

# ANALYSIS OF THE IMPACT OF HISTORY OF COMPLICATIONS, MOTHERS' ATTITUDES TOWARDS ANTENATAL CARE, AND MOTHERS' KNOWLEDGE ABOUT P4K ON ANTENATAL CARE VISITS IN SIKKA REGENCY, EAST NUSA TENGGARA PROVINCE

Sofia Merylista <sup>1\*</sup>, Lilik Zuhriyah <sup>2</sup> and Sri Andarini <sup>3</sup>

<sup>1,2,3</sup> Faculty of Medicine, Universitas Brawijaya, Malang, East Java, Indonesia.

\*Corresponding Author Email: [sofiamerylista79@gmail.com](mailto:sofiamerylista79@gmail.com)

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## Abstract

**Introduction:** The current phenomenon is the uneven reach of maternal and child health services, management of high-risk groups, and the still low coverage of antenatal care and childbirth assistance by health workers. The purpose of this study is to analyze factors that influence integrated antenatal care visits. **Method:** This research is an observational analytic study using a cross-sectional approach conducted in January 2024 at 25 Public Health Centers across Sikka District. The sample in this study consisted of 125 postpartum mothers, with the sampling technique using total sampling according to the criteria. This research was conducted at Public Health Centers across Sikka District in accordance with the data. Respondents who met the criteria filled out questionnaires provided by the researcher. Data analysis used chi-square and multivariate analysis used logistic regression analysis. **Result:** It was found that variables related to integrated ANC visits are the history of pregnancy complications ( $p=0.004$ ), mother's attitude towards ANC ( $p=0.000$ ), and mother's knowledge about P4K ( $p=0.012$ ), while variables not related are parity ( $p=0.633$ ), occupation ( $p=0.773$ ), age ( $p=0.429$ ), and education ( $p=0.823$ ). In the logistic regression analysis, it was found that the mother's attitude towards ANC is the most influential variable on integrated ANC visits with a p-value of 0.000 and an OR value of 0.015, meaning that mothers' attitudes that do not support ANC reduce the chance of making incomplete ANC visits by 0.015 times compared to mothers' attitudes that support ANC. **Discussion:** Attitude is said to be a response that only arises when an individual is faced with a stimulus. A person's attitude towards an object is either supportive (favorable) or unsupportive (unfavorable) towards a certain object. Attitude is a preparation to react to objects in a certain environment as an appreciation of the object. A person's attitude towards something will show how well the person's knowledge and the information obtained will influence the response to accept it positively, just as the lack of knowledge will provide a response to behave negatively. **Conclusion:** Factors influencing integrated ANC visits in Sikka District are the history of pregnancy complications, mother's attitude towards ANC, and mother's knowledge about P4K, while the factors of parity, age, occupation, and education are not related. The mother's attitude towards ANC is the most dominant factor affecting integrated ANC visits in Sikka District.

**Keywords:** Antenatal Care, Parity, Education, Knowledge, Attitude.

## 1. INTRODUCTION

The success indicators of maternal health can be reviewed from the Maternal Mortality Rate (MMR). In this indicator, maternal death is defined as all deaths during the pregnancy period, childbirth, and postpartum caused by its management but not by other causes such as accidents or incidental (Ministry of Health of the Republic of Indonesia, 2022). Antenatal care is any activity or series of health examination activities carried out from the time of conception until before the beginning of the childbirth process that is comprehensive and of high quality and provided to all pregnant women (Ministry of Health of the Republic of Indonesia, 2020). In 2016, WHO issued a service recommendation letter aimed at providing a positive pregnancy and childbirth experience for mothers and reducing the maternal and child mortality and morbidity rates. The current phenomenon is the uneven reach of maternal and child health services, management of high-risk groups, and the still low coverage of

antenatal care and childbirth assistance by health workers. Pregnant women who do not undergo integrated antenatal care do not undergo early screening for pregnancy risk factors, which can result in delayed handling until maternal death (Ulfa Damayanti Suherman & Dwi Putri Rusman, 2018).

