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Review Articles: Systematic Review, Meta-Analysis, Integrative Review, Scoping Review

IS ANTENATAL CARE (ANC) EXAMINATION IMPORTANT FOR THE HEALTH OF THE MOTHER AND BABIES?

Wahyu Anjas Sari^{1, 2*}, Ida Nurwati¹

¹ Doctoral Study Program in Public Health Sciences, University of Sebelas Maret

² Midwife Professional Education Study Program, College of Health Sciences of Husada Jombang

Correspondence:

Wahyu Anjas Sari

Doctoral Study Program in Public Health Sciences, University of Sebelas Maret

Midwife Professional Education Study Program, College of Health Sciences of Husada Jombang

e-mail: swahyuajas@yahoo.com

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ABSTRACT

Background: Maternal mortality and infant mortality are conditions that require special attention and immediate treatment. The antenatal care program is one way to reduce the increase in maternal mortality and infant mortality.

Objective: This study aims to determine the importance of antenatal care examinations on the health of mothers and babies.

Design: Scoping review was used in preparing this literature review.

Data Sources: The researchers conducted a search using several search engines, including Google Scholar, DOAJ, Pubmed, EBSCO, and Sciencedirect with several inclusion criteria, including 1) Year of publication between 2019-2023, 2) Articles in English and Indonesian, and 3) Original articles, full text, and open access.

Review Methods: The researchers carried out descriptive analysis and synthesis of the contents of all the articles, so that the researchers would be able to conclude the results of each research used as material in preparing this literature review.

Results: Based on the results of the search conducted by the researchers, it was found that 5 articles were in accordance with the objectives of preparing this literature review. These articles show the importance of antenatal care (ANC) examinations for the health of mothers and babies, both during pregnancy and after birth.

Conclusion: Implementing antenatal care services for pregnant women is very important because it can be related to the health of the mother and baby right up to the birth process. Apart from that, antenatal care services can detect early postnatal health problems, such as Low Birth Weight (LBW), Stunting, and so on.

Keywords: Antenatal Care, Mother's Health, Baby's Health.

INTRODUCTION

The high maternal mortality rate and infant mortality rate are still problems that require special attention and immediate treatment (Nasution, 2021). The antenatal care program is an obstetric service program as an effort to overcome maternal and infant deaths which is carried out by means of routine monitoring during the pregnancy process to avoid pregnancy complications. (Mahendra et al., 2019). In implementing antenatal care, health workers can carry out early detection of pregnancy complications/high risk pregnancies, so as to improve the health status of mothers and babies (Antono & Rahayu, 2017; Gultom et al., 2023). In addition, the implementation of antenatal care followed by providing information related to signs and symptoms of emergencies in pregnancy will increase the compliance of pregnant women in participating in the implementation of antenatal care (Lestari & Winarsih, 2022).

Based on 2019 Basic Health Research data, the maternal mortality rate will decrease in 2024 from around 305 per 100,000 live births to around 183 per 100,000 live births (Kementerian Kesehatan RI, 2019). Based on data obtained from the Indonesian Ministry of Health, coverage of antenatal care visits in 2019 also increased to 74.1% (Kementerian Kesehatan RI, 2021).

In overcoming the problem of a fairly high maternal mortality rate, pregnant women are expected to undergo prenatal care/antenatal care at least 6 times during pregnancy up to the birth process. The implementation of antenatal care aims to detect early health problems faced by pregnant women, so that prevention can be carried out so that they do not become serious and do not affect the delivery process (Kementerian Kesehatan RI, 2020).

METHODS

Design

The design of this scientific article is a scoping review which aims to determine the importance of ANC examinations for maternal and fetal health. According to Arksey and O'Malley, a scoping review consists of 5 stages, namely 1) Finding the phenomenon that is the research issue, 2) Identifying relevant literature, 3) Determining appropriate literature, 4) Carrying out analysis on literature that is in accordance with the objectives of the preparation, and 5) Reporting findings from the analysis of the literature.

Search Methods

In preparing this scientific article, the researchers conducted a search using several search engines, including Google Scholar, DOAJ, Pubmed, EBSCO, and Sciencedirect. The keyword in the search process was "the importance of antenatal care checks". Apart from that, the researchers also provided several criteria in determining several inclusion criteria, including 1) Year of publication between 2019-2023, 2) Articles in English and Indonesian, and 3) Original articles, full text, and open access.

