The Utilization of Postnatal Care in South Sulawesi (Data Analysis of the Indonesia Demographic and Health Survey 2017)

Kajian Pemanfaatan Pelayanan Nifas di Sulawesi Selatan (Analisis Data SDKI 2017)

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ABSTRACT

The main problem that is still faced with maternal health in Indonesia is the high Maternal Mortality Rate (MMR). It is estimated that 60% of maternal deaths in Indonesia occur after postpartum, and nearly 50% of deaths during childbirth occur within the first 24 hours after delivery. Some causes of maternal death, such as postpartum complications and postpartum bleeding, can be prevented through the puerperal care program. The study aims to determine the factors associated with a postpartum examination in South Sulawesi Province. This study uses cross-sectional study design in 393 couple's age 15-49 years by using data from IDHS 2017. The hypothesis was tested with a chi-square test ($p<0.05$). The results obtained by variables related to the utilization of childbirth services in South Sulawesi are education ($p=0.000$), birth order ($p=0.026$), place of childbirth ($p=0.000$), wealth quintiles ($p=0.000$), distance to health facilities ($p=0.020$), and complication during delivery ($p=0.000$). Variables not related to postpartum service use are age ($p=0.507$), occupation ($p=0.232$), and ANC visit ($p=0.077$). A comprehensive effort is needed by involving various media and elements of society to encourage mothers to use health care, especially after postpartum.

ABSTRAK

Permasalahan utama yang masih dihadapi berkaitan dengan kesehatan ibu di Indonesia adalah masih tingginya Angka Kematian Ibu (AKI). Kematian ibu di Indonesia diperkirakan sebanyak 60% terjadi setelah persalinan dan hampir 50% dari kematian itu pada masa nifas terjadi dalam 24 jam pertama setelah persalinan. Beberapa penyebab kematian ibu, seperti komplikasi nifas dan perdarahan pasca bersalin dapat dicegah melalui program pelayanan nifas. Penelitian ini bertujuan untuk mengetahui hubungan pemanfaatan pelayanan nifas di Sulawesi Selatan. Desain penelitian menggunakan cross sectional study pada 393 pasangan suami istri berusia 15-49 tahun dengan menggunakan data SDKI 2017. Pengujian hipotesis menggunakan uji chi-square (p<0,05). Hasil penelitian menunjukkan bahwa variabel yang berhubungan dengan pemanfaatan layanan nifas di Provinsi Sulawesi Selatan adalah pendidikan (p=0,000), urutan kelahiran (p=0,026), tempat persalinan (p=0,000), kuintil kekayaan (p=0,000), jarak ke fasilitas kesehatan (p=0,020) dan komplikasi persalinan (p=0,000). Variabel yang tidak berhubungan dengan pemanfataan layanan nifas adalah umur (p=0,507), pekerjaan (p=0,232), dan kunjungan ANC (p=0,077). Dibutuhkan upaya yang komprehensif dengan melibatkan berbagai media dan elemen masyarakat untuk mendorong ibu memanfaatkan layanan kesehatan, khususnya pasca persalinan.

INTRODUCTION

Maternal mortality is the death that occurs during pregnancy, within 42 days of pregnancy termination, regardless of the duration and place of pregnancy, which is caused or aggravated by the pregnancy or the management of the pregnancy, but is not caused by accident or chance.[1] Globally, in 2015, the Maternal Mortality Rate (MMR) was estimated at 216 (with an 80% uncertainty interval of 207 to 249) maternal deaths per 100,000 live births.[2] WHO has attempted to encourage MMR reduction through international commitments contained in the SDG's (Sustainable Development Goals) to reduce maternal mortality to less than 70 per 100,000 live births.

The big challenge is the national level MMR in 2015 is still far from the SDG's target of 305 deaths per 100,000 live births.[3] The same problem was faced in South Sulawesi in 2015, which had not yet reached the SDG target. The number of maternal deaths was 149 people or 99.38 per 100,000 live births, consisting of pregnant women (12.75%), maternal deaths (29.53%), and postpartum deaths (57.71%).[4]

Maternal mortality in the world is mainly caused by bleeding (mostly postpartum hemorrhage), infection (mostly after the birth of a baby), hypertension in pregnancy (eclampsia), and disorders during childbirth.[5] Further analysis of the 2010 population census shows three causes of maternal death in Indonesia: hypertension during pregnancy, puerperal complications, and postpartum hemorrhage.[6] The puerperium is a period that begins after the placenta is released and ends when the uterus organs return to their original condition (before pregnancy). This situation lasts for about 6 weeks.[7] Monitoring the puerperium is very important because the mother can experience various health problems such as puerperal sepsis, infection, and bleeding.

