



Exploring Factors Behind Women Do Not Give Birth at Health Facilities in Nias Barat

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ABSTRACT

Choosing location for delivery by pregnant women and deliveries assisted by skilled health workers are important keys in reducing MMR and IMR. The low birth rate at health facilities in Mandrehe Utara Subdistrict, Nias Barat Regency is a serious challenge to achieve the success of the maternal and child health service program. This study analyzes the factors that influence pregnant women who do not give birth in health facilities. This study uses a quantitative method with a cross-sectional approach. The samples were 180 people. The data were collected using a questionnaire and then tested using the Chi-Square test and logistic regression test. The results showed that the reason why mothers did not choose to give birth in health facilities was influenced by knowledge ($p=0.022$), attitude toward birth attendants ($p=0.002$), perception of distance ($p=0.004$), husband and family support ($p=0.000$), and access to health information ($p=0.007$). The role of health workers had no significant effect in this study ($p=0.756$). The results of the logistic regression test showed that husband and family support was the most dominant variable affecting mothers who did not give birth in health facilities. Mothers who perceive the lack of support from their husbands and families are 5,668 times more to choose to give birth outside a health facility. Education and socialization by health workers to mothers and their husbands and families are suggested to increase knowledge, awareness and change attitudes. No less important are the government's efforts to provide health facilities and infrastructure development to reduce access difficulties.

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ABSTRAK

Pemilihan lokasi persalinan oleh ibu hamil dan persalinan yang ditolong tenaga kesehatan terampil menjadi kunci penting dalam menurunkan AKI dan AKB. Rendahnya angka persalinan di fasilitas kesehatan di Kecamatan Mandrehe Utara Kabupaten Nias Barat menjadi tantangan berat untuk mencapai keberhasilan program pelayanan kesehatan ibu dan anak. Studi ini bertujuan menganalisis faktor-faktor yang mempengaruhi ibu hamil tidak bersalin di fasilitas kesehatan. Studi ini menggunakan metode kuantitatif dengan pendekatan cross-sectional. Sampel yang terlibat sebanyak 180 orang. Pengumpulan data menggunakan kuesioner dan kemudian diuji dengan menggunakan uji Chi-Square dan uji regresi logistik. Hasil penelitian menunjukkan penyebab ibu tidak memilih bersalin di fasilitas kesehatan dipengaruhi oleh pengetahuan ($p=0,022$), sikap terhadap penolong persalinan ($p=0,002$), persepsi tentang jarak ($p=0,004$), dukungan suami dan keluarga ($p=0,000$), dan akses terhadap informasi kesehatan ($p=0,007$). Peran petugas kesehatan tidak berpengaruh signifikan dalam studi ini ($p=0,756$). Hasil uji regresi logistik menunjukkan dukungan suami dan keluarga merupakan variabel yang paling dominan mempengaruhi ibu

tidak melahirkan di fasilitas kesehatan. Ibu yang menganggap kurangnya dukungan suami dan keluarga berpeluang 5,668 kali memilih melahirkan di luar fasilitas kesehatan. Edukasi dan sosialisasi oleh tenaga kesehatan terhadap ibu beserta suami dan keluarga disarankan untuk peningkatan pengetahuan, kesadaran dan perubahan sikap. Tidak kalah penting upaya dari pemerintah untuk penyediaan fasilitas kesehatan dan pembangunan infrastruktur guna memangkas kesulitan akses.

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INTRODUCTION

The high rate of maternal and infant mortality is a complicated problem in developing countries. A cause is the lack of access for mothers to give birth in health facilities with the help of skilled health workers (Moyer & Mustafa, 2013; Alkema et al., 2016). In developing countries, more than half of births are performed outside health facilities without skilled birth attendants (Afulani & Moyer, 2016). Prevention and treatment of pregnancy complications including antepartum and postpartum hemorrhage, infections, puerperal complications, preeclampsia, and eclampsia can be done by ensuring adequate health services and provided by skilled health workers during pregnancy and after birth (Bhattacharyya et al., 2016).

Previous studies indicated that the high maternal mortality rate in several countries in Africa be prevented by giving birth assisted by skilled health workers in health facilities (Yaya et al., 2018). WHO provides recommendations for preventing maternal mortality by recommending building more health facilities managed by trained health workers (World Health Organization, 2016). The gap in the quality of facilities and the number of skilled health workers in rural and urban areas make the problem of access to delivery more complex. The results of a study in Nepal concluded that certainty of access and quality of health facility infrastructure is an important point in increasing the utilization of maternity services by pregnant women in rural areas (Khatri et al., 2017).

