



The Relationship Between Participation in Maternal Health Care Decision-Making and the Selection of Birth Assistants

Putu Sri Devi Tari¹(✉) and Helen Andriani²

¹ Master Program of Public Health Science, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia

putusrid@gmail.com

² Department of Health Policy and Administration, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia

Abstract. Maternal Mortality Rate (MMR) still a concern, especially in Indonesia. The decreasing of MMR is an important indicator in achieving health development in Indonesia. Delivery assistance by health personnel is important because health workers have the appropriate skills and tools to provide safe and clean assistance. The Ministry of Health has obliged delivery assistance assisted by competent health personnel to achieve the Sustainable Development Goals (SDGs) targets. However, study on women's participation in household decision-making to choose birth assistants is still lacking. This study aims to determine the relationship between participation in maternal health care decision-making and the selection of mothers' birth assistants in Indonesia. This study used secondary data from 2017 Indonesian Demographic and Health Survey (IDHS) using a cross-sectional research design. The sample of this research was mothers aged 15–49 years who had given birth in the last five years before the survey in 34 provinces in Indonesia, with a total of 3.042 respondents. The independent variable was participation in maternal healthcare decision-making, and the outcome variable was the selection of birth assistants. The potential covariates were mother's age, residence, living with a partner, number of children who are still alive, knowledge during pregnancy, women's education, women's occupation, husband's education, husband's occupation, and the socio-economic. This study was analyzed using multiple logistic regression. The proportion of skilled birth attendants was 88,6% and traditional birth assistants were 11,4%. The majority of husbands indicated that they made the healthcare decision (46,9%). Our study showed that mothers and other people was 1.5 times more likely to choose traditional birth assistants than the decision made by mothers (OR = 1.5; 95% CI = 1–2.1; p-value 0.044). Also, the participation in health care decision-making by partners was 1.4 times higher than participation by mothers (OR = 1.4; 95% CI = 1.1–1.7; p-value 0,009). However, in the final model of multivariate, participation maternal health care decision-making variable has a significant relationship with the birth assistants variable after controlling for the covariates (p-value > 0.05). Health workers need to improve health education during pregnancy and delivery, openly or even personally through classes for pregnant women and increase knowledge from families, especially husbands, in choosing birth assistants in professional birth assistants.

Keywords: Birth assistants · Women's participation · Maternal health care · Decision-making · Indonesia

1 Introduction

World health development refers to the Sustainable Development Goals (SDG's) which are valid until 2030. One of the targets set by the SDGs is to reduce the Maternal Mortality Rate (MMR) globally to less than 70 per 100,000 live births. The average reduction in maternal mortality rates globally during 2000–2017 was 2.9% [1]. World Bank data shows that Indonesia is one of the countries with the third-highest maternal mortality rate among the Southeast Asian region, namely 177 maternal deaths per 100,000 live births in 2017 [2]. One of the fundamental causes of high maternal mortality in Indonesia is the delay in recognizing pregnancy danger signs and making decisions [3].

Childbirth assistance by health personnel is important because health workers have the appropriate skills and tools to provide safe and clean assistance where the Ministry of Health has required competent health workers assist births to achieve the SDG targets [4]. Research in 97 countries stated that there is a significant correlation between birth attendants and maternal mortality [5]. Riset Kesehatan Dasar or Basic Health Research (2018) shows that only 79% of deliveries take place in health facilities and 16% of births occur at home, where 6.7% are still assisted by non-health personnel. The proportion of deliveries assisted by health personnel has increased from 73% to 83% [6]. From the 2017 IDHS report, birth attendants from health personnel also increased from 83% to 91%, meaning that there are still around 7% who still give birth to traditional birth attendants [7].

According to the indicators on the coverage of maternal and child health services, birth attendants should be performed by competent health workers in midwifery, namely midwifery specialists, general practitioners, midwives, midwife assistants, and midwifery nurses. Competent health workers do not belong to Traditional Birth Assistant (TBA) [8]. Although there has been a decrease in birth attendance by TBA, according to research by Agus et al. TBAs still play a role in assisting deliveries of around 13–18%, especially in rural areas by 20–27% [4].

