

UNDERSTANDING ANTENATAL CARE UTILIZATION AMONG PREGNANT WOMEN IN INDONESIA : A LITERATURE REVIEW

Kartika Aprilia

Faculty of Public Health, Universitas Airlangga

Email Correspondence: dr.kartika@yahoo.com

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ABSTRACT

Antenatal care (ANC) services are one of the efforts to reduce Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). However, the coverage of ANC visits has not yet reached the target, indicating the presence of factors that influence the utilization of ANC services. The objective of this study is to identify the factors influencing the use of antenatal services among pregnant women in Indonesia. This study uses a literature review design with journal articles as references. Articles were searched using the keywords "utilization," "health services," "antenatal care," and "pregnant women" through the database <https://garuda.kemdikbud.go.id/>. Screening was conducted on original articles published between 2019-2024, focusing on the utilization of ANC services for pregnant women in Indonesia. Eleven articles met the criteria, and information was extracted on factors associated with ANC service utilization in Indonesia. ANC service utilization is influenced by both maternal and provider factors. Maternal factors included age, knowledge level, attitude, distance to the facility, family support, economic condition, and history of complications. Service provider factors include staff support and satisfaction with services, which encourage pregnant women to be more active in ANC.

Keywords: Antenatal Care, Health Service, Indonesia, Pregnant Women, Utilization.

INTRODUCTION

Antenatal care (ANC) services for pregnant women are an important part of the health system that aims to ensure the health of the mother and fetus during pregnancy. The utilization of ANC services in Indonesia plays a role in reducing maternal and infant mortality and improving quality of life. Indonesia's maternal mortality rate (MMR) is still at 189 deaths per 100,000 live births in 2020 (Kemenkes RI, 2022). This figure has been much lower when compared to the 2015 MMR of 305

per 100,000 live births (Kemenkes RI, 2021). However, when compared to other countries in Southeast Asia such as Thailand, Vietnam, Malaysia and Brunei Darussalam, Indonesia's MMR is still higher and requires further efforts in its reduction. The number of maternal deaths in Indonesia in 2022 showed 3,572 deaths, a decrease compared to 2021 of 7,389 deaths. Neonatal health also requires serious attention because most deaths occur during the neonatal period (0-28

days). Data for 2022 shows that there were 18,281 neonatal deaths with 75.5% of them occurring at the age of 0-7 days (Kemenkes RI, 2022).

In the community, there are still disparities in the level of utilization of ANC services among pregnant women. The proportion of pregnancy check-ups (ANC) according to the 2018 Riskesdas showed an ideal first trimester visit (K1) of 86% and a K4 visit of 74.1% (Kemenkes RI, 2018). Data from the 2023 Indonesian Health Survey (SKI) even showed a gap in the proportion of the first ANC visit during trimester 1 (K1), the 4th visit (K4) and the 6th visit (K6) in trimester 3. The achievement of K1 was 86.7%, K4 was 68.1% and K6 was only 17.6% (Badan Kebijakan Pembangunan Kesehatan, 2023).

This literature review study aims to identify factors that influence antenatal care utilization among pregnant women in Indonesia, with the hope of providing deeper insight into the challenges and opportunities in improving access and quality of health services for pregnant women. By understanding these factors, it is hoped that more effective interventions can be designed to encourage optimal utilization of ANC services, and support the achievement of public health goals in Indonesia.

LITERATURE REVIEW

Support and positive attitudes from husbands and other family members are associated with more routine ANC among pregnant women (Destri & Safitri, 2022; Hasibuan & Afrillia, 2023; Martilova & Amran, 2024; Obenu et al., 2024; Raeshita, 2020; Sumarni et al., 2024). In order to guarantee that expectant mothers follow the ANC plan, family support is crucial. Strong family support

increases a woman's likelihood of attending ANC visits, which are essential for tracking and treating pregnancy-related health problems (Siwi et al., 2023). By promoting regular ANC attendance, which is linked to a lower risk of problems such as preeclampsia and eclampsia, adequate family support can improve health outcomes. Frequent ANC visits improve mother and newborn health by enabling the early identification and treatment of any health problems. Involving the family in ANC can encourage good habits that are important for the mother's and the fetus's health, such as eating well and abstaining from drugs (OECD & World Health Organization, 2022).