Many factors influence pregnant women to use delivery services at health facilities. If viewed from the socio-economic viewpoint, it can be classified into several causes such as household income, employment status, and area of residence (rural or urban) (Agadjanian et al., 2016; Bose, 2019). Maternal age, marital status, occupation, use of contraceptives, use of facilities in previous deliveries, use of antenatal care, history of obstetric complications, perception of high quality of care, and husband's education level also increase the likelihood of using health services by pregnant women (Smith et al., 2012; Odo, 2014; Paneru, 2014). Difficult geographical conditions and limited means of transportation are also inhibiting factors (Crissman et al., 2013; Sialubanjanje et al., 2015).

The situation in Indonesia shows that 91% of live births are attended by competent health personnel, with details of 61% by village midwives, 29% by obstetricians, and 1% by general practitioners (Kementerian Kesehatan, 2018). In North Sumatra, data in 2016 showed that 92.67% of birth attendants had been assisted by health workers. However, only 59.7% of deliveries occurred in health facilities, 38.6% of deliveries at home/other, and the rest gave birth without any information (Dinas Kesehatan Propinsi Sumatera Utara, 2017). Several previous studies in Indonesia showed a link between costs, access to health facilities, trust in health

workers, mother's knowledge, and family support with the mother's decision to choose a place of delivery (Putri, 2016; Nurhidayanti et al., 2018; Hakim et al., 2020).

The phenomenon found in the initial survey in Mandrehe Utara Subdistrict, Nias Barat Regency, shows that there are still many people, especially pregnant women and their families, who choose not to give birth in health facilities. From the data obtained from January to September 2020, it shows that out of 89 mothers who gave birth, only 18 gave birth at the Puskesmas. The initial assumption was that the trigger for mothers to choose a delivery location outside the health facility was due to the long-distance, lack of husband and family support, lack of knowledge of mothers and lack of health information obtained from mothers. This study analyzes the factors that influence pregnant women who do not give birth in health facilities.

METHOD

Research Design

This study uses a quantitative method with a cross-sectional approach that analyzes the factors that influence pregnant women who do not give birth in health facilities. The study was conducted in Mandrehe Utara Subdistrict, Nias Barat Regency in April 2021. The variables studied in this study were knowledge, attitudes toward birth attendants, perceptions of distance, husband and family support, access to health information, and the role of health and delivery workers in medical facilities.

Participant Recruitment

The population of this study was pregnant women who were about to give birth. The population of pregnant women patients is 180 people. All pregnant women were included in the study as the research sample (total sampling).

Data Collection

Data were collected by distributing questionnaires to the sample containing questions related to the factors that affect pregnant women who do not give birth in health facilities. The knowledge questionnaire, perception on distance questionnaire, husband and family support questionnaire, and information access questionnaire contained 10 questions each with the lowest answer score being 1 and the highest score being 20. In the health worker role questionnaire, the sample was given 4 questions with an answer score. the lowest was 4 and the highest score was 12. On the attitude toward birth attendants questionnaire, the researcher gave 10 questions with the lowest answer score being 10 and the

highest score being 40. All respondents were given informed consent to state their willingness to be involved in this study.

Data Analysis

Data analysis begins with calculating the frequency distribution and percentage of data that include demographic data of pregnant women patients (age, occupation, and last education). Furthermore, the frequency distribution on the independent variables (knowledge, attitudes toward birth attendants, perceptions of distance, husband and family support, access to health information, and the role of health workers) and the dependent variable (delivery in health facilities). The data analysis process produces an output in the form of descriptive data and frequency distribution tables. Furthermore, the researchers used the Chi-Square test to analyze whether there was an influence between the independent variable and the dependent variable. In the final stage of the analysis, the researcher used multiple logistic regression intending to know the most dominant factor in determining the mother did not give birth in a health facility. The test results are presented in the form of tables and descriptive explanations.

RESULTS AND DISCUSSION

The study, which lasted for a month, involved 180 pregnant women in North Mandrehe Sub-district who were included in the West Nias District. All respondents were willing to fill out the consent form and were involved until the data collection was completed. The results of the calculation of the frequency distribution showed that most pregnant women aged 21-35 years were 121 people (67.2%), followed by pregnant women aged >35 years as many as 36 people (20%) and pregnant women aged <21 years as many as 23 (12.8%). 163 people work as farmers and 17 people work as entrepreneurs. From the last education level, most respondents graduated from elementary school (58.3%), 26.1% graduated from junior high school, 7.8% finished high school, 6.7% did not attend school. Pregnant women with the latest education strata 1 (bachelor) only 1.1%.

Table 1 also presents the results of the calculation of the frequency distribution on the knowledge variable showing that most pregnant women have poor knowledge (62.8%) and 37.2% have good knowledge. Attitudes toward birth attendants were dominated by negative attitudes as many as 99 people (55.0%). Most pregnant women have a poor perception of the distance to health facilities (57.8%). Most respondents also stated that their husband and family support were not good (57.8%), while 75 people said it was good. In the statement regarding access to health information, as many as 105 respondents stated that access was not good. Then, on the variable of the role of health workers, most respondents stated that the role of health workers was good (68.9%). Most respondents stated the possibility of not giving birth in a health facility (57.2%) and around 42% said that they would give birth at a health facility.

