p–ISSN: 2723 – 6609 e-ISSN: 2745-5254
Vol. 5, No. 12, December 2024 http://jist.publikasiindonesia.id/

A Literature Review on Determinant Factors Related to Midwifery Performance in Antenatal Care (ANC) Services in Health Centers

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Keywords: midwifery performance, antenatal care (ANC) services.

ABSTRACT

The maternal mortality rate (MMR) is one of the indicators that shows how the quality of health services is. Based on the results of maternal and perinatal audits, in general, cases of death due to obstetrics can still be prevented if health service efforts are adjusted to standards. The ability of health service facilities to carry out early detection and readiness of health workers, especially midwives, is important in comprehensive and quality pregnancy, childbirth, and postpartum services through continuous midwifery services. ANC examination services are one of the four safe motherhood concepts carried out to reduce AKI and need to be carried out in an integrated manner to improve the quality of ANC services at Puskesmas. The low coverage of KIA services by health workers is linked to midwifery performance problems. Midwifery performance problems are greatly influenced by various factors. The purpose of this study is to further explore the determinant factors related to the performance of midwives in antenatal care (ANC) services in Puskesmas. The approach used in this study is a study of literature with data sources in the form of original articles published in national/international journals through electronic databases such as Google Scholar and Garuda. The results of the study show that the individual factors are significantly related, namely ability, experience, and age; psychological factors that are significantly related, namely attitude and motivation; significantly related organizational factors, namely leadership, remuneration, length of service, employee status, facilities, and workload. The results of this study can be used as input for health service provider institutions to improve the quality of midwives in providing antenatal care (ANC) services.

Introduction

Death and pain in pregnant, childbirth, and postpartum women are still a big problem in developing countries including Indonesia. Maternal mortality accounts for

nearly 95% of deaths in low- and middle-income countries. Prenatal, intrapartum, and postpartum care performed by medical personnel can prevent maternal and newborn deaths (Malaikosa, Fatimah, & Astarie, 2022).

The Maternal Mortality Rate (MMR) is one of the indicators to see the success of maternal health efforts. Maternal mortality is the result of the interaction of various aspects, both clinical aspects, aspects of the health service system, and non-health factors that affect the optimal delivery of health services. (Hanifah & Natalia, 2023). Therefore, a common perception and understanding from all parties is needed regarding the importance and role of various aspects in handling the problem of maternal mortality so that the strategy to overcome it must be a comprehensive integration for all parties. (Yuniarti & Suharto, 2024).

The number of maternal deaths is currently a major problem, and the best solutions are constantly being sought to reduce the number of cases. The Safe Motherhood program, which has been running since 1997, is one of the government's efforts to reduce AKI. The purpose of this concept is to ensure that the mother and baby are secure and safe during pregnancy, childbirth, and the postpartum period. The four concepts of safe motherhood are Antenatal Care (ANC) examination services, family planning services, childbirth at health facilities, and postpartum examinations. (Nasution & Santosa, 2024).

ANC examination services are one of the four safe motherhood concepts carried out to reduce AKI and need to be carried out in an integrated manner to improve the quality of ANC services in Puskesmas (Sukirman, Wahyono, & Shivalli, 2020). The concept of integrated ANC is one of the right actions in suppressing various pregnancy problems that are carried out regularly and planned (Shitaw, 2020).

The role of midwives has a very high contribution in meeting the achievement of KIA service targets. Midwives as health workers at the forefront and by their functions are expected to be able to increase the coverage of KIA services The low coverage of KIA services by health workers is linked to midwifery performance problems. (Rizqi, Djannah, & Suryani, 2023). Performance is the result of the quality and quantity of work achieved by an employee in carrying out his duties according to the responsibilities given to him, while midwifery performance is a health service carried out by midwives to improve maternal health. (Pusporini et al., n.d.). Midwifery performance problems are greatly influenced by various factors. There are internal and external factors that can affect a performance (Mangkunegara, 2017) External factors are everything that comes from a person's surrounding environment, including training, while internal factors are everything related to a person's personality, such as ability. There are seven aspects according to (Rahayu Tri Utami, Wulandari, & Wibowo, 2022) That affects the performance required to carry out routine organizational tasks. Training and competence are one of the factors that require efforts to achieve these goals. (Susanti, 2023).

