

LIVED EXPERIENCES OF MATERNAL HEALTH LITERACY AMONG PRIMIGRAVIDA WOMEN IN URBAN INDONESIAN COMMUNITY: A PHENOMENOLOGICAL STUDY

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ABSTRACT

Introduction: Maternal health literacy (MHL) is the ability of pregnant women to access, understand, and use health information during pregnancy. Despite various programs to reduce maternal mortality, limited maternal health literacy remains a challenge. This study aims to explore the experiences of primigravida pregnant women in understanding and utilizing health information during pregnancy in an urban Indonesian community. **Methods:** A qualitative study using a phenomenological design was conducted at the Kassi-Kassi Community Health Center in Makassar City. Six primigravida pregnant women were purposively selected. Data were collected through in-depth interviews and analyzed using the Colaizzi method. **Results:** Four main themes were identified: (1) limited understanding of maternal health literacy; (2) reliance on informal sources and digital media; (3) lack of knowledge about essential maternal health information; and (4) cultural influences and pregnancy myths. **Conclusion:** Maternal health literacy among primigravida pregnant women is influenced by limited understanding, the dominance of informal information sources, and culture. Contextual and culturally sensitive health education is needed to improve health decision-making during pregnancy.

Keywords: Maternal health literacy, self care, pregnant women.

ABSTRAK

Pendahuluan: Literasi kesehatan maternal (maternal health literacy/MHL) merupakan kemampuan ibu hamil dalam mengakses, memahami, dan menggunakan informasi kesehatan selama kehamilan. Meskipun berbagai program penurunan angka kematian ibu telah dilakukan, keterbatasan literasi kesehatan maternal masih menjadi tantangan. Penelitian ini bertujuan mengeksplorasi pengalaman ibu hamil primigravida dalam memahami dan memanfaatkan informasi kesehatan selama kehamilan di komunitas perkotaan Indonesia.

Metode: Penelitian kualitatif dengan desain fenomenologi dilakukan di Puskesmas Kassi-Kassi, Kota Makassar. Enam ibu hamil primigravida dipilih secara purposive. Data dikumpulkan melalui wawancara mendalam dan dianalisis menggunakan metode Colaizzi. **Hasil:** Ditemukan empat tema utama, yaitu: (1) keterbatasan pemahaman tentang literasi kesehatan maternal; (2) ketergantungan pada sumber informal dan media digital; (3) kurangnya pengetahuan tentang informasi kesehatan maternal esensial; dan (4) pengaruh budaya serta mitos kehamilan. **Kesimpulan:** Literasi kesehatan maternal pada ibu hamil primigravida dipengaruhi oleh keterbatasan pemahaman, dominasi sumber informasi informal, dan budaya. Diperlukan edukasi kesehatan yang kontekstual dan sensitif budaya untuk meningkatkan pengambilan keputusan kesehatan selama kehamilan.

Kata Kunci : Literasi kesehatan maternal, ibu hamil, perawatan diri.

A. INTRODUCTION

Pregnancy represents a crucial and transformative period in a woman's life. Physiological and psychological adaptations occur simultaneously, driven by hormonal and physical changes that prepare the body for childbirth (Alim et al., 2019; Ana, 2022). These changes—such as hyperpigmentation, reduced mobility, and fatigue—are often accompanied by heightened emotional sensitivity, anxiety, and irritability as women process both internal bodily transitions and external narratives about pregnancy and childbirth. While pregnancy is a natural physiological event, it remains a condition that requires careful adaptation. Inadequate adaptation may lead to complications or even maternal mortality (Dwi Pangesti, 2018).

Globally, maternal mortality remains a persistent challenge. According to WHO (2023), an estimated 287,000 maternal deaths occurred in 2020, predominantly in low- and middle-income countries. In Indonesia, maternal mortality rates (MMR) have shown improvement—from 305 deaths per 100,000 live births to 189 per 100,000 live births (Kemenkes RI, 2023). However, some regions, including South Sulawesi, continue to report high maternal deaths, recording 176 cases in 2023, only a slight decline from 193 the previous year. These statistics underscore that despite government initiatives such as mandatory antenatal care visits, Gerakan Sayang Ibu, and strengthened referral systems (PONED-PONEK), maternal mortality remains unacceptably high.

