

## The Relationship Between Maternal Characteristics and Maternal Compliance With Antenatal Care Visits in UPT Work Areas, Lambing Health Center, West Kutai Regency

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### ABSTRACT

**Background** : High maternal mortality rates can occur in pregnant women who are at risk of not being detected early with routine pregnancy checks from the first trimester to the third trimester, the aim of which is to monitor physical and psychological health, including fetal growth and development as well as preparing for the labor and birth process, ANC coverage. Currently, the Puskesmas target has not yet been achieved. Based on data from the Lambing Health Center in 2022, K4 coverage in 2022 was 74.14% and coverage of K6 visits in 2022 was 73 people, amounting to 62.93%. **Objective**: to determine the relationship between maternal characteristics and maternal compliance with Antenatal Care visits in the UPT Working Area of Lambing Health Center, West Kutai Regency. **Method**: Case control type of research with a retrospective approach, the sample size was 61 respondents selected using total sampling. The measuring tool uses a questionnaire. Data analysis used the Chi Square test. **Results**: The characteristics of pregnant women at the UPT Puskesmas Lambing were mostly of healthy reproductive age (20-35 years), namely 62.3%, multiparity, namely 59%, secondary education, namely 55.7%, mothers who did not work, namely 68.9%. There is a relationship between age (p value 0.000), parity (p value 0.000), education (p value 0.000) and employment (p value 0.000) with mother's compliance with Antenatal Care visits in the UPT Working Area of Lambing Health Center, West Kutai Regency. **Conclusion**: maternal characteristics including age, parity, education and occupation are related to maternal compliance with ANC visits in the Lambing Health Center UPT Working Area, West Kutai Regency.

## INTRODUCTION

The use of ANC services by a number of pregnant women in Indonesia is not fully in accordance with established guidelines. This tends to make it difficult for health workers to carry out regular and comprehensive health maintenance guidance for pregnant women, including early detection of pregnancy risk factors which are important to be treated immediately, this is due to the lack of compliance of pregnant women with ANC (Indonesian Ministry of Health, 2019).

Mothers who do not comply with ANC examinations can result in various types of high-risk pregnancies not being known which can affect the continuity of the pregnancy or complications of pregnancy so that they cannot be treated immediately which will result in increased mortality and morbidity rates (Notoatmodjo, 2019).

There are many factors that cause this situation, such as age, education, employment, knowledge and attitudes of pregnant women, facilities and infrastructure, transport, family income, distance and health facilities, attitudes and behavior of health workers, family support, religious leaders and community figures who can influence a person's behavior, including influencing the behavior of pregnant women in making ANC visits (Notoatmodjo, 2019).

A preliminary study conducted by researchers through observations with the KIA book on 10 third trimester pregnant women obtained data that 6 people did not comply with ANC visits, especially during K6 visits. The results of interviews found that 3 people stated that they were more than 35 years old and had children more than 2 so they already had previous experience so they didn't have their pregnancy checked, 3 people stated that they didn't make regular visits because they were busy working in the garden so they didn't have time to do a pregnancy check, of the 6 people who didn't make regular visits stated that there was no family who took them to the midwife for a pregnancy check or Public health center.

Based on the background above, the author is interested in researching the relationship between maternal characteristics and maternal compliance with antenatal care visits in the Lambing Health Center UPT working area.

## METHODS

This research is researchcase controlwith a retrospective approach.The population in this study was 61 women giving birth in January-July 2023 in the Lambing Health Center UPT work area. The sampling technique used a total sampling technique with a total of 61 people. The research instrument used in this research is a checklist sheet. Data analysis was carried out in two stages, namely univariate analysis presented in the form of a frequency distribution table and bivariate analysis with testschi square.

