Original Article

Experiences of Low-Income Indonesian Pregnant Women Regarding the Challenges of Receiving Health Services: A Qualitative Content Analysis

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Abstract

Background: The information needs of low-income pregnant women are multisectoral, encompassing both pregnancy-related and non-pregnancy-related information. Barriers to receiving information for low-income pregnant women are specific and complex. This study aimed to explore the experiences of low-income Indonesian pregnant women regarding the challenges of receiving health information.

Methods: A qualitative study was conducted using content analysis according to Graneheim and Lundman's approach between January and June 2022. A total of 17 women were selected for this study using purposive sampling. In-depth interviews were done following semi-structured interview guidelines, concluding when saturation was reached. Nvivo software version March 2020 was used for organizing data and analysis.

Results: Three themes emerged concerning receiving health information among low-income women, including encountering barriers to accessing information and care, access to ineffective information sources, and difficulties in applying pregnancy health information.

Conclusion: This study shows that barriers to receiving information are specific to low-income pregnant women. Therefore, solution approaches must also be specific. Efforts to improve receiving health information can be achieved through developing educational materials that are easy to access and understand, improving e-health literacy, refining counseling skills among village midwives, holding culturally tailored educational programs, improving mothers' health literacy by family and husbands, integrating counseling with a focus on critical literacy, and formulating policies to alleviate the midwife's workload.

Keywords: Counselling, Health information, Lower Middle Income Country, Midwifery, Pregnant women

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Introduction

Pregnancy is a complex condition involving the interaction of various physiological, psychological, and social factors. Sufficient health literacy during the pre-pregnancy, pregnancy, and postnatal phases directly influences the health status of both the mother and developing fetus,[1] diminishes disparities during pregnancy, and informs the maternity care plans of healthcare systems.[2]

Numerous studies have indicated limited health literacy in countries below the poverty line. The low rate of health literacy among pregnant women in low-income countries is primarily attributed to low educational attainment,[3] low reading ability,[3] cultural domination,[4] stigmas of women as weak,[5] and insufficient proficiency in information and communication technology.[6] This indicates that pregnant mothers from low-income families are a vulnerable group with multisectoral needs, both regarding pregnancy-related information and beyond the context of pregnancy.

Maternal health literacy is a key factor in empowering low-income pregnant women. Health literacy enables mothers to access, understand, evaluate, and utilize the information needed to maintain and improve their health status.[7] In this regard, the role of midwives in providing health education is a key factor in meeting the information needs of mothers and empowering pregnant women.[8]

Women consider midwives the most reliable primary source of health information compared to other channels because they can provide credible and trustworthy information consistently based on literature, which becomes their decision-making source during pregnancy.[9] Therefore, midwives play a crucial role in facilitating women's empowerment in decision-making. However, it would be detrimental if women inquire about topics that are of interest to them, but healthcare providers may discontinue the conversation later.

Midwives providing effective health education can improve the health literacy of pregnant women.[7] However, communication gaps between midwives and pregnant women hinder the reception of health information.[10] Some women expressed dissatisfaction with the information received from midwives.[11] Midwives ignore pregnant mothers' questions, even being harsh towards them.[11] This can reduce the mother's ability to understand the health information provided disrupt the empowerment process and proper decision-making. Midwives are also difficult to reach due to their busy work schedules.[12] On the other hand, many women still have questions and express uncertainty about various health issues, including nutrition, weight gain, and physical activity; however, they dare not asked.[13]

Additionally, the lack of access to adequate healthcare information is a barrier for pregnant women. Low-income pregnant women have limited access to health information from complex learning materials, whether from digital sources or written health messages. Research in Thailand shows that migrant mothers are unable to read written health messages containing complex images, subtle concepts, and taboo images on posters, causing widespread misunderstandings of the visuals used in the campaign;[14] also, research in the United States indicates that vulnerable pregnant women are not motivated to use the MyCare app due to its complex interface and limited language options.[15] Furthermore, the lack of prenatal knowledge among mothers drives them to rely heavily on information from family members and husbands, leading to potential misunderstandings and exacerbation of complications or issues that could have been avoided by seeking accurate information.[16]

Factors surrounding mothers, such as beliefs, culture, and low socioeconomic status, also hinder them from properly applying health practices according to pregnancy guidelines.[17] In South Sudan, women reported that they could naturally give birth to their babies anywhere without prior preparation. They consider the use of maternal health facilities limited to complicated pregnancies.

