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Quality of Antenatal Care at Community Health Centers and Midwifery Practitioner in Jeneponto

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ABSTRACT

This research aims to determine the difference of antenatal care quality at Puskesmas and midwifery practitioner in Jeneponto Regency. The type of research was observational analysis with cross sectional study design. The populations were pregnant women in Jeneponto regency from October 2015-may 2016 as many as 4,156 samples. The samples were pregnant women and midwifery practitioners, there were 182 respondents, and respectively 91 samples at puskesmas and 91 samples at midwifery practitioners. The samples were drawn with stratified random sampling method then analyzed using computer application of SPSS examined with chi square test. The results indicate that 72% of antenatal care both at puskesmas and at midwifery practitioner quality is categorized bad. There is difference of antenatal care quality at puskesmas and midwifery practitioner quality based on indicator of antenatal care examination such as body height ($p=0.023$), body weight ($p=0.011$), blood pressure ($p=0.000$), height of fundus uteri ($p=0.001$), fetus heart beat ($p=0.000$), immunization of TT ($p=0.000$), administration of Fe tablet ($p=0.005$), blood type test ($p=0.011$), and haemoglobin (Hb) examination ($p=0.000$). There is no quality difference of antenatal care based on measurement of upper arm ($p=0.098$).

CCS Concepts

•Social and professional topics → User characteristics

Keywords

antenatal care; indicator; puskesmas; midwifery practitioner

1. INTRODUCTION

Maternal health is the key to progress in all development goals. Every year more than 350,000 women die from complications related to pregnancy, childbirth, and the puerperium [1]. 99% of these deaths occur in developing countries, especially among the poor and 80% of these deaths can be prevented or avoided through timely, effective, and affordable interventions [2].

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Maternal mortality is caused by various factors related to the social determinants of maternal health both at the individual, family, community, health, and government [3].

According to the World Health Organization (WHO) [3] Indonesian women are very bad criteria in terms of their health, marriage, employment, education and equality with men. Indonesian women criteria are married at relatively young age, relatively large number of children, short pregnancy interval, pregnancy over the age of 35 years, low antenatal care, low acceptance of family planning programs, communal and paternalistic community concepts and, most of all, community situations that are entirely covered by low education, social and economic circumstances that cause inability to cover costs modern health services. The most common causes and directly result in maternal mortality in Indonesia 30-35% are bleeding, 20-25% infections, and 10-15% are caused by pregnancy poisoning [4].

To help reduce maternal mortality, most low-income countries have adopted antenatal care strategies as recommended by the world's organization bodies [5]. Antenatal Care (ANC) plays an important role in reducing maternal mortality through identification complications associated with early pregnancy [6]. The core of antenatal care is to prepare for birth, prevent pregnancy problems, and manage maternal health problems during pregnancy, through early detection [7]. However, in practice there are still many gaps related to service quality [5]. This is especially true in low-income countries as in Zambia, 94% of pregnant women make antenatal care visits even once, but the country's maternal mortality is estimated at 591 per 100,000 live births [8]. In India, pregnant women are given incentives through Janani suraksha yojana (JSY) program with the aim of improving access to health services. The results were also able to provide a positive impact on the increase in coverage of health facilities, especially on antenatal care visits, but this increase has not been offset by efforts to improve service quality [9]. This is evidenced by anemia which is the cause that contributes 4 times to 22 deaths, because prevention, detection and treatment of anemia are not a priority during antenatal care, so India still contributes high mortality rates to maternal groups [3,9].

This study aims to assess the quality of antenatal care at puskesmas and midwife practice district Jeneponto, as the national health research data in 2013 shows that as a health facility visited by many pregnant women in antenatal care examination, the practice midwife had the highest percentage of 52.4% and the second highest percentage of 16.6% [10]. According to the data of South Sulawesi provincial riskeddas, health centers have the

highest percentage of 51.1% and practice midwives have the second highest percentage of 17.4% as health facilities visited by pregnant women in antenatal care [11]. Meanwhile, according to Jeneponto Regency data, puskesmas has the highest percentage of 67.7% and practice midwife has the third highest percentage after polindes / poskesdes is 12.4 % as a health facility visited by many pregnant women in antenatal care examination [11] the 14 percentage difference above shows that both health facilities have a big contribution in providing quality service to pregnant women.