Empowerment of women is a process to determine life choices, including making decisions and having control over the resources they have [9]. Compliance in the family is still a tradition which results in low access to health services including health personnel and facilities [10]. Decisions are taken directly by pregnant women usually have a positive impact on their delivery. The direct decision on the mother also makes the proportion of birth choices among health workers more [11]. The selection of birth attendants for skilled health workers tends to be for women who take part in household decisions [9].

Although several studies on women's participation in the selection of birth attendants show significant results and have positive impacts, some women in Indonesia are not given the opportunity to be involved in household decision-making due to the influence of several people, including their husbands, parents, and in-laws. In the 2017 IDHS data, 68% of women were involved in 3 household decisions and as many as 10% of women

were not involved at all in these decisions, with 11% of women were not involved in decisions about their health care, 23% of women were not involved in major household expenditure decisions, and 13% of women were not involved in decisions regarding family visits [6]. Therefore, it is necessary to carry out more in-depth research on the relationship between maternal participation in household decision-making and the selection of birth attendants with the further analysis using Indonesian Health Demographic Survey (IDHS) data in 2017.

2 Methods

This study uses secondary data from the 2017 IDHS. Data were taken from 34 provinces in Indonesia, which can be accessed from the official website of the DHS program on <https://dhsprogram.com/data/available-datasets.cfm>. The IDHS was carried out by the Ministry of Health, the National Population and Family Planning Agency (BKKBN), the Central Statistics Agency (BPS), and was technically assisted by the United States Agency for International Development (USAID). The IDHS is also part of an international program, namely the Demographic and Health Survey (DHS), designed to collect data on fertility, family planning, and maternal and child health). The selection is carried out in 2 stages. First, select a number of census blocks with a systematic probability proportional to size (PPS) with the size of the number of households listed in the 2010 Population Census. Second, select 25 ordinary households in each selected census block systematically from the results of household updates in each census block. This study used an analytical study with a cross-sectional design. The population of this study was all maternal / mothers who were responsive in the 2017 IDHS, namely women aged 15–49 years who had been married and gave birth in the last five years during the survey and successful interviews were conducted. The initial sample of the study was 15,357, but after the missing data were removed and sorted in the last five years, the number of samples obtained was 3,042 mothers, namely mothers who were responsive in the 2017 IDHS aged 15–49 years who had married and gave birth in the last 5 years prior The survei, with the criteria that respondents had completed data on all analyzed variables. The dependent variable in this study is childbirth assistance, while the independent variable is maternal participation in health care decision-making. Confounding variables in this study were maternal age, place of residence, mother's education, husband's education, number of children ever born, knowledge of pregnancy, and socioeconomic conditions. Data were analyzed using multiple logistic regression on multivariate variables. The selection of candidate variables to be included in the multivariate variable is based on the results of the bivariate analysis with a p -value ≤ 0.25 . The multivariate variable analysis begins by including all selected candidates into the model; Then, variables with a p -value > 0.05 were excluded one by one from the model. If there is a $> 10\%$ OR change in the variables in the model, they are re-entered as confounding variables. The last model on the multivariate variable is obtained when there are no more variables with a p -value > 0.05 and confounding variables.

3 Ethics

This research is based on secondary data analysis of the 2017 IDHS. The author obtained research permission to use the 2017 IDHS data to use and download raw data after applying for a research permit, namely through the link <https://dhsprogram.com/data/available-datasets.cfm> on the official website DHS. Before the survey began, the IDHS survey had obtained ethical approval from the research ethics committee in each country, namely The Institutional Review Board of Inner City Fund (ICF) International which has been adhered to by the US Department with Health and Human Services requirements for the protection of human subjects.

4 Discussion

4.1 Univariate Analysis

For mothers who gave birth in 2012–2017 in Indonesia, there were more birth attendants among health workers than non-health personnel. Table 1 shows that the most birth attendants were midwives (62.3%), followed by obstetricians (30.2%), nurses (21.6%), and general practitioners (1.8%). However, the number of birth attendants for non-health workers was still quite high, where the number of TBA (19.3%), friends / neighbors (13.9%), and others (1.2%).