RESEARCH METHODS

This study used a literature review research design with reference sources derived from internet articles in internet journals. The keywords used in the search for Indonesian-language articles were 'utilization', 'health services', 'antenatal care', 'pregnant women' through filtering the article abstracts. The database used in the article search was the search engine <https://garuda.kemdikbud.go.id/>. Data analysis of this literature review included content analysis. Based on the results of the journal search, with keywords and a time span of 2019-2024, a screening process was then carried out by paying attention to the criteria of journals that describe the utilization of antenatal care (ANC) health services in pregnant women in Indonesia, sourced from articles that have been published and can be downloaded in full (open access and full text). The review was conducted by reading the complete content of the article, then extracting and synthesizing the required

information related to factors associated with the utilization of

antenatal care (ANC) health services by pregnant women in Indonesia.

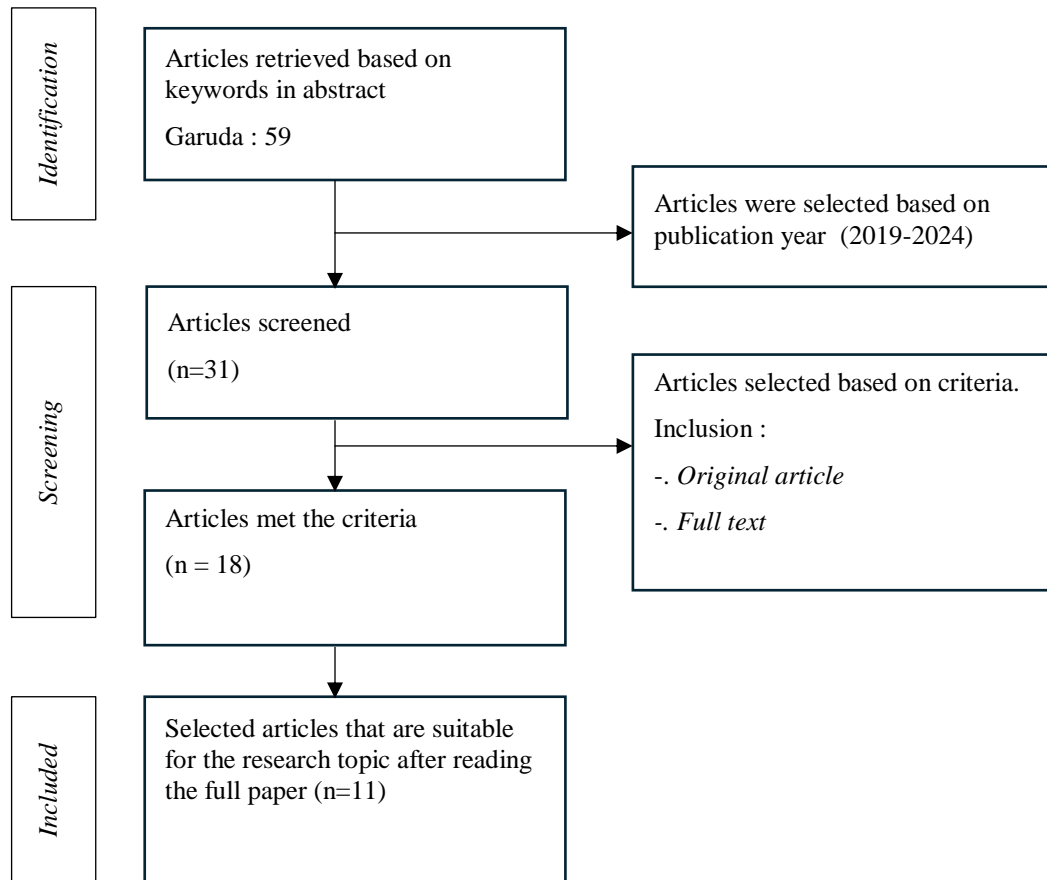


Figure 1. Diagram Of The Literature Review Study Prism

RESEARCH RESULTS

All articles that had passed the screening process and met the criteria were then extracted. Extraction was done by grouping information based on title, author, year of publication, population and

research results. Eleven research articles on factors associated with the utilization of ANC services by pregnant women in Indonesia were obtained.

