that they can seek it whenever necessary. Some cases included the use of fliers to be distributed to women, public gatherings to provide health education, and health talks at clinics before midwives and other healthcare workers attend to patients. Most participants mentioned that they may highly benefit if healthcare providers can provide mobile health education clinics in their residential areas. That would eliminate transport costs due to attendance at distant clinics.

"Women should encourage their husbands to go for regular check-ups so that they will plan pregnancy by the awareness of their status. I think here in towns since there are wards it could be good for nurses to come and give us information on the benefits. If they can assign dates for health talks, even if a few will attend, people will share and become knowledgeable. In the rural areas, the headman can mobilize and will inform people that they are wanted at the clinic on such a day in which the health talk will be given" (Participant 5, 31 years old, para 2 gravida 3)

"In towns, it can be a problem since most people go to work in the morning but in the rural areas, the headman can mobilize and will inform people that they are wanted at the clinic on such

a day for a health talk on PCC, or at the clinic, the health talk may be given early in the morning after prayers, and this will be ideal since both men and women will be present. In towns, one can use fliers and give them to people so that those who can read get the information on what to do before pregnancy" (Participant 3, 25 years old, para 1 gravida 2).

The participants reported that social support from peers, spouses, and community will facilitate the reception of PCC. The subjects cited the provision of free services, such as preconception counseling, medication for the treatment of ailments, all maternity medical sundries, and mobile health education clinics for PCC.

## **Discussion**

### **Demographics**

A sample size of eight pregnant women was utilized in the study. The sample size was determined by data saturation (11). In related qualitative studies performed in other countries, such as North America, United Kingdom, Australia, France, and Malta, with regard to PCC, the sample sizes varied from seven to above (3). All the participants were within the age range of 20-43 years. The age range was within the reproductive period. The risk of pregnancy complications increases with increasing the age to above 35 years. This justifies the importance of PCC as risk factors are identified and taken care of to optimize maternal health (12).

In this study, a number of opportunities were identified for health education about PCC. All the participants attained at least an ordinary level of education indicating that they could better comprehend health instructions. A high level of education has been associated with good knowledge and uptake of PCC (1, 13). All the participants in the present study were married. Although husbands play an important role in social support (14), the majority of participants cited them as barriers to the utilization of PCC. The majority of the participants in this study were either self-employed or unemployed and dependent on their spouses for financial support. The low economic status of most women creates an important barrier to PCC utilization (13).

**Inadequate awareness of preconception care**

Most participants reported a limited level or no knowledge of PCC. The subjects who had the idea of PCC were only aware of HIV screening in order to protect the unborn baby. A study conducted in Northwest Nigeria reported similar findings where women were ignorant of PCC and did not report the need to seek for it prior to pregnancy despite high maternal and infant morbidity and mortality. The women in the aforementioned study had suboptimal health-seeking behavior and preferred to postpone PCC up to their pregnancy (15).

This lack of awareness of PCC led women to not seeking for it. The limited knowledge of PCC regardless of the level of education or area of residence was also reported in a study conducted in Ethiopia (1). Other countries, such as Sudan, Iran, Nepal, and Ethiopia, were reported with low levels of knowledge, including 11%, 10.4%, 15.6%, and 27.5%, respectively (1). The utilization rates of PCC in developing countries, such as Brazil and Sri Lanka, are 7.9% and 27.2%, respectively (16).

A study carried out in Canada among Chinese immigrants demonstrated low to moderate awareness of PCC related risks and intended behavior to optimize reproductive health (17). In a study conducted in the Netherlands, a lack of PCC knowledge posed a barrier to its uptake (18). Studies performed in Kenya have also reported poor PCC knowledge of provided services, and Kenya recorded 1.8 million married women with an unplanned pregnancy and 1.1 million women with unmet needs for conception in 2018 (19). About 7,500 women annually die from pregnancy-related complications.<sup>19</sup> However, developed countries tend to have better PCC knowledge due to better health systems, with studies conducted in the United States of America reporting 76% for PCC knowledge (1).

Women sometimes do not see the need for checking immunization status, analyzing family history, as well as screening for infectious conditions, medications in use, and intake of folic acid prior to conception.<sup>20</sup> The lack of awareness can be due to the insufficiency of skilled personnel to provide health education resulting in heavy workloads on nurses and midwives (21). In developed countries, PCC

knowledge is much higher than that in low- and middle-income countries due to good health systems (1), although some studies conducted in developed countries have also reported poor knowledge (22).