As explained in Table 1, there are more birth assistants (88.6%) than non-health workers (11.4%). Table 2 shows that husbands have the highest participation in health care decision-making, namely 46.9%; followed by maternal decisions as much as 42.4%; mothers and other people as much as 10.4%; others and others 0.3%. Then in the confounding variable, the age of the mother was more at the age of around 25–35 years, namely as much as 78.7% compared to the age of the mother who was <25 years or > 35 years (21.3%). In the area of residence, more mothers live in rural areas (50.8%) than in urban areas (49.2%). The most recent education of mothers was mothers who attended

Table 1. Proportion of Each Variables Birth Assistants

Birth Assistant	Total (n)	%
Health Workers (HW)		
General practitioners	56	1,8
Obstetricians	918	30,2
Nurse	656	21,6
Midwife	1895	62,3
Non Health Workers (NHW)		
TBAs	588	19,3
Friends / Neighbors	422	13,9
Others	35	1,2

Table 2. Descriptive Analysis Of Independent, Dependent, And Counfounding Variables

Independent Variabels	Total (n)	%
Participation in Health Care Decision-making		
Mother	1291	42,4
Husband	1427	46,9
Mother and Others	316	10,4
Others and Others	8	0,3
Dependent Variabels	Total (n)	%
Birth Assistants		
Health Workers	2696	88,6
Non-Health Workers	346	11,4
Counfounding Variabels	Total (n)	%
Mother's age		
25–35 years	2393	78,7
<25 years or >35 years	649	21,3
Residence		
Rural	1546	50,8
Urban	1496	49,2
Mother's Education		
>ES	2239	73,6
≤ES	803	26,4
Husband's Education		
>ES	2204	72,5
≤ES	838	27,5
Mother's Occupation		
Work	1465	48,2
Does not work	1577	51,8
Husband's Occupation		
Work	3000	98,6
Does not work	42	1,4
Living with a Partner		
Together	2798	92
Stay Elsewhere	244	8
Number of Children Ever Born		

(continued)

Table 2. (continued)

Independent Variabels	Total (n)	%
01-May	2802	92,1
<1 or >5	240	7,9
Pregnancy Knowledge		
Know	1667	54,8
Doubtful	182	6
Do not know	1193	39,2
Socio Economic Family		
Quartile 3	1004	33
Quartile 2	447	14,7
Quartile 1	1591	52,3

school > Elementary School (73.6%) compared to those who attended \leq Elementary School (26.4%). Husband's education is also the same as mother's, that is, more people go to school > Elementary School (ES) (72.5%) than \leq Elementary School (27.5%). The number of mothers who work (48.2%) is less than those who do not work (51.8%). In contrast to mothers, the number of husbands who work is more (98.6%), very far from the husbands who do not work (1.4%). The proportion of mothers who live with their partners is more (92%) than mothers whose partners live elsewhere (8%). Most mothers have given birth to 1–5 children (92.1) compared to mothers who gave birth to children <1 or >5 (7.9%). Furthermore, the average mother knows knowledge during pregnancy (54.8%), mothers who do not know knowledge during pregnancy (39.2%) and are hesitant to know or not (6%). Then, in the economic status of the mother, the highest number of mothers was in the lowest quantile (52.3%), followed by mothers with the third or top quantile (33%), and mothers with the second quantile (14.7%).

4.2 Bivariate Analysis

Table 3 shows the participation of joint health care decision-making (mothers and others) who chose non-health workers to be birth attendants was 1.5 times higher (OR = 1.5; 95% CI = 1–2.1) and participation in health care decision-making by husbands 1.4 times higher than participation by mothers (OR = 1.4; 95% CI = 1.1–1.7). The risk of mothers aged <25 years or > 35 years choosing to give birth to a non-health worker was almost the same as for mothers aged 25–35 years (OR = 1.1; 95% CI = 0.8–1.4; p-value 0.657). Then, mothers who live in rural areas have a 5.8 times higher risk of giving birth to non-health workers than mothers who live in urban areas (OR = 5.8; 95% CI = 4.4–7.8). The risk of mothers and husbands with education \leq ES has a risk of 5.4 times higher and 4.2 times higher than that of mothers and husbands whose education is >ES. The mother who did not live with her partner or her partner lived in another place, it was almost the same as the mother who lived with her partner (OR = 0.6; 95%

Table 3. The Participation in Maternal Health Care Decision-Making and the Selection of Birth Assistants.