Table 1. Results of Literature Review Study on Factors Associated with Antenatal Care (ANC) Utilization in Indonesia

Title	Author, Year	Population	Result
Analysis of Factors Utilization of Antenatal Care Service	Martilova and Amran, 2024	Pregnant women in Sungai Ekok and Talang Perigi village, Indragiri Hulu, Riau.	There was a statistically significant association between several variables and utilization of antenatal

Title	Author, Year	Population	Result
			care services namely age, knowledge, attitude, beliefs, distance and family support. (Martilova & Amran, 2024).
Faktor-Faktor Yang Berhubungan Dengan Kunjungan Antenatal Care Di UPT Puskesmas Binaus	Obenu et al, 2024	Third trimester pregnant women in the Binaus Health Centre working area, South Central Timor District.	There is a significant relationship between pregnant women's knowledge level, distance from residence, family income and husband's attitude towards ANC visits (Obenu et al., 2024).
Faktor yang Berhubungan dengan Pemanfaatan Pelayanan Antenatal Care pada Ibu Hamil di Wilayah Kerja Puskesmas Wapunto Kabupaten Muna Tahun 2022	Sumarni et al, 2024	Pregnant women in Puskesmas Wapunto, Kabupaten Muna.	There is a significant relationship between family support and antenatal care utilization (Sumarni et al., 2024).
Family Decision Making in Utilization of Pregnancy and Maternity Services	Barus, 2023	Family with pregnant women in Puskesmas Pancur, Batu.	There is a significant association between knowledge, economic factors and distance travelled with utilization of pregnancy and delivery services (Barus, 2023).
Hubungan Pengetahuan Dan Sikap Ibu Dengan Kunjungan Antenatal Care di Puskesmas Malabo Kelurahan Minake Kecamatan Tanduk Kalua	Mukharrim et al, 2023	Pregnant women in Puskesmas Malabo, Kelurahan Minake Kecamatan Tanduk Kalua.	There is a significant relationship between maternal knowledge and antenatal care visits (ANC) (Mukharrim et al., 2023).
Hubungan Pengetahuan	Irmawati et al, 2023	Pregnant women with 0-36 weeks	There was a significant association between

Title	Author, Year	Population	Result
dan Sikap Ibu dengan Kunjungan Antenatal Care di Puskesmas Matako Kecamatan Tojo Barat Kabupaten Tojo Una-Una		gestation in Puskesmas Matako Kecamatan Tojo Barat, Kabupaten Tojo Una-Una	maternal knowledge and attitude with ANC visits where higher knowledge or positive attitude correlated with more complete antenatal care visits. (Irmawati et al., 2023).
Riwayat Komplikasi Dan Pendampingan Suami Terhadap Pemanfaatan Antenatal Care di Provinsi Aceh	Hasibuan and Afrillia, 2023	Pregnant women aged 15-49 years in Aceh	There was a significant association between history of complications during pregnancy and utilization of antenatal care (ANC). Husband's involvement in supporting pregnant women was significantly associated with ANC utilization. Other factors such as age, education level, employment status, place of residence, and economic status showed no significant association with ANC utilization. (Hasibuan & Afrillia, 2023).
Analisis Faktor yang Berhubungan dengan Pemeriksaan K4 Pada Ibu Hamil Di Klinik Surya Medika Bandar Lampung	Destri and Safitri, 2022	Mothers with infants aged 0-4 months who attended check-ups between September and November 2021 at Surya Medika Clinic Bandar Lampung	There was a significant association between knowledge and family support with ANC visits. In contrast, no significant association was found between education, accessibility of health facilities and support from health workers with antenatal care visits (Destri & Safitri, 2022).
Determinan Pemanfaatan Pelayanan Antenatal Care oleh Ibu Hamil di Puskesmas	Raeshita, 2020	Pregnant women in Puskesmas Berastagi, Kabupaten Karo.	There was a significant association between knowledge and ANC service utilization, suggesting that better knowledge correlates