In most of Sub-Saharan Africa, PCC is not available, compared to antenatal care and postnatal care (19). The PCC addresses the reproductive system, family planning, vaccinations, psychosocial issues, environmental hazards, teratogenic medications, nutrition, folic acid intake, genetic problems (13), and domestic violence screening. Some participants misunderstood PCC to be antenatal care. The preconception period may be defined as the minimum of three menstrual cycles before the initiation of unprotected sexual intercourse to achieve a planned and viable pregnancy (23). All the participants in the present study were not aware of preconception period timing.

**Acceptance of preconception care importance**

All the participants acknowledged the importance of PCC. The PCC provides women with preventive and promotive interventions for the reduction of and elimination of biomedical, behavioral, and social risks during pregnancy and childbirth (24) and decreases negative health effects on women and neonates (1). It has both social and health benefits for low- and middle-income countries to reduce high maternal and neonatal morbidity and mortality in the countries (23, 25) The PCC promotes risk assessment, screening, and treatment of infections before pregnancy which will, in turn, prevent neonatal infections (2).

The PCC also develops the awareness of the importance of men's health and behavior in maternal and child health outcomes. This finding is very critical, especially in most Sub-Saharan African countries, in which culturally, men leave most of the pregnancy responsibilities to be women's duties. The participants in this study cited that PCC improves women's health and that reported for the unborn baby through identifying and managing risks before pregnancy. Similar results were obtained in a study conducted in the United States of America (26).

### **Barriers of preconception care**

Although PCC advantages were acknowledged for the promotion of better pregnancy outcomes, a number of challenges hinder its accessibility or uptake. Barriers reported in this study were a lack of knowledge, funds, social support, and unsupportive healthcare systems. The barriers to PCC seem to interrelate for both developed and developing countries (22, 27). However, barriers sometimes lead to negative health-seeking behaviors resulting in high maternal and neonatal mortality (15).

Some participants mentioned that it was difficult to prioritize traveling long distances in a bid for screening general health in preparation for pregnancy that was supposed to occur. Other participants chose to pay money for other medical conditions they considered important. Although the knowledge of PCC is related to better compliance with good health behaviors, increased antenatal attendance, institutional delivery, and postnatal care (13), a study conducted in England reported that two-fifths of women who planned their pregnancy did not desist from bad health behaviors (28).

Attitudes are also very important in the formation of health behaviors. More information provided by healthcare workers is vital to influence the utilization of PCC services.<sup>18</sup> However, healthcare providers allocate more commitment and time to other health programs leaving PCC unattended (21). In the Netherlands, despite the efforts made by the Dutch Council to introduce PCC, healthcare providers seem not to be supportive in the creation of awareness, as well as the lack of a comprehensive PCC program for the standardization of care (29).

The findings of the present this study revealed that some women did not seek PCC due to long distance to healthcare facilities, lack of human and material resources in the healthcare facilities, and negative attitude of nurses. A study conducted in Kwazulu-Natal, South Africa, reported negative attitudes toward patients by nurses (30). In another study, nurses were shown to have negative attitudes toward obese patients, demonstrating disrespect and spending less time with them which affected their treatment protocols.

In another study carried out in France, PCC was only targeted at good glycaemic control resulting in unmet needs for PCC in the majority of women (6). In the United States, PCC services are available but personal factors, such as age and attitude, hinder the uptake of PCC (31). Countries, such as Hong Kong, are providing PCC in private clinics where the majority fail to access it (6).

Financial problems were also indicated as challenges to the utilization of PCC. Most women were either unemployed or self-employed demonstrating unstable sources of income. A 2011 Sub-Saharan African report on maternal and child health revealed that PCC is poor due to low economic status, lack of healthcare providers, and poor awareness of maternal health (13). The participants in this study cited the lack of money for transportation to healthcare centers, consultation, and screening.

Most of the subjects mentioned the lack of support from husbands, peers, and community. Husbands were either difficult to convince to go for testing or left all the responsibility to women for everything with regard to pregnancy. A study conducted in South Africa reported negative attitudes toward reproductive health by HIV negative men (32). Husbands play an important role in financial support and many activities to promote physical well-being during the preconception period.<sup>33</sup> In some cultures, spouses are the decision-makers for everything at home. Partner involvement during the preconception period produces effective behavioral changes in the reduction of new sexually transmitted infections, as well as in preconception counseling in case of testing HIV-positive or genetic counselling (2).