In this study, researchers used ANC service standards as parameters in measuring the quality of service karna considered more objective than other parameters. as the previous study conducted by 2014 with the aim of assessing the quality of antenatal care based on satisfaction patients, studies conducted in South Ethiopia proved that 90.2% of the 256 respondents expressed satisfaction with antenatal care services provided although respondents only received 2 of 10 components that became the standard of ANC service so that the researchers assessed this parameter is too subjective in measuring the quality of service [12].

Another study in 2008 with the aim of assessing the quality of services based on visits, as well as patient satisfaction, the researchers assessed the visit parameters are also too subjective in measuring the quality of service because the number of visits can only show quantity data but not the quality of service [13].

Therefore, to reduce maternal mortality rate in Jeneponto regency, it is necessary to identify problems further intervention related to the gap between quantity and quality of antenatal care service in the district. This is done in order to formulate a new strategy or revise the existing programs both preventive, promotive, curative, and rehabilitative programs in Jeneponto District.

2. METHODOLOGY

2.1 Research Type

This type of research is an observational analytic study, with a Cross sectional study design, an epidemiological study design in which the dependent variable and the independent variable were measured at the same time. This study is a comparative study that will see the difference of antenatal care quality in Puskesmas and Jeneponto Regency practical midwife. Research on antenatal care quality in Kab. Jeneponto consists of a variety of settings based on 10 antenatal care standards set by the Ministry of Health.

2.2 Location and Time of Study

Jenepono District has 18 Puskesmas and 20 private practice midwives. The research was conducted from June to July 2016 at 4 Puskesmas (Bonto sunggu kota, Binamu kota, Bontoramba, Bontomate'ne) and 4 Midwives of practice (Midwives Rt, Midwife Sd, Midwife Sn, Midwife Hr).

2.3 Population and Sample

Population in this research is total of pregnant woman in Jeneponto Regency on October 2015 - Mei 2016 coming to puskesmas that is equal to 4,156 pregnant women. (DINKES, 2015). The sample size required in this study was calculated using the large cross sectional formula (Dahlan, 2016). Therefore, the minimum sample size was obtained based on the sampling formula, 91 in the health center and 91 in the practice midwife with the total sample size of 182 respondents.

2.4 Data Collection

Data were obtained from Jeneponto District Health Office 2015 related to health profile data, pregnant women's data obtained from Puskesmas register and midwife register and pregnancy history, birth, abortion and pregnancy history were obtained from the book Health of both mother and child. Data collection at puskesmas was done at 8.00 - 12.00 wita. Mothers who come to the puskesmas and meet the inclusion criteria, are observed during the pregnancy check up and in the interview after the examination has been completed.

2.5 Data Analysis

Data processing is done computerized by using computer program SPSS (Statistical Product and Service Solution) version 20.0. Bivariate analysis was performed on each variable to see the difference of service quality of ANC between Puskesmas and midwife practice by using Chi-square test with significance level $\alpha = 0.05$. Interpretation H_0 is rejected if the probability value (p-value) ≤ 0.05 .

3. RESULT AND DISCUSSION

3.1 ANC Quality Analysis Based on Height Measurement

Table 1 shows that out of 71 respondents, 28 respondents (30.8%) received high body measurement services at puskesmas and 43 respondents (69.2%) who received high body measurement service in practice midwife. The result of statistical test shows that there is ANC quality difference based on height measurement at puskesmas and practice midwife with $p = 0.023$.

Table 1. ANC quality difference analysis based on height measurement at Puskesmas and Jeneponto District practice midwife

Health Service	Measurement of Body Height						p value
	Yes		No		Total		
	n	%	n	%	n	%	
Puskesmas	28	30.8	63	60.6	91	100	0.023
Practice midwife	43	69.2	48	43.2	91	100	
Total	71	39.0	111	50.0	182	100	

3.2 ANC Quality Analysis Based on Weight Measurement

Table 2 shows that out of 124 respondents, 54 respondents (59.3%) received weight measurement service at puskesmas and 70 respondents (76.9%) who received weight measurement service in practice midwife. The result of statistical test shows that there is ANC quality difference based on weight measurement at puskesmas and practice midwife with $p = 0.011$.