Title	Author, Year	Population	Result
Berastagi Kabupaten Karo			with higher ANC utilization. Support from family especially husband, showed significant results on ANC utilization. Support from health care providers was associated with ANC utilization(Raeshita, 2020).
Pemanfaatan Pelayanan Antenatal Care di Puskesmas	Cahyani, 2020	Mothers who had given birth in 2018, at Puskesmas Trucuk I, Klaten Regency from 29 August to 13 September 2019	There was a significant association between employment status, knowledge and satisfaction level with ANC service utilization. No significant association was found between antenatal care service utilization and the factors of age, education, income, accessibility, medical history, and family support(Cahyani, 2020).
Hubungan Antara Pendidikan dan Pendapatan Keluarga Dengan Pemanfaatan Pelayanan Antenatal Care di Wilayah Kerja Puskesmas Tuminting Kota Manado	Humokor et al, 2019	Pregnant women aged 9 months and postpartum women within 12 months of delivery, in the working area of Tuminting Community Health Centre in Manado from August to October 2019.	There was a significant association between education and ANC service utilization. However, there was no significant relationship between family income and ANC service utilization (Humokor et al., 2019).

DISCUSSIONS

Utilization of ANC services in the community can be influenced by several factors. These factors can come from pregnant women and service provider factors. Factors from pregnant women include social, economic and demographic factors (Laksono et al., 2020).

A woman's age at pregnancy can influence her utilization of ANC services. Pregnant women who are at a low-risk age (20-35 years) are less likely to utilise ANC services than pregnant women at a high-risk age (Martilova & Amran, 2024). Pregnancy in older women is linked to greater incidence of cesarean delivery, gestational diabetes mellitus, and gestational hypertension, also higher intrauterine growth rate (IUGR) and the post-delivery incident (Alam et al., 2022). The level of knowledge of pregnant women is the factor that shows the most significant relationship.

The higher and better the knowledge of mothers, the higher the utilization of routine ANC services (Barus, 2023; Cahyani, 2020; Destri & Safitri, 2022; Martilova & Amran, 2024; Mukharrim et al., 2023; Obenu et al., 2024; Raeshita, 2020). Mothers with higher levels of education are more likely to use ANC services. Education increases mothers' knowledge and awareness of the importance of ANC services (Shrestha, 2018). A correlation was found between educational status and knowledge about antenatal services, which in turn affects their usage, indicating that education empowers women with the necessary information to make appropriate health decisions (Phukan & Jayalakshmi, 2022). Positive attitudes of pregnant women towards ANC correlate with more complete ANC visits (Irmawati et al., 2023; Martilova & Amran,

2024). Attitude is a closed reaction or response to an object or stimulus. Attitudes clearly show the suitability of reactions to certain stimuli, such as emotional reactions to social stimuli in everyday life (Notoatmodjo, 2003). Distance and travel time to ANC facilities are also associated with ANC utilization (Barus, 2023; Martilova & Amran, 2024; Obenu et al., 2024). Geographical access is important for obtaining health services. There is evidence that distance or travel time to a health facility is a major barrier to utilising health services. Not only good access to health facilities is required but also the distribution of drugs and other goods to health facilities as well as fast emergency referral (Peters et al., 2008).

Economic factors such as family income or employment status contribute to pregnant women attending ANC (Barus, 2023; Cahyani, 2020; Obenu et al., 2024). Free maternity care laws may not adequately address the underlying socioeconomic problems, even when their goal is to lower cost obstacles, suggesting that in order to optimize the benefits of the strategy, further assistance is required. In Ghana, although antenatal care (ANC) services are "free" because of the National Health Insurance Scheme's (NHIS) user-fee exemption policy, socioeconomic circumstances have a big impact on women's decisions to use these treatments. Economic empowerment is essential since it enables women to pay for any related expenses and promotes increased use of ANC. The advantages of early and sufficient ANC services could not be completely realized without removing these financial obstacles, which could have an effect on maternal health outcomes (Angko et al., 2022). Mothers with a previous

history of complications tend to have more routine ANC (Hasibuan & Afrillia, 2023).