Until now, there are still many differences in results about factors that affect the performance of midwives in antenatal care (ANC) services. Some studies state that there is a relationship between factors related to midwifery performance, but there is also the opposite. Therefore, the researcher wants to further explore the determinant factors

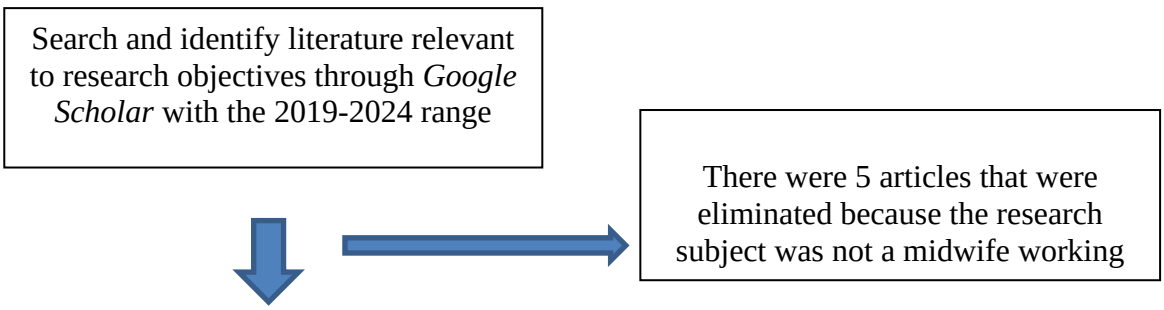
related to the performance of midwives in antenatal care (ANC) services in Puskesmas. This is expected to be able to plan preventive efforts/actions in preventing and reducing AKI in Puskesmas so that it can provide information related to strategies in planning maternal health activity programs for KIA managers in Puskesmas, especially in improving the performance of midwives.

Method

This study uses a literature review method to explore determinant factors related to the performance of midwives in antenatal care (ANC) services in Puskesmas. The research method by reviewing or summarizing empirical or theoretical literature uses a systematic approach to conduct data analysis in a simplified approach to provide a more comprehensive understanding of the literature review in ANC services. This review stage includes problem identification, literature search, processing, and presentation. The literature search was carried out by analyzing articles obtained from Google Scholar and the Garuda Portal. The search for articles was carried out using the following keywords: "midwifery performance in ANC services", "factors influencing midwifery performance in antenatal care" and "analysis of factors in ANC services". This study examines the relationship of several determinant factors that affect the performance of midwives in antenatal care (ANC) services.

The inclusion criteria in the search for articles in this study are the bound variable is the performance of midwives in antenatal care (ANC) services, the articles were selected using a quantitative research method with a cross-sectional design. Articles are written in Indonesian or English, published in the last 5 years (2019-2024), available in full PDF text format, and can be accessed for free. Meanwhile, the exclusion criteria of this study include articles that examine the performance of midwives in ANC services other than puskesmas, which have been published for more than 5 years (before 2019) and cannot be fully accessed at no cost.

Article selection flow diagram based on inclusion criteria in this study:



