MINH
MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)
DOI: 10.33024
Nomor: 79/E/KPT/2023

ARTICLE INFORMATION
Received: September, 27, 2025
Revised: February, 1, 2026
Available online: February, 1, 2026
at : https://e-jurnal.iphorr.com/index.php/minh

Nutritional health services for pregnant women: A qualitative study

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Abstract

Background: Nutritional health services play a crucial role for pregnant women in supporting fetal growth, preventing complications, and reducing the risk of stunting.
Purpose: To explore nutritional health services for pregnant women.
Method: A phenomenological approach involving 11 informants (pregnant women, family members, healthcare workers, community cares, and policymakers). Data were collected through in-depth interviews and analyzed using thematic analysis to identify patterns and themes emerging from participants' narratives.
Results: The analysis generated 47 codes, which were grouped into 8 categories and distilled into two main themes: (1) Experiences of Receiving Nutritional Services, including routine screening, internal referrals, multidisciplinary collaboration, availability of supplements/PMT, and digital media–based education; (2) Barriers in Nutritional Practices and Uptake, including brief communication due to workload, low effectiveness of conventional education, internal constraints (nausea, side effects, forgetting to take supplements), socio-economic challenges, conflicts between medical advice and family traditions, as well as perceptions that services are more beneficial for high risk patients.
Conclusion: Although nutritional services are relatively well-structured and adequate, their implementation still faces significant barriers related to communication, education, internal, socio economic, and cultural factors. These findings highlight the need for interventions focusing on more effective communication strategies and strengthening the role of reliable information sources to improve the nutritional status of pregnant women.

Keywords: Nutritional Health Services; Pregnancy-Related Nutritional Disorders; Pregnant Women.

INTRODUCTION

Nutritional health services play a strategic role for pregnant women. Optimal nutrition is essential to support fetal growth, prevent pregnancy complications, and ensure the health of both mother and newborn. Nutritional interventions such as nutrition education, regular nutritional status assessments, and supplementation with iron, folic acid, and vitamins are key to reducing maternal and infant mortality, which remains a global health priority (Pratiwi, 2020; Qin & Xie, 2023).

The consequences of maternal undernutrition are severe, including anemia, low birth weight (LBW), birth defects, and childhood stunting (Shrivastava, Singhal, Gupta, & Josh, 2023). Globally, the prevalence of chronic energy deficiency (CED) among pregnant women remains high, reaching 41% (Hasanah, Monica, Susanti, & Hariyanti, 2023). In Indonesia, although the prevalence of CED declined to 16.9% in 2023, this figure is still far from the Ministry of Health's Strategic Plan target of reducing it to 10% (Mariyatun, Herdiana, & Rini, 2023).

Specifically, in Jakarta Province, the prevalence of CED among pregnant women was recorded at 3.1% in 2023, the lowest in Indonesia. However, the 2018 Basic Health Research data for Jakarta showed that 48.9% of pregnant women experienced anemia and 23% of newborns were stunted. These findings indicate that while the challenge of CED is

DOI: https://doi.org/10.33024/minh.v8i11.1640

relatively well managed, other nutritional problems such as anemia and stunting remain serious concerns requiring sustained interventions (Ministry of Health of the Republic of Indonesia, 2022; Arfan, Marlenywati, Saleh, Rizky, & Marlina, 2024).

Several nutritional interventions have been implemented, including iron supplementation and maternal health classes. However, the effectiveness of these interventions is strongly influenced by the quality of healthcare services and patient satisfaction. Research shows that low maternal satisfaction with nutritional health services can affect adherence to interventions. Satisfaction is shaped by various factors such as the quality of facilities, provider competence, clarity of communication, and empathy. Therefore, it is important to gain an in-depth understanding of the experiences and challenges faced by both pregnant women and healthcare providers in accessing and delivering nutritional services (Dewidar, John, Baqar, Madani, Saad, Riddle, Ota, Kung'u, Arabi, Raut, Klobodu, Rowe, Hatchard, Busch-Hallen, Jalal, Wuehler, & Welch, 2023; Dinengsih, Kundaryanti, & Nurdiani, 2024).

