MOTHER'S KNOWLEDGE, MOTHER'S ATTITUDE, AND HUSBAND'S SUPPORT RELATED TO PREGNANT WOMEN'S COMPLIENCE WITH ANC

Pengetahuan Ibu, Sikap Ibu dan Dukungan Suami Berhubungan dengan Kepatuhan Ibu Hamil Melakukan ANC

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ABSTRAK

Indikator derajat kesehatan suatu negara ditentukan oleh beberapa aspek diantaranya angka kematian ibu (AKI) dan angka kematian bayi (AKB). Antenatal care (ANC) yang komprehensif berperan penting dalam menurunkan AKI dan AKB serta mendeteksi risiko kesehatan ibu dan anak. Untuk itu diperlukan kepatuhan ibu hamil untuk melakukan ANC. Penelitian ini bertujuan untuk mengetahui faktor-faktor yang berhubungan dengan kepatuhan ANC pada ibu hamil. Penelitian ini menggunakan metode kuantitatif cross sectional. Populasi dalam penelitian ini ibu hamil, pengambilan sampel menggunakan tekhnik purposive sampling berjumlah 181 ibu hamil. Teknik pengumpulan data dengan wawancara menggunakan instrument berupa kuesioner yang telah dilakukan uji validitas dengan nilai corrected item-total correlation >0,514 dan uji reliabilitas dengan nilai Cronbach alpha >0,8. Uji Chi Square digunakan untuk analisis bivariat. Hasil penelitian menunjukkan sebagian besar responden memiliki katagori pengetahuan cukup (52,5%), sebagian kecil sikap responden mendukung (48,1%), sebagian besar responden mendapat dukungan suami (61,3%) dan sebagian besar patuh melakukan ANC (66,9%). Terdapat hubungan yang signifikan antara pengetahuan responden dengan kepatuhan ANC (p-value 0,001). Terdapat hubungan yang signifikan antara sikap responden dengan kepatuhan ANC (p-value 0,001). Terdapat hubungan yang signifikan antara dukungan suami dengan kepatuhan ANC (p-value 0,001). Penelitian lebih lanjut diperlukan untuk mengeksplorasi faktor yang berkontribusi terhadap hubungan antara pengetahuan, sikap dan dukungan suami dengan kepatuhan ANC ibu hamil seperti umur, pendidikan dan paritas sehingga didapatkan pendekatan yang lebih tepat untuk meningkatkan kesadaran ibu hamil dalam melakukan ANC.

***Kata kunci**: antenatal care, ibu hamil, kepatuhan*

ABSTRACT

A country's health status is determined by several aspects, including maternal mortality rates (MMR) and infant mortality rates (IMR). Comprehensive antenatal care (ANC) plays a crucial role in reducing MMR and IMR and detecting maternal and child health risks. Therefore, among pregnant women, compliance with ANC is essential. This study aimed to determine the factors related to ANC compliance in pregnant women. This study used a quantitative cross-sectional method. The population in this study was pregnant women; sampling was conducted using a purposive sampling technique, totaling 181 pregnant women. Data collection techniques by interview using an instrument in the form of a questionnaire that has been tested for validity with a corrected item-total correlation value of >0.514 and a reliability test with a Cronbach

alpha value of >0.8. The Chi-Square test was used for bivariate analysis. The results showed that most respondents had the category of sufficient knowledge (52.5%), unsupportive attitudes (51.9%), received support from their husbands (61.3%), and adhered to ANC (66.9%). There was a significant relationship between the knowledge of pregnant women (p-value 0.001). There is a significant relationship between respondents' attitudes and ANC compliance (p-value 0.001). There is a significant relationship between husband's support and ANC compliance (p-value 0.001). It is hoped that readers can contribute to increasing ANC compliance in pregnant women by promoting health and seeking social support to increase awareness among pregnant women in carrying out ANC.

Keywords: antenatal care, compliance, pregnant women

INTRODUCTION

The indicators of a country's health status are determined by several aspects, including the maternal mortality rate (MMR) and infant mortality rate (IMR), which describe the quality and accessibility of maternal and child health services[1]. In 2023, the global maternal mortality rate was 197 per 100,000 live births, or around 260,000 maternal deaths. This is equivalent to one death every two minutes. In Southeast Asia, the average maternal mortality rate was around 96 per 100,000 live births[2], while in Indonesia, the MMR exceeds the average figure in Southeast Asia, namely 140 per 100,000 live births[3]. The global infant mortality rate (IMR) in 2023 reached 26.05 per 1,000 live births, and several countries with the highest infant mortality rates (IMR) included Sierra Leone (56.2) and Afghanistan (50.4 per 1,000 live births)[4]. The infant mortality rate (IMR) in Indonesia in 2023 was 17 per 1,000 live births[5]. The maternal mortality rate in West Java in 2024 was 98.60 per 100,000 live births, and in Garut Regency, the maternal mortality rate reached 50 cases. Garut Regency ranked second highest in West Java after Bogor Regency. The maternal mortality rate in West Java reached 5,758 cases, with Garut Regency ranking third (357 cases) after Bogor Regency (824 cases) and Bandung Regency (463 cases)[6]. The high maternal and infant mortality rates indicate that maternal and child health problems have not yet been properly addressed.