## RESULT AND DISCUSSION

### Result

#### 1. Univariate Analysis

##### a. Characteristics Based on Age

**Table 4.1**  
**Frequency Distribution of Respondent's Age**  
**Characteristics in Regions Work of UPT Lambing,**  
**West Kutai Regency**

Age Characteristics	Frequency	Percentage (%)
Reproductive Age	38	62,3
Healthy	23	37,7
Risk Age		
Amount	61	100

Based on table 4.1. Above, a picture of 61 respondents was obtained, most of whom were of healthy reproductive age, namely 38 people (62.3%).

##### b. Characteristics Based on Parity

**Table 4.2**  
**Frequency Distribution of Parity Characteristics of**  
**Respondent in the Working Area of UPT Lambing,**  
**West Kutai Regency**

Parity Characteristics	Frequency	Percentage (%)
Low Parity	36	59,0

<b>High Parity</b>	<b>25</b>	<b>41,0</b>
<b>Amount</b>	<b>61</b>	<b>100</b>

Based on table 4.2. Above, we get a picture of the 61 respondents, most of whom had low parity, namely 36 people (59%) and 25 people who had high parity (41%).

### c. Characteristics Based on Education

**Table 4.3**  
**Frequency Distribution of Respondent's Educational Characteristics in the Working Area of UPT Lambing, West Kutai Regency**

<b>Characteristics Education</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Higher education</b>	<b>10</b>	<b>16,4</b>
<b>Secondary education</b>	<b>34</b>	<b>55,7</b>
<b>Elementary education</b>	<b>17</b>	<b>27,9</b>
<b>Amount</b>	<b>61</b>	<b>100</b>

Based on table 4.3. Above, we get a picture of the 61 respondents, most of whom had secondary education, namely 34 people (55.7%), 17 people (27.9%) had low education and 10 people (16.4%) had higher education.

### d. Job Based Characteristics

**Table 4.**  
**Frequency Distribution of Respondent's Job Characteristics in the Working Area of UPT Lambing, West Kutai Regency**

<b>Job Characteristics</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Doesn't work</b>	<b>42</b>	<b>68,9</b>
<b>Work</b>	<b>19</b>	<b>31,1</b>
<b>Amount</b>	<b>61</b>	<b>100</b>

Based on table 4.4. Above, a picture was obtained of 61 respondents, most of whom were unemployed, namely 42 people (68.9%).

### e. Characteristics Based on ANC Visit Compliance

**Table 5.**  
**Frequency Distribution of ANC Visit Compliance Characteristics in the Working Area of UPT**

## Lambing, West Kutai Regency

<b>Visit Compliance ANC</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Comply</b>	<b>42</b>	<b>68,9</b>
<b>Disobedient</b>	<b>19</b>	<b>31,1</b>
<b>Amount</b>	<b>61</b>	<b>100</b>

Based on table 4.5. Above, we get a picture of the 61 respondents, most of whom complied with ANC visits, namely 42 people (68.9%) and 19 people who did not comply with ANC visits (31.1%).

## 2. Bivariate Analysis

### a. Relationship between Age Characteristics and Adherence to ANC Visits

**Table 6.**  
**Relationship between Age Characteristics and Compliance with ANC Visits in the UPT Lambing Working Area, West Kutai Regency**

Characteristics Age	Obedience ANC Visit				Total		p value
	Comply		Disobedient		N		
	n	%	n	%			
Reproduction Healthy	36	85,7	2	10,5	38	62,3	0,000
Age at Risk	6	14,3	17	89,5	23	37,7	51,000 (9,30-279,471)
Amount	42	100	19	100	61	100	

The Chi Square test results obtained a value of 0.000 (<0.05), so it can be concluded that there is a relationship between age and compliance with ANC visits in the Lambing Health Center UPT Work Area. The Odds Ratio (OR) value is 51,000 (CI 9.307-279.471), which means that mothers who are of healthy reproductive age have a 51 times greater chance of complying with ANC visits compared to mothers who are at risk, namely < 20 years or > 35 years. **p**

