

A study identifying factors related to the home delivery attended by the midwives in the health center of Mawasangka, Middle Buton Regency

Risnawati Zuhaeni^{1,2}, Sukri Palutturi³, Syamsiar Russeng⁴, Hasanuddin Nuru⁵

¹Department of Public Health, Hasanuddin University, Indonesia.

²District Health Office, Middle Buton, Indonesia.

³Department of Public Health, Health Policy, and Administration; Public Health Faculty, Hasanuddin University, Indonesia.

⁴Department of Public Health, Occupational Health; Public Health Faculty, Hasanuddin University, Indonesia.

⁵Faculty of Nursing, Mahidol University, Thailand.

Correspondence to: Hasanuddin Nuru, E-mail: hasanuddinmu@gmail.com

Received July 12, 2015. Accepted May 1, 2016

Abstract

Background: The location and person who help the baby delivery would directly affect mothers' health.

Objective: To identify factors related to the home delivery attended by the midwives in the Health Center of Mawasangka, Middle Buton Regency.

Materials and Methods: This is a cross-sectional study with 100 mothers as participants who met the inclusive criteria, and they were chosen by using the purposive sampling technique.

Result: The result showed that respondents who chose to give birth at home with and without assistance of the midwives were 78 (78%) and 22 (22%) respondents, respectively. The statistical analysis using the χ^2 -test showed that the factors significantly related to the utilization of the midwives' assistance in the home delivery were the attitudes ($p = 0.002 < 0.05$), the supports of the family ($p = 0.001 < 0.05$), the supports of the healthcare workers ($p = 0.013 < 0.05$), and the perception of the felt need for health ($p = 0.010 < 0.05$). Meanwhile, the factors which were not significantly related to the utilization of the midwives' assistance in the home delivery were the opinions of the family ($p = 1.000 > 0.05$), the knowledge ($p = 0.992 > 0.05$), and the cost of the delivery ($p = 0.209 > 0.05$). The attitude was the dominant factor related to the utilization of the midwives' assistance in the home delivery, which was 13.992 times greater than any other factors.

Conclusion: There was a relationship between attitude, family support, health worker's support, and the perception of health need with the utilization of home delivery by midwives assistance. While the family income, knowledge, and labor cost conversely (did not have significant relationship), the most dominant factor was attitude.

KEY WORDS: Utilization analysis, home delivery, midwives

Introduction

The period of delivery was a critical time for the pregnant women. There were two possibilities, safe delivery or death for the pregnant women. The success of maternal labor was

determined by several factors, ranging from the absence of risk factors for maternal health, the selection of birth attendants, affordability and availability of health services, birth attendant competence, and family attitude in the face of an emergency. The birth attendant, the place of delivery, and the limited access to health services showed a very strong correlation to maternal and infant mortality. Safe delivery could be achieved through birth attendant helped by health professionals and the availability of adequate equipment to handle obstetric and neonatal complications.^[1]

Prawirohardjo^[2] stated that maternal delivery conducted by healthcare workers in the health facilities was one indicator to reduce maternal mortality rate (MMR) and infant mortality rate (IMR). According to data from the Indonesian Demographic

Access this article online

Website: <http://www.ijmsph.com>

DOI: 10.5455/ijmsph.2016.12072015441

Quick Response Code:



Health Survey (IDHS) in 2012, AKI increased to 359 deaths per 100,000 live births. IMR decreased to 32 per 1,000 live births in 2012. Although in IDHS, there was an increase of birth attendants covered by health personnel, it does not match to the number of deliveries in healthcare facilities. On the basis of Riskesdas data in 2013, 67.2% of births took place at home.^[3] It means delivery at home remain loved by pregnant women in Indonesia.

In Buton district, health profile showed that the MMR was 242 per 100,000 live births in 2014. Most maternal deaths occurred during delivery was 71.4%, the mother during the baby birth 14.4%, and 14.2% of maternal deaths occurred during mother pregnancy. The cause of death was hemorrhage, eclampsia, and infections.