The study of applied postpartum services in Indonesia is still limited, especially in South Sulawesi. Postpartum care is important because the postpartum period is still at risk of bleeding or infection that can cause maternal death., it is necessary to address the low utilization of postpartum services. Through community-based data analysis, the results of this study are expected to identify factors related to postnatal care use to encourage the use of postpartum services to be more focused.

MATERIAL AND METHOD

This study used a quantitative method with cross-sectional study design. The population was 1179 married couples aged 15-49 years based on the 2017 Indonesia Demographic and Health Survey (IDHS) data. The Sampling method used total sampling, which taking all the samples in the 2017 IDHS of married couples aged 15-49 who have given birth in South Sulawesi Province. Data that was missing in each variable was not included in the study sample. The number of samples was 393 respondents. The data analyzed by SPSS program. Data analysis includes univariate analysis and bivariate analysis. The relation of the variable test using the Chi-Square test.

RESULTS

This study's respondents' characteristics consisted of age, education, occupation, child-birth order, ANC visits, place of delivery, wealth quintile, distance to health facilities, and delivery complications. Respondents dominant in the 30-34 years age group (22.9%). The least age group is 45-49 years (2.8%). The respondents education level mostly did not complete high school (27%), and the least was the level of education that did not complete primary school (8.7%). Respondents with the working category were 58.8%, while the non-working category was 41.2%. The highest order of birth of respondents was 2-3 (49.4%), while the lowest was birth order 6+ (4.1%) (Table 1).

Most of the respondents did not go to the ANC visits (78.9%), while respondents who went to 1-2 ANC visits was 21.1%. Most of the respondents gave birth in health facilities (75.3%), while respondents who did not give birth in health facilities were 24.7%. Dominant respondents are in the lowest wealth quintile (28.5%), while the lowest respondents are in the top wealth quintile (15.8%). Most of the respondents had no problem with distance to the health facilities (84.5%), while respondents who had distance problems was 15.5%. The most childbirth complications occurred in the prolonged duration of childbirth (73%) (Table 1). The postpartum check-up by young mothers (77.7%) was almost the same as the postpartum check-up for older mothers (73.7%). The results of statistical tests obtained p-value = 0.507. This value indicates that there is no relationship between age and the use of postpartum services (Table 2).

Table 1. Characteristics Respondents

Characteristics	n =393	%
Age (In Years)		
15-19	13	3.3
20-24	66	16.8
25-29	82	20.9
30-34	90	22.9
35-39	85	21.6
40-44	46	11.7
45-49	11	2.8
Education Background		
Not finished the primary school	34	8.7
Finished primary school	78	19.8
Not finished the high school	106	27.0
Finished high school	97	24.7
College graduated	78	19.8
Occupation		
Working	231	58.8
Jobless	162	41.2
Birth Order		
1	120	30.5
2-3	194	49.4
4-5	63	16.0
6+	16	4.1
ANC Visits		
No visiting	310	78.9
1 -2 times visiting	83	21.1
Childbirth Place		
Health facilities	296	75.3
Others	97	24.7
Wealth Quintile		
Lowest	112	28.5
Lower middle	88	22.4
Middle	78	19.8
Upper middle	58	14.8
Highest	57	14.5
Distance to Health Facilities		
Problem	61	15.5
Not as problem	332	84.5
Childbirth Complications		
Long childbirth timing	287	73.0
Excessive bleeding	79	20.1
Fever or odorous vaginal discharge	183	46.6
Convulsions	76	19.3
Premature rupture of membranrs	18	4.6
No strength or weak	21	5.3
Anxious	5	1.3
Others	31	7.9

Source: Secondary Data of IDHS, 2017

Postpartum check-up was mostly carried out by highly educated mothers (89.7%) than mothers with low education (58.9%). The results of statistical tests obtained p-value = 0.000. This value indicates a significant relationship between education and the use of postpartum services (Table 2).