### b. Relationship between Parity Characteristics and Adherence to ANC Visits

**Table 7.**  
**The Relationship between Parity Characteristics and Compliance with ANC Visits in the UPT Lambing Working Area, West Kutai Regency**

Characteristics Parity	Obedience ANC Visit				Total		p value
	Comply		Disobedient		N	%	
	n	%	n	%			
Low Parity	33	78,6	3	15,8	36	59,0	0,000 (4,649- 82,258)
High Parity	9	21,5	16	84,2	25	41,0	
Amount	42	100	19	100	61	100	

The Chi Square test results obtained a value of 0.000 ( $<0.05$ ), so it can be concluded that there is a relationship between age and compliance with ANC visits in the Lambing Health Center UPT Work Area. The Odds Ratio (OR) value is 19.556 (CI 4.649-82.258), which means that mothers who have low parity have a 19 times greater chance of complying with ANC visits compared to mothers who have high parity.  $\rho$

**c. Relationship between educational characteristics and compliance with ANC visits**

**Table 8.**  
**The Relationship between Educational Characteristics and Compliance with ANC Visits in the UPT Lambing Working Area, West Kutai Regency**

Characteristics Education	Obedience ANC Visit				Total		p value
	Comply		Disobedient		N	%	
	n	%	n	%			
	Height	9	21,4	1	5,3	10	
Secondary	31	73,8	3	15,8	34	55,7	0,000
Low	2	4,8	15	78,9	17	27,9	
Amount	42	100	19	100	61	100	

The results of the Chi Square test obtained a value of 0.000 ( $<0.05$ ), so it can be concluded that there is a relationship between education and compliance with ANC visits in the Lambing Community Health Center UPT Work Area.  $\rho$

**d. Relationship between Job Characteristics and Compliance with ANC Visits**

**Table 9.**  
**Relationship between Job Characteristics and Compliance with ANC Visits in the UPT Lambing Working Area, West Kutai Regency**

Characteristics Work	Obedience ANC Visit				Total		p value
	Comply		Disobedient		N	%	
	n	%	n	%			
Doesn't work	36	85,7	6	31,6	42	68,9	0,000 (3,553- 47,567)
Work	6	14,3	13	68,4	19	31,1	
Amount	42	100	19	100	61	100	

The Chi Square test results obtained a value of 0.000 ( $<0.05$ ), so it can be concluded that there is a relationship between work and compliance with ANC visits in the Lambing Health Center UPT Work Area.

## Discussion

### 1. Relationship between Age and Adherence to ANC Visits

The research results show that there is a relationship between age and compliance with ANC visits in the Lambing Community Health Center UPT Work Area. This can be seen from the fact that the majority of mothers who comply with ANC visits are those of healthy reproductive age, namely those aged 20 to 35 years who are more likely to comply with visits compared to mothers who are of high risk age.

This research is in line with research Ariestanti et al. (2022) where the results of the research showed a significant relationship, namely age ( $P: 0.02$ ) with the mother's behavior in carrying out pregnancy checks, research Mariyam et al. (2022) with the research results there is a relationship between maternal age and compliance with pregnancy visits, knowledge of pregnant women about ANC on pregnancy visits with  $p$  value = 0.029, But this research is not in line with research Ujung & Nainggolan (2022) where the results of the research were that there was no relationship between the age of the pregnant woman and the visit. research conducted by Mayang Wulan (2020) with research results There was no relationship between age and pregnant women's compliance with antenatal care (ANC) visits ( $p= 0.082$ ).

According to Green & Kreuter (2017) A person's age is one of the factors that influences a person to make changes in health behavior. Age influences a person's ability to perceive and think. As one gets older, one's grasping power and thinking patterns will also develop, so that the knowledge gained will get better, this is as a result of experience and maturity of one's soul (Notoatmodjo, 2019).

Based on research conducted by Juwahir (2011) in Girsang (2020) Those aged 20-35 years (healthy reproduction) mostly carry out pregnancy checks according to standards ( $> 4$  times), compared to those aged 35 years (resti) (Walyani, 2019).