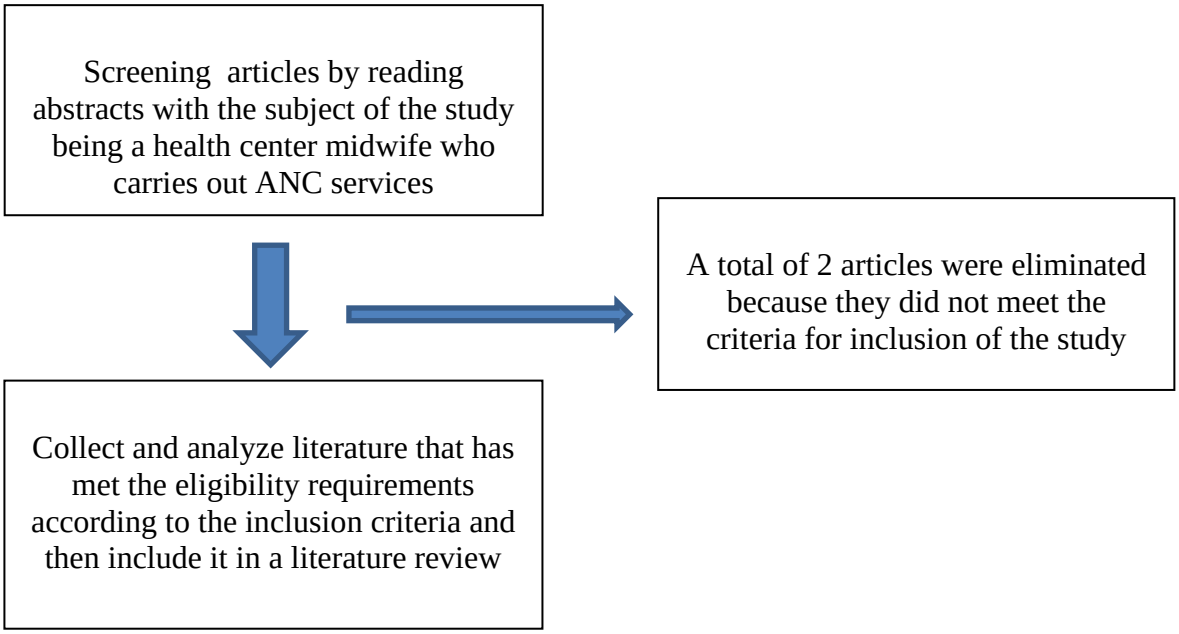


Figure 1
Flow of the selection stages of article search

Results and Discussion

Here are 6 articles that have passed according to the research inclusion criteria to be analyzed in the literature review

Table 1
Literature review based on samples, sampling techniques, and statistical tests

It	First author and Research Year	Research Design	Sample	Bound Variables	Independent Variable	Sampling Techniques	Statistical Test
1	Sri Astuti Siregar (2021)	Observational analysis with *a cross-sectional approach*	56 respondents	Midwifery Performance	Knowledge, motivation, leadership, rewards/incentives and training	*Probability sampling*	Test *Chi-Square*
2	Sri Yunita Wind Wind (2023)	Observational analysis with *a cross-sectional approach*	49 respondents	Midwifery Performance	Knowledge, motivation, leadership, incentives/rewards, colleague relationships	Not listed	Test *Chi-Square*

3	Anisa Nur Cahyanti (2023)	Observational analysis with *a cross-sectional approach*	14 respondents	Midwifery Performance	Age, knowledge, attitude, and motivation	*Purposive Sampling*	Bivariate analysis of the Pearson correlation test
4	Josina Hattu (2023)	Observational analysis with *a cross-sectional approach*	23 respondents	Midwifery Performance	Age, Employee Status, working period, knowledge, and attitude	*Total Sampling*	Bivariate analysis test and multivariate analysis test.
5	Maria Esther Malaikosa (2022)	Quantitative with *a cross-sectional approach*	30 respondents	Midwifery Performance	Skills, motivation, and rewards/wages	*Purposive Sampling*	Test *Chi-Square*
6	Mera Marhamah (2022)	Observational analysis with *a cross-sectional approach*	31 respondents	Midwifery Performance	Knowledge, Motivation	*Total Sampling*	Test *Chi-Square*

Table 2
Literature Review Based on Factors Related to Midwifery Performance in Health Centers

It	**Independent variables analyzed**	**Author's Name**					
		Sri Astuti Siregar (2021)	**Sri Yunita Wind Wind (2023)**	**Anisa Nur Cahyanti (2023)**	**Josina Hattu (2023)**	**Maria Esther Malaikosa (2022)**	**Mera Marhamah (2022)**
1	Knowledge	p = 0.037, PR = 1.93 (Related)	ρ=0,043 (ρ < 0,05) (There is a connection)	ρ=0,0001 (ρ < 0,05) r = 0.853 (There is a connection)	p-value = 0.704; RP = 1,471; CI 95% (0,704 – 3,071) (No relationship)		ρ= 0,004 (ρ < 0,05) (There is a connection)

2	Motivation	p = 0.000, PR = 4 (There is a connection)	ρ=0,016 (ρ < 0,05) (There is a connection)	ρ=0,009 (ρ < 0,05) r = 0.670 (There is a connection)		ρ= 0,01(ρ < 0,05) (There is a connection)	ρ= 0,000 (ρ < 0,05) (There is a connection)
3	Leadership	p = 0.240, PR = 1.4 (No relationship)	ρ=0,007 (ρ < 0,05) (There is a connection)				
4	Rewards/incentives/wages	p = 0.013, PR = 2.0 (There is a connection)	ρ=0,025 (ρ < 0,05) (There is a connection)			ρ= 0,02 (ρ < 0,05) (There is a connection)	
5	Training	p = 0.010, PR = 2.25 (There is a connection)					
6	Collaborative relationships		ρ=0,002 (ρ < 0,05) (There is a connection)				
7	Age			ρ=0,004 (ρ < 0,05) r = 0.714 (There is a connection)	p-value = 0.00; RP = 2,200; CI 95% (0,990 – 4.888) (There is a connection)		
8	Attitude			ρ=0,006 (ρ < 0,05) r = 0.690 (There is a connection)	p-value = 1.474; RP = 5,444; CI 95% (1.474 – 20.110) (No relationship)		
9	Employee Status				p-value = 0.018; RP = 5,870: CI 95%		