Variables	Birth Assistants (%)		OR (95% CI)	p-value
	HW	NHW		
Participation in Health Care Decision-making				
Mother	90.55	9.45	1	-
Husband	87.39	12.61	1.4 (1.1–1.7)	0,009
Mother and Others	86.71	13.29	1.5 (1–2.1)	0,044
Others	75	25	3.2 (0.6–16)	0,158
Mother’s age				
25–35 years	88.76	11.24	1	-
<25 years or >35 years	88.14	11.86	1.1 (0.8–1.4)	0,657
Residence				
Rural	96.19	3.81	1	-
Urban	81.31	18.69	5.8 (4.4–7.8)	<0.0001
Mother’s Education				
>ES	93.88	6.12	1	-
≤ES	73.97	26.03	5.4 (4.3–6.8)	<0.0001
Husband’s Education				
>ES	93.19	6,81	1	-
≤ES	76,61	23,39	4.2 (3.3–5.3)	<0.0001
Mother’s Occupation				
Work	87.99	12.01	1	-
Does not work	89.22	10.78	0.9 (0.7–1.1)	0.284
Husband’s Occupation				
Work	88.73	11.27	1	-
Does not work	80.95	19.05	1.9 (0.9–4)	0.12
Living with a Partner				
Together	88.28	11.72	1	-
Stay Elsewhere	92.62	7.38	0.6 (0.4–1)	0.05
Number of Children Ever Born				
01-May	90.15	9.85	1	-
<1 or >5	70.83	29.17	3.8 (2.8–5.1)	<0.0001

(continued)

Table 3. (continued)

Variables	Birth Assistants (%)		OR (95% CI)	p-value
	HW	NHW		
Pregnancy Knowledge				
Know	94.78	5.22	1	-
Doubtful	86.09	13.91	18.9 (13.2–27.3)	<0.0001
Do not know	48.9	51.1	2.9 (2.2–3.8)	<0.0001
Socio Economic Family				
Quartile 3	98.8	1.2	1	-
Quartile 2	96.42	3.58	3.1 (1.4–6.5)	0.004
Quartile 1	80.01	19.99	20.7 (11.5–37)	<0/0001

CI = 0.4–1; p-value 0.05). The risk of mothers who have given birth to 1–5 children has a 3.8 times greater risk (OR = 3.8; 95% CI = 2.8–5.1) compared to mothers who have given birth to children <1 or >5. Mothers who did not have the knowledge of pregnancy chose non-health workers as labor workers by 18.9 times higher (OR = 18.9; 95% CI = 13.2–27.3) and mothers who were in doubt about knowledge of pregnancy were 2.9 times higher than mothers who knew knowledge about pregnancy. The family wealth quartile shows that the risk of families included in the 1st quartile (lowest quartile) of choosing non-health workers to be birth attendants was 20.7 times higher (OR = 20.7; 95% CI = 11.5–5.37) and families included in wealth quartile 2 (middle quartile) has a risk 3.1 times higher than the wealth quartile 3 (higher quartile).

4.3 Multivariate Analysis

In the final model, the multivariate analysis shows that the decision-making in health care that involves the mother is lower in choosing birth attendants for non-health workers. The risk of husband's health decision-making; others and others alike had a 1.2 times higher risk of choosing birth attendants than non-health workers. The risk of mothers living in rural areas choosing birth attendants without health personnel was 2.2 (aOR = 2.2; 95% CI = 1.6–3). Mothers with education <ES was 1.9 time more likely (aOR = 1.9; 95% CI = 1.4–2.7) to choose non-health workers to be birth attendants. The risk of mothers who have given birth to children less than 1 or more than 5 to give birth to non-health workers is 2.1 (aOR = 2.1; 95% CI = 1.4–3.1) and the odds of mothers who did not have knowledge on their pregnancy was 9.6 (aOR = 9.6; CI 95% = 6.4–14.3). The lower the family wealth quartile, the higher the risk of choosing a birth attendant for non-health care providers: mothers with the lowest wealth quartile (quartile 1) with OR 6.4 (aOR = 6.4; 95% CI = 3.4–11.9) (Table 4).