Based on the research results, it can be seen that most of the respondents who were of healthy reproductive age complied with ANC visits, but there were 2 people who did not comply with the visits, this was due to the influence of other factors. From the interview results, it was found that the reason why they did not comply with the visits was because the place of residence is far from the health center so that in the first trimester of pregnancy they do not make visits, they are worried about their pregnancy, meanwhile, of the mothers who are at risk, most of them do not make visits, there are 6 people who comply with the visits, this is based on interviews obtained information that they make visits because at the time Pregnancy feels that the condition is not good so carry out routine pregnancy checks.

According to researchers, compliance with ANC visits among pregnant women is due to the large number of mothers of healthy reproductive age who routinely undergo examinations because they want to know the condition of pregnancy until delivery because on average this is the first child and the second child.

## **2. Relationship between Parity and Compliance with ANC Visits**

The research results show that There is a parity

relationship with compliance with ANC visits in the Lambing Community Health Center UPT Work Area. This can be seen from the majority of mothers who are obedient to ANC visits, those with low parity are more likely to comply with visits compared to mothers who have high parity.

This research is in line with research Mariyam et al. (2022) There is a relationship between parity of pregnant women and pregnancy visits with  $p$  value = 0.029 but this research is not in line with research Ujung & Nainggolan (2022) There is no relationship between pregnant women's parity and ANC visits with a value of  $P=0.090$  ( $P>0.05$ ).

Based on the research results, it shows that the majority of mothers with low parity are more likely to comply with ANC visits, but there are 3 people who are not obedient to ANC visits. The results of interviews showed that they did not make ANC visits because they live far away so it takes time to carry out pregnancy checks and are worried about the condition of the pregnancy if they travel long distances, while there are 9 mothers with high parity who are obedient to ANC visits because the mother's current pregnancy condition is not good and she has to have her pregnancy checked regularly.

According to researchers, mothers in the Lambing Health Center UPT work area do not comply with ANC visits for children who are more than 3 because usually because they have given birth before they choose a dukun for the birth of their next child because the previous birth went smoothly and safely so they decided to have it checked. Pregnancy is carried out by a shaman and birth is handled by a shaman.

## **3. Relationship between Education and Compliance with ANC Visits**

The research results show that There is a relationship between education and compliance with ANC visits in the Lambing Community Health Center UPT Work

Area. This can be seen from the fact that the majority of mothers who are obedient to ANC visits are those with higher and secondary education who are more obedient to visits compared to mothers who have low education.

This research is in line with research Ujung & Nainggolan (2022) where the research results show a relationship between pregnant women's education and ANC visits with a value of  $P = 0.001$  ( $P < 0.05$ ), as well as research Triana (2023) with the research results there is a significant relationship between education with a pvalue of  $0.036 < 0.05$  ( $OR = 2.700$  (1.152-6.329)). Based on research conducted by Luciana et al. (2022) The statistical test results obtained  $p = 0.022$ , meaning there is a relationship between education level and antenatal care visits at the Candipuro Community Health Center, South Lampung Regency. The OR value was also obtained; The 95%CI is 3.1 (1.2-7.7) which indicates that pregnant women with higher education have 3 times the chance of having a complete ANC visit compared to mothers with low education.

The level of education of pregnant women also plays a big role in the quality of care for their babies. Information related to pregnancy care is really needed, so that it will increase knowledge. Mastery of knowledge is closely related to a person's level of education. Research shows that the higher a person's education, the better their knowledge about something. For pregnant women with a low level of education, sometimes when they don't get enough information about their health, they don't know how to carry out good pregnancy care and this also affects their pregnancy visits (Romauli, 2019).

