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**The correlation between behavior of pregnant women and antenatal care utilization at Antang Primary Health Centre**

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**KEYWORDS**

Pregnant Women, Utilization, Antenatal care

**A B S T R A C T**

One of the goals of the Millennium Development Goals (MDG) is to improve maternal and child health that can be achieved by utilizing antenatal care services. The antenatal care is the examination on pregnant women to prevent birth complications. The study aimed to determine the correlation between accessibility, knowledge, parity, maternal behavior, and family support with the antenatal care utilization. The research applied an observational study with cross sectional design. The population was the pregnant women who did check up sat Primary Health Centre Antang by using Purposive Sampling method. The number of samples was 83 pregnant respondents. Results showed that of 83 respondents, there are 80.0% achievable accessibility and 12.0% unachievable accessibility; 60.2% had sufficient knowledge and 39.8% had less knowledge; 5.6% primiparous category and 49.4% multiparous category; 48.2% had positive behavior and 51.8% had a negative behavior; and 79.5% received sufficient family support and 20.5% less family support. Furthermore those who utilized the Antenatal Care services were 53 respondents (63.9%) while those who did not utilize it were 30 respondents (36.1%). It can be concluded that there is no correlation between parity with the utilization of Antenatal Care services, and there is correlation between accessibility, knowledge, behavior of pregnant women, family support and the utilization of Antenatal Care services. It is suggested to the clinic to intensify education/advocacy on the importance of prenatal care for pregnant women.

**Introduction**

One of the Millennium Development Goals' (MDG's) aim is to enhance mothers' health. This goal can be achieved by utilizing antenatal care (ANC) services especially for the pregnant women. The ANC service is a medical check-up for the pregnant women during their pregnancy period to prevent the complications and to prepare healthy birth. It has become one of the programs to decrease the

number of maternal mortality. Moreover the ANC service is a health service held by professional attendants towards the pregnant women during their pregnancy period and conducted based on the standardized ANC service. The ANC service is an effort to ensure maternal health during pregnancy as well as to decrease physical pain and

mortality numbers for both mothers and babies (Marmi, 2011)

In 2011 around ASEAN, The numbers of maternal mortality occurred only five countries 15–199 per 100.000 live birth, such as Brunei Darussalam with (24 per 100,000 live births), Philippine (99 per 100,000 live births), Malaysia (29 per 100,000 live births), Vietnam (59 per 100,000 live births), and Thailand (48 per 100,000 live births). It also occurred to 200–499 per 100,000 live births in Indonesia in which there were 228 per 100,000 live births. Likewise the large number of maternal mortality still occurs in Indonesia as the cases of 228 passed away mothers per 100,000 live births. Meanwhile the government target is to reduce the number of maternal mortality to 102 per 100,000 live births in 2015 (Kementerian Kesehatan Republik Indonesia, 2013).

Nevertheless, there was a downward trend in the number of maternal mortality in Indonesia from 390 per 100,000 live births in 1994 to 228 per 100,000 live births in 2007. In addition, the number of maternal mortality in Indonesia will not have reached the target of MDGs by 2015 in decreasing it into 102 per 100,000 live births (Kementerian Kesehatan Republik Indonesia, 2013). The data from 2006 in South Sulawesi province showed that maternal mortality number was 133 per 100,000 live births, and there was sustainable deterioration in 2007 in which 143 per 100,000 live births. In contrast, from 2008 to 2009 there was a steady decline of maternal mortality number at 121 per 100,000 live births in 2008, and 118 per 100,000 live births in 2009. However, it had not been overcome by the government of South Sulawesi since 2006 until 2009 by decreasing it into 102 per 100,000 live births (Dinas Kesehatan Provinsi Sulawesi Selatan, 2009).

The data obtained from K1 and K4 in Indonesia increased considerably since 2004 until 2012. The data from Indonesia Health Profile in 2012 presented that in 2004 the involvement of K1 reached 88.09 % and K4 at 77.00 %. Moreover, it was getting more and more improving until 2012 in the involvement of K1 at 96.84% and K4 at 90.18%. Whereas, the involvement of K4 in Indonesia has not achieved the objective determined by the government at 95% (Kementerian Kesehatan Republik Indonesia, 2013).

Based on the data derived from Primary Health Centre in Antang, the involvement of K1 was at 90.3 % and K4 was at 89.5% in 2011. On the other hand, in 2012 the involvement of K1 at Primary Health Centre in Antang was at 96.1% and the involvement of K4 was at 87.1%. It showed that the involvement of K4 at Primary Health Centre in Antang has not achieved the objective determined by the government at 95% as well (Puskesmas Antang, 2013). This study aimed to examine the factor associated with the pregnant mothers' behavior in attending the ANC services at Primary Health Centre (PHC) Antang in Makassar city.