Furthermore, bivariate analysis was conducted using the Chi-Square test to determine whether the independent variables (knowledge, attitudes toward birth attendants, perceptions of distance, husband and family support, access to health information, and the role of health workers) influenced the mother's choice not to give birth in health facilities (see Table 2).

Table 1.
Characteristics of respondents (n=180)

Characteristics	n	%
Age		
<21 years	23	12,8
21-35 years	121	67,2
>35 years	36	20,0
Work		
Farmer	163	90,6
Self-employed	17	9,4
Education		
No education	12	6,7
Elementary school	105	58,3
Junior high school	47	26,1
Senior high school	14	7,8
College	2	1,1
Knowledge		
Not good	113	62,8
Good	67	37,2
Attitude toward birth attendant		
Negative	99	55,0
Positive	81	45,0
Perception of distance		
Not good	104	57,8
Good	76	42,2
Husband and family support		
Not good	105	58,3
Good	75	41,7
Access to health information		
Not good	107	59,4
Good	73	40,6
Role of health workers		
Not good	56	31,1
Good	124	68,9
Facility-based childbirth		
Not giving birth in health facility	103	57,2
Giving birth in health facility	77	42,8

The results of the analysis on the association of knowledge variables on childbirth in health facilities showed a significant effect ($p = 0.002$). With a prevalence ratio of 1.377 (95% CI 1.027-1.846) it can be concluded that respondents who have less knowledge have a risk of 1.377 times not giving birth in health facilities than those who have good knowledge. Respondents who had poor knowledge and did not give birth in health facilities were the highest number in this study (71 people). This finding indicates that the mother's level of knowledge is sufficient to determine the mother's choice to choose the place of delivery. This condition can occur due to the low level of mother's education, in this study most of the respondents graduated from elementary school (58.2%). Mothers with low education tend to make less use of services in health facilities (Hamal et al., 2020). Pregnant women in the group with low education levels also still choose birth attendants with non-health workers (Fitrianeti et al., 2018). The more complete knowledge that mothers have about the danger signs of pregnancy also encourages them to make decisions to use medical services (Mwilike et al., 2018).

In this study, the mother's attitude toward birth attendants also correlated with the choice of delivery at a health facility ($p=0.002$). A total of 69 respondents have a negative attitude and tend not to give birth in health facilities. With a prevalence ratio of 1.523 (95% CI 1.152-2.013) it can be concluded that respondents who have a negative attitude have a risk of 1.523 times not giving birth at a health facility compared to those who have a positive attitude. Attitude towards birth attendants is one of the

internal factors that determine the behavior of using health services, in this case deciding to give birth at a health facility. If individuals have a positive attitude towards birth attendants, they tend to seek and use health services. Birth attendants who are available, especially in rural areas, are midwives and traditional birth attendants. In Nias Barat, the large role of traditional birth attendants in assisting childbirth is influenced by strong customs and culture of the community. In some villages, the community considers

traditional birth attendants easy to contact because they are close to each other. This condition causes the mother's attitude towards birth attendants such as traditional birth attendants to tend to be positive. Previous research shows the tendency of mothers to choose to give birth with a shaman due to the tradition and belief that the shaman is an elder person and has hereditary knowledge (Nurhayati & Sugiharto, 2019).

Table 2
Chi-Square test results

Variable	Delivery in health facilities				p	PR	95% CI	
	Not giving birth in health facility		Giving birth in health facility				Lower	Upper
	n	%	n	%				
Knowledge								
Not good	72	63,7	41	36,3	0,022	1,377	1,027	1,846
Good	31	46,3	36	53,7				
Attitude toward birth attendant								
Negative	67	67,7	32	32,3	0,002	1,523	1,152	2,013
Positive	36	44,4	45	55,6				
Perception of distance								
Not good	69	66,3	35	33,7	0,004	1,483	1,115	1,972
Good	34	44,7	42	55,3				
Husband and family support								
Not good	78	74,3	27	25,7	0,000	2,229	1,587	3,129
Good	25	33,3	50	66,7				
Access to health information								
Not good	70	65,4	37	34,6	0,007	1,447	1,085	1,930
Good	33	45,2	40	54,8				
Role of health workers								
Not good	33	58,9	23	41,1	0,756	1,044	0,799	1,364
Good	70	56,5	54	43,5				