Based on the health profile of Sikka District in 2022, it states that the maternal mortality rate from 2019 was 240/100,000 live births with a total of 12 deaths, in 2020 decreased to 133/100,000 live births with 7 deaths, in 2021 was 179.5/100,000 live births with 9 deaths, and in 2022 was 178.5/100,000 live births with 8 deaths, where the details of the period of maternal death during pregnancy were 6 people, during childbirth was 1 person, and during the postpartum period was 1 person. According to the coverage rate of ANC K1 visits and ANC K4 visits in Sikka District, there has been a decrease from 2020 to 2022, with K1 from 96.4% in 2020 to 86.3% in 2022 and K4 from 78.8% in 2020 to 71.1% in 2022. This is due to the less optimal compliance of midwives to the SOP, and the absence of midwives in some villages. The percentage of coverage of K1 visits for pregnant women is pregnant women who have received the first antenatal service, regardless of the gestational age at the time of receiving the first antenatal service (K1 access) (Sikka, 2022).

Maternal deaths can also occur due to inadequate and inappropriate treatment, the presence of the "three delays" factors: delays in recognizing danger signs, delays in referral, and delays in receiving optimal health care. These factors are indirect causes but are fundamental in maternal mortality. The first delay in referral that must be immediately prevented to avoid other delays such as late family decision-making and late recognition of signs and dangers in pregnancy. The health service factor is caused by the unstable reach of Maternal and Child Health (MCH) services and management of high-risk groups, still low coverage of antenatal care and childbirth assistance by health workers, and inaccessible health services (distance, cost, time, and transportation) (Respati et al., 2019). The government's effort to maintain the health of pregnant women and detect early risks is through integrated antenatal care services. WHO recommends that pregnant women should have ANC visits eight times, after adaptation with professions and related programs, it was agreed in Indonesia, ANC is carried out at least six times with a minimum of two contacts with a doctor for screening risk factors/complications of pregnancy in the first trimester and risk factor screening of childbirth in the third trimester (World Health Organization, 2021).

Additional efforts made by the government to improve maternal health quality include providing comprehensive maternal health services. This is expected so that mothers can go through the pregnancy and childbirth process healthily and safely through several health programs, including the Birth Planning and Complication Prevention Program (P4K), where this program is an innovative effort in accelerating the reduction of maternal and infant mortality rates, through activities to increase access and quality of services, and is also an activity to build community potential, especially community concern for preparation and follow-up in saving mothers and babies (Ministry of Health of the Republic of Indonesia, 2012). Research conducted by (Siwi & Saputro, 2020) states that pregnancy risk in pregnant women affects the implementation of integrated ANC visits. Due to the low coverage of K1 and K4, the early detection of risk factors in pregnant women is delayed, leading to delayed handling that can result in maternal death. Mothers experiencing pregnancy risk symptoms must be examined immediately so that what the pregnant woman may be suffering from can be identified earlier and handled promptly to save the mother and fetus.

The study conducted by (Ulfa Damayanti Suherman & Dwi Putri Rusman, 2018) mentions that there is a relationship between age and the utilization of ANC in pregnant women. Pregnant women aged 20-35 years utilize ANC services more compared to pregnant women with high risk, namely ages < 20 years and > 35 years. Research by (Trisnawati et al., 2021; Hipson1 et al., 2022; Suryanegara & Sirait, 2023) explains that mothers with higher education  $\geq$  high school more frequently attend integrated ANC visits compared to mothers with lower education (<high school), this is because the higher the education, the better a person, especially pregnant women, performs pregnancy examinations, so the mother can obtain information about pregnancy.

The results of Putri Dwijayanti's (2013) research on the Analysis of the Implementation of the Birth Planning and Complication Prevention Program (P4K) by Village Midwives in Demak District concluded that the implementation of P4K by village midwives was not optimal because the village midwives did not conduct home visits, and sticker filling was left to the pregnant women themselves. The attachment of P4K stickers was merely a formality performed by pregnant women, as most pregnant women received information to just stick it in front of the house. Likewise, the recording of pregnant women was obtained from mothers who came for checks at health facilities, not because of home visits by village midwives. Blood donor mobilization is endeavored by the village midwives themselves if complications have occurred in pregnant women (Rosita, 2013; Lennox et al., 2017; Terazawa & Terazawa, 2018; Yaya et al., 2019). Therefore, there is a need for research related to the Influence of Maternal Factors, Sociodemographic Factors, and mothers' knowledge about P4K on integrated ANC visits in Sikka Regency, East Nusa Tenggara Province so that it can identify the factors that more influence mothers' compliance with ANC in Sikka Regency.