Data from Mawasangka District Health Center on 2014 showed that there were 322 normal deliveries, 80.1% of deliveries was performed by health workers, and 93% of deliveries took place at home. On the basis of that data, it was found that there were two infants mortality.^[4] Most of us understood that institutional delivery was actually the best option in reducing the MMR, but noninstitutional delivery would improve the referral system in the area. This was because the present changes of baby birth delivery took place not in health facilities but at home. Previous study conducted in the USA and other developed countries revealed that there was an increased number of women who chose to give birth at home because it was safer, less medical intervention, and there was an opportunity to have a baby in his own comfortable home. Conversely, Ehiri (2013) stated that there was threefold risk of neonatal death in baby birth at home by a midwife. It could be concluded that utilization of birth delivery service both at home and health service center are not clear, and further study is needed to find the most beneficial for delivery birth.

Subsequently, most previous studies had been conducted based on the utilization of health services such as a model of health service utilization by Andersen (1974). He said that there were three factors of health services use, first is predisposing factors (demographic, social structures, and attitudes or beliefs to health care); second, enabling factors (resources both family and community); and the last is factors that need an individual assessment of a history of services' felt/perceived need and clinical assessment.^[5]

Health Belief Model by Rosenstock (1982) believed that individual behavior was determined by the motives and the beliefs, regardless of whether the motive and the beliefs were suitable or not with reality or other people's views about what was good for the individual. The trust model was composed of five main elements that included individual perception on the effect of the illness (perceived susceptibility), individual view of the severity of illness (perceived seriousness), the magnitude of the perceived threats (perceived threats), consideration of the alternative actions (perceived benefits) and barriers of recommended actions, and decide to accept or reject the alternative actions (cues to action).^[6]

Ochako *et al.*^[7] stated that the utilization of maternal health services was an effective approach for reducing the risk of

maternal morbidity and mortality. Residence, family income, education, ethnicity, parity, marital status, and age at birth of the last child showed a strong influence at the time for first visit of antenatal care (ANC) and the choice of birth attendants. Titaley *et al.*^[8] stated that the use of traditional birth attendants (TBAs) and home deliveries was a part of the community even, although it was helped by a midwife in the village. The distance and the cost were two major obstacles in accessing and utilizing the trained midwives and deliveries in health facilities.

Factors that influenced the decision for home delivery were the negative perception of the public on the availability and quality of care in the hospitals, discontinuity of care by TBA, closeness with her husband and family desire, limited health education from their husband and the readiness of birth was not optimal, and limitation of road vehicles to be some factors in the delay of reaching the hospital.^[9]

There was limited study that examined the healthcare facility deliveries conducted by skilled health personnel. There was a need to examine other aspects that were rarely investigated (*i.e.*, the contribution on who helped the delivery). Therefore, it was necessary to conduct a study in Mawasangka Health Center with the aim to analyze factors related to the utilization of home delivery attended by a midwife at Puskesmas Mawasangka.

Materials and Methods

Location and Research Design

This study was conducted in Mawasangka Health Center Central Buton Regency. The working area of health center was an area of 84.67 km². Most of the area were coastal areas. Road condition in general was not good. The availability of public transport to the city was still available 24 h. Figure 1 shows the overview map of Mawasangka district.

This study use cross-sectional design that explained the dynamics of the correlation between the dependent and independent variables at the same time with the aim of exposing the influence of family income, knowledge, attitudes, costs of labor, family support, support for health workers, and the



Figure 1: Map of Mawasangka district.

perception of health needs with the utilization of home delivery by a midwife assistant at Mawasangka Health Center.

Population and Sample

Population was all the mothers who delivered at home, and they were assisted by a midwife at Mawasangka Health Center in 2014. The sample of 100 respondents were chosen by purposive sampling. According to Sugiyono,^[10] purposive sampling was a sampling technique with a certain consideration. The samples had met the inclusion criteria, that is, all mothers who delivered at home and they were assisted by midwives. The mother had a baby 0–11 months, they could read and write.

Data Collection

Data collection was carried out by researchers using a questionnaire. The intended use of the questionnaire was to analyze the influence of family income, knowledge, attitudes, labor costs, family support, health workers support, and perception of the use of delivery. The collection of data was carried out in two stages, namely the provision of early information to prospective respondents and conducting the interview and the distribution of questionnaires. To determine whether the questionnaires used were really qualified, validity and reliability test were carried out.