MMR and IMR in Indonesia have decreased from year to year but are still far from the Sustainable Development Goals (SDGs) target, namely, in 2030, MMR of 70 per 100,000 live births and IMR <12 per 1,000 live births[7]. The main causes of direct maternal death are bleeding, hypertension during pregnancy and infection, while the causes of infant death are prematurity and complications of premature birth, intrapartum asphyxia, and neonatal infection[8]. The high maternal and child mortality rates (MMR) indicate that the quality of health services, including antenatal care (ANC) services, is still low.[9]Efforts to accelerate the reduction of maternal and child mortality rates can be made by ensuring that all pregnant women have access to quality health services (ANC)[6]. Antenatal care (ANC), according to the World Health Organization (WHO), is a nursing service for pregnant women provided by skilled health professionals to monitor the health condition of pregnant women and the fetus in their womb, detect and reduce high-risk pregnancies, and provide health education and promotion[10].

ANC is a health service for pregnant women with appropriate but cost-effective interventions to reduce morbidity and mortality rates in mothers due to complications of pregnancy and childbirth[11]. Quality ANC plays an important role in reducing maternal and infant mortality and in detecting maternal and child health risks[12]. Antenatal care is carried out in an integrated and comprehensive manner from conception to the beginning of labor, so that it is hoped that pregnant women can experience pregnancy and childbirth safely and have a positive experience, namely a pleasant experience,

providing added value and benefits for pregnant women in carrying out their roles as women, wives and mothers and giving birth to babies safely and healthily[13].

ANC aims to prepare pregnant women physically, psychologically, mentally and socially during pregnancy, childbirth, postpartum, breastfeeding, to strive to give birth to a healthy baby, to be able to prepare themselves to face the risk of pregnancy complications, to be ready to deal with the possibility of deviations or complications and if not handled immediately to be taken to an adequate health facility so that the risk of death in pregnant women and babies can be prevented[14],[15]. Quality antenatal care is obtained if pregnant women comply with ANC. ANC coverage at least six times during pregnancy[13]. In Indonesia, in 2024, it will only reach 74.5%, in West Java89.54% in Garut Regency is still below the West Java figure of 79.7%[5][16]. This coverage is still below the national target, namely 100%[17]. Several factors that influence failure to achieve the target percentage of antenatal care compliance include the knowledge and attitudes of pregnant women and husbands' support[18]. This statement is supported by the results of Safitri's (2020) research, which states that there is a relationship between the knowledge and attitudes of pregnant women and their husbands' support for ANC compliance[19]. This study aimed to analyze factors related to antenatal care (ANC) compliance in pregnant women.

METHODS

The method in this research was a quantitative cross-sectional design. The population in this study was pregnant women in their third trimester, and the sampling technique was purposive sampling at the Kadungora Community Health Center and Sukawening Community Health Center in Garut Regency, who conducted ANC during May-July 2025. The inclusion criteria in this study were pregnant women in their third trimester and willing to be respondents, while the exclusion criteria were pregnant women who had complications in pregnancy, such as severe preeclampsia, bleeding. The sample size was calculated using the Slovin formula of 181 pregnant women.

Data collection techniques using interviews using instruments in the form of a questionnaire about factors related to ANC compliance of pregnant women, the instrument used has been tested for validity with a corrected item-total correlation value of > 0.514 and a reliability test with a Cronbach alpha value of > 0.8. The variables in this study consist of independent variables of knowledge, attitudes, and husband's support while the dependent variable is ANC compliance of pregnant women (six visits during pregnancy). Bivariate analysis or testing the relationship between independent variables and dependent variables using the Chi-square test. This study has obtained permission from the Health Research Ethics Commission of the Faculty of Health Sciences and Technology, Jenderal Achmad Yani University, with number: 034/ KEPK/FITKes-Unjani/IV/2025.