A postpartum check-up in working mothers (79.2%) almost the sameas mothers who did not work (74.1%). The results of statistical tests obtained *p-value*=0.232. This value indicates that there is no significant relationship between work and the use of postpartum services. Postpartum check-up was mostly performed by mothers who had first childbirth (82.5%) and decreased with increasing birth order (number of children). The results of statistical tests obtained *p*=0.026. This value indicates that there is a significant relationship between birth order and the use of postnatal care (Table 2).

A postpartum check-up by mothers who had ANC visits 1-2 times (84.3%) was almost the same with mothers who did not attend ANC visits (75.2%). The results of statistical tests obtained p=0.077. This value indicates that there is no significant relationship between ANC visits and the use of postnatal services. Postpartum check-up was mostly performed by mothers who gave birth in health facilities (95.6%) compared to other places (20.6%). The results of statistical tests obtained *p*=0.000. This value indicates that there is a significant relationship between the place of delivery and the use of postpartum services (Table 2).

Mothers in the top wealth quintile performed the most postpartum examinations (94.7%) and continued to decline according to the wealth quintile. The results of statistical tests obtained *p*=0.000. This value indicates that there is a relationship between wealth quintile and the use of postpartum services. Most of the postpartum check-up were carried out by mothers who had no problem with the distance to health facilities (79.2%). The results of statistical tests obtained *p-value*=0.020. This value indicates no significant relationship between the distance to the facility and the use of postpartum services (Table 2).

Mothers who experienced childbirth complications mostly had postpartum check-up (80.4%) than mothers who did not experience childbirth complications (59.7%). The results of statistical tests obtained *p*=0.000. This value indicates that there is a relationship between childbirth complications and the use of postpartum services (Table 2).

DISCUSSION

The Age variable in this study is the length of time a person lives (in years) from birth to the last birthday when the research is conducted. The age aspect of a mother can be an indicator of the level of mental maturity and determine the condition of pregnancy, childbirth, and the postpartum period. Based on the results of statistical tests, there is no relations between age and postpartum examination. Most mothers who underwent postpartum check-up in the first 3 days after giving birth were in the young age category (<40 years).

Tabel 2. The Relation Between Independent Variable and Postpartum Check-up in South Sulawesi Province

Independent Variable	Postpartum Care				Total		p
	Yes		No				
	n	%	n	%	n	%	
Age							
Old (≥ 40 years)	42	73.7	15	26.3	57	100	0.507
You (< 40 years)	261	77.7	75	22.3	336	100	
Education Background							
High	70	89.7	8	10.3	78	100	0.000*
Middle	167	82.3	36	17.7	203	100	
Low	66	58.9	46	41.1	112	100	
Occupation							
Working	183	79.2	48	20.8	231	100	0.232
Jobless	120	74.1	42	25.9	162	100	
Birth Order							
1	99	82.5	21	17.5	120	100	0.026*
2-3	150	77.3	44	22.7	194	100	
4-5	46	73	17	27	63	100	
6+	8	50	8	50	16	100	
ANC Visits							
No visiting	233	75.2	77	24.8	310	100	0.077
1 -2 times visiting	70	84.3	13	15.7	83	100	
Childbirth Place							
Health Facilities	283	95.6	13	4.4	296	100	0.000*
Others	20	20.6	77	79.4	97	100	
Wealth Quintile							
Lowest	67	59.8	45	40.2	112	100	
Lower middle	70	79.5	18	20.5	88	100	
Middle	64	82.1	14	17.9	78	100	0.000*
Upper middle	48	82.8	10	17.2	58	100	
Highest	54	94.7	3	5.3	57	100	
Distance to Health Facilities							
Problem	40	65.6	21	34.4	61	100	0.020*
Not As Problem	263	79.2	69	20.8	332	100	
Childbirth Complications							
Yes	266	80.4	65	19.6	331	100	0.000*
No	37	59.7	25	40.3	62	100	

Source: Secondary Data of IDHS, 2017
*sig. (p<0,05)

This shows that there is no relationship between age and the use of postpartum services. This finding showed with previous studies that older age is positively correlated with health care utilization.[11] Although the age variable in this study is not significant, caution is still needed in the context of age, considering that couples of reproductive age spread from 15-19 to 45-49 years categories. Characteristics of maternal mortality refer to four (4) too (T). This study's data indicate that two things related to the four T's are too young and too old.