Data Analysis

Data were analyzed by measuring scale and answering the purpose of the study using the SPSS software. Data were analyzed by univariate to look at the frequency distribution of the characteristics of respondents and each variable. For bivariate analysis, data were analyzed by χ^2 -test to look at the nature and magnitude of the relationship between independent

and dependent variables. Confidence interval used was 95% and the limit of significance when $p < 0.05$. Multivariate logistic regression test was used to look at the most related variables with the workload of midwives (Hastono, 2001).

Result

Characteristics of the respondents

Table 1 shows that the majority of respondents was at the age of 20–30 years (62%). Educational status was elementary education (23%). Respondents generally did not have a job (51%).

Univariate analysis

Table 2 shows that the majority of respondents (100) was from low income family (56%). The respondents' knowledge were enough (66%). About 94% respondents showed a positive attitude toward health care. Respondents stated that the labor cost at home helped by a midwife was cheap (96%). Similarly, to the variables of family support, of 100 respondents, 92% respondents got enough support from their families. About 89% respondents stated that they got enough assess to health worker support. About 70% respondents showed a positive perception. About 78% respondents got adequate assess to utilize the home delivery helped by a midwife.

Table 2: Distribution of respondents by family income, knowledge, attitude, cost of delivery, family support, health providers support, and health needs perception in the Health Center of Mawasangka, Middle Buton Regency

Variables	N = 100	%
Family income		
High	44	44.0
Low	56	56.0
Knowledge		
Enough	66	66.0
Less	34	34.0
Attitude		
Positive	94	94.0
Negative	6	6.0
Cost of delivery		
Cheap	96	96.0
Expensive	4	4.0
Family support		
Enough	92	92.0
Less	8	8.0
Health providers support		
Enough	89	89.0
Less	11	11.0
Health needs perception		
Positive	70	70.0
Negative	30	30.0

Table 1: Distribution of respondents' characteristics

Characteristics	N = 100	%
Age group (years)		
<20	4	4.0
20–30	62	62.0
>30	34	34.0
Education level		
No elementary school	7	7.0
Elementary school	23	23.0
Junior high school	17	17.0
Senior high school	20	20.0
Diploma	19	19.0
Bachelor degree/S1	14	14.0
Employment		
No job	51	51.0
Civil servant	18	18.0
Businessmen	8	8.0
Private staff	6	6.0
Others	17	17.0

Bivariate analysis

Table 3 shows the relationship between maternal behavior toward the use of home delivery helped by a midwife. Forty-four respondents were from a high income family. About 77.3% of them stated enough to utilize home delivery helped by a midwife. Fifty-six respondents were from a low income family, 78.6% of them stated enough to utilize home delivery helped by a midwife. (χ^2 -test, p value = 1.000). Regarding utilization of home delivery helped by midwives, 78.8% respondents showed enough knowledge, 34 respondents showed less knowledge, and 76.5% of them stated enough to utilize home delivery helped by a midwife. (χ^2 -test, p = 0.992). Regarding attitude variable, 94 respondents showed a positive attitude, 81.9% of them stated enough to utilize home delivery helped by a midwife, and 6 respondents showed a negative attitude. About 16.7% of them stated enough to utilize home delivery helped by a midwife. (χ^2 -test, p = 0.002).

For labor cost variable, 96 respondents considered the labor costs was cheap, 79.2% of them stated enough to utilize

home delivery helped by a midwife, 4 respondents considered the cost of labor was expensive, and 50% of them stated enough to utilize home delivery helped by a midwife. (χ^2 -test, p = 0.209).

For family support variable, 92 respondents gained enough family support and 82.6% of them stated enough to utilize home delivery helped by a midwife. From 8 respondents who gained less support from family, 25% of them stated enough to utilize home delivery helped by a midwife. (χ^2 -test, p = 0.001). In respondents who gained enough health workers support, 82% of them stated enough to utilize home delivery helped by a midwife. Eleven respondents expressed a lack of support of health workers and 45.5% enough to utilize home delivery helped by a midwife. The result of χ^2 -test showed p = 0.013. For perception variables, 70 respondents who showed a positive perception, 85.7% of them stated enough to utilize home delivery helped by a midwife; 30 respondents who had a negative perception, 60% stated enough to utilize home delivery helped by a midwife. The result of χ^2 -test showed p = 0.010.