Moreover, economically, low-income families (LIFs) face ongoing challenges in accessing healthcare facilities, ultimately pushing them to seek medical care only in critical situations. However, this results in increased healthcare costs.[18]

Although previous research has shown low health literacy among low-income mothers, there is still insufficient evidence regarding effective sources of information, behaviors in applying health information, and barriers to receiving health information for pregnant women with low income in Low- and Middle-Income Countries (LMICs), especially in Indonesia. Understanding effective sources of information, barriers to receiving information, and conditions influencing mothers in applying health information can guide policymakers in taking necessary steps toward providing appropriate and equitable healthcare services for pregnant women from LIFs. Therefore, this study aimed to explore the experiences of low-income indonesian pregnant women regarding the challenges of access to health information.

Materials and Methods

This is a qualitative conventional content analysis study conducted from January to June 2022. The location of the research interviews was two community health centers, namely Kalimanah Health Center and Padamara Health Center, which are in Central Java, Indonesia. The research setting was selected because it is a rural area, and most of its population is in a low socioeconomic status.

A total of 17 women comprising 11 pregnant women, 1 postpartum woman, and 5 mothers of babies had referred to village midwives during their pregnancy and had incomes below the minimum wage according to the amounts determined by the government. In this study, postpartum mothers and mothers of infants intended to explore their experiences in obtaining information during pregnancy. The inclusion criteria were i) pregnant women in their 3rd trimester, postpartum women within 1-42 days after labor, or mothers of babies aged 0-1 year; ii) confirmation of their pregnancy through village midwives' services, and iii) adherence to pregnancy check-ups from the village midwives. The village midwives have a Diploma 3 in midwifery education and interact with mothers by providing health education during pregnancy services at the Community Health Center or sub-district health center in their supervised villages. Participants who were unwilling to participate after the interview were excluded from the study.

Interviews were conducted following an interview guide with open-ended questions designed and recorded using an audio recording device with the participants' consent. Most interviews were conducted in the respondents' residence and lasted about 45 to 60 minutes each, depending on the participants' availability and the extent of information shared on each topic. The in-depth interviews aimed to collect comprehensive data and commenced with demographic questions, including name, age, education, history of previous pregnancies and childbirth, and pregnancy experience. By using a topic guide, the participants were asked some questions, such as How do you acquire information about pregnancy?, How do you trust in the information?, How do you evaluate the information?, How do you implement various information?, and How has your experience been when interacting with healthcare providers? Researchers made an attempt to conduct in-depth interviews during the process, using probing questions such "What do you mean by this?", "Why?", and "How?" to understand the experiences participants. The interviews continued until we reached data saturation. This indicates that the interview provided no new information. None of the participants withdrew from the data collection process.

After each interview, the o-transcribe software was used to help us transcribe the tapes, and the finished product was copied

and pasted into Microsoft Office Word. Conventional content analysis was used to analyze the data in this study. Concurrent coding and analysis were done. The data analysis process was conducted based on the steps proposed by Graneheim and Lundman.[19] Data were read and understood as a preparation step, and then a coding system was developed. The coding process was conducted on relevant units of information, followed by the development of sub-themes based on their similarities and differences until the themes were identified. The first researcher conducted the interview process and transcribed the interviews verbatim. Data coding was carried out by the first and third researchers, who had experience in maternity nursing and had undergone qualitative research training. The second and fourth researchers, experienced in qualitative research data analysis, reviewed the coding process and its results to ensure the quality and accuracy of the analysis. NVivo software version March 2020 was used to facilitate the data analysis process, particularly in data grouping and the formulation of sub-themes/ themes. Additionally, the authors adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ) as a guide for presenting the research results.[20]