The results of the multivariate analysis showed that maternal knowledge of pregnancy and socioeconomics greatly influenced the choice of birth attendant. The risk of mothers

Table 4. Final Model of the relationship Between the Participation in Maternal Health Care Decision-Making and the Selection of Birth Assistants.

Variables	aOR	95% CI	p-value
Participation in Health Care Decision-making			
Mother	1.0	-	-
Husband	1.2	0.9–1.6	0.182
Mother and Others	1.0	0.6–1.5	0.853
Others and Others	1.2	0.2–7.97	0.820
Residence			
Rural	1.0	-	-
Urban	2.2	1.6–3.0	0.019
Mother's Education			
>ES	1.0	-	-
≤ES	1.9	1.4–2.7	<0.0001
Number of Children Ever Born			
1–5	1.0	-	-
<1 or >5	2.1	1.4–3.1	< 0.0001
Pregnancy Knowledge			
Know	1.0	-	-
Doubtful	2.3	1.7–3.0	<0.0001
Do not know	9.6	6.4–14.3	<0.0001
Socio Economic Family			
Quartile 3	1.0	-	-
Quartile 2	2.0	0.9–4.3	0.0081
Quartile 1	6.4	3.4–11.9	<0.0001

who did not have the knowledge about pregnancy will choose birth attendants instead of health personnel is 9.6 times higher than that of mothers who know about pregnancy after controlling for other maternal variables. According to the Indonesian Ministry of Health in Fitriani (2018), mothers who know about reproductive health tend to have broad insight, have high self-confidence in themselves, and can make better decisions for themselves, including in health care and the selection of birth attendants. Mothers who know their pregnancy will usually carry out prenatal examinations and routine to avoid complications, high risks, and death in pregnant women [12]. Based on the Regulation of the Minister of Health Number 97 of the Republic of Indonesia of 2014, during pregnancy, it is recommended to make ANC visits at least four times, namely once in the first trimester, once in the second trimester, and twice in the third trimester [13]. So that mothers must get antenatal care (ANC) services that are by the standards, which is to carry out three examinations, namely the 1st, 2nd and 3rd trimesters with

health workers in health facilities. The risk of mothers who are socioeconomic in the lowest quartile (quartile 1) to give birth to non-health workers is 6.4 times higher than that of mothers who are socioeconomic in the top quartile of wealth after controlling for other maternal variables. This finding is in line with the results of previous research from Wulandari et al. (2020), namely the economic status of the household also plays a role in the selection of birth attendants. Women who have a household economy in quintile 1 (lowest) give birth to non-skilled health workers. Then the greater the wealth quintile, which means that the higher a person's economic status, the smaller the percentage of women who give birth with the help of non-skilled health workers. [9]. Other studies show that pregnant women who do not have or prepare for delivery costs have a 1.7x greater chance of choosing birth attendants by non-health workers than pregnant women who do prepare for their delivery costs [12].

In this study, the participation of non-maternal health care decision-making was higher for non-health workers to give birth to non-health workers than the participation in health care decision-making by mothers. This is supported by Abrori's research (2017) that the condition of mothers who receive family support has a 1.6x risk (PR = 1.560, 95% CI = 1,273–1,912) in deciding to give birth in a traditional birth attendant compared to mothers who do not receive support from their family. Then, mothers with family beliefs who believed had a risk of 1.5x (PR = 1.459, 95% CI = 1.126–1.892) decided to choose a traditional birth attendant compared to mothers who did not receive the family's trust, and mothers who received support from their husbands had risk 1.7x (PR = 1.740, 95% CI = 1.380–2.193) decided to choose a traditional birth attendant compared to mothers who did not receive support from their husbands. It can be concluded that decisions made outside of the mother's own decisions are more dominant in choosing birth attendants. The mother's decision is not directly considered by her family and the decisions made by the mother are considered unable to provide good decisions for childbirth. This situation makes the mother always depend on the decision of her family to give birth by the traditional birth attendant in every delivery [14]. Most important decisions, such as choosing a birth attendant, are still largely determined unilaterally by the husband. Support from husbands related to safe delivery by health workers, availability of funds, equipment and transportation is definitely needed during the labor process [15].

