Research Paper

Maternal Health Information Seeking Behaviors and Perceptions Among Ugandan Pregnant Women: Theory-informed Study

Josephine Namyalo[1,2*], Kiva S. Joseph[3], Emmanuel Otieno[2]

1. Save the Mothers East Africa, Mukono Uganda.
2. Department of Public Health, Faculty of Public Health Nursing and Midwifery, Uganda Christian University, Mukono, Uganda.
3. Department of Communication Studies, Institute of Language Studies, Kabale University, Kabale, Uganda.

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ABSTRACT

Background: Although the maternal mortality ratio has declined in Uganda, but it remains a public health threat, constraining the achievement of maternal mortality targets. Research suggests that health information-seeking behavior is significant for understanding different maternal health outcomes. This study aimed to understand the underlying factors affecting health information-seeking behaviors among pregnant women in selected hospitals in Mukono and Kampala Districts, Uganda.

Methods: Utilizing a qualitative design, 24 pregnant women aged 16-24 years who were seeking antenatal care (ANC) from Mukono, Nagalama, and Naguru Hospitals were recruited through purposive sampling. Focus group discussions (FGDs) and key informant interviews (KIIs) were conducted. The data were analyzed using thematic analysis.

Results: Data analysis identified 20 codes that generated three themes: reasons for seeking information, challenges faced in seeking information, and behavioral change communication strategies.

Conclusion: Findings showed pregnant women accessed information from health workers. The main barrier to receiving information was different reporting times for ANC. There is a need to develop a centralized, standardized health information repository and to provide continuous professional development to providers. Future research should examine interventions to improve health-seeking information behavior across various cultural contexts.

Keywords: Health information-seeking, Antenatal care (ANC), Pregnancy, Uganda

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*** Corresponding Author:**
Josephine Namyalo, MPH.
Address: *Department of Public Health, Faculty of Public Health Nursing and Midwifery, Uganda Christian University, Mukono, Uganda.*
Phone: *+256 (777) 730228*
E-mail: *njozena@gmail.com*

Introduction

Globally, 74% of births are assisted by trained health personnel, and 3000 women die while giving birth annually [1, 2]. However, many of these deaths are preventable through maternal care. In sub-Saharan Africa, 51% of births are attended by a skilled birth attendant, compared to 99% in developed countries. The good health of mothers and newborns is a key contributor to the sustainable development goals (SDGs), which aim to end preventable newborn deaths by 2030 [3]. In Uganda, the maternal mortality ratio has declined from 506 deaths per 100,000 live births in 1988 to 336 in 2016 to 189 in 2023, remaining above the SDG target of less than 70 deaths [4]. The importance of prenatal care lies in reducing maternal mortality by detecting and managing potential complications [5]. Women who remain healthy during pregnancy and after birth are more likely to remain healthy later in life and to have better birth outcomes, childhood, and adulthood [6]. Therefore, adequate information helps decrease stress and enhance self-esteem [7].

Theoretical framework

The behaviour change wheel (BCW) model, closely related to Social and Behaviour Change Communication, was adopted in this study to address health-seeking information behaviour among pregnant women in peri-urban areas. The model holds that consumers can make suitable decisions regarding their health beliefs and practices. The constructs are perceived susceptibility, severity, threat, benefits and barriers, cues to action, and taking health action [8]. Pregnant women tend to make decisions to seek maternal health information from hospitals because of their beliefs about the likely challenges of being ignorant of issues related to maternal health. The BCW model, developed by Michie and West in 2011, addresses individual, environmental, and structural factors affecting behavior and appropriate behavior change interventions. BCW was developed from 19 behavior change frameworks [9]. The model represents the behavioral ecological system in three layers. The innermost layer is focused on the COM-B model of behaviour. It has shown reliability in healthcare settings for determining the context and individual's capability (psychological and physical), opportunity (social and physical environments), and motivation (underlying automatic and reflective processes) of behaviours needed to effect change and develop targeted interventions resulting in improved practice [10]. The second layer relates to nine intervention functions spanning the psychological, community, and social-structural levels. These are observed as potential avenues for influencing behaviour in the psychological, cognitive, affective, physical, or other domains, based on the diagnosed behaviour "problem" or deficit. To this end, health-seeking information behaviour among pregnant women in three selected hospitals. The outermost layer of the wheel consists of policy interventions observed as having the potential to support interventions in the second layer of the wheel. The BCW model recognizes that behaviour is part of an interacting system involving multiple components at different levels. Thus, this study aimed to understand the underlying factors affecting health information-seeking behaviors among pregnant women in selected hospitals in Mukono and Kampala Districts, Uganda.