From the provider factor, support from health care providers is related to ANC utilization (Raeshita, 2020). Satisfaction about quality in using the service contributes to encouraging pregnant women to do ANC (Cahyani, 2020). Quality is something that can satisfy and exceed customer needs and wants, also known as perceived quality. The individual utilizing the services determines the quality (Sallis, 2002).

CONCLUSIONS

Health care providers should understand the factors that influence pregnant women to utilise ANC services, so that they can make targeted efforts according to the needs of pregnant women, in order to reduce mortality, morbidity and improve the quality of health of mothers and babies.

Strengthening health and education campaigns to increase community knowledge and awareness about the importance of antenatal care is expected to improve the knowledge of pregnant women and their families and encourage family-based support mechanisms. Improving and providing ANC service facilities that are geographically accessible and economically affordable requires government commitment. Quality ANC services need to be improved to fulfil the needs and satisfaction of service users.

REFERENCES

- Alam, Md. Z., Khatun, S., Manjuri, M., Sikder, M., Sarmin, F., & Begum, A. A. (2022). Impact of Maternal Age on Obstetric and Neonatal Outcome in Primiparous Women. *Scholars International Journal of Obstetrics and Gynecology*, 5(5), 254-260. <https://doi.org/10.36348/sijog.2022.v05i05.006>
- Angko, W., Wulifan, J. K., Department of Geography, SD Dombo University of Business and Integrated Development Studies, Wa, Ghana, Sumankuuro, J., & Faculty of Public Policy and Governance, SD Dombo University of Business and Integrated Development Studies, Wa, Ghana. (2022). Health Insurance Coverage, Socioeconomic Status of Women, and Antenatal Care Utilization in Ghana. *Journal of Population and Social Studies*, 31, 62-79. <https://doi.org/10.25133/JPSv312023.004>
- Badan Kebijakan Pembangunan Kesehatan. (2023). *Survei Kesehatan Indonesia*. Kemenkes RI. https://drive.google.com/file/d/1rjNDG_f8xG6-Y9wmhJUnXhJ-vUFevVJC/view
- Barus, E. B. (2023). Family Decision Making in Utilization of Pregnancy and Maternity Services. *Jurnal Aisyah : Jurnal Ilmu Kesehatan*, Vol 8, No S1: Supplement, 23-32.
- Cahyani, I. S. D. (2020). Pemanfaatan Pelayanan Antenatal Care Di Puskesmas. *HIGEIA (Journal of Public Health Research and Development)*, Vol 4 No 1 (2020): HIGEIA: January 2020, 76-86.
- Destri, Y., & Safitri, O. (2022). Analisis Faktor Yang Berhubungan Dengan Pemeriksaan K4 Pada Ibu Hamil Di Klinik Surya Medika Bandar Lampung. *Jurnal Ilmu*