Perceptions of distance had significant effect on the choice of delivery in health facilities (p=0.004). Respondents stated that the long distance made them reluctant to give birth at the puskesmas or clinic. The limited choice of means of transportation is also an obstacle in reaching health facilities. The implication is that mothers tend to choose to give birth with the help of a traditional birth attendant who is easier to contact. Arief & Sudikno's research (2014) concluded that the area where the mother lives are also closely related to the choice of delivery location. Mothers who live in urban areas prefer to give birth in health facilities compared to mothers who live in rural areas. The reason is the large number of health workers, complete facilities and ease of transportation in urban areas. Meanwhile in rural areas, where people live are scattered, isolated with low socioeconomic status, making it difficult to reach health facilities and high transportation costs. Distance constraints are also experienced in several countries where citizens living in rural areas have difficulty accessing health facilities during childbirth (Kifle et al., 2018; Treacy et al., 2018). This study also concluded that mothers who considered the distance to health facilities to be quite far had 1,483 times the chance of not giving birth at a health facility.

The results of the analysis on the variables of husband and family support also showed a significant influence on the choice of childbirth place (p = 0.000) and with a prevalence ratio of 2.229 indicating that mothers who considered their husband and family support less to give birth 2,229 times outside a health facility. The mother's choice in determining the location of delivery is influenced by the people closest to her, such as her husband and family. The husband's and family's care in the form of support and

advice will greatly determine the mother's decision, considering that in Indonesia the husband's role in making decisions on various matters in the family is still dominant. The research concludes that the husband's support can be in the form of emotional support (assistance before, during, and after childbirth), the provision of funds, information, and equipment and transportation (Story et al., 2012). Husband's involvement is much needed in planning and ensuring the health of mothers and babies during pregnancy and childbirth (Treacy et al., 2018). In some countries in Africa, gender inequality has the opportunity to prevent women from making decisions about the choice of delivery location (Ganle et al., 2015; Kifle et al., 2018); Yaya et al., 2019).

In this study, access to information had a significant influence on the choice of childbirth place (p=0.007). The lack of health information obtained from the mother can be caused by the area of residence and the level of education of the mother. Health information is available in various sources, namely, magazines, radio, newspapers, television, libraries, internet, and so on. In rural areas, the challenge to obtain information can be the lack of a telecommunications network, especially in villages located in the highlands. Additionally, most respondents last educated were elementary school graduates (58.3%). The role of education is crucial in the ability to receive information. The more information received, the more health knowledge obtained (Budiman & Riyanto, 2013). Limited access to information can cause mothers to seek health information from mothers-in-law, traditional birth attendants, and other women in the community. At this point, the presence of health workers in providing information becomes crucial (Kaaya et al., 2021). Assurance of accurate information from health workers can

prevent mothers from underestimating the risks that can occur during pregnancy and childbirth.

In this study, the choice of childbirth place by the mother was not significantly influenced by the role of health workers ($p=0.756$). This can be caused by strong culture and long-distance access. The reluctance of health workers to be placed in remote locations causes the distribution of health workers to be uneven and has little effect on mothers' decisions to give birth in health facilities (Lestari & Agustina, 2018). Health workers are crucial in getting access to information closer to mothers about the importance of giving birth in health facilities. The encouragement of health

workers in the form of pregnancy counseling provided by health workers can increase the potential for delivery in health facilities (Paneru, 2014). The results of this study also show that the role of officers are 1,044 times less to cause mothers not to give birth in health facilities.

Furthermore, logistic regression analysis was used to determine the most dominant variable affecting mothers who did not give birth in health facilities. The candidate variables included in the logistic regression test ($p<0.25$) included knowledge, attitudes towards birth attendants, perceptions of distance, husband and family support, and access to health information.

Table 3
Logistic regression test

Variable	p	Exp(B)	95% CI	
			Lower	Upper
Knowledge	0,163	1,673	0,811	3,448
Attitude toward birth attendant	0,157	1,652	0,825	3,309
Perception of distance	0,008	2,690	1,292	5,600
Husband and family support	0,000	5,668	2,746	11,703
Access to health information	0,078	1,878	0,931	3,790

In table 3, it can be seen that the husband and family support is the most dominant variable affecting mothers not giving birth in health facilities. Mothers who perceive the lack of support from their husbands and families are 5,668 times more to choose to give birth outside a health facility.

Conflict of Interest Statement

The authors declared that no potential conflicts of interests with respect to the authorship and publication of this article.

CONCLUSIONS AND SUGGESTIONS

The causes of mothers do not choose to give birth in health facilities are influenced by knowledge, attitudes towards birth attendants, perceptions of distance, husband and family support, access to health information. The role of health workers has no significant effect in this study. The results of the logistic regression test show that the husband and family support is the most dominant variable affecting mothers who do not give birth in health facilities. Mothers who perceive the lack of support from their husbands and families are 5,668 times more to choose to give birth outside a health facility. Education and socialization by health workers to mothers and their husbands and families are suggested to increase knowledge, awareness and change attitudes. No less important are the government's efforts to provide health facilities and infrastructure development to reduce access difficulties.

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