Methods

Study design

This study employed an exploratory, descriptive qualitative research design using a BCW. The BCW model was used to provide a framework to assess and address participants' needs for effective behaviour change interventions. And a qualitative method to gather insights into participants' feelings, experiences, and perceptions that could impact their behavior and actions towards seeking health information [11, 12].

Sample and data collection

Purposive sampling was used to select 24 pregnant women aged 16 to 24 years who sought care at 3 selected hospitals in Mukono district and Kampala City, Uganda, had attended antenatal clinics at least two times, and were willing to provide written consent for an interview. Pregnant women who were not residents of the study area for at least 6 months were excluded. Three focus group discussions (FGDs), each from one hospital, were conducted, each consisting of eight women, hence 24 respondents in all FGDs. Having a maximum of 8 respondents per FGD was considered ideal given that it is likely to maintain a discussion and, consequently, advance a variety of perspectives. Three key informant interviews (KIIs) were conducted with senior nursing officers, one from each hospital. The FGDs and KIIs were chosen to provide an in-depth understanding of the pregnant women's information needs. The data triangulation (using different modes of data collection). A semi-structured interview and interview schedule were developed using the COM-B model, guided by the Consolidated criteria for reporting qualitative research (COREQ) criteria for reporting qualitative research [13].

The interview sessions were conducted in English and took 30-60 minutes. The FGDs were conducted in Luganda, an indigenous language, for 60 minutes. The interviews were audio-recorded, transcribed verbatim, and proofread by three research assistants from Uganda Christian University who were native speakers of English and Luganda and had graduate training in qualitative research methods. Before data collection activities, two UCU faculty members reviewed the interview guide to ensure rigor and appropriateness for the study. The research assistants were trained for 3 days. All interviews were conducted in person in the respondents' private environment. Data were collected until saturation was reached.

Data analysis

A framework mix analysis was conducted. A guideline laid out by Krueger and Casey (2002) for FGDs was used [14]. Two experienced investigators performed qualitative thematic analysis of the interview data. A third experienced investigator reviewed the themes and re-examined them to ensure they reflected the interview data and also answered the research questions [15]. Thematic analysis was conducted to meet the trustworthiness criteria outlined by Lincoln (1985) [16]. All study data were mapped to the COM-B and BCW. The intervention functions of particular relevance were identified guided by the BCW. Interview responses are quoted in italics in the finding section.

Rigor of the study

The "four-dimension criteria" were used to establish the rigor of the study [17]. Lincoln (1985) introduced these dimensions of trustworthiness for judging qualitative research: Credibility, transferability, dependability, and confirmability [16].

Credibility: To improve the validity of interviews, a pretest survey was conducted. This helped to refine further data collection procedures. Peer debriefing sessions during data analysis, which helped identify key findings [17].

Dependability: Pre-test survey, triangulated literature review, and draft of study procedures with experts in safe motherhood and academia to detail the purported content of the study using the BCW prior to seeking approval. The findings were validated through participant feedback [17].

Confirmability: Discussion and adoption of mutually acceptable methods, including data collection and analysis by researchers who participated in the study, were achieved.

Applicability: Usage of quotes to explain themes allowed researchers to demonstrate the transferability of findings. Codes and themes of the collected data were refined to address any variations in key categories (and themes) during frequent meetings for coding and discussion.

Results

Sociodemograhic characteristics of participants

Twenty-seven respondents participated in this study. The participants included three health workers (midwives in charge of the clinics) and 24 pregnant women.

Themes and sub-themes

Three themes were identified from the analyzed data. These include reasons for seeking information on maternal healthcare services, challenges faced in seeking such information, and behavioral change communication strategies (Table 1).

Reasons for seeking information on maternal healthcare services

Sources of information

The sources identified were media, such as television, radio, and the Internet-based Baby Centre app. However, radio and television are the most common sources of health information among pregnant women. They identified advertisements and announcements as a means of receiving information about pregnancy. The identified media houses were Radio Simba FM and television stations (NTV and NBS TV). Many participants identified more than one source of information. This implies that the availability of various sources of health information can be leveraged to enhance health literacy.