Table 3: Relationship between independent variables and dependent variable in Health Center of Mawasangka

Variables	Utilization				Total		χ^2 -test
	Enough		Less		N = 100	%	
	N = 100	%	N = 100	%			
Family income							
High	34	77.3	10	22.7	44	100.0	1.000
Low	44	78.6	12	21.4	56	100.0	
Number	78	78.0	22	22.0	100	100.0	
Knowledge							
Enough	52	78.8	14	21.2	66	100.0	0.992
Less	26	76.5	8	23.5	34	100.0	
Number	78	78.0	22	22.0	100	100.0	
Attitude							
Positive	77	81.9	17	18.1	94	100.0	0.002
Negative	1	16.7	5	83.3	6	100.0	
Number	78	78.0	22	22.0	100	100.0	
Cost of labor							
Cheap	76	79.2	20	20.8	96	100.0	0.209
Expensive	2	50.0	2	50.0	4	100.0	
Number	78	78.0	22	22.0	100	100.0	
Family support							
Enough	76	82.62	16	17.4	92	100.0	0.001
Less	2	25.0	6	75.0	8	100.0	
Number	78	78.0	22	22.0	100	100.0	
Health providers support							
Enough	73	82.0	16	18.0	89	100.0	0.013
Less	5	45.5	6	54.5	11	100.0	
Number	78	78.0	22	22.0	100	100.0	
Health needs perception							
Positive	60	85.7	10	14.3	70	100.0	0.010
Negative	18	60.0	12	40.0	30	100.0	
Number	78	78.0	22	22.0	100	100.0	

Table 4: Multivariate analysis of independent variables with home delivery by midwives at the Health Center of Mawasangka

Variables	B	P	Exp(B)
Attitude	2.639	0.033	13.992
Family support	2.445	0.015	11.525
Health providers support	1.820	0.020	6.173
Health needs perception	1.381	0.024	3.980
Constant	-2.521		
Overall Percentage	85.0		

Multivariate Analysis

The result of bivariate analysis in Table 3 indicated that the dependent variables, that is, attitude, family support, health workers support, and perception showed a relationship with the independent variables (i.e., the utilization of home delivery helped by midwives). Then, the researcher performed multivariate logistic regression. On the basis of analysis, Table 4 shows that the attitude variables ($p = 0.033$), family support ($p = 0.015$), the support of health workers ($p = 0.020$), and perception of health need ($p = 0.024$) showed significant relationship with the utilization of home delivery helped by midwives. The most dominant variable was attitude [Exp (B) = 13 992].

Discussion

The result of χ^2 -test on family income variable showed that there was no relationship between family income with the utilization of home delivery helped by a midwife, $p = 1.000$ ($p > 0.05$).

There was a lack of adequate maternity facilities in Mawasangka health center. This had made the maternal mothers with low and high income consider that home delivery attended by midwives was the best alternative to the best service because it was secure, convenient, and relatively affordable. The result was consistent with the study conducted by Sampeluna *et al.*^[11] who found that there was no relationship between family income with the utilization of health services in Lakipadada hospital. The result was different with the health system model by Andersen (1974), who stated that the family income was an enabling characteristic, that is, someone would not utilize health services unless he/she could afford it. According to the author, the difference in these results was caused by the law of demand. People should meet their need based on their budget. The home delivery was a primary need for the mother so that the mother would prepare for the budget despite their limited income.

The result of χ^2 -test on knowledge variable showed that there was no relationship between knowledge with the utilization of home delivery helped by a midwife, $p = 0.992$ ($p < 0.05$).

Most of the maternal mothers showed enough knowledge on the utilization of labor and childbirth and the labor assistance. Generally, mothers understood on the risks to do home delivery. But, there were women who did not understand

that home delivery was not allowed for the first child labor. Although, the maternal knowledge was enough or less. The result was in line with the research of Yaziz *et al.*,^[12] who found that the knowledge of pregnant women and labor mother did not have any relationship with the utilization of midwives in the district Peudada Bireuen.