Based on the research results, it can be seen that respondents with higher education are mostly obedient to ANC visits, but there is 1 person who is not obedient to ANC visits. Likewise, among respondents

who have secondary education, there are still 3 people with secondary education who are not obedient to ANC visits, this can be caused by there is influence from other factors, the results of interviews obtained information that the mother did not comply with ANC visits because she lived far from health services and was difficult to reach, meanwhile there were 2 people who had low education but complied with ANC visits, this was because the mother was supported by Health workers to make regular visits to the Puskesmas.

According to researchers in the Lambing Community Health Center UPT working area, many people have secondary education because the public's awareness of education is good and they send their children to school at least until they graduate from high school, so their understanding of health behavior is good so many people comply with ANC visits.

#### **4. Relationship between Work and ANC Visit Compliance**

The research results show that There is a parity relationship with compliance with ANC visits in the Lambing Community Health Center UPT Work Area. This can be seen from the fact that the majority of mothers who are obedient to ANC visits are non-working mothers who are more obedient to visits compared to working mothers.

This research is in line with research Ujung & Nainggolan (2022) There is a relationship between the employment of pregnant women and ANC visits with a value of  $P = 0.000$  ( $P > 0.05$ ). Ariestanti et al. (2022) there is a relationship between employment and compliance with ANC visits ( $P; 0.03$ ), research Triana (2023) The research results showed that there was a significant relationship between work with a p value of  $0.002 < 0.05$  ( $OR = 3.938$  (1.684-9.207)), Mariyam et al. (2022) According to the research results, there is a relationship between maternal employment and compliance with pregnant women's ANC visits to visits

to the pregnancy ward with a p value of 0.048.

Based on the research results, it can be seen that most of the respondents who do not work are obedient to ANC visits, but there are 6 people who are not obedient to ANC visits, this could be because the mother is the fourth child so she already has previous experience of pregnancy so she does not routinely carry out pregnancy checks, while There are people who work but adhere to ANC visits. Based on interviews, information was obtained that mothers know the importance of having regular pregnancy checks so that mothers prioritize ANC visit schedules. According to researchers, compliance with ANC visits cannot be separated from the mother's understanding of the importance of ANC, so whatever the obstacles, mothers will try to carry out pregnancy checks according to schedule because they know the importance of having regular pregnancy checks.

## CONCLUSION

1. The characteristics of pregnant women at the UPT Puskesmas Lambing are mostly healthy reproductive age (20-35 years), namely 62.3%, multiparity, namely 59%, secondary education, namely 55.7%, non-working mothers, namely 68.9%.
2. Mothers' compliance with Antenatal Care visits in the UPT Working Area of the Lambing Health Center, West Kutai Regency, most of them complied with ANC, namely 68.9%.
3. There is a relationship between maternal age and maternal compliance with Antenatal Care visits in the UPT Working Area of Lambing Health Center, West Kutai Regency with a p value of 0.000.
4. There is a relationship between maternal

parity and maternal compliance with Antenatal Care visits in the Lambing Health Center UPT Working Area, West Kutai Regency with a p value of 0.000.

5. There is a relationship between maternal education and maternal compliance with Antenatal Care visits in the UPT Working Area of Lambing Health Center, West Kutai Regency with a p value of 0.000.
6. There is a relationship between maternal employment and maternal compliance with Antenatal Care visits in the UPT Working Area of Lambing Health Center, West Kutai Regency with a p value of 0.000.

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## SUGGESTION

1. Lambing Community Health Center  
Further increase outreach to the community, especially in areas far from health centers and routinely carry out ANC services to reach mothers who are located far from health services. Community health centers must create educational or outreach programs about the importance of ANC visits and the impact of non-compliance with ANC visits using various media such as audiovisuals, leaflets or flip sheets.
2. Educational Institutions  
Educational institutions can use the results of this research as lecture material for students taking research methods courses.
3. Respondent  
Prioritize visit schedules and pay attention to

maternal and fetal health during pregnancy, seek information regarding ANC visits.

#### 4. Next Researcher

Use the results of this research as comparison and reference material for further research regarding ANC visit compliance by taking different variables and continuing the analysis to a multivariate analysis.

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