"Televisions make some announcements or advertisements concerning pregnant women. Sometimes, I get this information from our fellow women and the radio. Also, medical doctors educate us on how we can keep our pregnancies and babies healthy" (FGD1, M).

Table 1. Themes and subthemes

Themes	Subthemes
Reasons for seeking maternal health information	To have a healthy pregnancy and healthy baby after childbirth To gain knowledge about danger signs during pregnancy To manage personal anxiety or uncertainty To prepare for labor and delivery To gain knowledge about self-care, nutrition, and hygiene To follow up on fetal development
Barriers to access to maternal health information	Distance to the health facilities Fear of testing for HIV/Aids Negative attitudes/harassment from the health workers High costs of transportation from the homes to the health Facilities Feeling of laziness in attending ANC Poor access to better technology/communication channels, ie, phones, Internet, TVs Delays /long waiting time at the hospital Receiving contradictory information from health workers
Behaviour change communication strategies	Health information was received via local television stations, radios, and public address systems. Health promotion and education by health care workers and VHTS Social media platforms (e.g. WhatsApp, TikTok, YouTube) Organizing weekend sessions for accessibility, for example, during village meetings Community outreach and sensitization programs Distribution of brochures/posters in local languages

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Credibility of health information

Health providers are the most trusted sources of health information among pregnant women compared to other sources, especially the Internet and social media. One participant said:

'Health workers' information gives me tips on how to ensure that my unborn child stays safe and healthy……. information written on flyers teaches us as women we should not be predisposed to such situations. In any case, if it happens, one should report to the hospital." (FGD-2CUFH).

Individual care during pregnancy

There are several concerns about pregnancy. Many women are preoccupied with thoughts about their pregnancy; therefore, this curiosity always preempts them from visiting hospitals to seek clarity on what is happening. As one of them shared:

"Obviously, we seek information because we are anxious about how the baby will be delivered or whether the baby will be normal" (FGD3NAGA).

Delivery of a baby

Every mother wants to give birth to a healthy child, so knowing how this can be possible is one of the major reasons they seek health information from hospitals. One said:

"Some mothers want to know how well their pregnancy can go up to the delivery time. Hence, they want to know whether they are normal to empower them to deliver from the communities" (KII3NAGA).

Referral from health care providers (HCPs)

Referrals from health workers are one of the ways many pregnant women seek health information from hospitals. Some of these mothers go to lower health facilities as their first point of care, and when they require more specialized attention, they are referred to hospitals.

"Experiences shared by peers and friends are a good message for promoting pregnant women's attendance at the facility. Others are being referred by health centers, especially mothers with high-risk conditions. Relatives influence others" (KII1CUF).

Previous pregnancy experiences

Mothers who have experienced complications during previous pregnancies also have a high chance of seeking health information from hospitals. This is mainly because they want to ensure such experiences do not recur. Similarly, high-risk mothers are always worried about complications if they do not seek health information, such as, mothers at risk of eclampsia. One participant explained:

"Many pregnant women with a history of obstetrical complications would want to know if it is not happening again" (KII2M).

Perceptions of quality

The reasons given for perceptions of high-quality health information were mainly the presence of health workers who could provide authentic health information. Many participants rated health workers highly for their trained and for being trusted to share authentic information. Some participants thought that the ability to access healthcare in these hospitals was good enough, as one of the participants shared:

"I appreciate the care provided. When I was infected with HIV by my boyfriend, he advised I seek care from a hospital. I was helped and enrolled in ART therapy, and since then, I am healthy" (FGD2CUFH).

Cultural beliefs, traditions, and norms

Participants were asked how cultural beliefs, traditions, or societal norms influence the type of health information they receive from health facilities during pregnancy. They shared various responses, including culture being a facilitator and barrier to accessing health information. Participants reached a consensus that culture often acts as a barrier to access to health information. Some cultural beliefs contradict early pregnancy planning and preparation. For instance, there is a belief that pregnant mothers should not prepare newborn clothing before a child is born, as it causes a bad omen, and a newborn can lose its life. One participant explained:

"There is a way cultural beliefs hinder us regarding what and how medical doctors teach us. For example, during my first pregnancy, … when I bought baby clothes, people in my culture were furious with me because it was not a good omen for the baby who was not yet born. However, I went ahead and bought clothes."