The result of this study was not in line with the health system model by Andersen (1974); knowledge was the predisposition factor in which knowledge could trigger or as predisposition factor on the onset of behavior within the individual and society.

Some mothers who had enough knowledge on labor would give no guarantee to utilize home delivery helped by midwives. This happened because of their willingness to take delivery may be affected by other factors such as the absence of risk in childbirth. The difference in this study was also because most of the respondents showed enough knowledge, but their knowledge was merely to know and to understand, yet not to act. So, it did not change their behavior.

The result of χ^2 -test on labor cost variable showed that there was no relationship between labor costs with the utilization of home delivery helped by a midwife, $p = 0.209$ ($p > 0.05$). Mothers who did the home deliveries helped by midwives several times assumed that the labor cost was not a factor to choose home delivery. The existence of free labor program (Jampersal) and insurance costs (BPJS) of government was not able to change the behavior of the mother not to give birth at home. The result was consistent with the study of Sodikin,^[13] who stated that respondents who thought that the labor cost was expensive preferred nonhealth personnel as birth attendant.

And respondents who thought that the labor cost of was cheap (affordable) preferred health workers as a birth attendant. The result of this study was not consistent with the health system model by Andersen (1974). Andersen stated that the labor cost was an enabling factor, that is, every individual would not act to utilize the health service, unless she could afford it. The high cost of labor felt by the mother depended on the level of family income. If they were from a high income, then the high cost of labor was not a problem. But for mothers who came from low-income families, even though the labor cost was expensive, they still could afford it. The socialization of Jampersal program or BPJS had not yet attracted the maternal mother to utilize a free program of delivery in health facilities. The maternal mothers preferred to get home delivery helped by a midwife although the cost was expensive.

In addition, the reluctance of private midwife to participate in free labor program because it would give less benefit for private midwife was found to be one of the factors the maternal mother chose home delivery helped by midwives.

The result of χ^2 -test showed that there was a relationship between attitude with the utilization of home delivery helped by a midwife, $p = 0.002$ ($p < 0.05$).

In general, mother showed a positive attitude to midwife as a birth attendant. However, mother gave a more positive attitude when choosing a house as a place of birth than at the health facilities. There were a lot of factors why the maternal

mother chose to give birth at home such as comfortability, safety factors, the fear to give birth in health facilities, and the presence of the TBA as a companion. Van Der Hulst *et al.*^[14] found that home delivery gave a positive influence on the process of birth. In multiparous group who were referred to a gynecologist, maternal women wanted to get the home delivery because they would get less intervention (e.g., induction, augmentation, pharmacological pain, deliveries, caesarean section) compared with those who had chosen to give birth in a hospital.

The result was consistent with the WHO teamwork of Notoatmodjo,^[15] who stated the factors why someone did certain behavior, that is, thought and feeling (perception), attitude, belief, and the assessment of the object (health object). This revealed that attitude was one of the determinants to change health behavior in the community. Attitude was one determinant factor that needed to take into account to change the behavior of the community. The result of multivariate analysis showed that attitude variable was the most dominant variable on the utilization of home delivery helped by midwives in Mawasangka health center. Therefore, there was a need to consider the attitude of the community to improve the utilization of the health services.

The result of χ^2 -test on family support variable showed that there was a relationship between family support with the utilization of home delivery helped by a midwife, $p = 0.001$ ($p < 0.05$).

Many factors could cause the mother to chose home delivery, one of them was a psychological factor, where the moral support of the husband/family had a big share. Childbirth at home would allow the family to always be on the side of the mother. Mpembeni *et al.*^[16] stated that women who discussed the place of delivery with their husband/family had a higher proportion to utilize skilled health workers compared to women who received the support of health workers when they did the ANC. This indicated that the role of husband and family would determine the mother's delivery.

The result of the questionnaire on the family support to conduct home delivery helped by midwives indicated that 95% of the mothers agreed to do home delivery because of the support from their husband or family; about 25% of the mothers agreed to do home delivery even though there was less support from their husband or family. In general, their husband worked outside of the province so that their husband could not accompany their wives during pregnancy or labor.