## **2. RESEARCH METHOD**

This study is an observational quantitative research with a cross-sectional approach, meaning the research is conducted only once at the same time with the aim of determining the influence of the birth planning and complication prevention program, maternal factors, and sociodemographic factors on integrated ANC visits. The population and sample in this study are all postpartum mothers (who gave birth in January 2024) at 25 public health centers (Puskesmas) across Sikka Regency. This study was carried out at 25 Puskesmas within the working area of the Sikka Regency Health Office. The research was conducted over a period of one month. The independent variables in this study are Maternal Factors (history of pregnancy complications, ANC attitude, parity), Sociodemographic Factors (education, employment, age), and P4K (mother's knowledge). The dependent variable in this study is Integrated ANC Visits. The data obtained from the questionnaire will be processed using the SPSS application with chi-square tests at a 95% confidence level ( $p < 0.05$ ) and multivariate testing using logistic regression tests conducted through several stages to obtain a value of  $p < 0.05$ .

## **3. RESULTS AND DISCUSSION**

This study involves 125 postpartum mothers who are willing to be research respondents in the Sikka Regency area.

## Respondent Characteristics

**Table 1: Characteristics of Respondents in Sikka Regency Area**

	Variable	Quantity	%
	<b>History of Pregnancy and Delivery Complications</b>		
0	None	45	36%
1	Present	80	65%
	<b>Attitude</b>		
0	Not Supportive	53	42,4%
1	Supportive	72	57,6%
	<b>Parity</b>		
0	Primipara (first-time mother)	45	36%
1	Multipara (multiple births)	41	32,8%
2	Grandemultipara (five or more births)	39	31,2%
	<b>Age</b>		
0	Normal	61	48,8%
1	High Risk	64	51,2%
	<b>Occupation</b>		
0	Unemployed	81	64,8%
1	Employed	44	35,2%
	<b>Education</b>		
0	Low	58	46,4%
1	High	67	53,6%
	<b>Mother's Knowledge about Maternal and Child Health (P4K)</b>		
0	Insufficient	98	78,4%
1	Sufficient	27	21,6%
	<b>Integrated Antenatal Care Visits</b>		
0	Incomplete	66	52,8%
1	Complete	59	47,2%

Based on Table 1, the characteristics of the respondents are as follows: the majority of mothers in Sikka Regency have experienced pregnancy and childbirth complications, totaling 80 individuals (65%), and those without complications number 45 individuals (36%).

Mothers supporting antenatal care (ANC) amount to 72 individuals (57.6%), and those not supporting are 53 individuals (42.4%). Regarding the number of children, 45 mothers (36%) have one child, 41 mothers (32.8%) have 2-4 children, while 39 mothers (31.2%) have five or more children. Mothers in the normal age category (20-35 years) number 61 individuals (48.8%), and those in the high-risk age category (<20 years and >35 years) are 64 individuals (51.2%).

Non-working mothers total 81 individuals (64.8%), while working mothers are 44 individuals (35.2%). The highest level of education among mothers is high education, with 67 individuals (53.6%), and those with low education are 58 individuals (46.4%). Mothers with limited knowledge about P4K are 98 individuals (78.4%), and mothers with good knowledge about P4K total 27 individuals (21.6%). The majority of mothers did not complete integrated ANC visits, with 66 individuals (52.8%), and those who completed integrated ANC visits number 59 individuals (47.2%).

## Relationship between History of Pregnancy and Childbirth Complications and Integrated ANC Visits in Sikka Regency

**Table 2: Relationship between History of Pregnancy Complications and Integrated ANC Visits in Sikka Regency**

History of Pregnancy and Delivery Complications	Incomplete Integrated Antenatal Care Visits		Complete Integrated Antenatal Care Visits		probability value
	N	%	N	%	
none	16	35.6%	29	64,4%	<b>0,004</b>
Present	50	62,5%	30	37,5%	

Based on Table 2, it can be explained that mothers with a history of pregnancy complications have a proportion of 62.2% for not completing integrated ANC visits and 37.5% for completing integrated ANC visits.