RESEARCH METHOD

This study employed a qualitative design with a descriptive phenomenological approach. This approach was chosen to explore and gain an in-depth understanding of the subjective experiences of participants regarding nutritional services for pregnant women in North Jakarta. Phenomenology enables researchers to capture the essence of participants' lived experiences, independent of pre-existing theoretical frameworks, thus providing rich and detailed descriptions from their own perspectives. The study was conducted at primary healthcare facilities, namely Community Health Centers and independent midwifery practices in North Jakarta.

Participants were recruited through purposive sampling, selecting individuals with direct experience or substantial knowledge related to nutritional services for pregnant women. In total, eleven informants took part in this study, including five pregnant women, two healthcare providers such as midwives or nutritionists, and two family members who were either husbands or other relatives. Additionally, one community health care and one policymaker from the local health center were included to provide broader perspectives on service implementation and policy context.

Specific inclusion criteria were established for each group of participants to ensure the relevance of the data collected. Data were obtained through semi-structured, in-depth interviews. An interview guide was prepared in advance, allowing flexibility to explore emerging issues during the interview process. Each session was audio-recorded with the participants' consent and supplemented with field notes. Interviews continued until data saturation was reached, defined as the point when no new information or themes emerged.

To ensure the rigor and credibility of the findings, we employed source triangulation, cross-checking narratives from pregnant women against those of healthcare providers, family members, community health cares, and policymakers. Data were analyzed using inductive thematic analysis, and coding, categorization, and theme development were supported by NVivo Pro. Ethical approval was obtained from the Health Research Ethics Committee, Faculty of Health Sciences, National University, under approval number 053/e-KEPK/FIKES/VI/2025.

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RESEARCH RESULTS

Table 1. Characteristics of Informants

Classification of Informants	Code	Role/Position
Main Informant	I.U. 1	Pregnant Woman (Employed)
Main Informant	I.U. 2	Pregnant Woman (Housewife)
Supporting Informant	I.P. 1	Husband of Main Informant
Supporting Informant	I.P. 2	Mother-in-law of Main Informant
Key Informant	I.K. 1	Nutritionist / Community Health Center Program Coordinator
Key Informant	I.K. 2	Midwife at Community Health Center
Key Informant	I.K. 3	Midwife at Private Midwifery Practice (TPMB) 1
Key Informant	I.K. 4	Midwife at Private Midwifery Practice (TPMB) 2
Key Informant	I.K. 5	Obstetrician-Gynecologist (ObGyn)
Key Informant	I.K. 6	Doctor in Charge of Maternal and Child Health (MCH)
Key Informant	I.K. 7	Community Health Care

From the data analysis, 47 specific codes were identified and grouped into 8 main categories. These eight categories were then distilled into two major themes that form the core findings of this study: "Experiences with Receiving Nutritional Services" and "Barriers in the Practice and Acceptance of Nutritional Services".

Table 2. Thematic Analysis of Interview Data

Major Theme	Category	Codes
Theme 1: Experiences with Receiving Nutritional Services	1. Quality of Interaction with Health Workers	Good & friendly service Fast & rushed explanations Medical language is difficult to understand Feeling cared for (in KEK cases) Feeling burdened by the diagnosis Midwife/doctor is easy to consult with Feeling awkward/too shy to ask questions
	2. Service System and Flow	Nutritional screening at every visit Internal referral directly to the Nutrition Clinic Existence of a special monitoring team (high-risk patients) Uncomplicated procedures Collaboration between units (midwives, nutritionists, doctors) Case discussions (mini-symposium) Community health center targets/KPIs (reduction of anemia & KEK)