WHO (2023) emphasizes that most maternal deaths are preventable through appropriate and timely care. However, one crucial yet underrecognized factor contributing to maternal health disparities is health literacy. Health literacy extends beyond traditional health education and encompasses the capacity to access, understand, evaluate, and apply health information to make informed decisions in daily life (Sørensen et al., 2012). For pregnant women, health literacy influences their ability to engage in self-care, adhere to medical advice, and recognize early signs of complications (Hakkak et al., 2019); (Berkman et al., 2011).

Empirical studies have consistently linked low maternal health literacy to adverse outcomes such as non adherence to treatment, misinterpretation of health information, and delayed healthcare seeking (Gani et al., 2022 ; Gani et al., 2017). In Indonesia, limited evidence suggests that maternal health literacy remains low; for instance, studies conducted in Makassar revealed that over 57% of pregnant women had inadequate health literacy (Gani et al., 2017; Risma et al, 2022). This condition may hinder their ability to maintain nutrition, hygiene, and preventive health practices, which are vital for a healthy pregnancy (Shahid et al., 2022).

Primigravida women represent a particularly important group in maternal health research. As women experiencing pregnancy for the first time, primigravida mothers often have limited prior knowledge and experience related to pregnancy care. Consequently, they may face greater challenges in understanding health information, navigating healthcare services, and making informed decisions regarding maternal health. Limited experience may also increase their dependence on informal sources of information such as family members, community beliefs, or social media, which may not always provide accurate health information.

Despite the importance of maternal health literacy, most previous studies have primarily employed quantitative approaches that measure literacy levels or associated risk factors. Limited research has explored how pregnant women—particularly primigravida mothers—experience, interpret, and utilize health information during pregnancy. Understanding these lived experiences is important for designing effective maternal health education strategies that are culturally sensitive and contextually relevant.

Furthermore, the national data on maternal health literacy are unavailable, and most insights are derived from scattered local studies. This knowledge gap is significant because inadequate maternal health literacy not only compromises maternal outcomes but also influences child health and developmental trajectories (Solhi et al., 2018; Ramezankhani et al., 2017). Despite the increasing body of quantitative research assessing literacy levels, little is known about how pregnant women acquire, interpret, and utilize health information in their daily lives—dimensions that are critical for developing culturally relevant interventions.

This study offers a novel qualitative exploration of the lived experiences of maternal health literacy among pregnant women in Makassar, Indonesia—a region with persistently high maternal morbidity and mortality rates. Unlike prior quantitative studies that focused merely on measuring literacy levels, this research investigates how and why pregnant women seek, process, and apply health information within their socio-cultural contexts. This approach provides a deeper understanding of the cognitive, emotional, and behavioral processes underpinning health literacy, which will serve as a foundation for developing tailored, evidence-based health literacy interventions to improve maternal outcomes.

Given the intersection of maternal health, health literacy, and socio-cultural determinants, this research is both timely and essential. By capturing women's experiences from a qualitative perspective, it contributes new insights into contextual determinants of health literacy that have been largely overlooked in low-resource settings like Indonesia. The findings are expected to inform policymakers, educators, and healthcare providers in designing effective literacy-based maternal health promotion strategies.

Therefore, this study aims to explore the lived experiences of primigravida women in understanding, accessing, and utilizing maternal health information during pregnancy in an urban community in Makassar, Indonesia. By exploring these experiences, the study seeks to provide deeper insights that may inform the development of more effective and culturally appropriate maternal health education strategies

B. METHOD

This study employed a qualitative research design with a phenomenological approach to explore the lived experiences of health literacy among pregnant women. The phenomenological design was selected to gain a deep understanding of how women perceive, interpret, and construct meaning from their experiences in accessing, understanding, and utilizing health information during pregnancy.