- Kebidanan, Vol 12, No 2 (2022): Jurnal Ilmu Kebidanan, 83-95.
- Hasibuan, R., & Afrillia, N. N. (2023). Riwayat Komplikasi Dan Pendampingan Suami Terhadap Pemanfaatan Antenatal Care Di Provinsi Aceh. *Journal of Borneo Holistic Health*, 6(1). <https://doi.org/10.35334/borticalth.v6i1.3544>
- Humokor, A. C., Rumayar, A. A., & Wowor, R. E. (2019). Hubungan Antara Pendidikan Dan Pendapatan Keluarga Dengan Pemanfaatan Pelayanan Antenatal Care Di Wilayah Kerja Puskesmas Tuminting Kota Manado. *KESMAS*, Vol 8, No 7 (2019): Volume 8, Nomor 7, NOVEMBER 2019. <http://ejournal.unsrat.ac.id/index.php/kesmas/article/view/26594>
- Irmawati, Salham, M., & Moonti, S. (2023). Hubungan Pengetahuan dan Sikap Ibu dengan Kunjungan Antenatal Care di Puskesmas Matako Kecamatan Tojo Barat Kabupaten Tojo Una-Una. *Jurnal Kolaboratif Sains*, Vol. 6 No. 5: MEI 2023, 400-406.
- Kemenkes RI. (2018). Riset Kesehatan Dasar tahun 2018. Kementerian Kesehatan RI.
- Kemenkes RI. (2021). Profil Kesehatan Indonesia Tahun 2020. Kementerian Kesehatan RI.
- Kemenkes RI. (2022). Profil Kesehatan Indonesia 2022. Kementerian Kesehatan RI.
- Laksono, A. D., Rukmini, R., & Wulandari, R. D. (2020). Regional disparities in antenatal care utilization in Indonesia. *PloS One*, 15(2), e0224006. <https://doi.org/10.1371/journal.pone.0224006>
- Martilova, D., & Amran, H. F. (2024). Analysis Of Factors Utilization Of Antenatal Care Service. *JKM (Jurnal Kebidanan Malahayati)*, 10(1), 1-7. <https://doi.org/10.33024/jkm.v10i1.13383>
- Mukharrim, Muh. S., Permatasari, R., & Pratiwi, L. (2023). Hubungan Pengetahuan Dan Sikap Ibu Dengan Kunjungan Antenatal Care Di Puskesmas Malabo Kelurahan Minake Kecamatan Tanduk Kalua. *Journal Pegguruang: Conference Series*, 5(1), 14. <https://doi.org/10.35329/jp.v5i1.3604>
- Notoatmodjo, S. (2003). Pendidikan dan perilaku kesehatan.
- Obenu, Y., Dwi Wahyu Wulan Sulistyowati, Rekawati Susilaningrum, & Novita Eka Kusuma Wardani. (2024). Faktor-Faktor Yang Berhubungan Dengan Kunjungan Antenatal Care Di UPT Puskesmas Binaus. *Gema Bidan Indonesia*, 13(1), 17-24. <https://doi.org/10.36568/gebindo.v13i1.200>
- OECD & World Health Organization. (2022). Health at a Glance: Asia/Pacific 2022: Measuring Progress Towards Universal Health Coverage. OECD. <https://doi.org/10.1787/c7467f62-en>
- Peters, D. H., Garg, A., Bloom, G., Walker, D. G., Brieger, W. R., & Hafizur Rahman, M. (2008). Poverty and Access to Health Care in Developing Countries. *Annals of the New York Academy of Sciences*, 1136(1), 161-171. <https://doi.org/10.1196/annals.1425.011>
- Phukan, S., & Jayalakshmi, M. (2022). A Descriptive Study to Assess the Knowledge and Utilization of Antenatal

- Services Among Primigravida Women in Selected Hospitals of Kamrup District, Assam. *INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH*, 72-74. <https://doi.org/10.36106/ijsr/0202887>
- Raeshita, D. (2020). Determinan Pemanfaatan Pelayanan Antenatal Care oleh Ibu Hamil di Puskesmas Berastagi Kabupaten Karo. *Jurnal Kesehatan Global*, 3(2), 47-54. <https://doi.org/10.33085/jkg.v3i2.4503>
- Sallis, E. (2002). Total quality management in education (3rd ed). Kogan Page ; Stylus Pub.
- Shrestha, B. (2018). Mother's Education and Antenatal Care Visits in Nepal. *Tribhuvan University Journal*, 32(2), 153-164. <https://doi.org/10.3126/tuj.v32i2.24712>
- Siwi, R. P. Y., Wulandari, A., Retnaningtyas, E., & Astikasari, N. D. (2023). Analysis of Pregnant Women's Motivation and Family Support on Integrated Antenatal Care Participation. *Journal for Quality in Women's Health*, 6(1), 42-50. <https://doi.org/10.30994/jqwh.v6i1.213>
- Sumarni, S., Effendy, D. S., & Yuniar, N. (2024). Faktor Yang Berhubungan Dengan Pemanfaatan Pelayanan Antenatal Care Pada Ibu Hamil Di Wilayah Kerja Puskesmas Wapunto Kabupaten Muna Tahun 2022. *Jurnal Administrasi Kebijakan Kesehatan Universitas Halu Oleo*, 4(4). <https://doi.org/10.37887/jakk.v4i4.46983>