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Major Theme	Category	Codes
	3. Quality of Information and Education	Education at every ANC visit Use of everyday language Receiving leaflets/brochures Main information from the Mother and Child Health Book (KIA's Book) Use of social media (Instagram, TikTok, WhatsApp) Teach-back method Use of visual evidence from ultrasound Pregnancy classes
	4. Availability of Facilities & Resources	Iron supplements (TTD) are always available PMT biscuits for KEK Integrated Health Post PMT (eggs, bananas) Provision of alternative supplements (paid) PMT quality is perceived as inadequate Resources are subsidized by the government
Theme 2: Barriers in the Practice and Acceptance of Nutritional Services	5. Internal Patient Barriers	Severe nausea & vomiting Side effects of TTD (nausea, smell) Poor appetite Laziness or inability to cook Forgetting to take supplements Prior pregnancy experience (already knows)
	6. Socio-Economic Barriers	Financial constraints for nutritious food Husband's unstable income Transportation costs to healthcare facilities Time constraints due to work
	7. Cultural & Social Support Barriers	Conflict between a midwife's advice vs. a mother in law's advice Myths & food taboos (fishy, pineapple, ice) Positive support from husband & family Lack of family support Social pressure
	8. Systemic Service Barriers	Rushed explanations due to long queues Educational materials (leaflets) are considered ineffective Nutritional services are not always received at every visit Integrated Health Post/Community Health Center schedules clash with work hours

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DISCUSSION

Quality of Interaction and Systemic Barriers

Qualitative findings highlight personal interaction as the core of service experiences. Participants felt comfortable and open when a good relationship was established, as expressed by one husband:

"My wife also seems to feel comfortable with the midwife, so consultations go smoothly." (I.P.1).

However, long queues at health facilities created systemic burdens that directly undermined communication quality. Patients were reluctant to ask further questions because of rushed explanations:

"The community health center was so crowded, so when they explained things… it was very fast. I wanted to ask more, but I felt bad since so many people were waiting behind me." (I.U.2).

In addition, nutritional diagnoses sometimes became a psychological burden:

"After coming back from the community health center, I often have so many thoughts… I feel burdened, worried that something might happen to the baby." (I.P.2).

This phenomenon creates a dissonance between the intentions of providers and the perceptions of patients. Empathy in communication was the strongest factor (R^2 = 0.274) influencing patient satisfaction (Lampus & Wuisan, 2024). This suggests that a well-designed system can lose its impact if the human interaction is perceived as lacking. The findings underscore the critical role of empathy and clear, unhurried communication in building patient trust, which ultimately affects their willingness to adhere to medical advice (Nwosu, Edo, & Jalloh, 2023)

Effectiveness of Education: From Conventional to Contemporary

This study found that conventional educational methods such as brochures and leaflets were often perceived as ineffective. As one midwife candidly admitted:

"Brochures and leaflets… sometimes those media are not effective, Miss. Hehehe. People take them home, but often just use them to wrap chilies." (I.K.4).

In response, digital media such as WhatsApp groups and short videos were introduced:

"I usually send healthy menu pictures or short videos to the pregnant women's WhatsApp group. I think they're more likely to see it on their phones." (I.K.4).

The most persuasive approach, however, was the use of direct visual evidence from ultrasound (USG) scans to foster both cognitive and emotional connection. As an obstetrician explained:

"I often show it directly on the ultrasound screen, for example: 'Look, Ma'am, this is the baby's abdominal circumference. For it to grow, it needs building blocks namely protein…'" (I.K.5).

These findings strengthen the argument that the effectiveness of information depends not only on content accuracy but also on the medium of delivery (Puspitaningrum, 2024). This is especially critical in an age of information overload, where pregnant women are exposed to various sources, including potentially unreliable ones. Research shows that mothers often rely on healthcare providers for nutritional information, and misinformation can lead to inadequate nutrition, causing conditions like anemia and poor fetal outcomes. Therefore, healthcare providers must not only be a source of accurate information but also employ methods that are both engaging and easily digestible for their patients (Cetin, Passoni, & Laoreti, 2022).

Availability of Facilities and Patient Perceptions

Nutritional services in the study area were structurally well-organized, providing free iron-folic acid (IFA) supplements and fortified food (PMT). However, side effects such as nausea discouraged women from consuming them:

"But sometimes when I take it, I feel nauseous. So usually, I replace it with another supplement." (I.U.1).

This gap was addressed by private practices that offered paid supplement alternatives. Moreover, discrepancies were found between patients' and providers' perceptions of nutritional services. Some women felt they did not always receive nutritional counselling at every visit:

"Sometimes this month I get nutritional services, but last month I didn't. It's like that sometimes." (I.U.1).

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From the providers' perspective, however, in-depth counselling was only provided for high-risk cases:

"Oh no, it's separated. So, if the patient is normal without any problems… then next month she doesn't need to return to the nutrition clinic." (I.K.1).