The statistical test results obtained a significant value (p-value) of  $0.004 < 0.05$ , indicating a relationship between the history of pregnancy complications and integrated ANC visits.

This research result is consistent with the hypothesis proposed by the researchers that there is an influence of pregnancy complication history on integrated ANC visits. This study aligns with the research conducted by (Antes & DuBois, 2014; Singh & Major, 2017; Siwi & Saputro, 2020), which found that respondents with a pregnancy risk have an impact on the implementation of ANC and are 147.163 times more likely to undertake integrated ANC.

This finding contrasts with the study by (Maharaj et al., 2022), which explains that there is no significant relationship between the history of complications and ANC visits (Gupta et al., 2014; Beauclair, Petro & Myer, 2014; Amoakoh-Coleman et al., 2016; Siwi & Saputro, 2020).

Through early detection, any potential abnormalities can be quickly identified and addressed before adversely affecting and leading to maternal death. Pregnant women can prevent complications by undergoing regular pregnancy examinations according to the applicable standards with healthcare professionals, so any complaints can be promptly managed (Jain et al., 2015; AlexanderErik et al., 2017; Rini et al., 2023).

According to the study conducted by Mahendra et al. (2019), there is a relationship between ANC and pregnancy complications. Essentially, every pregnant woman is at risk of experiencing complications that can threaten her life. Therefore, every pregnant woman needs to make ANC visits according to the standard during the antenatal period. During each visit, the mother will receive information related to her pregnancy, especially about the danger signs of pregnancy that can threaten the safety of both the mother and the fetus (El-Nagar et al., 2017; Mwilike et al., 2018; Mahendra et al., 2019).

In the research area of Sikka Regency, it was found that there are still mothers experiencing complications during pregnancy and not completing integrated ANC visits, partly because mothers prefer ANC visits to specialist doctors rather than to community health centers or midwives.

## Relationship between Attitudes towards Integrated ANC Visits in Sikka Regency

**Table 3: Relationship between ANC Attitude and Integrated ANC Visits in Sikka Regency**

Attitude towards ANC	Incomplete Integrated Antenatal Care Visit		Complete Integrated Antenatal Care Visit		probability value
	N	%	N	%	
Not supportive	50	94,3%	3	5,7%	<b>0,000</b>
Supportive	16	22,2%	56	77,8%	

Based on Table 3, it can be explained that mothers who support integrated ANC visits have a proportion of 22.2% for not completing integrated ANC visits and 77.8% for completing integrated ANC visits. The statistical test results obtained a significant value (p-value) of  $0.000 < 0.05$ , indicating a relationship between ANC attitude and integrated ANC visits.

In this research, it was found that the attitude of mothers affects integrated ANC visits in Sikka Regency. This study aligns with the research conducted by (Ranotana & Kota, 2019) which mentions that there is an influence between the attitude of pregnant women and ANC visits at the Weru Community Health Center in Manado City. It demonstrates that the relationship between attitude and the utilization of ANC visits. A person's attitude towards something will show how well the person's knowledge and the information obtained will influence the response to accept positively (support) and conversely, insufficient knowledge will provide a response to behave negatively (less/not supportive).

This finding contrasts with the study conducted by Yulia Safitri1 (2020), which states that the attitude of pregnant women does not affect ANC visits in Hamparan Perak Sub-district, Deli Serdang Regency. This condition is caused because even though pregnant women support ANC attitude and perform incomplete ANC, they consider that ANC visits are only necessary if there are pregnancy problems (Jacobs et al., 2018; Kotoh & Boah, 2019; Yulia Safitri1, 2020).

In Sikka Regency, most respondents support ANC and perform incomplete ANC; this condition could occur because pregnant women assume that complete ANC is only necessary if there are problems in the pregnancy. The attitude of mothers towards pregnancy examination services affects their compliance in making ANC visits. A positive attitude or good response or supportive attitude towards ANC reflects concern for their and their fetus's health, thereby increasing the rate of visits. In contrast, a less supportive or negative attitude causes pregnant women to lose motivation to make visits.