		(0,903 – 38,153) (There is a connection)	
10	Working Period	p-value = 0.004; RP = 4,789; CI 95% (1,302 – 17,624) (There is a connection)	
11	Skills		ρ=0,936 (ρ < 0,05) (No relationship)

Based on the results of the analysis of the literature review according to Table 1 and Table 2, it is known that 6 articles are included in the inclusion criteria with the type of quantitative research in the form of observational analysis with a cross-sectional approach with most of them using chi-square analysis tests, bivariate analysis, and multivariate analysis tests and some using Pearson correlation tests. The number of samples used in the study varied between 14 to 56 respondents with the sampling techniques used were probability sampling, purposive sampling, and total sampling.

Midwife performance is a health service provided by a midwife to ensure optimal maternal health which can be accounted for in quality and quantity. Midwifery performance is influenced by a variety of individual and organizational factors, including leadership, work location, organizational structure, and rewards and compensation. Psychological factors include perception, attitude, personality, learning, motivation, and job satisfaction. Individual factors include abilities, skills, family background, work experience, social level, and demographics (Gibson, 2008)

Based on the results of the research from the six articles analyzed, it can be found that from several independent variables studied, there are variables related to the performance of midwives in antenatal care (ANC) services which are determined in 5 articles using the chi-square statistical test and 1 article using the Pearson correlation test at a significance level of $\alpha = 0.05$ (95% confidence level), where the decision is taken based on the sig p value < 0.05. The variables related to the performance of midwives in ANC services include:

1. Knowledge

A total of 5 out of 6 articles discussed the relationship between knowledge and midwifery performance in antenatal care (ANC) services in health centers, of which 5

articles there were 4 articles stating that there was a relationship between knowledge and midwifery performance with a ρ < value of 0.05 (Hasalia, Noerjoedianto, & Hubaybah, 2022); (Syafputri, 2023) ; (Reni Sulung Utami, 2019) while 1 other article (Hattu et al., 2023) stated that there was no relationship between knowledge and midwifery performance in ANC services at health centers.

Knowledge is a factor that influences a person to behave positively and produce good output. With the increasing level of knowledge of midwives, it is believed that it will improve the performance of midwives in antenatal care (ANC) services. The success of a midwife in providing ANC services is positively correlated with her level of expertise; Conversely, a limited knowledge base can also have a detrimental impact on its performance.

2. Motivation

3 elements form motivation, namely the need for power, the need for affiliation, and the desire to achieve. Motivation is a driver for midwives in carrying out antenatal care such as pregnancy checkups, and K1 and K4 visits. A total of 5 out of 6 articles discussed the relationship between motivation and midwifery performance in antenatal care (ANC) services at health centers, where of the 5 articles all stated that there was a relationship between motivation and midwifery performance with a ρ value of < 0.05 (Hasalia et al., 2022); (Syafputri, 2023); (Yubiah, Nurwati, Astuti, & Bima, 2022); (Malaikosa, Fatimah and Astarie, 2022); (Reni Sulung Utami, 2019).

In this study, we can find out that the average midwife officer at the health center has good motivation in providing services. Good motivation can improve midwifery performance, while lack of motivation also decreases midwife's performance in providing ANC services. Midwives who have good motivation are encouraged by several things, including supportive environmental conditions, good direction and guidance from the leadership, rewards, and awards for midwives.

3. Leadership

A total of 2 out of 6 articles discussed the relationship between leadership and midwifery performance in antenatal care (ANC) services at health centers, of which of the 2 articles there was 1 article stating that there was a relationship between leadership and midwifery performance with a ρ < value of 0.05 (Syafputri, 2023) While 1 other article stated that there was no relationship between leadership and midwifery performance in ANC services at health centers (Hasalia et al., 2022).

Midwives in carrying out their duties are responsible to their leaders, namely the Head of the Health Center. So the Head of the Health Center must also provide guidance to all midwives in their work area. In this case, it is hoped that the leadership can influence the midwife through a good communication process so that the midwife follows his decision because a leader will probably be considered effective and ineffective from the point of view of the satisfaction of his subordinates so that leadership is used as one of the driving factors for midwives in providing antenatal care (ANC) services by standards.