The analysis result showed that there is a relationship between education and the use of postnatal care. Most of the mothers who use postpartum services are in the secondary and tertiary education categories. Mothers with high education tend to carry out complete postnatal care compared to mothers with low education. This means that the higher the mother's

education, the more willing she is to carry out a postpartum check-up. Education will also motivate a person to want to know about their postpartum health condition. This is in line with research conducted by Nababan et al, which states that there is a significant relationship between education and the use of health services.[12] The ability to understand health problems and think critically about health will be easier if women have sufficient education, which leads to behavior positive attitude towards health services. Efforts to improve women's health status by improving women's education still require optimal efforts. Based on data in 2016, the average length of schooling of the female population in South Sulawesi aged 25 years is 7.47 years. This figure implies that the 25-year-old female population in South Sulawesi has only been able to study up to grade 1 or 2 in junior high school. Length of schooling for women has slightly increased compared to 2015, which was recorded at 7.35 years.[13]

A job that is often referred to as a profession is something that humans do properly and correctly to get a reward in the form of money to fulfill the lives needs. Many mothers work to earn a living, both to fulfill their family needs and their own lives. Based on the analysis, it is known that there is no relationship between work and the use of postpartum services. This study is in line with previous research that found no relationship between work and utilization of maternal health services.[14] But it shows Contra with the findings of Ousman et al. That women who work to meet health services more affordable, thereby increasing the utilization of maternal health services. Working women are more likely to receive information in the workplace that promotes health-seeking behavior.

The birth of children has a strong relationship with the use of maternal health services, such as antenatal care, childbirth assistance by health workers, childbirth in health facilities to postpartum services. Mothers who have more children usually impact increasing their physical and material responsibilities so that they only have less time and financial resources to look after and care for their health.[16] The results of statistical tests show a relationship between birth order and the use of postpartum services. Mothers who gave birth to their first to third children made more use of postpartum services than their four or more children. This is consistent with the research of Khanal et al., who found that there was a significant relationship between birth order and the use of postnatal services.[17] The high utilization of postnatal care for first children is because mothers will be more careful about their first pregnancy and tend to have difficulties during delivery.

Antenatal care is a health service provided by health workers to mothers during their pregnancy, carried out by antenatal service standards stipulated in Midwifery Service Standards.[19] The frequency of antenatal care is at least four times during pregnancy, at least once in the first trimester, once in the second trimester, and twice in the third trimester.[6]

The analysis results found that as many as 78.9% of mothers had never had an antenatal care visit. This shows that the level of maternal awareness for antenatal visits is very low. It is very important to educate the public about the importance of antenatal care visits. Education with interesting and innovative methods can increase public awareness of using maternal services.[20] ANC visits are an effort to detect difficult labor signs and help pregnant women always coordinate with health workers. In the end, it will encourage mothers always to be aware of the complications that can occur during childbirth and the puerperium. Research in the Makassar City area proves the importance of completing examinations for pregnant women. Risk of complicating labor occurs in women who have incomplete antenatal care compared to the control group.[21] The results of statistical tests in this study indicate that there is no relationship between antenatal care visits and service utilization in childbirth. This research is in line with the study conducted by Berhe.[22] The absence of the relation to the variable is possible because even though the mother did not visit ANC, she still uses the postpartum services.