3.3 ANC Quality Analysis Based on Blood Pressure Measurement

Table 3 shows that out of 164 respondents, 73 respondents (80.2%) received blood pressure measurement services at puskesmas and 91 respondents (100%) who received blood pressure measurement services at midwife practice. The result of statistical test shows that there is ANC quality difference based on blood pressure measurement at puskesmas and practice midwife with $p = 0.000$.

Table 2. ANC quality difference analysis based on weight measurement at Puskesmas and Jeneponto District practice midwife

Health Service	Measurement of Body Weight						p value
	Yes		No		Total		
	n	%	n	%	n	%	
Puskesmas	54	59.3	37	40.7	91	100	0.011
Practice midwife	70	76.9	21	23.1	91	100	
Total	124	68.1	58	31.9	182	100	

Table 3 Analysis of ANC quality differences based on blood pressure measurement at Puskesmas and Jeneponto District practice midwives

Health Service	Measurement of blood pressure						p value
	Yes		No		Total		
	n	%	n	%	n	%	
Puskesmas	73	80.2	18	19.8	91	100	0.000
Practice midwife	91	100	0	0.0	91	100	
Total	164	90.1	18	9.9	182	100	

3.4 ANC Quality Analysis Based on Measurement of Upper arm Circumference

Table 4 shows that out of 75 respondents, 32 respondents (35.2%) received upper arm circumference measurement services at puskesmas and 43 respondents (47.3%) who received service of upper arm circumference at midwife practice. The result of statistical test shows that there is no difference of ANC quality based on measurement of upper arm circle at puskesmas and practice midwife with $p = 0.098$.

Table 4. Analysis of ANC quality differences based on upper arm circumference measurement (Lila) at Puskesmas and Jeneponto Regency practical midwife

Health Service	Measurement of upper arm circumference						p value
	Yes		No		Total		
	n	%	n	%	n	%	
Puskesmas	32	35.2	59	64.8	91	100	0.098
Practice midwife	43	47.3	48	52.7	91	100	
Total	75	41.2	107	58.8	182	100	

3.5 ANC Quality Analysis Based on Measurement of Fundal Height of Uteri

Table 5 shows that out of 135 respondents, 77 respondents (84.6%) received high fundus uteri measurement services at puskesmas and 58 respondents (63.7%) who received high fundus uteri measurement services in practical midwives. The result of statistical test shows that there is ANC quality difference based on

the measurement of fundus uteri height at puskesmas and practice midwife with $p = 0.001$.

Table 5 Analysis of ANC quality differences based on measurements of fundus uteri height at Puskesmas and Jeneponto district midwives

Health Service	Measurement of fundal height of uteri						p value
	Yes		No		Total		
	n	%	n	%	n	%	
Puskesmas	77	84.6	14	15.4	91	100	0.001
Practice midwife	58	63.7	33	36.3	91	100	
Total	135	74.2	47	25.8	182	100	

3.6 ANC Quality Analysis Based on Fetal Heart Rate Examination

Table 6 shows that from 123 respondents, 79 respondents (86.8%) who received fetal heart rate service at puskesmas and 44 respondents (48.4%) who received fetal heart rate measurement service at practice midwife. The results of statistical tests show that there are ANC quality differences based on fetal heart rate measurements at puskesmas and practice midwives with $p = 0.000$.

Table 6. ANC quality difference analysis based on fetal heart rate examination at Puskesmas and Jeneponto district practice midwife

Health Service	Measurement of fetal heart rate						p value
	Yes		No		Total		
	n	%	n	%	n	%	
Puskesmas	79	86.8	12	13.2	91	100	0.000
Practice midwife	44	48.4	47	51.6	91	100	
Total	123	67.6	59	32.4	182	100	

3.7 ANC Quality Analysis Based on TT Immunization

Table 7 shows that from 38 respondents, 38 respondents (41.8%) who received TT immunization at puskesmas and none of the respondents received TT immunization in the practice midwife. The result of statistical test shows that there is difference of ANC quality based on TT immunization in puskesmas and practice midwife with $p = 0.000$.