4. Rewards/incentives/wages

Based on the analysis of the literature review conducted, it can be found that as many as 3 out of 6 articles discussing rewards/incentives/wages received by midwives where the three articles stated that there is a relationship between the remuneration/incentive/wage variables and the performance of midwives in providing antenatal care (ANC) services with a ρ < value of 0 (Syafputri, 2023); (Malaikosa et al., 2022).

In general, most employees want their performance to be synergistic with the rewards they receive. Most of the three articles show the relationship between rewards/incentives/wages and midwifery performance in antenatal care (ANC) services at health centers. Rewards are considered something that the boss gives after they can provide their abilities, expertise, and efforts by the targets to be achieved.

5. Age

Age is one of the factors related to the performance of midwives in antenatal care (ANC) services at health centers. The older they are, the better the midwife is at providing antenatal care (ANC) services. There were 2 out of 6 articles studied that discussed the relationship between age and midwifery performance where the two articles were significantly related to the ρ < value of 0.05 (Yubiah et al., 2022); (Hattu et al., 2023).

As midwives grow older, they will mature their psychological and physical aspects, so that their thinking will develop and easily accept all forms of information. In addition, with a more mature age, problem-solving will also be carried out better, and calmer, and pregnant women who get services will be more comfortable and confident because the midwives who handle them are mature and experienced midwives.

6. Attitude

A good midwife's attitude is an attitude that does not deviate from the rules of the code of ethics and health disciplines. In addition, the attitude of health workers must be accompanied by patience, firmness, quickness in action, ease of getting along with others, and so on. Attitude is also a midwife's response in antenatal care (ANC) services. Midwives who have a good response to their work will also maximize their practice in providing services.

There were 2 out of 6 articles studied that discussed the relationship between age and midwifery performance, where the two articles were significantly related to the ρ < value of 0.05 (Yubiah et al., 2022) and (Hattu, Razak, Palutturi, Mallongi, & Russeng, 2023). This shows that attitude has an important role that very much behaves a person at work.

7. Worker status, employment period, and relationship with co-workers

In this literature analysis, there are 1 of 6 articles that discuss the relationship between worker status factors, working period, and relationships with colleagues related to the performance of midwives in providing antenatal care (ANC) services. The article shows the relationship between worker status, length of service (Hattu et al., 2023), and the relationship between colleagues and midwifery performance with a significant value ρ < 0.05 (Syafputri, 2023).

The work status factor that shows the existence of a relationship has a role where the lack of performance of midwives in ANC services is due to employees who have the status of permanent employees with a fixed salary with incentives according to performance. Meanwhile, employees with non-permanent status are compensated according to the policy of the health center. In addition, the actual working period factor can determine whether a midwife is right or not in carrying out her duties as a midwife. The longer a midwife's working period, the more she is expected to be able to master the situation in her work area. However, the working period is also related to the responsibility of implementing ANC where the longer the working period, the more experience or lessons are obtained, and the better the performance will also be in carrying out services in the examination of pregnant women, midwives can carry out according to standards.

8. Training and Skills

Another determinant factor analyzed was training and skills, where of the 6 articles that met the inclusion criteria, 1 article each discussed training and skills. The article (Hasalia et al., 2022) Stated that there was a relationship between training and midwifery performance in ANC services with a value of $p = 0.010$ and $PR = 2.25$ ($\rho < 0.05$). This shows that training plays an important role in improving performance where with more types of training followed by midwives, it will have a good impact on improving the competence and performance of midwives.

In addition, there is another factor that is analyzed, namely skills, where there are 1 out of 6 articles discuss skills with midwifery performance in ANC services whereas the article. (Malaikosa et al., 2022) States that there is no significant relationship $\rho=0.936$ ($\rho < 0.05$).

Conclusion

Based on a study from six journals that are included in the inclusion criteria of this study, which specifically examines the performance of midwives in antenatal care (ANC) services with a range of 2019-2024, it can be concluded that the determinants related to the performance of midwives in antenatal care (ANC) services in health centers are knowledge, motivation, rewards/incentives/wages, training, age, worker status and relationships with colleagues. The researcher's suggestion for the future needs to involve the Health Office and professional organizations (Indonesian Midwives Association/IBI) involved in coaching and supervision in the form of standardization, technical guidance, and evaluation monitoring which is carried out at least 2 times a year by the Regulation (Permenkes RI No. 28, 2017) and is obliged to carry out credentialing and credentialing by the Decree of the Director General of Health Services Number HK.01.07/I/4719/2020 so that it can improve quality health center from the aspect of human resources (Ministry of Health of the Republic of Indonesia, 2021).

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