Search Outcome

Search results using predetermined keywords resulted in the discovery of 8,820 articles. After limiting publication years to 2019-2023, 5,870 articles were obtained. In the final stage, the authors carried out another screening by looking at duplicate articles, open access, full text,

and suitability for the purpose of preparing this scientific article, finding 5 suitable articles. The search process for this article can be seen in Figure 1.

Quality Appraisal

The researchers used the JBI Critical Assessment Tools to maintain the quality appraisal of each article used in preparing this literature review.

Data Abstraction

The researchers used the PRISMA guide in the process of selecting articles that were in accordance with the objectives of preparing this literature review. Each article selection process is recorded in the PRISMA Flow Chart above. The researchers also tried to avoid the risk of bias by using the JBI Critical Appraisal Tool. After declaring that there was no bias, the researchers analyzed each article one by one to find out the research results and discussion of each study.

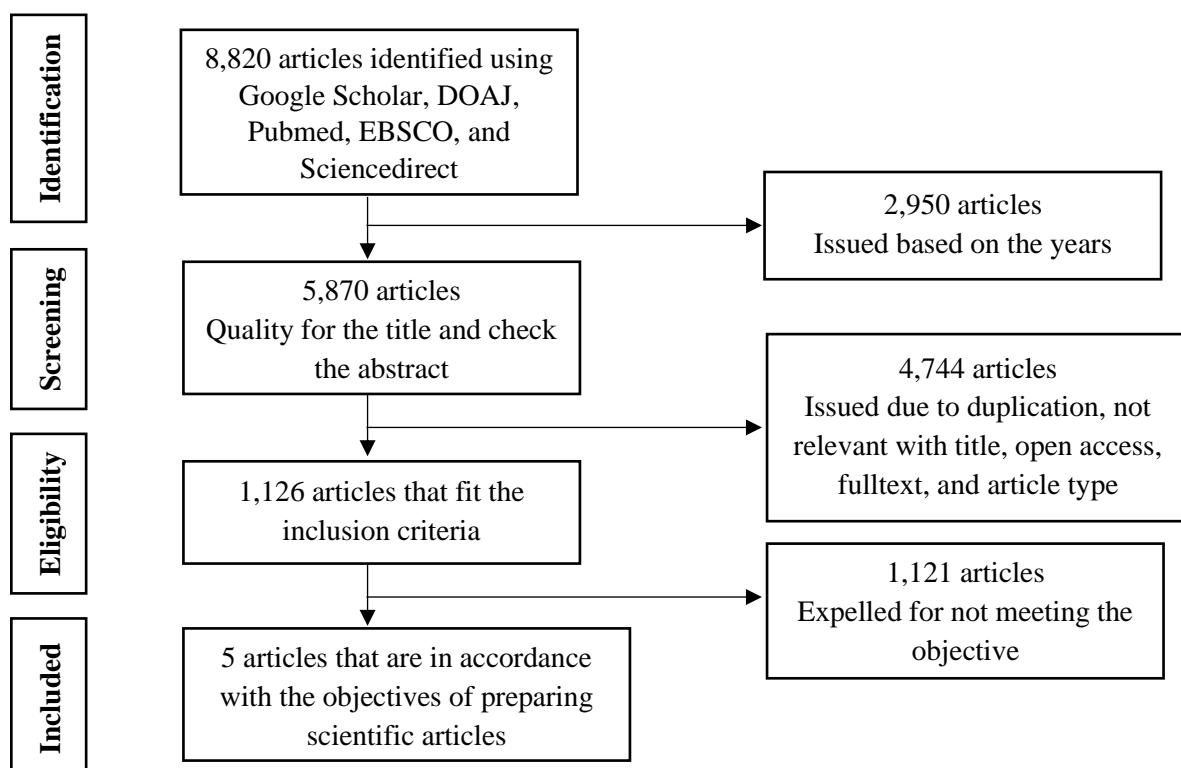


Figure 1. Flowchart of Literature Search and Screening Strategy.