Also, cultural belief contradicts delivery in health facilities. One of the participants shared:

"It is possible that cultural beliefs influence the type of health information pregnant women seek because there are some cultures where if you get married to a man, they do not accept giving birth to their children from hospitals. And find they have a specific place where they deliver their babies" (FGD3NAGA).

Similarly, culture affects access to several routine health care services for pregnant women, such as ultrasound scans and immunization, as participants share below.

Then narrated

"……when they come for the scan, we do not consider the scan alone; we have to take them through the entire process. And then they want to know the baby's sex. You know, in our culture, when you deliver a baby boy, they say she will give birth to the heir" (KII2M).

Technology and health information dissemination

Health workers identified technology as a tool that enhances health information. Also, the health workers agreed that technology enhances their ability to research and to keep updating themselves with current relevant health information, as reflected by one of the health workers from Nagalama hospital:

'Technology is good for continuing professional development. Given that, the women use the Internet for information, healthcare workers need to have these smartphones to keep abreast with updated information" (KII3NAGA).

Challenges in seeking information on maternal healthcare services

Contradicting health information from healthcare workers

Contradicting information from various categories of health professionals. This creates ambiguity, for instance, when they get different scan dates, they cannot establish their actual expected dates of delivery, as one of them shared:

"Well, sometimes we get confused on which information to take because different people on the internet give information according to their own perspectives, and so it is difficult to know which information to go with and which information to leave out" (FGD3NAGA).

Limited access to media sources

Limited access to media resources, as identified by participants, acts as a barrier to accessing health information. They said that a lot of information can be obtained from phones, but they cannot afford data. The TV's are loaded with a lot of information, but these cannot be afforded either. This is an emerging critical challenge in accessing health information.

"The challenge I get is data for mbs. Data is expensive; before I finish the content, I am watching, they deduct all my data bundles" (FGD3NAGA).

Health care practitioners are overwhelmed

Given that, the health education sessions take place at different times, and the mothers also come at various times, many mothers miss information as there are not enough health workers to keep holding these sessions for all the mothers in the hospital. As one of them shared

"We do not come at the same time; therefore, by the time you come, you find the health care provider has already finished providing information to those pregnant women who were present at that time. And, the challenge is that you will not have benefited since you have not gotten the information that has already been passed" (FGD1M).

Poor attitude of healthcare providers

Some pregnant women reported that health workers' attitudes hindered their ability to seek health information. Some health providers reported that mothers were rude, which denied them the opportunity to be free and ask pressing health questions, as one of them shared:

"Sometimes the medical doctors we ask to get this information are usually very rude to us. I say some of them, not all. Some of them do not want to give you their time, and this creates fear in us to ask more questions" (FGD1M).

Behavioral change communication strategies

Source and information preferences on maternal health care services

Participants were asked which means of health information they preferred most, and they gave several responses that included health workers and village health teams (VHTS) for various reasons. Health workers are a preferred source of health information among pregnant women because of their ability to access authentic information in comparison to other resources, such as the Internet and social media, as one of the m shared.

"Medical officers can help us to access better information about maternal health. For me, I still think that coming here would be better because not all people have smartphones or data to get this kind of information from these media platforms" (FGD3NAGA).

Radio and television programs

Radio and Television programs are also perceived as powerful sources of health information. Some participants expressed that health officials should leverage these platforms for impactful health communication, as one of them shared, radios and TV.

'A policy should be in place for all radios and televisions to always have programs on health, such as "ask your doctor" running for at least one hour. A few stations have these programs. However, Uganda Communication Commission (UCC) develops and reinforces implementation " (FGD2CUFH).

Social media

The growth of social media as a technological medium of communication has increasingly crucial in recent times. Participants appreciated the relevance of social media as a tool for seeking health information.

"The social media platforms would not be a bad option if they could first sieve out the right information to disseminate through other channels like radios and TVs" (FGD3NAGA).

Village health team

VHTs were mentioned as an effective source of health information outside health facilities. This is because some mothers don't have smartphones and yet are in need of health messages, as one of them shared

"VHTs would be of great help to us because for us these people usually pass through our residential area and health educate women" (FGD1M).

Data mapping to the COM-B and BCW

In this study, data collected revealed 100% adherence to seeking health information among pregnant women in the three selected hospitals, with no apparent need for change.