This approach allows the researcher to explore the subjective dimensions of health literacy that are shaped by social, emotional, and cultural contexts, providing insights that cannot be captured through quantitative inquiry (Creswell, J. W., & Poth, 2018).

The study was conducted at the Kassi-Kassi Public Health Centre, located in the Rappocini District, Makassar City, South Sulawesi Province, Indonesia. This site was chosen because it represents a community-based health facility serving a large population of pregnant women with diverse educational and socioeconomic backgrounds. Data collection was conducted between May 29 and June 10, 2024.

The study population consisted of pregnant women who attended antenatal care services at the Kassi-Kassi Health Centre. Participants were selected using purposive sampling, a technique commonly applied in qualitative research to identify individuals who have rich, relevant, and diverse experiences related to the study phenomenon. Inclusion criteria :Pregnant women who voluntarily agreed to participate; Primigravida (first-time pregnancy);Residing in the Kassi-Kassi Health Centre catchment area; Able to communicate verbally and provide informed consent. Exclusion criteria: Pregnant women who were unavailable during data collection; Those unwilling to participate in the study. The number of participants was determined based on data saturation, meaning that interviews were continued until no new information or themes emerged. Saturation was reached after interviewing six participants.

Data were collected through in-depth, semi-structured interviews conducted face-to-face in a quiet and private setting within the health centre to ensure participant comfort and confidentiality. Each interview lasted between 30–60 minutes and was conducted in Bahasa Indonesia by the principal investigator. Interviews were audio-recorded with participant consent, and field notes were taken to capture contextual observations, tone, and non-verbal cues. The interviews were conducted until data saturation was achieved, where no additional insights were found. Data collection followed an iterative process comprising three interpretive stages: Descriptive phase – initial observation and open exploration of participants’ narratives; Reduction and focusing phase – identifying and filtering significant statements related to maternal health literacy; Selective interpretation phase – clustering and integrating essential meanings into emerging themes. This process ensured depth, reflexivity, and interpretive accuracy throughout the research.

Data were analyzed using Colaizzi’s phenomenological method (Colaizzi, 1978), which provides a structured framework to extract the essence of lived experiences. The process involved iterative reading of transcripts, identification of significant statements, formulation of meanings, clustering of meanings into themes, and validating findings through member checking.

Researcher reflexivity was maintained throughout the research process. The principal investigator, who has professional experience in maternal health and nursing research, remained aware of potential biases and preconceptions that might influence data interpretation.

Reflexive notes were documented during data collection and analysis to ensure that interpretations remained grounded in participants' lived experiences.

To ensure methodological rigor, several strategies were implemented to establish trustworthiness. Credibility was enhanced through prolonged engagement during interviews and member checking, where participants confirmed the accuracy of interpreted findings. Dependability was ensured through detailed documentation of the research process and analytic procedures. Confirmability was strengthened by maintaining reflexive field notes and ensuring that interpretations were grounded in participants' narratives. Transferability was supported by providing detailed contextual descriptions of participants and the research setting. Three instruments were used in this study: Semi-structured interview guide, developed based on literature review and validated by two qualitative research experts; Voice recorder, to ensure accurate documentation of participants' narratives; Field notes, used to capture non-verbal cues, emotional tone, and environmental context during interviews.

All instruments were tested in a pilot interview to ensure clarity and appropriateness before formal data collection.

Ethical clearance was obtained from the Ethics Committee of the Faculty of Medicine and Health Sciences, UIN Alauddin Makassar (Approval No. C.055/KEPK/FKIK/VI/2024). Additional administrative authorization was provided by the Makassar City Investment and One-Stop Integrated Services Office (No. 070/2223/SKP/SB/DPMPTSP/5/2024).