Table 7. ANC quality difference analysis based on TT immunization in Puskesmas and Jeneponto District practice midwife

Health Service	TT immunization						p value
	Yes		No		Total		
	n	%	n	%	n	%	
Puskesmas	38	41.8	53	58.2	91	100	0.000
Practice midwife	0	0.0	91	100	91	100	
Total	38	20.9	114	79.1	182	100	

3.8 ANC Quality Analysis Based on Giving of fe Tablet

Table 8 shows that out of 87 respondents, 34 respondents (37.4%) received Fe tablets at puskesmas and 53 respondents (58.2%) who received Fe tablets in practice midwives. The results of statistical tests showed that there were ANC quality differences based on the Fe tablet administration at puskesmas and practice midwife with $p=0.005$.

Table 8. ANC quality difference analysis based on fe tablet distribution at Puskesmas and Jeneponto District practice midwife.

Health Service	Giving FE Tablet						p value
	Ye		No		Total		
	n	%	n	%	n	%	
Puskesmas	34	37.4	57	62.6	91	100	0.005
Practice midwife	53	58.2	38	41.8	91	100	
Total	87	47.8	95	52.2	182	100	

3.9 ANC Quality Analysis Based on Blood Type Examination

Table 9 shows that out of 8 respondents, 8 respondents (8.8%) received blood glucose screening service at puskesmas and none received blood glucose examination service at midwife practice (0.0%). The result of statistical test shows that there is ANC quality difference based on blood group examination at puskesmas and practice midwife with $p = 0.004$.

Table 9 Analysis of ANC quality differences based on blood type examination at Puskesmas and Jeneponto District midwife practice

Health Service	blood type examination						p value
	Yes		No		Total		
	n	%	n	%	n	%	
Puskesmas	8	8.8	83	91.2	91	100	0.004
Practice midwife	0	0	91	100	91	100	
Total	8	4.4	174	95.6	182	100	

3.10 ANC Quality Analysis Based on Hemoglobin (Hb)

Table 10 shows that out of 46 respondents, 46 respondents (50.5%) received Hb examination service at puskesmas and none received Hb examination service at midwife practice (0.0%). The result of statistical test shows that there is ANC quality difference based on Hb examination at puskesmas and practice midwife with $p=0.000$.

3.11 ANC Quality Analysis at Puskesmas and Practice Midwife Jeneponto District

Table 11 shows that from 10 respondents, 10 respondents (11.0%) received good service quality at puskesmas and none received good service quality in midwife practice (0.0%). Of the 41 respondents, 18 respondents (19.8%) received the minimum service quality at the puskesmas and 23 respondents (25.3%)

obtained the minimum service quality in the midwife. From 131 respondents, 63 respondents (69.2%) received less service quality at puskesmas and 68 respondents (74.4%) received less service quality in midwife practice. The result of statistical test shows that there is ANC quality difference based on ANC service quality in puskesmas and practice midwife with $p = 0.005$.

Table 10 Analysis of ANC quality differences based on hemoglobin examination at Puskesmas and Jeneponto District practice midwives

Health Service	Hemoglobin (Hb)						p value
	Ye		No		Total		
	n	%	n	%	n	%	
Puskesmas	46	50.5	45	49.5	91	100	0.000
Practice midwife	0	0	91	100	91	100	
Total	46	25.3	136	74.7	182	100	

Table 11 Analysis of ANC quality quality analysis at puskesmas and practice midwife Jeneponto District

Health Service	quality analysis								p value
	Good		Minimum		Less		Total		
	n	%	n	%	n	%	n	%	
Puskesmas	10	11.0	18	19.8	63	49.5	91	100	0.000
Practice midwife	0	0	23	25.3	68	74.7	91	100	
Total	10	25.3	41	22.1	131	72.0	181	100	

4. CONCLUSION

Thus from the work done, it can be concluded that 72% of the quality of antenatal care services at puskesmas and midwife practice of Jeneponto Regency were low. 22% have minimum quality, and 5.5% have good quality with $p = 0.005$. The result of statistical test shows that there are ANC quality differences based on antenatal care inspection indicator such as height measurement ($p = 0.001$), fetal heart rate ($p = 0.000$), TT immunization ($p = 0.000$), giving of fe ($p = 0.005$), blood type examination ($p = 0.011$), hemoglobin examination ($p = 0.000$) and no difference in antenatal care quality based on measurement of upper arm circumference ($p = 0.098$).

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