## Relationship between Parity and Integrated ANC Visits in Sikka Regency

**Table 4: Relationship between Parity and Integrated ANC Visits in Sikka Regency**

Parity	Incomplete Integrated Antenatal Care (ANC) Visit		Complete Integrated Antenatal Care (ANC) Visit		probability value
	N	%	N	%	
Primipara	23	51,1%	22	48,9%	<b>0,633</b>
Multipara	20	48.8%	21	51,2%	
Grandemultipara	23	59%	16	41%	

Based on Table 4, it can be explained that primiparous mothers have a proportion of 51.1% for not completing integrated ANC visits and 48.9% for completing integrated ANC visits. The statistical test results obtained a significance value (p-value) of  $0.633 > 0.05$ , meaning there is no relationship between parity and integrated ANC visits.

The research conducted by the researchers regarding the parity variable indicates that primiparous mothers complete integrated ANC visits, but there is no influence of parity on integrated ANC visits in Sikka Regency. This is in line with the research conducted by (Siwi & Saputro, 2020) which found that the parity variable does not affect integrated ANC visits in the working area of Sukodono Public Health Center, Lumajang Regency. First-time pregnant mothers usually have good knowledge about ANC due to a lack of experience, but also possibly due to a high curiosity about ANC. In contrast, respondents with a parity of 2 or more typically have experience from previous pregnancies, making it easier for them to decide whether to complete integrated ANC visits or not (Siwi & Saputro, 2020).

The study by (Ulfa Damayanti Suherman & Dwi Putri Rusman, 2018) revealed that there is no influence of parity on ANC visits. According to the research by (Maharaj et al., 2022), there is no relationship between parity and ANC visits. The group of pregnant women with parity  $< 3$  utilize ANC services more than the group of pregnant women with parity  $> 3$ . This is because pregnant women who have  $< 3$  children are very hopeful about their pregnancy, so they are more diligent in checking their pregnancy regularly so that the child in their womb is born well and healthy. Similarly, mothers who have been pregnant and given birth multiple times are accustomed to the conditions of pregnancy and childbirth.

That primiparous mothers completing integrated ANC visits both completely and incompletely indicates that they have less motivation for ANC visits. Therefore, the role of health workers in conducting home visits and health education should be intensified to build motivation among all pregnant women regarding the importance of pregnancy examinations.

### Relationship between Age and Integrated ANC Visits in Sikka Regency

**Table 5: Relationship between Age and Integrated ANC Visits in Sikka Regency**

Age	Incomplete Integrated Antenatal Care (ANC) Visit		Complete Integrated Antenatal Care (ANC) Visit		probability value
	N	%	N	%	
Normal	30	49,2%	31	50,8%	<b>0,429</b>
High Risk	36	56,3%	28	43,8%	

Based on Table 5, it can be explained that high-risk age mothers supporting integrated ANC visits have a proportion of 56.3% for not completing integrated ANC visits and 43.8% for completing integrated ANC visits fully. The statistical test results obtained a significance value (p-value) of  $0.429 > 0.05$ , meaning there is no relationship between age and integrated ANC visits.

In this study, researchers found that there is no influence between age and integrated ANC visits in Sikka Regency. Most mothers of high-risk age do not complete integrated ANC visits. This is consistent with the research conducted by (N. A. Putri et al., 2016), which states that there is no influence between age and antenatal visits. Age influences a mother's mindset. Mothers of reproductive age (20-35 years) can think

more rationally compared to those who are younger or older. Therefore, mothers of reproductive age are more motivated to have pregnancy check-ups.

This study aligns with the research conducted by (Redi et al., 2022) that there is a relationship between age and ANC visits. The research by (Devi Kurniasari, 2016; Wondemagegn et al., 2018; Konje et al., 2018) also mentions that age does not affect ANC visits. The older age of a mother does not necessarily mean she cannot make good ANC visits, and conversely, younger mothers may not always be able to make ideal visits to health facilities.

Mothers of high-risk age (<20 years and > 35 years) are more likely to have incomplete ANC visits. Age cannot be used as a predictor for maternal behavior in making ANC visits, meaning that both mothers of risk age and those not at risk have the same opportunity to complete or not complete ANC visits.