The researchers utilized four ways to improve the accuracy and reliability of data analysis: dependability, credibility, conformability, and transferability, following Lincoln and Guba's methodology.[21] Credibility was ensured through member checking, which involved verifying research findings with participants in face-to-face meetings. Specialized faculty experts in qualitative research and health literacy who were not involved in the research conducted external checking to ensure dependability. Furthermore, for conformability, all study procedures were carefully documented and published to ensure consistency and provide a detailed record for future research. Detailed explanations of all research steps were provided to enhance transferability, making the findings relevant to other populations with similar characteristics.

The fieldwork began after obtaining ethical approval from the Research Ethics Committee at Universitas Gadjah Mada Faculty of Medicine, Public Health, and Nursing. The approval code is KE/FK/0756/EC/2021. Before participant recruitment, meetings were held with the director of the community health center and staff members to provide information about the study. A roster of potential participants was compiled with the assistance of supervising midwives. Subsequently, the researcher personally met those who met the inclusion criteria, explaining the objectives of the study and emphasizing voluntary participation with freedom to withdraw at any time. Participants were given written informed consent and asked to participate. The research objectives and procedural steps were explained to the participants. After obtaining signed informed consent from each participant, interviews were conducted and recorded.

Results

A total of 17 participants comprised women from low-income households. The mother's age range was 22- 39 years. Most of the participants (70,6%) were unemployed. Five participants (29,4%) had completed their Junior High School. Nine of them (52,9%) were multigravida. The characteristics of the participants are detailed in Table 1. The data analysis from interview transcriptions texts revealed the derivation of 8 sub-themes and 3 themes resulting in the experiences articulated by the participants regarding maternal health literacy. The sub-themes and themes extracted from the data are presented in Table 2.

Theme 1: Encountering Barriers to Accessing Information and Care

This topic focuses on how mothers encountered various barriers that prevented them from accessing sufficient information and care. Within this theme, three sub-themes were explored in-depth.

Table 1: Demographic characteristic of the participants

Participant Number	Age (Year)	Status	Education Level	Husband's education	Employee	Husband's employee	Obstetrical History
P1	22	Pregnant	Junior HS[a]	Junior HS	Unemployed	Factory worker	G1[b]/P0[c]
P2	23	Pregnant	Senior HS	Senior HS	Factory worker	Private sector employee	G1/P0
P3	39	Pregnant	Junior HS	Junior HS	Unemployed	Agriculture worker	G2/P1
P4	28	Pregnant	Junior HS	Junior HS	Unemployed	Construction worker	G2/P1
P5	28	Pregnant	Senior HS	Senior HS	Factory worker	Private sector employee	G2/P1
P6	30	Mother with baby	Senior HS	Senior HS	Private teacher	Driver	G2/P2
P7	31	Pregnant	Senior HS	Senior HS	Unemployed	Private sector employee	G2/P1
P8	28	Pregnant	Senior HS	Senior HS	Unemployed	Construction worker	G1/P0
P9	26	Pregnant	Senior HS	Senior HS	Unemployed	Farmer	G1/P0
P10	28	Pregnant	Junior HS	Elementary	Unemployed	Farmer	G3/P2
P11	38	Mother with baby	Senior HS	Senior HS	Unemployed	Private sector employee	G3/P3
P12	26	Mother with baby	Senior HS	Senior HS	Unemployed	Private sector employee	G1/P1
P13	30	Mother with baby	Senior HS	Senior HS	Unemployed	Private sector employee	G1/P1
P14	28	Mother with baby	Senior HS	Junior HS	Unemployed	Private sector employee	G1/P1
P15	31	Pregnant	Senior HS	Senior HS	Factory worker	merchant	G1/P0
P16	28	Pregnant	Junior HS	Senior HS	Factory worker	Private sector employee	G3/P2
P17	24	Postpartum women	Senior HS	Elementary	Unemployed	Laborer	G2/P2