Data Analysis/ Synthesis

After all the articles met the objectives of preparing this literature review, the researchers carried out descriptive analysis and synthesis of the contents of all the articles, so that the researchers would be able to conclude the results of each research used as material in preparing this literature review.

RESULTS

Based on the results of the review articles, there are several articles that match the objectives and criteria for preparing this literature review (Table 1).

Table 1. Results of the Scientific Article Review

No.	Title	Authors and years	Methods	Result
1.	Utilization of Antenatal Care Services at Community Health Centers	Indrastuti, A. N., & Mardiana (2019)	<p>Design: Quantitative research with a cross-sectional approach and complemented by qualitative studies.</p> <p>Sample: There were 51 mothers who had babies aged 0-6 months in the Kalongan Community Health Center Working Area, Semarang Regency, who were selected using random sampling techniques.</p> <p>Variable: The variables in this study include age, occupation, level of knowledge, attitude, family support, ownership of health insurance, ease of information, disease complaints, and utilization of antenatal care services.</p> <p>Instrument: Age, occupation, level of knowledge, attitudes, family support, ownership of health insurance, ease of information, and</p>	The results showed that there was a relationship between work ($p = .001$), level of knowledge ($p = .008$), attitude ($p = .001$), family support ($p = .015$), ease of information ($p = .033$), and complaints of illness ($p = .039$) with the use of antenatal care services. Meanwhile, age ($p = .956$) and ownership of health insurance ($p = .234$) were not related to the use of antenatal care services.

			<p>disease complaints were measured using a questionnaire.</p> <p>Measuring the utilization of antenatal care services was carried out using secondary data contained in the KIA book (related to attendance at antenatal care services).</p> <p>Analysis: Chi Square Test.</p>	
2.	Antenatal Care Visits Are Associated with Stunting	Hutasoit et al. (2020)	<p>Design: Quantitative research with a cross-sectional approach.</p> <p>Sample: The target population in this research was all toddlers from four villages in Kalibawang District, totaling 310 toddlers who experienced stunting. The sampling technique used was purposive sampling. Based on the inclusion and exclusion criteria set by the researchers, 100 toddlers who experienced stunting were used as respondents.</p> <p>Variable: The variables in this study were antenatal care visits and the incidence of stunting.</p> <p>Instrument: The research instrument</p>	<p>The results of this study indicate that there is a moderate strength relationship between antenatal care visits and the incidence of stunting (p-value = .000, r = .389).</p>

			<p>used was a questionnaire.</p> <p>Analysis: The statistical test used is the Chi-Square Test.</p>	
3.	Relationship between Frequency of Antenatal Care and Knowledge about High Risk of Pregnancy at Kilasah Community Health Center, Serang City in 2018	Fairuza, F. (2019)	<p>Design: Analytical descriptive research with a cross-sectional approach.</p> <p>Sample: The population of this study were all pregnant women who visited the Serang City Kilasah Community Health Center in November-December 2018, totaling 44 pregnant women. The sampling technique used was total sampling, so the research sample size was 44 pregnant women.</p> <p>Variable: There are 2 research variables, including frequency of antenatal care and knowledge about high risk pregnancies.</p> <p>Instrument: The research instrument used was a questionnaire.</p> <p>Analysis: The data analysis used in this research is the Chi-Square statistical test.</p>	The results of the study showed that there was a relationship between the frequency of antenatal care and knowledge about high risk pregnancies (p -value = .000).
4.	The Relationship between Antenatal Care and the Incidence of Low Birth Weight in the	Astuti, E. R. (2020)	<p>Design: This research design uses a retrospective study</p>	The results of the study showed that there was a relationship between