Discussion

In this study, pregnant women's health care-seeking behaviors were explored based on women's and healthcare providers' perceptions, reasons for seeking information on maternal health care services, challenges faced in seeking information on maternal health care services, and behavioral change communication strategies. Pregnancy confirmation among women's care-seeking during ANC

is common in these study areas. Healthcare providers explained that the majority of pregnant women tend to report early for antenatal clinic because the urge to confirm if they are pregnant and wish to know if they will deliver normally are some of those reasons for the initial point of seeking health care at health facilities. This finding is in contrast to Nigerian and Ethiopian studies, where pregnant women do not confirm their pregnancies early, reporting in the second trimester [18].

Timing of health messages

Most participants in the present study received information on ANC. At least four ANC visits are critical to their health and survival, aligning with recommendations from the World Health Organization (WHO) [19, 20]. Also, the timely delivery of health messages is based on the quality of health education. The timing of health education on maternal care is a crucial factor in its effectiveness, and health messages should be communicated during ANC and hospital stay [21-25]. The constructs of the health belief model posit facilitators and barriers to healthcare-seeking information behavior [9]. Thus, it is presumed that pregnant women make decisions to seek health information based on their beliefs about the likely challenges of being ignorant or informed on issues related to maternal and child health.

Facilitators to care-seeking information in the antenatal period

Pregnant women seek information to feel more confident and comfortable in communicating with healthcare providers, to make decisions during the perinatal period, and to prepare for their maternal responsibilities. Adequate information helps decrease stress and anxiety, provide support, and enhance self-esteem and internal control [8]. Inadequate information, whether limited, contradictory, or false, is related to loss of control and limited participation in decision-making [26, 27]. Not meeting women's information needs during pregnancy can increase their worries and anxiety, is a risk factor for isolation, and is a predictor of low confidence as a parent [28]. Therefore, pregnant women need access to information suited to their needs, delivered in the right amount and at the right time [29]. Pregnant women seek information during pregnancy for acquaintance; as a result, they are exposed to a wide range of information [30]. The quality of the decisions made at any time, to a large extent, depends on the type of information available to the user, which helps reduce the degree of uncertainty [31].

Delivery of health messages

Healthcare providers were the primary source of information for many aspects of care. Health messages, with other healthcare professionals involved, including doctors, midwives, and nurses. In the USA [32] and the UK [26], providers play a crucial role in disseminating maternal health messages. 'Hamza et al. and Onuoha & Amuda also reported that providers were the primary source of health education messages on ANC in Egypt and Egypt [33, 34]. However, several participants indicated that they were self-taught, emphasizing the need for health education. Health messages were largely communicated to women via demonstrations, which participants reported were appropriate. Studies conducted in Swaziland found that practical demonstrations were the most commonly used form for health messages in maternal health services, complemented by charts, brochures, and booklets [35]. Previous studies have reported that doctors are the most used source of information [36, 37]. These findings are consistent with our study results. The Internet has also been a leading resource in today's tech-savvy world because 87% of subjects reported using it. A study in USA supports this finding [38]. On the Internet, the need for accurate, verified information for pregnant women is evident. Women must be educated to not blindly trust Internet sources but to verify the data with health professionals [39].

Barriers to care-seeking information in the antenatal period

Pregnant women: Numerous factors prevented women from seeking health information. Transportation costs and distance from the facilities were barriers to accessing healthcare facilities. This finding is consistent with similar study conducted in Ethiopia where distance and transport were hindrances to seeking care by pregnant women [40]. Similar studies conducted in low and middle-income countries, such as Zambia, Malawi, Nigeria, Sierralone, and India, have indicated barriers to transport and distance to maternal services. However, in Ghana, as in Uganda, motorcycle ambulances have proven to be a cost-effective and culturally acceptable solution. Their ability to navigate rough terrain enables them to reach remote locations that are inaccessible to larger vehicles, thereby facilitating women's access to healthcare facilities [41-44].

All participants indicated a poor attitude as an obstacle to seeking health information. Similarly, a Zimbabwean study is consistent with this finding, showing that the

rudeness of health providers deters pregnant women from seeking care [44].

In Uganda, herbal therapy is a growing trend. Almost all the 52 indigenous tribes that constitute Uganda encourage the use of herbal therapy during pregnancy and the postnatal period. This discourages some mothers from seeking conventional healthcare early during pregnancy. A study conducted in Nepal contradicts this finding. Despite the use of herbal therapy in maternal care, the shyness of pregnant women to be observed by male health providers is an obstacle to seeking health care due to the socio-cultural practices and beliefs deeply rooted in the community [45].