The awareness of mothers to maintain their babies' health and their babies can be a reason for them to do postpartum checks. ANC is a very important first phase to encourage mothers to use their services. This phase should not be missed considering the magnitude of the impact it has on maternal health. Therefore, optimizing the use of ANC care needs to involve families. Family support has been recognized in the literature as an important component in encouraging positive maternal behavior.[23]

One of the main factors contributing to the prevention of maternal mortality is ensuring the childbirth in a health facility. According to Limenih et al, mothers who gave birth to their last child in a health institution were 1.68 times more likely to receive postnatal care than mothers who gave birth to their last child at home.[24] The results of statistical tests show that there is a relation of place for childbirth with postpartum services. 95.6% of mothers who gave birth in health facilities made use of postpartum services, while mothers who gave birth, not in the health facilities made use of the postpartum services of only 20.6%. The analysis results regarding the factors of the place of childbirth on the postpartum checks are in line with several previous studies. Postpartum services were higher for mothers who gave birth in health facilities than at home births.[18,25] This was possible because the data containing maternal health status during delivery had been recorded on status cards, making it easier to coordinate and monitor maternal health. In addition, childbirth in the health facilities gives includes a direct education to mothers about the importance of monitoring health during the postpartum period. A strict policy encouraging mothers in South Sulawesi to childbirth in health facilities is urgently needed. The 2017 IDHS data show that home births are 21%.[26]

The wealth quintile is an index of household wealth based on the items owned by the household. In the results of this analysis, the

use of postnatal care was higher for mothers who were in the top wealth quintile (94.7%). The results of statistical tests show a relationship between the wealth quintile and the use of postpartum services.

The results of the research on the wealth quintile factor on the use of postnatal care are in line with the research of Khanal et al, they found a relationship between the wealth quintile (economic status) and the use of postpartum services.[17] Mothers with high and middle wealth quintiles used more postpartum services than mothers in the lower wealth quintile. Nugraha's research also found that mothers with medium-high economic levels were more likely to use postpartum services than mothers with low economic levels in Indonesia.[27]

Accessibility to health facilities is a supporting resource for a person in utilizing health services.[27] The distance aspect is one component that facilitates one's access to facilities. Based on the analysis, 15.5% of mothers who have given birth and have problems with health facilities' distance. The use of postnatal care was higher for mothers who did not have issues with the distance to health facilities (79.2%) compared to mothers who experienced problems with distance to health facilities (65.6%). The results of statistical tests also show no relations between distance to health facilities and the use of postnatal services. This study is in line with previous research that found that women perceive distance as a major obstacle to accessing health care.[15] Geographical conditions are not conducive for mothers to get

health services is a big problem in Indonesia, especially in rural areas. The difficult road conditions become an obstacle to accessing health services.[29]

Health monitoring until the end of the puerperium is very important, especially for mothers who experience complications during childbirth. The program hopes that mothers' complications during childbirth will become a common concern for both mothers and their families and health care providers. This is shown the findings of this study that is a relationship between childbirth complications and theuse of postpartum services. Postpartum check-up as mostly carried out by mothers who had complications of childbirth than mothers who had no childbirth complications. This study is in line with Paudel's findings that mothers who get danger signs or complications during childbirth are more likely to receive postpartum services.[21]

The results of this study also showed that the mother experienced birth complications of 84.2%. Maternal complications of labor are marked by at least one danger sign. Three more common signs of danger are prolonged labor, excessive bleeding, and fever/vaginal discharge that smells. Birth complications, which have been recognized as a major factor in maternal mortality, can be exacerbated by the condition of being three too late. This includes being late in making decisions to get services, being late to a health facility, and being late in being served by health workers. Education of mothers about the dangerous signs of childbirth is very important to immediately recognize and realize compli-

cations in making decisions to seek medical care from an early age.[20,30] Therefore, designing interventions to raise awareness of mothers using health services early can prevent delays in health services. In the end, this situation saved the mother from a severe condition during childbirth.

CONCLUSION AND RECOMMENDATION

The analysis results of the relations between postpartum service utilization in South Sulawesi Province showed the relations between education level birth order place of childbirth wealth quintile distance to health facilities and childbirth complications with the use of postpartum services. Knowledge of the various factors associated with the use of postpartum services in South Sulawesi can be one of the bases for related parties in developing and strengthening action plans that encourage the use of postnatal care to improve the quality of maternal and child health.

This study suggests that health workers can improve health promotion continuously through various media and support at the family and community level about the importance of using maternal health services, namely antenatal care, childbirth assisted by trained health personnel and carried out in health facilities, and postpartum services. In addition, based on the magnitude of the problems posed to maternal health, a more in-depth study, including using multivariate analysis, is needed. Thus, it can present the interactions between variables and research recommendations with very high quality.

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