C. RESULT

Table 1. Sociodemographic characteristics of pregnant women participating in the study (n= 6)

Participant	Age (years)	Gestational Age (weeks)	Education	Ethnicity
Informant 1	20	15	Senior High School	Makassar
Informant 2	24	17	Junior High School	Bugis
Informant 3	29	18	Senior High School	Makassar
Informant 4	32	19	Senior High School	Bugis
Informant 5	40	21	Senior High School	Makassar
Informant 6	44	22	Senior High School	Bugis

A total of six primigravida women participated in this study. Data analysis using Colaizzi's phenomenological approach generated four major themes that capture the lived experiences of pregnant women in navigating maternal health literacy. These themes illustrate limitations in conceptual understanding, patterns of information-seeking, cultural influences, and barriers to information appraisal and application.

Themes Development process

The themes presented in this study were generated through a systematic thematic analysis process. Initially, all interview transcripts were read repeatedly to gain a comprehensive understanding of participants' experiences related to maternal health literacy during

pregnancy. Meaning units reflecting participants' perceptions, information-seeking behaviors, and understanding of maternal health information were identified throughout the transcripts.

These meaning units were subsequently coded to capture key ideas expressed by participants. The codes were then grouped into several categories representing similar patterns of meaning across different participants. Through an iterative interpretative process, these categories were further synthesized into broader themes that represented the essence of participants' experiences in accessing, interpreting, and applying maternal health information.

This analytic process enabled the identification of recurring experiential patterns, ultimately resulting in several major themes describing pregnant women's experiences in understanding and navigating maternal health information within their social and informational environments.

Codes (Meaning Units)	Categories	Themes
Unfamiliar with maternal health literacy term First time hear about health literacy term	Limited conceptual awareness	Theme 1: Limited Conceptual Understanding of Maternal Health Literacy
Pregnancy knowledge learned informally	Experiential knowledge acquisition	Theme 1: Limited Conceptual Understanding of Maternal Health Literacy
Searching Google or TikTok for pregnancy information	Online information seeking	Theme 2: Reliance on Informal and Online Information Sources
Asking family members or neighbors for advice	Informal social information sources	Theme 2: Reliance on Informal and Online Information Sources
Only basic understanding of nutrition during pregnancy	Limited essential maternal knowledge	Theme 3: Limited Knowledge of Essential Maternal Health Information
Uncertainty in recognizing pregnancy danger signs	Knowledge gaps in maternal health risks	Theme 3: Limited Knowledge of Essential Maternal Health Information
Following advice from elders regarding food or activity restrictions	Intergenerational cultural practices	Theme 4: Strong Cultural Influences and Pregnancy-Related Myths
Fear of violating cultural taboos during pregnancy	Cultural norms shaping health behavior	Theme 4: Strong Cultural Influences and Pregnancy-Related Myths

Theme 1: Limited Conceptual Understanding of Maternal Health Literacy

Participants demonstrated a minimal understanding of the concept of maternal health literacy. Most women reported being unfamiliar with the term and perceived pregnancy-related

knowledge as something that is learned naturally or passed down informally. Their understanding was experiential rather than conceptual.

One participant stated, "I don't really know what maternal health literacy means... I only learned about this now after many years." (Informant 1)

Another said, "I don't really understand that kind of thing, especially during pregnancy." (Informant 4). This theme reflects a foundational gap in awareness and conceptual clarity, which influences all subsequent stages of information access, interpretation, and decision-making.

Theme 2: Reliance on Informal and Online Information Sources

Participants consistently relied on informal networks (family members, neighbors) and online platforms (Google, TikTok, Facebook) as their primary information sources. Formal health professionals were consulted less frequently and typically only during scheduled antenatal care visits.

As one participant noted, "I usually search on Google." (Informant 1).

Another shared, "I look for tips on Google or TikTok... even though many things online are not true." (Informant 3).

Family influence was also prominent:

"My parents usually tell me what to avoid or what to eat." (Informant 6)

This theme highlights a pattern of information dependence that may reinforce misinformation, particularly when reliable sources are underutilized.