	<p>Segnim Community Health Center Working Area, South Bengkulu Regency</p>	<p>with a case-control approach.</p> <p>Sample: The target population in this study was mothers who had live-born babies in the Segnim Community Health Center working area, South Bengkulu Regency in 2019. The research sample ratio using this case-control approach was 1:1. The size of the research sample was 30 respondents who were divided into 2 groups, namely the case sample with 15 respondents who experienced Low Birth Weight and the control sample with 15 respondents who did not experience Low Birth Weight. The sampling technique used is simple random sampling.</p> <p>Variable: There are 2 variables in this study, namely the frequency of antenatal care and the incidence of Low Birth Weight.</p> <p>Instrument: Research data collection was carried out using a questionnaire.</p> <p>Analysis: Data analysis carried out in</p>	<p>Antenatal Care and the incidence of Low Birth Weight (<i>p</i>-value = .01, <i>OR</i> = 8.00).</p>
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			this research was the Chi-Square statistical test.	
5.	Analysis of Antenatal Care (ANC) Adherence to Pregnancy Complications	Mahendra et al. (2019)	<p>Design: This research design used observational research with a cross-sectional approach.</p> <p>Sample: The target population in this study was all pregnant women at the Tiudan Community Health Center, Gondang District, Tulungagung Regency, totaling 45 respondents. The sampling technique used was purposive sampling, so that the total research sample was 30 respondents.</p> <p>Variable: The independent variable in this study is compliance with antenatal care (ANC). The dependent variable in this study is the incidence of pregnancy complications.</p> <p>Instrument: The research instrument used to determine compliance with ANC visits and the incidence of complications during pregnancy was an observation sheet.</p> <p>Analysis: Data analysis carried out in</p>	Based on the research results, it was found that there was a relationship between compliance with antenatal care and the incidence of pregnancy complications at the Tiudan Community Health Center, Gondang District, Tulungagung Regency (p -value = .001, r = .537).

			this study was Fisher's exact test.	
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Based on the five articles above, it can be seen the importance of antenatal care checks on the health of the mother and baby, both during pregnancy and after birth.

DISCUSSION

Based on the analysis carried out by researchers, it was found that antenatal care services are very important to support the health of the mother and fetus right up to the birth process. Apart from that, antenatal care examinations can also provide early detection of low birth weight (LBW), stunting and other complications in mothers and babies after giving birth (Astuti, 2020; Hutasoit et al., 2020; Nasution, 2021). According to Fairuza (2019), the attendance rate of pregnant women in utilizing antenatal care services is related to their level of knowledge regarding high-risk pregnancies. This shows that pregnant women are concerned about their condition when they are pregnant. A similar thing was conveyed by Lestari & Winarsih (2022) from his research which states that pregnant women's knowledge about pregnancy emergencies is related to their compliance in carrying out antenatal care. This shows that the better understanding pregnant women have regarding the signs and symptoms of pregnancy emergencies, the greater the awareness of pregnant women to carry out routine antenatal care checks. Apart from that, there are several factors related to the use of antenatal care services, including employment, attitude, family support, ease of information, and complaints of illness/complications during pregnancy (Fitriana et al., 2020; Indrastuti & Mardiana, 2019; Mahendra et al., 2019; Rahman, 2017). The level of regularity of pregnant women in utilizing antenatal care services will be able to detect early high-risk pregnant women, so that prevention can be taken so that conditions do not get worse (Antono & Rahayu, 2017; Gultom et al., 2023). This is in line with the results of research conducted by Mahendra et al. (2019) which states that compliance with antenatal care is related to the occurrence of complications in pregnancy which can threaten the lives of the mother and baby. Mahendra et al. (2019) added that every time antenatal care is carried out, the mother will undergo an examination that can detect early complications during pregnancy, provide information related to the health of the mother and baby, and prepare for birth. This aims to reduce maternal mortality and infant mortality. Antenatal care is also used to prepare pregnant women for the birth process, both normal birth and birth with special care (Nainggolan et al., 2023). It is important that the implementation of antenatal care services be carried out regularly by pregnant women, so it is necessary to carry out more active approaches and provide information by health workers and health cadres to pregnant women regarding the implementation of antenatal care services (Gultom et al., 2023; Herinawati et al., 2021; Sari & Susanti, 2022)

CONCLUSION

Implementing antenatal care services for pregnant women is very important because it can be related to the health of the mother and baby right up to the birth process. Apart from

that, antenatal care services can detect early postnatal health problems, such as Low Birth Weight (LBW), Stunting, and so on.

SUGGESTION

The importance of increasing awareness of pregnant women in carrying out regular antenatal care checks through approaches that are actively carried out by health workers and health cadres, so that it can reduce maternal mortality rates, infant mortality rates, and postnatal health problems (LBW, Stunting, etc.).

LIMITATION

There are no limitations in this research.

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