### Relationship between Employment and Integrated ANC Visits in Sikka Regency

**Table 6: Relationship between Employment and Integrated ANC Visits in Sikka Regency**

Occupation	Incomplete Integrated Antenatal Care (ANC) Visit		Complete Integrated Antenatal Care (ANC) Visit		probability value
	N	%	N	%	
Not working	42	51,9%	39	48,1%	<b>0,773</b>
Working	24	54,5%	20	45,5%	

Based on Table 6, it can be explained that non-working mothers supporting integrated ANC visits have a proportion of 51.9% for not completing integrated ANC visits and 48.1% for completing integrated ANC visits fully. The statistical test results obtained a significance value (p-value) of 0.773 > 0.05, meaning there is no relationship between employment and integrated ANC visits.

The research conducted by (Hipson1 et al., 2022) states that there is a significant relationship between employment and ANC visits at PMB Suryati. The study by (Yaya et al., 2017) mentions that there is no relationship between employment and ANC visits.

Employment is one of the factors that influence pregnant women not to make ANC visits according to the standard because a working pregnant woman tends to spend her time on work activities rather than making ANC visits, while non-working pregnant women have more time for daily activities and to go to health service places to check their pregnancy.

In the research area of Sikka Regency, it was found that most respondents do not work and do not complete ANC; this can be due to financial constraints such as transportation costs, examination fees, or additional test fees which can be barriers for non-working mothers to complete ANC.

In the research location, it was found that there is no influence of the mother's employment status on integrated ANC visits. Most respondents in the research location do not work. This aligns with the research conducted by (J. M. Putri, 2019), which mentions that there is no relationship between employment and ANC visits in the working area of Puskesmas Pertiwi, Makassar City.



## Relationship between Education and Integrated ANC Visits in Sikka Regency

**Table 7: Relationship between Education and Integrated ANC Visits in Sikka Regency**

Education	Incomplete Integrated Antenatal Care (ANC) Visit		Complete Integrated Antenatal Care (ANC) Visit		probability value
	N	%	N	%	
Low	30	51,7%	28	48,3%	<b>0,823</b>
High	36	53,7%	31	46,3%	

Based on Table 7, it can be explained that mothers with higher education supporting integrated ANC visits have a proportion of 53.7% for not completing integrated ANC visits and 46.3% for completing integrated ANC visits fully. The statistical test results obtained a significance value (p-value) of  $0.823 > 0.05$ , meaning there is no relationship between education and integrated ANC visits.

In this research, the researchers found that there is no influence of the mother's level of education on integrated ANC visits in Sikka Regency. This aligns with the research conducted by (N. A. Putri et al., 2016), which states that the higher a person's education, the easier it is to access information, ultimately affecting an individual's behavior. This could occur because the research referred to by these researchers concerns knowledge about antenatal visits among pregnant women, not general knowledge, so it does not necessarily mean that respondents with higher education have good knowledge about antenatal visits.

This study contrasts with the research conducted by (Yaya et al., 2017), which found that there is an influence between the level of education and ANC visits, indicating that mothers with higher levels of education are more likely to make ANC visits compared to mothers with lower education levels. The research by (Devi Kurniasari, 2016; Muyunda et al., 2016; Muchie, 2017) also found that there is an influence between the level of education and ANC visits. The higher the education level, the easier it is to accept information, and adequate health information among pregnant women influences the behavior of pregnant women in making pregnancy check-up visits, which indirectly can reduce maternal and infant mortality.

In the research location, it was found that most mothers with higher education do not complete ANC, which could be because highly educated mothers easily accept information related to pregnancy examinations without having to make ANC visits. An individual's level of education determines how much knowledge they have. Pregnant women with higher education have a better understanding of health issues, thus influencing their attitude towards pregnancy and fulfilling nutrition during pregnancy.