However, proponents of cultural beliefs assert that these beliefs positively influence pregnant mothers to seek care, including information. A health provider elucidated the impact of cultural beliefs on seeking.

Conclusion

Most pregnant women received information, as recommended by the WHO from healthcare providers in easy-to-understand language. The identified gaps in women's knowledge and in the health messages provided by healthcare providers should be addressed to improve pregnant women's knowledge and, ultimately, improve health-seeking information behaviors and well-being for both mother and baby.

Implications, future directions, and limitations

The findings are crucial for policymakers, practitioners, and researchers. The study findings suggest the need to improve the infrastructure to promote the sharing of health messages and information with pregnant women. Finally, practitioners can use these insights to design interventions that target health-seeking information to enhance maternal health and end maternal mortality. The age range of 16 to 24 years and a limited number of variables are not generalizable to women outside this population. Future studies could address these limitations by using larger samples and investigating additional variables associated with health-seeking information behavior. Finally, study findings can serve as a basis for strengthening and improving existing policies, the availability of information, education, and communication resources, and maternal care services.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Ethics Committee of Uganda Christian University, Mukono, Uganda (Code: UCUREC-2023-750). Written consent was obtained from each participant, and their confidentiality and privacy were maintained by anonymizing their details.

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Authors' contributions

All authors contributed equally to the conception and design of the study, data collection and analysis, interpretation of the results, and drafting of the manuscript. Each author approved the final version of the manuscript for submission.

Conflict of interest

The authors declared no conflicts of interest.

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References

[1] Uganda UNFPA. Fact sheet on teenage pregnancy. Kampala: United Nations Population Fundation; 2021. [Link]

[2] World Health Organization (WHO). Sexual, reproductive, maternal, newborn, child and adolescent health: report on the 2023 policy survey. Geneva: World Health Organization; 2024. [Link]

[3] Assembly G. Sustainable development goals. Improving human and planetary wellbeing. SDGs Transform Our World. 2014; 2030(82):20-3. [Link]

[4] Ministry of Health Reproductive and Child Health Department. National maternal and perinatal deaths surveillance and response meeting. Kampala: Ministry of Health Reproductive and Child Health Department; 2023.

[5] Bhutada K, Venkateswaran M, Atim M, Munabi-Babigumira S, Nankabirwa V, Namagembe F, et al. Factors influencing the uptake of antenatal care in Uganda: A mixed methods systematic review. BMC Pregnancy Childbirth. 2024; 24(1):730. [DOI:10.1186/s12884-024-06938-6] [PMID]

[6] World Health Organization (WHO). Maternal health: Fact sheet on sustainable development goals (SDGs): Health targets [Internet]. 2021 [Updated 2021 April 18]. Available from: [Link]

[7] Demirci J, Caplan E, Brozanski B, Bogen D. Winging it: Maternal perspectives and experiences of breastfeeding newborns with complex congenital surgical anomalies. Journal of Perinatology. 2018; 38(6):708-717. [DOI:10.1038/s41372-018-0077-z] [PMID]

[8] Glanz KE, Lewis FM, Rimer BK. Health behavior and health education: Theory, research, and practice. San Francisco: Jossey-Bass/Wiley; 1990. [DOI:10.1249/00005768-199112000-00016]

[9] Michie S, Atkins L, West R. The behaviour change wheel. A guide to designing interventions. Good Hope Mountain: Silverback; 2014. [Link]

[10] Michie S, van Stralen MM, West R. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Implementation Science. 2011; 6:42. [DOI:10.1186/1748-5908-6-42] [PMID]

[11] Renjith V, Yesodharan R, Noronha JA, Ladd E, George A. Qualitative methods in health care research. International Journal of Preventive Medicine. 2021; 12:20. [DOI:10.4103/ijpvm.IJPVM_321_19] [PMID]

[12] Sutton J, Austin Z. Qualitative research: Data collection, analysis, and management. The Canadian Journal of Hospital Pharmacy. 2015; 68(3):226-31. [DOI:10.4212/cjhp.v68i3.1456] [PMID]

[13] Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. International Journal for Quality in Health Care. 2007; 19(6):349-57. [DOI:10.1093/intqhc/mzm042] [PMID]

[14] Krueger RA, Casey MA. Designing and conducting focus group interviews. Saint Paul: University of Minnesota; 2002. [Link]