## **Method**

### **Field study and site overview**

This study is observational research assessed using Cross Sectional design. This research was conducted at PHC Antang, located in Antang sub-district; Manggala District; Makassar city started on February-March 17, 2014. The population was the pregnant mothers who have ever used antenatal services during their pregnancy at PHC Antang. Some of the sample was the pregnant mothers who have ever used antenatal services during pregnancy at PHC

Antang under trimester III pregnancy criterion with 83 respondents. Sample obtained by using purposive sampling. The data analysis used was univariate and bivariate applying Chi Square test and Phi test. Then, questionnaire was administered as the instrument which was analyzed using SPSS. The analysis of the data is presented in frequency distribution table and cross tabulation with narration.

### **Data description**

The most group of pregnant mothers number was in the range of 36–40 year at 31.3% and the fewest was the group of pregnant mother aged 41–45 years old at 7.2%. The respondents' distribution classified according to educational level was the highest number of Senior high school graduations group at 51.8% and the fewest was those who never studies at school at 1.2%. The majority of respondents' distribution based on the job was the housewives at 79.5% and the lowest group was civil servants at 2.4% and private employees at 2.4% (Table 1).

More respondents were use antenatal care services (63.9%) while those who did not use were 36.1%. Furthermore most of respondents can reach the Antang PHC (88.0%) while those who do not have accessibility to get there was at 12.0%. Likewise the respondents who had well enough knowledge was at 60.2% and those few of them had the low one (39.8%). In addition the group of respondents including primiparous category were at 50.6% and those who are categorized as multipara was at 49.4%. There were respondents with positive behavior, at 48.2%, and the others had negative behavior (51.8%). Most of them got sufficient support from their family, at 79.5%, while the other respondents got low support at 20.5% (Table 2).

The result of analysis indicated the correlation between accessibility and the utilizing of ANC using Chi Square test obtained p value = 0.004, thereby, Ho was rejected and Ha was accepted which reveals that there is correlation between accessibility with the utilizing of ANC at Antang PHC. The total of 83 respondents utilizing ANC and can access Antang PHC at 69.9% while the others who cannot utilize ANC services and get difficulty to get to Antang PMC at 30.1% (Table 3).

The majority of the respondents utilized the ANC service and had sufficient knowledge, at 84.0%, in contrast those who utilized ANC service and low knowledge (33.3%). The analysis result to examine the correlation between parity and the utilization of ANC service using Chi Square test derived p value =0.547, therefore, Ho was accepted and Ha was refused indicating that there was correlation between parity and the utilization of ANC service at Antang PMC (Table 3).

In addition the result of analysis using Chi Square test obtained p value =0.006, as a result, Ho was rejected and Ha was accepted in which it means that there is correlation between the pregnant mother behavior in utilizing ANC service at Antang PHC. Furthermore the respondents utilizing ANC service and had sufficient support from their family were at 71.2% while the opposite was only at 35.3% (Table 3).

### **Results and Discussion**

Accessibility covers accessible health service place which can be measured with duration, distance, and affordable cost for the pregnant mother (the trip to the health service place). Likewise the accessibility means the health service which should be

easily accessed by the society even geographically. If the distance is close to the other places, it can be inferred that the accessibility between both places are high. On the contrary if they are distant, the accessibility is low. Moreover if it can save more time to reach, those places have high accessibility. The cost also indicates the accessibility level. Likewise it refers to the combination between time and cost as a measurement of transportation (Tamin, 2000).

The study result showed that there was positive trend between accessibility and the utilizing of ANC service at Antang PHC. In line with the research of Rauf at PHC Minasa Upa found that there was correlation between the accessibility and the utilizing of ANC service for pregnant women. Furthermore those who had utilized ANC service tended to easily access the health service place, the distance between their house and the nearest service place can be reached on foot or used vehicles with affordable cost, and did not spend much time during the trip. In contrast, they lacked of utilizing ANC service due to considerably difficult access to the ANC service (Rauf, 2013).

Knowledge is the result of human's sense or the result of recognizing the object through the sensory perception; as a result the knowledge is influenced with the attention intensity and object perception (Notoatmodjo, 2010). It really affects pregnant mother's behavior in utilizing ANC service. Moreover good knowledge about antenatal care will encourage the pregnant mother to check their pregnancy. The research conducted by Pratitis suggested that there was a significant correlation between the knowledge about pregnancy complication signs and the compliance with antenatal care. The higher

the knowledge of pregnancy complication signs were, the more compliance with antenatal care would be (Pratitis, 2013).

The study revealed that there was correlation between the pregnant mothers knowledge of the ANC service utilization at Antang PHC. Most of them who utilized ANC service tended to have sufficient knowledge of antenatal care. It is in line with the finding of Siringo-Ringo presenting that there was correlation between the pregnant mother knowledge with the ANC service utilization. This analysis was obtained through p value proving the positive correlation between knowledge and ANC service utilization which means that the higher one variable value was, the bigger the other variable values were. Consequently it emphasized that the more the knowledge of the pregnant mothers was, the better the ANC service to be performed (Siringo-Ringo and Nasution, 2011). In addition mothers' knowledge based on the research undertaken by Pongsibidang found that there was correlation between the knowledge and the regular attendance at ANC service with the strength of weak correlation contributing at 22% towards the regularity of ANC service attendance (Pongsibidang, 2013).