Some subjects cited a lack of support from peers within families and churches they go to. Some participants mentioned some religions, such as the apostolic church sect, which do not allow its followers to go to hospitals. In a study performed in Jordan and other Arab countries, the preconception period was not considered important and was given less attention (34).

Domestic violence can significantly deter the utilization of PCC. About 35% of women worldwide experience physical or sexual violence in their relationships (35). The incidence is high in African, Eastern

Mediterranean, and South Asian regions with 37% of intimate partner violence (35). In the present study, some women reported being forced not to go to the hospital; however, other subjects were blamed for cheating if they showed intentions of visiting the clinic or hospital for screening. Domestic violence is associated with bad pregnancy complications, such as preterm labor, abortions, and raised blood pressure (6), and affects the progress of pregnancy and childbirth up to 2 months after the delivery (35). It is very vital to address domestic violence in the preconception period in order to optimize pregnancy outcomes.

Healthcare-related issues cited in this study included long distances to healthcare facilities, understaffing at the clinics, lack of resources, and negative attitudes by the nurses. Nurses by the virtue of their profession are supposed to protect and promote health, prevent illness and injury, alleviate suffering, and advocate the care of patients, families, and communities.<sup>6</sup> Nurses have been reported to being disrespectful, lacking management support, and being rude to patients (30). Some women mentioned that preconception services were hindered by a lack of resources in healthcare facilities (36). The focused PCC, such as glycaemic control or HIV screening, creates gaps and unmet needs in PCC (6). Screening for medical conditions in pregnancy is associated with psychological stress (3).

In the present study, some participants cited being afraid of the awareness of HIV status in case of positive results. In South Asia, women expressed the fear associated with infertility as another reason for keeping pregnancy plans a secret (20). Some women prefer to keep pregnancy preparation a secret between their partners and themselves (14). Several cultural beliefs do not allow women to share pregnancy sentiments with anyone else (37). Such fear and anxiety have negative implications on preconception uptake.

#### **Facilitators of preconception care**

The possible facilitators of PCC utilization suggested in this study were the provision of mobile clinics for screening, social support from spouses, free services, and health education. The provision of preconception consultation and services is vital in the improvement of PCC

uptake (14, 27). However, in most Sub-Saharan African countries, men consider pregnancy as women's responsibility (6). Male involvement in the issues of pregnancy planning and preparing could help to mitigate a lot of social, psychological, and economic challenges faced by women in relation to pregnancy preparation.

Men can be involved in couple screening and counseling, as well as helping women to understand how genetic defects occur in the family, and this can set out the best conditions for conception (34). They are also involved in practicing safer sex, safer conception, and pregnancy counselling (38). At the community level, the involvement of key stakeholders, such as the village headman, in mobilizing people to visit the clinic for PCC services was cited as vital in the facilitation of preconception uptake. Some of the participants also expressed the provision of free services, such as medications and tests, as the facilitators of the increased uptake of PCC.

Many women in Sub-Saharan African countries cannot access PCC services due to a lack of consultation fees and transport costs (1). The introduction of the consultation fee for PCC contributes to the lack of utilization of PCC services and missed opportunities for vulnerable populations (18). The provision of resources for the delivery of PCC ensures the uptake (27).

Health education is very vital in promoting the uptake of PCC (14, 18). It enhances adequate awareness, eliminates lack of social support, and removes cultural barriers (18). The participants cited the provision of health education in mobile clinics, hospitals, or public gatherings as mitigation for huge transport costs, and it would increase their knowledge base of PCC activities and benefits. Some other participants suggested peer educators in case of nurse insufficiency. This justifies the importance of the development of culturally appropriate and family-centered health education programs in order to promote the uptake and utilization of PCC.

However, there were several limitations in the present study. This study was a hospital-based study and could result in participants giving socially desirable responses. Nevertheless, the consent process ensured that the participants were free to be as honest as possible.



## Conclusion

Although women acknowledged the importance of PCC, there are a number of barriers that should be addressed to be effective in this regard. The PCC is not routinely provided, and there are no models or protocols for the provision of PCC. It is required to develop appropriate strategies for offering PCC and integrating it into routine maternal and child health in healthcare settings. There is also a need to update the knowledge of healthcare providers of PCC.

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## Conflicts of interest

Authors declared no conflicts of interest.

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