"I usually search on Google when I suddenly feel abdominal pain and don't know whom to ask" (Informant 1)

"Usually, when I check up at the health center, I ask the midwife, and she tells me it's normal" (Informant 5)

Theme 3: Limited Knowledge of Essential Maternal Health Information

Participants possessed only partial or superficial knowledge regarding essential health information during pregnancy. While most participants recognized the need for good nutrition and vitamin intake, they lacked detailed understanding of antenatal care, fetal development, and the purpose of clinical assessments.

For example, one participant explained, "I only know that I should take vitamins and eat more protein." (Informant 1)

Another remarked, "I take vitamins but I don't really understand what they are for." (Informant 3)

Some participants were aware of physiological changes but lacked accurate explanations:

"The doctor said it's hormones, but I didn't understand." (Informant 4)

This theme reflects insufficient depth of knowledge, demonstrating gaps in both comprehension and application of health information.

Theme 4: Strong Cultural Influences and Pregnancy-Related Myths

Cultural norms and intergenerational beliefs significantly shaped participants' decisions and behaviors. Many participants followed food taboos, traditional warnings, or unverified restrictions passed down through family members.

Examples include:

"They said don't eat squid, the baby will turn dark." (Informant 1)

"My family said frequent ultrasound is dangerous for the baby." (Informant 5)

"I follow what my parents say... that's what we usually do." (Informant 6)

These beliefs often superseded scientific information or advice from healthcare providers, highlighting the strong sociocultural determinants of maternal health literacy.

Overall, the findings reveal that pregnant women's health literacy experiences are characterized by low awareness, dependence on unverified digital sources, limited information depth, and sociocultural constraints. The coexistence of traditional beliefs and modern digital exposure creates a complex environment that shapes how health information is perceived and applied.

Thus, enhancing maternal health literacy requires not only information dissemination but also empowerment through culturally sensitive, dialog-based educational strategies that foster critical thinking and informed decision-making among pregnant women.

D. DISCUSSION

The limited understanding of maternal health literacy among participants demonstrates a fundamental gap that affects all dimensions of their information behavior. Women did not recognize maternal health literacy as a concept, nor were they aware that pregnancy-related knowledge needed to be critically evaluated. This aligns with findings by Solhi et al. (2019) and Zhang et al. (2021), who reported that low awareness is a key barrier preventing women from understanding, interpreting, and applying health information effectively. Our study deepens this understanding by showing that the lack of conceptual awareness is not simply cognitive but also structural—rooted in limited exposure, minimal prior knowledge, and generational norms where health information is passively received, not actively sought.

Participants demonstrated a dominant reliance on family members, neighbors, Google, and social media rather than health professionals. This pattern is consistent with Nawabi et al. (2021), who found that digital information is often more accessible but less reliable, leading pregnant women to rely on unverified sources. Our findings expand this by revealing why this reliance occurs: trust toward familiar sources, convenience of digital media, and sociocultural norms that place family as the primary authority. This reliance increases vulnerability to misinformation and reduces opportunities for evidence-based decision-making.

The study revealed that mothers possessed fragmented and superficial knowledge related to nutrition, supplementation, fetal development, and antenatal care. This reinforces findings by Lupita et al. (2023) and Golshan et al. (2021), who noted that women with limited literacy tend to misunderstand or inadequately apply essential self-care behaviors. However, our qualitative findings contribute deeper insight: the problem is not only lack of knowledge content, but also the absence of mechanisms for validating and interpreting information. Mothers received information but were unable to construct meaning or connect it with self-care behaviors.

Participants frequently sought information when experiencing fear, pain, discomfort, or anxiety. Prior studies (Putri et al., 2023) have associated health literacy with better symptom interpretation, but our findings illustrate a more complex behavioral process: mothers seek information reactively, not proactively. The emotional burden of pregnancy—combined with uncertainty—drives them to seek immediate reassurance from convenience sources such as Google or family members. This has implications for risk management, as reactive information-seeking often results in inconsistent or delayed healthcare actions.