RESULT

Table 1. Overview of Respondent Characteristics (n= 181)

Variables	Compliant		Non-compliant		n	%
	n	%	n	%		
Age (years)						
< 20 and > 35 (risk)	38	77.7	15	28.3	53	29.3
20-35 (non-risk)	83	65.9	45	35.1	128	70.7
Education						
Elementary School/Equivalent	13	56.5	10	43.5	23	12.7
Junior High School	47	65.3	25	34.7	72	39.8
High School	53	67.9	25	32.1	78	43.1
College	8	100	0	0	8	4.4
Parity						
High	24	70.6	10	29.4	34	18.8
Low	97	66	50	34	147	81.2

Table 1 showed that most respondents were aged between 20-35 years (70.7%) and were compliant with ANC, most respondents had high school education (43.1%) and were compliant with ANC, and the majority of respondents had low parity (81.2%) and were compliant with ANC.

Table 2. Frequency Distribution of Knowledge, Attitudes, Husband's Support and ANC Compliance of Pregnant Women (n=181)

Variables	n	%
Knowledge		
Good	51	28.2
Fair	95	52.5
Poor	35	19.3
Attitude		
Support	87	48.1
Not supportive	94	51.9
Husband's Support		
Supportive	111	61.3
Not supportive	70	38.7
Compliance with ANC		
Compliant	121	66.9
Non-compliant	60	33.1

Table 2 showed that the majority of respondents had fair knowledge (52.5%), a small proportion had supportive attitudes (48.1%), received support from their husbands (61.3%), and were compliant with ANC (66.9%).

Table 3. Analysis of the Relationship between Knowledge, Attitude, and Husband's Support with ANC Compliance of Pregnant Women (n=181)

Variables		ANC Compliance				Amount		p-value
		Compliant		Non-compliant		n	%	
		n	%	n	%			
Knowledge	Good	43	84.3	8	15.7	51	28.2	
	Enough	65	68.4	30	31.6	95	52.5	0.001
	Not enough	13	37.1	22	62.9	35	19.3	
Attitude	Supportive	77	88.5	10	11.5	87	48.1	
	Not supportive	44	46.8	50	53.2	94	51.9	0.001
Husband's support	Supportive	86	77.5	25	22.5	111	61.3	
	Not supportive	35	50	35	50	70	36.7	0.001

Table 3 showed that respondents with good knowledge showed the highest proportion of compliance with ANC, namely 84.3% and found a significant relationship between knowledge and ANC compliance of respondents (p = 0.001), respondents with supportive attitudes showed the highest proportion of compliance with ANC, namely 88.5% and found a significant relationship between attitudes and ANC compliance of respondents (p = 0.001), and respondents who received husband support showed the highest proportion of compliance with ANC, namely 77.5% and found a significant relationship between husband support and ANC compliance of respondents (p = 0.001).

DISCUSSION

Antenatal care (ANC), according to WHO (2016), is a health service provided regularly to pregnant women by competent health workers to monitor the condition of the pregnant woman and fetus, carry out early detection of high-risk or pregnancy complications, and prepare for a safe delivery[20]. Pregnant women are said to be compliant if they carry out ANC according to the standards of the Indonesian Ministry of Health at least six times during pregnancy, namely 1 (one) time in the first trimester, 2 (two) times in the second trimester, and 3 (three) times in the third trimester[17]. This is

also stated in the 2024 West Java Provincial Health Profile on page 48, which states: "The results of antenatal care can be seen in the coverage of antenatal care visits according to standards by health workers, namely at the first visit during the first trimester of pregnancy (K1), four visits by pregnant women (K4), and at least six visits by pregnant women (K6)"[16]. K1 is to see access to services for pregnant women, which describes the number of pregnant women who made their first visit to a health facility and received antenatal care in the first trimester of pregnancy. K4 is access or contact between pregnant women and health workers at least once in the first trimester of pregnancy, once in the second trimester of pregnancy and at least twice in the third trimester of pregnancy, while K6 is the coverage of antenatal care according to standards (10T) and at least six visits, namely at least once in the first trimester to receive antenatal care by a doctor (K1), twice in the second trimester to receive antenatal care and three times in the third trimester to receive antenatal care by a doctor (K5)[16].

The results of the study showed that most of the respondents were aged 20-35 years (70.7%) and were compliant in performing ANC. Age is one of the demographic factors that can influence a person's health behavior, including ANC behavior in pregnant women. Pregnant women with ideal reproductive age (20-35 years) will generally have physical and psychological conditions that are more ready to undergo pregnancy and have a better understanding of the benefits of antenatal care. Pregnant women aged <20 years tend to have low emotional experience, which has an impact on low awareness of ANC, while pregnant women aged >35 years are at greater risk of experiencing pregnancy complications[10].