[a]High School; [b]Gravida; [c]Parity

Table 2: Sub-themes and themes generated from the data

Sub-Themes	Themes
Creating nonconductive learning environment by midwives Barrier to Obtaining Optimum Counseling from a Midwife Mothers' limitation to Asking the provider	Encountering with barriers to access information and care
Unable to Operate the e-Health Pregnancy Application Ambiguous and confused information in educational sources Limitations of Husband and Family informational Support	Access to Ineffective Information sources
Unable to Apply Pregnancy Guidelines Correctly Unable to Prevent Pregnancy Discomforts	Difficulties in Apply Pregnancy's Health Information

1.a. Creating nonconductive learning environment by midwives

This sub-theme indicates that midwives do not create a conducive learning environment to enhance the health literacy skills of pregnant women. One participant inquired whether consuming ice could result in a larger fetus, but the midwife's response did not promote health literacy for pregnant women: "*Is it true that if we consume too much ice, the baby will be big?" The midwife answered, "Saying it is just a myth, unfortunately. Believe in the*

Creator of life; trust in the Almighty" (P1). Another mother mentioned that a midwife became upset when she was asked why weight decreased during pregnancy due to nausea and vomiting: "*Many friends complain about the same thing... especially if they have complaints like this, for example, weight loss... because of nausea and vomiting, whatever they eat comes out, and the midwife scold them, saying you should eat more, like that*". (P12)

1.b. Barrier to Obtaining Optimum Counseling from a Midwife

This sub-theme underscores the challenges faced by low-income pregnant women in obtaining education during counseling sessions due to midwives being busy and difficult to reach, with limited time available for meetings between mothers and midwives. One participant mentioned the midwife was very busy, making it hard to arrange a meeting: "*When I wanted to meet, it was challenging to find her. I went to the midwife's house in the afternoon, but she didn't want to meet me... there was always some reason... eventually, I hesitated to go there for a check-up again*" (P6). Another mother stated that the time spent during midwife check-ups was brief, allowing limited room for discussion: "*The midwife has to examine not just one or two patients, but many... so, the midwife cannot spend a long time with each examination*" (P1). A mother expressed reluctance to ask too many questions due to the waiting time for other patients: "*Sometimes, the desire is there [explained by the provider], but if it goes beyond a lengthy examination... it seems like those outside might be waiting for a long time.*" (P16)

1.c. Mothers' Limitation to Asking the Provider

This sub-theme highlights the limitations of pregnant women from LIFs when consulting with healthcare providers. They feel embarrassed to inquire about the issues that are difficult to understand from the service providers. One participant wanted to have certain information but, due to embarrassment, eventually she refrained from asking: "*I wonder why I am not allowed to drink traditional herbal medicine; sometimes, I want to ask, but I am embarrassed.*" (P1)

Theme 2: Access to Ineffective Information Sources

Interviews with participants revealed diverse perspectives of mothers from LIFs on accessing information, involving both online and offline learning materials through spouses, family, friends, healthcare providers, and social media. Three sub-themes are elucidated in detail.

2.a. Unable to Operate the e-Health Pregnancy Application

This sub-theme highlights the challenges of low-income mothers in seeking complex online information through pregnancy application platforms that require multiple instructional steps and a connection to email. A participant expressed her inability to operate the E-Health Pregnancy application: "*I never read anything. I just accessed the pregnancy application, but I forgot its name [frowning, trying to recall]. Sometimes, I connect to their email and receive some information from the email only. At this advanced pregnancy stage, I only read that.*" (P17)

2.b. Ambiguous and Confused Information in Educational Sources

Women find reading the book more tedious than using social media. The content of the Maternal and Child Health (MCH) handbook is written in formal language and includes illustrations that are ambiguous and confusing. One participant said: "*For example, if it is about [picture] bleeding, is [the picture] about post-delivery bleeding or something else? I mean, if it is [a picture] about post-delivery, but it looks like [a picture] of a pregnant woman experiencing bleeding like that, right?*" (P16).