This difference was not due to negligence but rather a systemic communication issue that needs to be addressed (Leotin, 2025).

Internal and Socio-Economic Barriers

Physiological conditions such as nausea and vomiting in early pregnancy were significant barriers to food intake:

"Sometimes I can't even eat rice, let alone other kinds of food." (I.U.2).

Beyond this, economic constraints became the main challenge in meeting nutritional needs, despite awareness of their importance. As one informant stated:

"If I had to buy good quality meat or fish every day… that would be hard. My husband's work… well, it's uncertain." (I.U.2).

This indicates that nutritional interventions cannot stand alone and must consider the economic realities of patients. Although employment status was not always statistically significant, economic factors remained strong confounding variables for chronic energy deficiency (CED) (Setyaningrum, Netty, & Handayani, 2020; Halimah, Jayanti, & Fatmaningrum, 2022).

Medical Advice vs. Family Traditions

Qualitative findings clearly showed that pregnant women often faced dilemmas between medical advice and traditional family practices, particularly from mothers-in-law:

"At the community health center, the midwife said, 'Eat more fish.' But at home, my mother-in-law said, 'Don't eat too much of those fishy foods.'" (I.U.2).

The central role of mothers-in-law as custodians of nutritional traditions (Villarroel, Hannigan, Severoni, Puthoopparambil, & MacFarlane, 2019). Interestingly, such conflicts often stemmed from love and concern:

"It's not that we don't trust the midwife, but as parents we also worry… It's just an effort to protect." (I.P.2).

Conversely, active support from husbands proved to be a strong protective factor. A significant correlation ($p = 0.035$) between husband's support and pregnant women's adherence to iron supplementation (Rhamadayanti, Palimbo, Latifah, & Fetriyah, 2025).

Past Experiences as a Source of Knowledge

The study also indicated that nutritional knowledge was often shaped by prior pregnancy experiences. Multiparous women felt they already had sufficient knowledge:

"This is my fourth pregnancy. So, when it comes to nutrition services, I'm already quite experienced… I know quite a lot." (I.U.1).

Multiparous women tend to possess higher nutritional knowledge (Farhan, Iqbal, & Ikhsan, 2024).

Access Barriers

Qualitative findings showed that the main barrier was not physical access or financial cost, but rather time constraints. community health center schedules often conflicted with working hours:

"The main barrier is time, Ma'am. Because we work, while nutrition services or Integrated Health Post activities have fixed schedules. So sometimes I can't attend because of work." (I.U.1).

Access to health services significantly influenced the incidence of CED ($p = 0.024$. These barriers indicate that access is not merely about physical availability but also about the system's flexibility and adaptation to patients' socio-economic realities) (Sanggul, Andriyani Risma, 2024).

Theoretical and Practical Implications

The findings of this study provide several important implications. Theoretically, the study enriches the understanding of the phenomenology of nutritional services, demonstrating that patient experiences are influenced not only by technical aspects but also by social, economic, and cultural dynamics. Practically, the findings highlight that strategies to improve the nutritional status of pregnant women must go beyond supplement provision and conventional education. A more personalized and adaptive approach is urgently required to improve the quality of health services.

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This can be achieved by strengthening communication between healthcare providers and clients, particularly in high-demand settings where information may not always be delivered clearly or thoroughly. In addition, the use of digital and visual media that are more relevant and engaging can support health education, making information easier to understand and remember. This strategy becomes even more effective when husbands and other family members are actively involved in nutritional counselling sessions, ensuring that positive dietary practices and behavior changes are supported and reinforced at home.

CONCLUSION

This qualitative study concludes that while nutritional services for pregnant women are well structured and integrated, their implementation still faces significant challenges. The findings highlight two key themes: First, patients reported positive experiences with routine screening, internal referrals, and multidisciplinary collaboration. Educational innovations using digital and visual media were also found to be effective. Second, multidimensional barriers were identified, including internal (physiological), socioeconomic (cost and time), and cultural (conflicts with tradition) constraints. A crucial finding revealed a perception gap between patients and providers, largely driven by communication barriers and time limitations. Overall, the effectiveness of nutritional services depends not only on the availability of facilities and standardized procedures but also on human and contextual factors in practice

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