The results of the study showed that most respondents had a high school education and were compliant with ANC. The level of education can influence a person's understanding and can increase their understanding, thereby influencing behavior, including the behavior of complying with ANC[21]. The higher the level of education of pregnant women, the more pregnant women can seek better information, especially regarding antenatal care, so that mothers will be compliant in carrying out ANC. In addition, if mothers know a lot of information about the benefits of ANC, then mothers will know how to reduce the risk of pregnancy, one of which is by compliantly carrying with ANC[22].

The results of the study showed that the majority of respondents were of low parity (81.2%) and were compliant with ANC. For women of low parity, pregnancy is a new experience, so they indirectly pay more attention to their pregnancy. They view ANC as something new and are motivated to obtain clearer information about their pregnancy, which leads to greater compliance with ANC visits by health workers. Conversely, women with high parity may already have experience from previous pregnancies, so they feel there's no need for antenatal care[23].

The results of the study indicate a relationship between knowledge and ANC compliance in pregnant women. This finding aligns with the research by Merdikawati (2022) showed the level of knowledge of a person related to the frequency of ANC visits of pregnant women during the Covid-19 pandemic. [24] This research was also supported by the research results of Senudin (2022), namely that there was relationship between the level of knowledge of pregnant women and the frequency of ANC visits (p value = 0.023)[25]. The results of Yuniwati's research (2024) stated that there was a relationship between knowledge about early detection of pregnancy complications and ANC compliance of pregnant women[26], and the results of Ismail's research (2024) found a relationship between pregnant women's knowledge about antenatal care and compliance with antenatal care visits by pregnant women[27].

Pregnant women who have good knowledge about the benefits of antenatal care will be motivated to carry out antenatal care regularly so that the condition of their

pregnancy can be known[26]. Knowledge is an important factor that contributes to influencing ANC compliance of pregnant women; the higher the knowledge of pregnant women about ANC, the higher the desire to comply[27]. The results of Asmin's (2022) research show that there is a significant relationship between knowledge and ANC compliance. Pregnant women who have good knowledge will be encouraged to comply with ANC because they want to maintain the health of the mother and fetus, and if there are abnormalities, they will be immediately identified, so they can get fast and appropriate treatment[28].

Pregnant women will comply with ANC if they understand the benefits of ANC services during their pregnancy, which is supported by the essential domain, namely knowledge[29]. Pregnant women who do not comply with the use of ANC services may be caused by a lack of knowledge and understanding of the importance of ANC to monitor the health of the mother and fetus, detecting problems as early as possible, and providing appropriate action or intervention if complications are found during pregnancy[30].

Pregnant women and families are the smallest units of society and have an important role in preventing pregnancy complications through increasing knowledge and awareness, where knowledge is a key factor that can influence a person's behavior. Pregnant women as one of the vulnerable groups, need to get comprehensive information about the benefits of antenatal care (ANC), the risks that may occur during pregnancy, and their impact[31].The World Health Organization (WHO) recommends that pregnant women and newborns receive comprehensive care during pregnancy, childbirth, and after childbirth. In the context of reproductive health services, ANC plays a very important role in providing various health functions, including health promotion, screening, establishing diagnoses, and preventing diseases, as well as implementing Evidence-Based Practice promptly to save the lives of many babies and mothers[20].

The results of the study showed that more than half (51.9%) of respondents' attitudes did not support ANC compliance, but there was a relationship between attitudes and ANC compliance. This could be caused by several external factors that could influence ANC compliance, including recommendations from officers, support and pressure from family members, especially husbands, and regulations from health facilities[21]. The results of Agustina's research (2023) found a relationship between attitudes and compliance of pregnant women in making ANC visits[32]. The results of this study are also supported by several other research results, including: Ramadhaniati et al, (2023) which confirmed that there is a significant relationship between attitudes and ANC compliance of pregnant women[33], and the results of Kondamaru's research (2024) showed that there was a relationship between attitudes and ANC visits by pregnant women[15], however, this is in contrast to the results of Arisanti (2024) which stated that there was no relationship between attitudes and ANC visits[34].

Attitude is an individual's tendency to respond to certain objects, whether from individuals, groups, or situations, in a certain way that describes the individual's feelings, beliefs, and behavioral tendencies. Attitude is not just a feeling or opinion, but is a psychological dimension that consists of three main elements, namely the cognitive component which is related to the individual's thoughts or beliefs about an object or situation, the affective component which reflects a person's feelings or emotions towards a certain object, and the conative component which describes a person's tendency to behave in a certain way[35]. Pregnant women will be obedient and aware of undergoing antenatal care (ANC) if they experience any complaints during pregnancy, so that the health of the mother and fetus will improve or not worsen[36].The supportive attitude of pregnant women can encourage the mother's

desire to comply with ANC visits; on the other hand, the mother's negative attitude becomes an obstacle due to limited knowledge in understanding the benefits of ANC[37].