2.c. Limitations of Husband and Family Informational Support

This sub-theme highlights the lack of

understanding between families and husbands regarding certain information, hindering pregnant women from obtaining assistance in accessing information from their surrounding family. One mother revealed that "*When I complained about back pain and asked my husband how to deal with it... my husband replied... just be patient [imitating her husband's words]*". (P15)

Theme 3. Difficulties in Applying the Pregnancy Health Information

This topic centers on how pregnant women can modify their health behavior by implementing the information obtained from learning materials or oral sources. Within this theme, two sub-themes will be explored.

3.a. Unable to Apply Pregnancy Guidelines Correctly

This sub-theme highlights the limitations mothers face in identifying and taking necessary actions to maintain their own and their unborn baby's health, as well as preventing potential complications during pregnancy. Mothers may struggle to meet their needs due to cultural factors, economic constraints, household responsibilities, and limited knowledge about pregnancy practices. One participant mentioned she continued to lift a heavy water-filled bucket during her pregnancy due to domestic limitations: "*I still perform my routine activities, like carrying a bucket of water while doing the laundry. I fetch water from the well, as usual*" (P17). Another mother mentioned being unable to undergo prenatal check-ups due to financial constraints: "*Yes, I want to have a check-up to confirm whether I am really pregnant or not; I want to do an ultrasound, but there is no budget for it, so I just let it be for now*" (P17).

3.b. Unable to Prevent Pregnancy Discomforts

This sub-theme underscores the tendency of mothers from LIFs to prefer treating rather than preventing discomforts during pregnancy. A participant mentioned that when experiencing swollen feet, she prefered massaging them by rubbing oil: "*When my feet swell, I rub them with oil. My husband sometimes gives me a massage, but it feels painful, and the oil cannot reduce the pain*" (P16).

Discussion

This study revealed the challenges of pregnant women from low-income families in accessing health information, and how mothers received antenatal counseling from midwives. This is crucial as the availability of information and the ability to access, comprehend, and evaluate information influence the attitudes and behaviors of mothers in making informed decisions for themselves and their unborn children.[22]

In this study, pregnant women from LIFs placed more trust in healthcare providers than in other sources of information such as social media, family, and friends, and more often referred to village midwives. In this study, it was found that during counseling, village midwives had not succeeded in creating an atmosphere that impacted the improvement of maternal health literacy; midwives may respond angrily, provide casual answers, or lack scientific explanations. This finding is supported by studies in Nigeria, where midwives' negligent and harsh attitudes toward pregnant patients drive some women away.[23] This study indicates the mothers' tendency to obtain more information, but the midwives' role reveals a gap between what women expect and what they receive.

Furthermore, the study reveals that village midwives are frequently busy and difficult to contact; they also have limited counseling availability, resulting in pregnant women receiving insufficient information and feeling unsatisfied with the services offered by village midwives. A narrative review study in different countries such as Ghana, Uganda, Indonesia, Malawi, and Philippines reports that midwives do not function optimally in providing counseling due to high workload, limited knowledge, and low level of experience.[24,25] This research has implications where interventions focus

on improving midwives' communication competence, especially in empowering vulnerable groups and meeting maternal literacy needs. In addition, future policies that reduce the workload of village midwives also need to be considered.

The next barrier to accessing information is that mothers from LIFs feel embarrassed to discuss their pregnancies with healthcare providers and are hesitant to ask too many questions due to queues of other patients. Communication dysfunction between mothers and village midwives is a source of concern and frustration for mothers. These barriers also occur in Kenya where mothers fear reprimand from healthcare staff and service rejection. The negative attitudes of healthcare workers become reasons for mothers to avoid visits, leading to low antenatal care coverage.[26] This finding indicates **a** need to establish a trust-filled and respectful relationship between village midwives and pregnant women from LIFs, and a woman's experience in care is acknowledged as the key to the success of treatment.[27]

The findings in this research highlight the limitations faced by pregnant women from LIFs in accessing health information, both online and offline. Pregnant women from LIF face constraints in struggle with the use of e-Health pregnancy applications, exhibit disinterest in reading MCH handbooks, and experience limited support for information from family and spouses.