## Relationship between Mothers' Knowledge of P4K and Integrated ANC Visits in Sikka Regency

**Table 8: Relationship between Mothers' Knowledge of P4K and Integrated ANC Visits in Sikka Regency**

Education	Incomplete Integrated Antenatal Care (ANC) Visit		Complete Integrated Antenatal Care (ANC) Visit		probability value
	N	%	N	%	
Insufficient	46	46,9%	52	53,1%	<b>0,012</b>
Sufficient	20	74,1%	7	25,9%	

Based on Table 8, it can be explained that mothers with less knowledge about P4K have a proportion of 46.9% for not completing integrated ANC visits and 53.1% for completing integrated ANC visits incompletely. The statistical test results obtained a significance value (p-value) of  $0.012 < 0.05$ , meaning there is a relationship between mothers' knowledge of P4K and integrated ANC visits.

The research conducted by the researchers found that there is an influence of mothers' knowledge about P4K on integrated ANC visits in Sikka Regency. This study aligns with the research conducted by (Fitriyani & Aisyah, 2019), which found that there is a significant relationship between the frequency of ANC visits and P4K in third-trimester pregnant women in Pekalongan Regency.

Knowledge is crucial for survival to not be left behind by the progress of the times. The better the knowledge, the better a person will behave, because if behavior is not based on knowledge and awareness, then the behavior will be temporary or not last long (Notoatmodjo, 2012). The process of decision-making for innovation or change begins with the knowledge stage, where at this stage individuals start to seek out or search for information about the existence of an innovation and seek information about that innovation (Notoatmodjo, 2012). In Sikka Regency, it was found that mothers with less knowledge about P4K complete integrated ANC visits, this occurs because mothers with less knowledge about P4K seek more information related to pregnancy and childbirth preparation through complete ANC visits.

### Multivariate Test

**Table 9: Logistic Regression Test**

	B	Wald	Sig	OR	95%	
					Lower	Upper
History	1,246	4,353	0,037	<b>3,475</b>	1,078	11,199
Complications						
Attitude	-4,226	36,003	0,000	<b>0,015</b>	0,004	0,058
Knowledge	1,573	5,795	0,016	<b>4,823</b>	1,340	17,366
Constant	-0,380	0,404	0,525	<b>0,684</b>		

Based on Table 9, the variable of history of complications has an Odds Ratio (OR) of 3.475, indicating that mothers with a history of complications are 3.75 times more likely to complete ANC visits compared to mothers without a history of complications. For the variable of mothers' attitude towards ANC with an OR of 0.015, it suggests that mothers with a less supportive attitude towards ANC are 0.015 times less likely to complete ANC visits compared to mothers with a supportive attitude. For the variable of mothers' knowledge about P4K with an OR of 4.823, mothers with good knowledge about P4K are 4.823 times more likely to complete ANC visits compared to mothers with less knowledge about P4K.

The results of the multivariate test showed that there are three variables that influence integrated ANC visits in Sikka Regency: history of pregnancy complications, mothers' attitudes, and mothers' knowledge about P4K. Meanwhile, parity, age, education, and employment do not influence integrated ANC visits. From the calculations, the most dominant variable influencing integrated ANC visits is the mothers' attitude towards ANC with a p-value of 0.000, followed by the variables of history of pregnancy complications and knowledge about P4K.

Knowledge itself is influenced by formal education factors. Knowledge is closely linked to education, where it is expected that with higher education, a person will have broader knowledge. However, it should be emphasized that it does not mean that a person with lower education absolutely has low knowledge as well. This is because the increase in knowledge can be obtained not only from formal education but also through non-formal education. A person's knowledge about an object contains two aspects: positive and negative. These aspects will determine a person's attitude, the more positive and known aspects, the more likely it will generate a positive attitude towards a specific object (Notoatmodjo, 2012).

#### 4. CONCLUSION

There is a significant relationship between the history of pregnancy and childbirth complications and integrated ANC visits in Sikka Regency. There is a significant relationship between mothers' attitudes and integrated ANC visits in Sikka Regency. There is no relationship between parity and integrated ANC visits in Sikka Regency. There is no relationship between the age of mothers and integrated ANC visits in Sikka Regency. There is no relationship between mothers' education and integrated ANC visits in Sikka Regency. There is no relationship between mothers' employment and integrated ANC visits in Sikka Regency. The most influential factor is the mothers' attitude towards ANC, with a p-value of 0.000, followed by the variables of history of complications and mothers' knowledge about P4K.

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