The result confirmed the theoretical Health Belief Model by Rosenstock (1982), who stated that there were the triggered factors to decide whether to accept or reject certain health action. The factor could be from internal or external. The internal factor came from within the individual. Whereas, the external factor came from interpersonal interactions, such as mass media, message, advice, family support, and recommendation or consultation with a health worker. According to the author, the mother embraced patriarchal culture in which the position of men/husbands was higher; therefore, the decision to choose the place of delivery and birth attendants was

determined by their husband. Besides her husband, parents and mother-in-law also played a role in the decision making because the mother believed that they were more experienced than the mother.

The result of χ^2 -test on health workers support variable showed that there was a relationship between the support of health workers with the utilization of home delivery helped by a midwife, $p = 0.013$ ($p < 0.05$).

This may be owing to the condition of a patient who showed no history and risks in childbirth. In addition, the respondents' attitudes and perceptions about home deliveries. The presence of TBA had made the health workers to support labor at home to avoid the respondents to utilize TBA as a birth attendant. Although nearly 50% of maternal mothers received less support from healthcare workers during pregnancy, the mothers remained to utilize the home delivery helped by a midwife. This was owing to the belief that the midwife as a birth attendant was a professional and a competent person. Good relationship between midwives and maternal mother was one factor that affect the utilization of home delivery helped by a midwife. In general, the multiparous mothers typically had a good relationship with the midwife in the previous labor. Therefore, they tended to use the same midwife to help the next delivery. Despite the fact that the maternal mother never got any home visits from the health workers.

The experience to have a safe home deliveries without any risk had made the maternal mother to chose home delivery even without the support of health worker.

The result confirmed the theoretical Health Belief Model of Rosenstock (1982), who stated that there were the triggered factors to decide whether to accept or reject certain health action. The factor could be from internal or external. The internal factor came from the individual. Whereas, the external factor came from the interpersonal interactions, such as mass media, message, advice, family support, and recommendation or consultation with a health worker. This theory was supported by Yaziz, Ayu,^[12] who stated that the action of the health worker showed significant relationship with the use of the midwife by pregnant mother and labor mother.

The result of χ^2 -test on perception variables showed that there was a relationship between perception and the utilization of home delivery helped by a midwife, $p = 0.013$ ($p < 0.05$).

A judgment that gave birth at home was just the same as at the health center would encourage the maternal mother to chose the easiest place. Thus, individual would prefer home delivery helped by midwives because they were more convenient and practical. In addition to home delivery, individual could be accompanied by TBA. The presence of TBA was quite important in the society, although she was not involved in the delivery, but her role was important in the case of nonmedical and postnatal tradition. Most mothers considered that labor at home and in health facilities was just the same. Although the mothers had a wrong perception on the perceived health needs.

The maternal mother's perception stated that giving birth was a common thing. Age and parity had no relationship with

the labor. This would affect the mother to do home delivery repeatedly. This study was consistent with research of Khaeruddin and Rijadi,^[17] who stated that there was a relationship on the perception of health-related needs of pregnancy and childbirth helped by skilled health personnel. If the mother felt that she was at risk in her labor, then she would conduct certain action. This action would depend on the perceived benefits and barriers that were found in taking such action. To get the level of acceptance about the vulnerability, urgency, and benefits of certain action, then it was necessary to have some clues in the form of external factor such as, information, messages in the mass media, advice, and suggestions from their friends or other family members.^[15]

Conclusion

There were relationship between attitude, family support, health worker's support, and the perception of health need with the utilization of home delivery helped by midwives. Moreover, the family income, knowledge, and labor cost showed no significant relationship on the utilization of home delivery helped by midwives. The most dominant factor was attitude.

It was recommended to the health center to improve coordination with various stakeholders, to integrate maternal health programs with other programs, and to make a policy from stakeholders to improve the people's self-awareness and discipline system, labors should only be conducted in the healthcare facilities.

Acknowledgment

We are very grateful to Mawasangka Health Center, Central Buton Regency, which provided an opportunity to conduct this research. Our thanks also went to the village midwives who helped us to collect the necessary data for this study. A big thanks to all the respondents for information and cooperation. We hope this study would have a positive impact on maternal health in the future. This article is a part of the thesis when I did my master degree in the Faculty of Public Health Hasanuddin University, Makassar Indonesia.