This study indicates that pregnant women face difficulties in operating the e-Health Pregnancy application, which involves several instructional steps and connectivity with email. As reported by other studies, poor and less educated women have low access to information on websites, mobile devices, and e-health platforms; they are less skilled in online information searching.[28, 29] These findings emphasize the importance of digital literacy for pregnant women, especially in e-health knowledge and skills in using devices and e-health service providers, focusing on minimizing e-health service disparities by adhering to literacy principles.[30]

Furthermore, this study indicated that pregnant women from LIF expressed a lack of interest in accessing information from the MCH Handbook. They stated that reading the book is more tedious. The formal language and ambiguous illustrations in the MCH handbook were perceived as confusing. This finding emphasizes that utilization of the MCH handbook is suboptimal as an information source, and mothers have limited access to knowledge for self-care and fetal well-being during pregnancy.[31] This is in the same line with the results of previous research in Indonesia, showing that mothers with low educational levels may limit their understanding of the messages in the handbook, and/or the ability to follow the advice that is given to them. Therefore, each handbook in each country should have a variation; that is, they can solely focus on pictures and diagrams. However, in this study, mothers still complained that handbooks containing illustrations were not understandable. Using both illustrations and additional explanations from nurses and midwives help us better understand the information in the MCH handbooks and make it more accessible to a broader population.[32]

The low literacy skills of husbands and families hinder the mother's access to information from the family regarding health services. In India, women from LIFs rely on their husbands for health service information, irrespective of the husband's knowledge of health services or pregnancy. Communication with healthcare practitioners mainly revolves around consultations for pregnancy difficulties.[16] By understanding these barriers, engaging family members or husbands in prenatal visits and discussions with healthcare practitioners improves their comprehension of the care and requirements of pregnant women.[33]

Subsequently, regarding the application of pregnancy information, this study found that low-income pregnant women faced difficulties in implementing information according to pregnancy guidelines. A study

in Ghana identified women understanding and recognizing dangerous signs of pregnancy and in the newborn, but they had difficulty interpreting and operationalizing information they received during antenatal care visits, indicating that health education did not translate to appropriate health behaviors.[34] Several issues, including cultural attitudes, household duties, lack of awareness, and economic constraints, can hinder the ability to apply pregnancy care.[17]

The obstacle in applying further information is that mothers tend to treat with ineffective methods rather than prevent discomfort during pregnancy. Some pregnant women experience this condition due to a lack of awareness of the importance of preventive measures in maintaining their and their baby's health. They are more interested in traditional remedies or herbal medicine as the primary approach to addressing discomfort during pregnancy and fear of unknown health conditions. These barriers are also found in some pregnant , where they cannot effectively express complaints due to a lack of knowledge about pregnancy danger signs.[35]

The limitation of this study is that the researcher did not do interviews with healthcare providers involved in giving care from pregnant women. This restricts insights from the perspective of midwives during the counseling and pregnancy care process. Future research is recommended to explore the communication processes, barriers, and challenges in providing information for low-income pregnant women from the perspective of midwives would be valuable. However, this study also has strengths. To the best of our knowledge, this is the first study in Indonesia which explored receiving health information in a vulnerable group, namely low-income pregnant women.

Conclusion

The current study indicates that low-income pregnant women face various challenges in receiving health information during pregnancy. Additionally, the midwife counseling process during antenatal care does not support information improvement. Several concepts were identified, including limitations in accessing learning materials, limitations of family and husbands in informational support, communication dysfunction with village midwives, and difficulties in operationalizing of information due to external factors such as culture, domestic work, low education, and limited economic conditions. These findings provide an important basis for district-level maternal and child health program managers and midwifery professional associations to prioritize the issue of low health information in maternal policy and actions.

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Authors' Contribution

E.WN, MH were responsible for the conceptualization and design of this study. The data analysis and interpretation were carried out by LL and EWN. EH drafted the initial manuscript. All authors critically reviewed, revised the manuscript, and approved the final version for publication. All authors take responsibility for the integrity of the data and the accuracy of the data analysis. The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted.

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