[15] Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006; 3(2):77-101. [DOI:10.1191/1478088706qp063oa]

[16] Lincoln YS. Naturalistic inquiry. Newcastle: Sage; 1985. [Link]

[17] Forero R, Nahidi S, De Costa J, Mohsin M, Fitzgerald G, Gibson N, et al. Application of four-dimension criteria to assess rigour of qualitative research in emergency medicine. BMC Health Services Research. 2018; 18(1):120. [DOI:10.1186/s12913-018-2915-2] [PMID]

[18] Akeju DO, Oladapo OT, Vidler M, Akinmade AA, Sawchuck D, Qureshi R, et al. Determinants of health care seeking behaviour during pregnancy in Ogun State, Nigeria. Reproductive Health. 2016; 13(Suppl 1):32. [DOI:10.1186/s12978-016-0139-7] [PMID]

[19] Barreix M, Lawrie TA, Kidula N, Tall F, Bucagu M, Chahar R, et al. Development of the WHO antenatal care recommendations adaptation toolkit: A standardised approach for countries. Health Research Policy and Systems. 2020; 18(1):70. [DOI:10.1186/s12961-020-00554-4] [PMID]

[20] Gaboury J, Capaday S, Somera J, Purden M. Effect of the postpartum hospital environment on the attainment of mothers' and fathers' goals. Journal of Obstetric, Gynecologic, and Neonatal Nursing. 2017; 46(1):40-50. [DOI:10.1016/j.jogn.2016.08.008] [PMID]

[21] Dlamini LP, Shongwe MC, Simelane MS, Chemhaka GB, Magagula FN. Factors associated with poor maternal health care services utilization in Eswatini: A secondary analysis of a nationally representative household survey. Midwifery. 2022; 106:103250. [DOI:10.1016/j.midw.2022.103250] [PMID]

[22] Majumder S, Najnin Z, Ahmed S, Bhuiyan SU. Knowledge and attitude of essential newborn care among postnatal mothers in Bangladesh. Journal of Health Research. 2018; 32(6):440-8. [DOI:10.1108/JHR-05-2018-0015]

[23] Owen MD, Colburn E, Tetteh C, Srofenyoh EK. Postnatal care education in health facilities in Accra, Ghana: Perspectives of mothers and providers. BMC Pregnancy and Childbirth. 2020; 20(1):664. [DOI:10.1186/s12884-020-03365-1] [PMID]

[24] Shrestha SD, Pradhan R, Tran TD, Gualano RC, Fisher JR. Reliability and validity of the Edinburgh postnatal depression scale (EPDS) for detecting perinatal common mental disorders (PCMDs) among women in low-and lower-middle-income countries: A systematic review. BMC and Pregnancy Childbirth. 2016; 16:72. [DOI:10.1186/s12884-016-0859-2] [PMID]

[25] Malouf R, Henderson J, Alderdice F. Expectations and experiences of hospital postnatal care in the UK: A systematic review of quantitative and qualitative studies. BMJ Open. 2019; 9(7):e022212. [DOI:10.1136/bmjopen-2018-022212] [PMID]

[26] Manirakiza E, Niyonsaba R, Nyinawumuntu G, Nsabimana J, Gasaba E. Evaluation of knowledge and practice regarding family planning among christians pregnant women of gihanga attending antenatal careat vyizigiro health center, bubanza, burundi. Open Journal of Nursing. 2022; 12(5):363-75. [DOI:10.4236/ojn.2022.125025]

[27] Kim M, Lee G. Pregnant women's eHealth literacy and attitudes toward internet health information and their relationship to shared decision making: A cross-sectional study. Women's Health Nursing. 2025; 31(2):155-64. [DOI:10.4069/whn.2025.06.19]

[28] Bassey Etowa J. Becoming a mother: The meaning of childbirth for African-Canadian women. Contemporary Nurse. 2012; 41(1):28-40. [DOI:10.5172/conu.2012.41.1.28] [PMID]

[29] Grimes HA, Forster DA, Newton MS. Sources of information used by women during pregnancy to meet their information needs. Midwifery. 2014; 30(1):e26-33. [DOI:10.1016/j.midw.2013.10.007] [PMID]

[30] Ogunmodede TA, Ebijuwa AS, Oyetola SO. Health information need and information sources of pregnant women in Ogbomoso Metropolis, Oyo State, Nigeria. Lincoln: University of Nebraska; 2013. [Link]