Cultural norms, intergenerational beliefs, and pregnancy-related myths significantly shaped participants' decisions. This confirms findings by Grosser & Lombard (2008), who emphasized that upbringing and cultural systems strongly influence individuals' ability to critically evaluate health information. Our study deepens this understanding by showing how cultural narratives override professional guidance—even in an urban, accessible health-center context. This produces a pattern where women adhere to cultural prescriptions even when contradictory to medical advice, contributing to low critical literacy.

Beyond the descriptive findings, this study highlights the deeper meaning of maternal health literacy as experienced by primigravida women within their everyday social and cultural contexts. The findings suggest that maternal health literacy is not merely an individual cognitive ability to access and understand health information, but a socially situated process shaped by interpersonal relationships, cultural beliefs, and trust in informal knowledge networks. This interpretation aligns with the broader understanding of health literacy as a multidimensional construct involving the ability to access, understand, appraise, and apply health information in daily life (Sørensen et al., 2012).

From a phenomenological perspective, the experiences described by participants illustrate how pregnant women actively construct meaning when navigating multiple sources of health information. Many participants relied on family members and social networks as primary sources of advice, reflecting the social nature of knowledge transmission during pregnancy. Similar patterns have been identified in maternal health studies showing that informal networks often play a dominant role in shaping health decisions among pregnant women.

These experiences can also be interpreted through the concept of critical health literacy, which emphasizes individuals' ability not only to understand health information but also to critically evaluate its relevance and reliability within complex social contexts (Nutbeam, 2015). In this study, participants often faced situations where biomedical advice from healthcare providers conflicted with culturally rooted beliefs or family recommendations. In such contexts, social authority and cultural familiarity frequently influenced which information was accepted and acted upon.

Taken together, the essence of the participants' experiences reflects a process of negotiating between formal health knowledge and socially embedded cultural beliefs. Rather than being passive recipients of information, primigravida women actively interpret, filter, and reconcile various sources of information in order to make sense of their pregnancy experiences. However, limited opportunities to develop critical health literacy may restrict their ability to distinguish reliable health information from misinformation.

E. CONCLUSION

This study reveals that maternal health literacy among primigravida women is experienced as a socially embedded process rather than merely an individual ability to obtain health information. Participants navigated pregnancy by interpreting information from multiple sources, including healthcare providers, family members, and digital media, while

simultaneously negotiating cultural beliefs and social influences. The essence of these experiences reflects how pregnant women actively interpret and adapt maternal health information within their everyday social and cultural contexts. These findings highlight the importance of culturally responsive maternal health education and supportive communication between healthcare providers and pregnant women to enhance meaningful engagement with maternal health information during pregnancy.

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G. REFERENCE

- Alim, A., Imran Thamrin, A., & Kesehatan Masyarakat, F. (2019). *Kejadian Anemia Pada Ibu Hamil (Studi Analitik di Puskesmas Pertiwi Kota Makassar Provinsi Sulawesi Selatan)* Anemia Event in Pregnant Women (Analytical Study at Pertiwi Health Center in Makassar, South Sulawesi). 1(1), 8-17. <https://doi.org/10.36590/jika>
- Ana, E. F. (2022). Tingkat literasi kesehatan pada ibu hamil: Studi literatur. *Jurnal Akrab*, 13, 88-92. <https://jurnalakrab.kemdikbud.go.id/index.php/jurnalakrab/article/view/424>
- Berkman, ND., et al. (2011). Low health literacy and health outcomes: An updated systematic review. *Annals of Internal medicine*, 155, 97-107. Doi:10.7326/0003-4819-155-2-201107190-00005
- Dwi Pangesti. (2018). Adaptaasi Psikologis Ibu hamil dalam pencapaian peran sebagai Ibu, 1-8.
- Gani, N. F., Huriati, Nurhidayah, & Nur Risma. (2022). Telenursing Improving Health Literacy Among Pregnant Women. *Jurnal Life Birth*, 6(3), 133-147. <https://doi.org/10.37362/jlb.v6i3.934>
- Gani, N. F., Kadar, K., & Kaelan, C. (2017). Health literacy and self-care management of pregnant women at level 1 health service in Makassar. *Indonesian Contemporary Nursing Journal*, 1(2), 94-100. <https://doi.org/10.20956/icon.v1i2.3592>
- Golshan, M., Golshan, M., Ansari, H., Khosravi, M., & Seraji, M. (2021). Health Literacy, Antenatal Care Adequacy Indicator, and Delivery Outcomes in Pregnant Women in Zahedan, Iran. *Journal of Education and Community Health*, 8(4), 253-257. <https://doi.org/10.52547/jech.8.4.253>
- Hakkak, H. M., Joveini, H., Rajabzadeh, R., Robatsarpooshi, D., Tori, N. A., Haresabadi, M., & Hosseini, S. H. (2019). Health literacy level and related factors among pregnant women