The research result found that there was correlation between parity and ANC service utilization at Antang PHC. The number of pregnant mothers who utilized it including primiparous category was at 59.5% similar to the number of pregnant mothers with multiparous category (68.3%). It has the same idea as what Rauf presented that there is no correlation between parity with ANC service at PHC Minasa Upa, caused by the pregnant mother proportion in utilizing ANC service with high parity which is similar to the low parity pregnant mothers (Rauf, 2013).

**Table.1** The characteristic of respondent at Daya Public Hospital, Makassar

Respondent Characteristics	n	%
Age (Years Old)		
20-25	13	15.7
26-30	14	16.9
31-35	24	28.9
36-40	26	31.3
41-45	6	7.2
Education		
Never School	1	1.2
Not Complete Elementary School	4	4.8
Elementary School	14	16.9
Yunior High School	17	20.5
Senior High School	43	51.8
College (Bachelor)	4	4.8
Job		
Not Working/Housewife	66	79.5
Traders/Self Employed	13	15.7
Civil Servant	2	2.4
Private Employees	2	2.4
Total	83	100

**Table.2** Univariate analysis

Variables	Category	n	%
Accessibility	Affordable	73	88.0
	Not Affordable	10	12.0
		83	100
Knowledge	Good	50	60.2
	Less	33	39.8
		83	100
Parity	Primara	42	50.6
	Multipara	41	49.4
		83	100
Attitude of Pregnant women	Positif	40	48.2
	Negatif	43	51.8
		133	100
Family Support	Good	66	79.5
	Less	17	20.5
		83	100
Utilization of ANC	Utilizing	53	63.9
	Not Utilizing	30	36.1
		83	100

**Table.3** The independent variables relationship with utilization of antenatal care services in Antang Primary Health Care, Makassar

	Utilization of VCT				Total		Statistical Result
	Services						
	Yes	No	n	%	n	%	
Accessibility							
Affordable	51	69.9	22	30.1	73	100	<i>p</i> =0.004
Not Affordable	2	20	8	80	10	100	
Knowledge							
Good	42	84	8	16	50	100	<i>p</i> =0.000
Less	11	33.3	22	66.7	33	100	
Parity							
Primipara	25	59.5	17	40,5	42	100	<i>p</i> =0.547
Multipara	28	68.9	13	31.7	41	100	
Attitude of Pregnant Women							
Positive	32	80	8	20	40	100	<i>p</i> =0.006
Negative	21	48.8	22	51.2	43	100	
Family Support							
Good	47	71.2	19	28,8	66	100	<i>p</i> =0.014
Less	6	35.3	11	64.7	17	100	

Purwanto cited that there are two kinds of behavior; positive behavior (the inclination to approach, enjoy, and expect the object) compared to the fact of negative behavior (the inclination to leave, avoid, hate and dislike the specific object) (Purwanto, 1998). This study showed that there was correlation between pregnant mothers' behavior and ANC service utilization at Antang PHC. For those who had positive behavior in attending the antenatal cares tend to utilize it and so was the opposite. It is in line with Erlina's research proving that the result of Spearman test which was derived *p* value=0.001 which means that there was relation between pregnant mothers' behavior and ANC service utilization at PHC of Rawat Inap Panjang (Erlina, 2013). This was undertaken by Candra at Cohesive Service Post of PHC Arjo winangun Malang, showed that there was a significant relation between behavior

and the regularity of attending ANC service, the better mothers' behavior towards ANC service was, the more often they attended the ANC service (Candra, 2006).

Likewise this research proved that there was relation between family support and ANC service utilization at Antang PHC. The pregnant women who attended ANC service with sufficient family support because of their husbands or family reminded them about antenatal schedule and get ready to take them to PHC for checking their pregnancy. The family gives support and remind about consuming nutritious food and Fe tablet. Moreover according to the finding of Burhaeni using statistic test called Chi square test obtained that *p* value=0,039 which represents that the family support impacts on utilizing ANC service in the workplace of PHC Pampang. Based on the finding, it can be explained that there was



husband's support towards wife's attendance in which can improve the utilization of ANC service (Burhaeni, 2013).

It can be concluded from the research that was no correlation between parity and ANC service utilization at Antang PHC, and there was relation between accessibility, knowledge, maternal behavior, and family support in utilizing ANC service. It is highly recommended to Primary Health Centre management to advocate more optimally so that mother's awareness about the importance of pregnancy checkup can be improved. Consequently, the pregnant mother will behave positively toward antenatal attendance and will impact on her behavior to utilize the antenatal care.

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