[31] Gagnon AJ, Bryanton J. Postnatal parental education for optimizing infant general health and parent-infant relationships. Cochrane Database of Systematic Reviews. 2009(1). [DOI:10.1002/14651858.CD004068.pub2]

[32] Aksu H, Küçük M, Düzgün G. The effect of postnatal breastfeeding education/support offered at home 3 days after delivery on breastfeeding duration and knowledge: A randomized trial. The Journal of Maternal-Fetal & Neonatal Medicine. 2011; 24(2):354-61. [DOI:10.3109/14767058.2010.497569] [PMID]

[33] Hamza EA, Saied SM, Ataallah AA, Atlam SA. Patterns and Determinants of Utilization of Antenatal Care Services in Tanta, Egypt. Journal of Advances in Medicine and Medical Research. 2022; 34(15):75-85. [Link]

[34] Onuoha UD, Amuda AA. Information seeking behaviour of pregnant women in selected hospitals of Ibadan metropolis. Information Impact: Journal of Information and Knowledge Management. 2013; 4(1):76-91. [Link]

[35] Almoajel A, Almarqabi N. Online health-information seeking behavior among pregnant women in prenatal clinics at King Saud Medical City, Riyadh. Journal of Womens Health, Issues and Care. 2016; 5(3):2. [DOI:10.4172/2325-9795.1000228]

[36] Merrell LK. Exploration of the pregnancy-related health information seeking behavior of women who gave birth in the past year [doctoral thesis]. Tampa: University of South Florida; 2016. [Link]

[37] Kamali S, Ahmadian L, Khajouei R, Bahaadinbeigy K. Health information needs of pregnant women: Information sources, motives and barriers. Health Information & Libraries Journal. 2018; 35(1):24-37. [DOI:10.1111/hir.12200] [PMID]

[38] Shiferie F, Abate FW, Shifraw T, Eglovitch M, Amanuel H, Chan GJ, et al. Health care seeking behaviors of pregnant women in rural Amhara, Ethiopia: a qualitative study of perceptions of pregnant women, community members, and health care providers. The Pan African Medical Journal. 2023; 45:142. [DOI:10.11604/pamj.2023.45.142.39771] [PMID]

[39] Mweemba C, Mapulanga M, Jacobs C, Katowa-Mukwato P, Maimbolwa M. Access barriers to maternal healthcare services in selected hard-to-reach areas of Zambia: A mixed methods design. Pan African Medical Journal. 2021; 40(1):4. [DOI:10.11604/pamj.2021.40.4.28423] [PMID]

[40] Alaofe H, Lott B, Kimaru L, Okusanya B, Okechukwu A, Chebet J, et al. Emergency transportation interventions for reducing adverse pregnancy outcomes in low-and middle-income countries: A systematic review. Annals of Global Health. 2020; 86(1):147. [DOI:10.5334/aogh.2934] [PMID]

[41] Ekpenyong MS, Matheson D, Serrant L. The role of distance and transportation in decision making to seek emergency obstetric care among women of reproductive age in south-South Nigeria: A mixed methods study. International Journal of Gynecology & Obstetrics. 2022; 159(1):263-9. [DOI:10.1002/ijgo.14103] [PMID]

[42] Sarikhani Y, Najibi SM, Razavi Z. Key barriers to the provision and utilization of maternal health services in low-and lower-middle-income countries; A scoping review. BMC Womens Health. 2024; 24(1):325. [DOI:10.1186/s12905-024-03177-] [PMID]

[43] Osborne A, James PB, Bangura C. Determinants of poor access to health care among women of reproductive age in Sierra Leone: A cross-sectional study. BMc Health Services Research. 2025; 25(1):211. [DOI:10.1186/s12913-025-12363-y] [PMID]

[44] Lassi ZS, Middleton P, Bhutta ZA, Crowther C. Health care seeking for maternal and newborn illnesses in low- and middle-income countries: A systematic review of observational and qualitative studies. F1000Research. 2019; 8:200. [DOI:10.12688/f1000research.17828.1] [PMID]

[45] Shahabuddin AS, Delvaux T, Nöstlinger C, Sarker M, Bardají A, Sharkey A, et al. Maternal health care-seeking behaviour of married adolescent girls: A prospective qualitative study in Banke District, Nepal. Plos One. 2019; 14(6):e0217968 [DOI:10.1371/journal.pone.0217968] [PMID]