- referring to bojnord health centers in 2017. *International Journal of Pharmaceutical Research*, 11(1), 152–158. <https://doi.org/10.31838/ijpr/2019.11.01.015>
- Kementerian Kesehatan Republik Indonesia. (2023). Profil Kesehatan Indonesia 2022. <https://www.kemkes.go.id>
- Lupita, M., Meo, N., Kundre, R. M., Bidjuni, H. J., Studi, P., Keperawatan, I., Kedokteran, F., & Ratulangi, S. (2023). Gambaran Status Literasi Kesehatan Ibu Hamil di Puskesmas Tuminting Manado The Health Literacy Status Of Prenant Women In Tuminting Halath Center, Manado. In *18 Nursing Current* (Vol. 11, Issue 1).
- Nawabi, F., Krebs, F., Vennedey, V., Shukri, A., Lorenz, L., & Stock, S. (2021). Health literacy in pregnant women: A systematic review. *International Journal of Environmental Research and Public Health*, 18(7). <https://doi.org/10.3390/ijerph18073847>
- Risma, N. (2022). Efektivitas telenursing melalui video dan WhatsApp group terhadap peningkatan literasi kesehatan ibu hamil di wilayah Puskesmas Samata Gowa (Skripsi,
- Putri, A. P., Irawan AM., A., Hanifah, L., Wati, S. E., & Lu, Y. Y. (2023). Maternal health literacy and adherence to recommended ANC contact among pregnant women in Indonesian. *South East Asia Nursing Research*, 5(2), 1. <https://doi.org/10.26714/seanr.5.2.2023.1-11>
- Dadipoor S, Ramezankhani A, Alavi A, Aghamolaei T, Safari-Moradabadi A. Pregnant Women's Health Literacy in the South of Iran. *J Family Reprod Health*. 2017 Dec;11(4):211-218. PMID: 30288168; PMCID: PMC6168758. Shahid, R., Shoker, M., Chu, L. M., Frehlick, R., Ward, H., & Pahwa, P. (2022). Impact of low health literacy on patients' health outcomes: a multicenter cohort study. *BMC Health Services Research*, 22(1). <https://doi.org/10.1186/s12913-022-08527-9>.
- Solhi, M., Abbasi, K., Azar, F. E. F., & Hosseini, A. (2019). Effect of health literacy education on self-care in pregnant women: A randomized controlled clinical trial. *International Journal of Community Based Nursing and Midwifery*, 7(1), 2–12. <https://doi.org/10.30476/IJCBNM.2019.40841.2>
- Sørensen, K., Van Den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., & Brand, H. (2012). Health literacy and public health: A systematic review and integration of definitions and models. In *BMC Public Health* (Vol. 12, Issue 1). <https://doi.org/10.1186/1471-2458-12-80>
- World Health Organization and United Nations Children's Fund. WHO/UNICEF joint database on SDG 3.1.2 Skilled Attendance at Birth. Available at: <https://unstats.un.org/sdgs/indicators/database/>
- Zhang, F., Or, P. P. L., & Chung, J. W. Y. (2021). How different health literacy dimensions influences health and well-being among men and women: The mediating role of health behaviours. *Health Expectations*, 24(2), 617–627. <https://doi.org/10.1111/hex.13208>