References

- Asriani. Faktor-Faktor yang berhubungan dengan Pemilihan Penolong Persalinan oleh Ibu Bersalin di Wilayah Kerja Puskesmas Barombong Kelurahan Barombong. *Jurnal Kesehatan* 2009;II.
- Prawirohardjo S. *Ilmu Kebidanan*. Jakarta: P T Bina Pustaka Sarwono Prawirohardjo, 2012.
- Kemendes RI. *Profil Kesehatan Indonesia 2013*. Jakarta: Kementerian Kesehatan RI, 2014.
- Dinkes Kabupaten Buton. *Profil Kesehatan Kabupaten Buton Tahun 2014*. Buton Dinkes Kabupaten Buton, 2014.
- Notoatmodjo S. *Ilmu Perilaku Kesehatan Jakarta*: Rineka Cipta, 2014.
- Glanz K, Rimer BK, Viswanath K. *Health Behavior and Health Education Theory, Research, and Practice*. San Francisco: Jossey-Bass, 2008.
- Ochako R, Fotso JC, Ikamari L, Khasakhala A. Utilization of maternal health services among young women in Kenya: insights from the Kenya Demographic and Health Survey, 2003. *BMC Pregnancy Childbirth* 2011;11(1):1.
- Titaley CR, Hunter CL, Dibley MJ, Heywood P. Why do some women still prefer traditional birth attendants and home delivery?: a qualitative study on delivery care services in West Java Province, Indonesia. *BMC Pregnancy Childbirth* 2010;10(1):43.
- Roggeveen Y, Birks L, van Kats J, Manyama M, Hatfield J, Bunders J, et al. Low utilization of skilled birth attendants in Ngorongoro Conservation Area, Tanzania: a complex reality requiring action. *Health* 2013;5:7.
- Sugiyono. *Statistika Untuk Penelitian*. Bandung: Alfabeta, 2013.
- Sampeluna N, Balqis, Hamzah A. Faktor Yang Berhubungan Dengan Pemanfaatan Pelayanan Kesehatan di RSUD Laki pada Kabupaten Tana Toraja. *Administrasi dan Kebijakan Kesehatan FKM, UNHAS* 2013.
- Yaziz A, Ayu SF, Syarifah. Analisis Pemanfaatan Bidan Desa Oleh Ibu Bersalin di Kecamatan Peudada Kabupaten Bireuen. *Universitas Indonesia Jurnal Ilmu Berbagi Fakultas Kesehatan Masyarakat, Universitas Indonesia* 2010.
- Sodikin. Determinan perilaku suami yang mempengaruhi pilihan penolong persalinan bagi istri. *Berita Kedokteran Masyarakat* 2009;25(1).
- Van Der Hulst LAM, van Teijlingen ER, Bonsel GJ, Eskes M, Bleker OP. Does a pregnant woman's intended place of birth influence her attitudes toward and occurrence of obstetric interventions? *Birth* 2004;31(1):28–33.
- Notoatmodjo S. *Promosi Kesehatan dan Ilmu Perilaku*. Jakarta: PT Rineka Cipta, 2007.
- Mpembeni RNM, Killewo JZ, Leshabari MT, Massawe SN, Jahn A, Mushi D, et al. Use pattern of maternal health services and determinants of skilled care during delivery in Southern Tanzania: implications for achievement of MDG-5 targets. *BMC Pregnancy Childbirth* 2007;7(1):29.
- Khaeruddin, Rijadi S. Determinan Pemanfaatan Pertolongan Persalinan Oleh Tenaga Kesehatan Di Puskesmas Cijeruk Kabupaten Bogor Tahun 2012. *Jurnal Ilmu Berbagi Fakultas Kesehatan Masyarakat, Universitas Indonesia*, 2012.

How to cite this article: Zuhaeni R, Palutturi S, Russeng S, Nuru N. A study identifying factors related to the home delivery attended by the midwives in the health center of Mawasangka, Middle Buton Regency. *Int J Med Sci Public Health* 2015;5:1714-1720

Source of Support: Nil, **Conflict of Interest:** None declared.