The attitude of pregnant women regarding antenatal care (ANC) is one of the factors that can influence the compliance of pregnant women to carry out ANC, A positive attitude showed the concern of pregnant women for their own health and the health of the fetus in their womb[38]. The attitude of pregnant women towards antenatal care (ANC) plays an important role in determining compliance with antenatal care (ANC), this proves that a positive attitude or good response from pregnant women regarding antenatal care (ANC) reflects their concern for their own health and the fetus in their womb so that it can increase compliance, on the other hand, a negative attitude makes pregnant women lose their motivation to comply with antenatal care (ANC)[39],[40].

This study showed that husbands' support is related to ANC compliance among pregnant women. The results of this study are supported by the research of Ramadhaniati et al. (2023), which found a significant relationship between husband's support and regular antenatal care (ANC) in Sidomulyo, Bengkulu City[33], the results of Safiri's research (2020) showed that there was a relationship between husband's support and antenatal care[19], and the results of Pricila's research (2022) stated that husband's support influences pregnant women's ANC compliance[39]. However, the results of this study contradict the results of the study by Anjarpuspa et al (2023), which stated that there was no significant relationship between husband's support and compliance with ANC visits[18].

The husband, as the closest person and companion to the pregnant woman, needs to provide good support because the high level of support from the husband for the pregnant woman to maintain her pregnancy, the mother will motivate the pregnant woman to comply with ANC[39]. Husband's support is a form of manifestation of caring and affection, the husband has a very large role in determining the mother's health status because good husband's support can provide good motivation for the mother to check her pregnancy[41]. Husbands play a crucial role in supporting the physical and psychological well-being of pregnant women and significantly contribute to the health of both mother and fetus. This support may include providing affection, attention, encouragement, accompanying the wife to ANC visits, ensuring adequate nutrition, selecting appropriate delivery facilities, and preparing delivery-related expenses. As the primary companion during pregnancy, the husband is expected to offer motivation, support, and care before anyone else, which ultimately has a positive impact on maternal and neonatal health[41].

Husband's support can also be realized in the form of active cooperation in providing understanding, emotional support, and being able to make wise decisions for both his wife and her family. A husband who showed concern for the welfare of the mother and her fetus will result in a pregnant woman who is compliant in ANC visits, while a husband who does not show concern for his pregnant wife will cause the pregnant woman not to comply with ANC visits[42]. A husband needs to continue to support his wife in every ANC visit; the support given can be physical, mental, and financial. Good support will pay attention to his wife's needs in all matters, including in obtaining ANC services[43].

The strength of this study is that it clearly identifies knowledge, attitudes, and husbands' support as significant demographic factors influencing ANC compliance among pregnant women. It also explores the importance of improving knowledge and attitudes, particularly among pregnant women, and husbands' support, in improving antenatal care compliance. The limitations of this study are that it was only conducted in two community health centers, namely Kadungora Community Health Center and

Karangpawitan Community Health Center, so the number of samples studied was not limited or representative of Garut Regency. The cross-sectional method in this study only examined the relationship between the independent and dependent variables, not examining efforts to improve pregnant women's compliance in performing ANC. Therefore, further research is needed using other methods such as case-control or cohort designs.

The findings of this study show that knowledge, attitudes, and husband's support are significantly associated with pregnant women's ANC compliance. These results have important implications for improving maternal health. Health workers can use this evidence to strengthen educational strategies and interpersonal communication with pregnant women and their families. The findings also support maternal and child health programs by encouraging targeted health promotion, enhancing ANC service quality, and empowering health cadres to motivate pregnant women and facilitate family—especially husband—support. For nursing education, these results can serve as learning material in developing maternity nursing competencies related to ANC compliance. For future research, this study provides a foundation for evaluating the effectiveness of educational interventions and social support in improving ANC adherence among pregnant women.

CONCLUSION

The study found that most respondents had adequate knowledge, a minority demonstrated supportive attitudes, most received husband support, and the majority complied with ANC recommendations. There was a significant relationship between knowledge and ANC compliance ($p= 0.001$), between attitudes and ANC compliance ($p= 0.001$), and between husband support and ANC compliance ($p= 0.001$). These findings highlight the importance of strengthening health promotion efforts to improve ANC adherence among pregnant women. Further research is recommended to investigate additional contributing factors—such as age, education, and parity—to develop more targeted approaches that can enhance pregnant women's awareness and compliance with ANC.

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