Mothers who have given birth to <1 child or > 5 children have the risk is 2.1 higher than that of mothers who have given birth to 1–5 children. The number of children born can be attributed to maternal parity. The greater the parity, the lower the likelihood of giving birth assisted by skilled health personnel ($p = 0.000$; OR = 0.87; 95% CI = 0.82 < OR < 0.91) [9]. The experience of childbirth and previous pregnancies will greatly influence the selection of birth attendants. The experience of mothers being assisted by birth attendants is why mothers choose birth attendants for subsequent births. Since their first child have been assisted by a traditional birth attendant and the birth process is smooth, mother will assume that they will always give birth if they are assisted by a traditional birth attendant [16]. The number of children born to mothers is significantly related to the utilization of health services for childbirth [17].

5 Conclusions and Recommendations

Maternal exclusion from health care decision-making can create risks in the selection of birth attendants for non-health workers. Other factors related are the mother's place of residence, the mother's education, the number of children born to the mother, the mother's knowledge of pregnancy, and the socioeconomic conditions of the family. This shows that policies regarding maternal and child health, such as the Ibu dan Suami Siaga program, can be further strengthened at the provincial, district and sub-district levels. Their implementation has a strong legal basis to develop as a culture in society. Efforts to increase knowledge in pregnancy and childbirth openly or privately through the class of pregnant women can also be made to increase knowledge of mothers and families, including husbands, in choosing birth attendants to health professionals in improving maternal health that will give birth to a healthy future generation.

Acknowledgment. The authors would like to thank the Inner City Fund Internasional for allowing the use of the 2017 IDHS to be analyzed in this article.

References

1. Executive summary 2000. https://reliefweb.int/sites/reliefweb.int/files/resources/Maternal_mortality_ratio_2000-2017_Executive_summary.pdf (accessed April 19, 2021).
2. WHO, UNICEF, UNFPA, World Bank Group and the UNPD. Maternal mortality ratio (modeled estimate, per 100,000 live births) - ASEAN. World Heal Organ 2019. <https://data.worldbank.org/indicator/SH.STA.MMRT?end=2017&locations=MM-ID-VN-TH-MY-BN-SG-KH-LA&start=2015>.
3. A. Rizkianti, T. Afifah, I. Saptarini, and M. F. Rakhmadi, "Women's decision-making autonomy in the household and the use of maternal health services: An Indonesian case study," *Midwifery*, vol. 90, p. 102816, Nov. 2020.
4. S. Isfandari et al., "Dinamika Gender Terhadap Akses Pelayanan Kesehatan Maternal Sembilan Etnis Di Indonesia," *Bul. Penelit. Sist. Kesehat.*, vol. 22, no. 1, pp. 1–9, 2019.
5. T. Surtimanah and Y. Herawati, "Traditional Birth Attendants (TBAs) Positioning on Strengthening Partnership with Midwives," *J. Kesehat. Masy.*, vol. 13, no. 1, pp. 77–87, Jul. 2017.
6. Riskesdas, "Hasil Utama Riset Kesehatan Dasar," Kementerian Kesehat. Republik Indones., pp. 1–100, 2018.
7. Y. Agus, S. Horiuchi, and M. Iida, "Women's choice of maternal healthcare in Parung, West Java, Indonesia: Midwife versus traditional birth attendant," *Women and Birth*, vol. 31, no. 6, pp. 513–519, 2018.
8. R. D. Parenthen, "Analisis Keputusan Ibu Memilih Penolong Persalinan Di Wilayah Puskesmas Kabila Bone Analysis of Decision Mother to Choosing Delivery Helper In Kabila Bone Health Center," *Bapelkesman Propinsi Gorontalo 2) Fak. Ilmu Kesehat. Masy. Univ. Sam Ratulangi Manad.*, vol. 5, NO, pp. 362–372, 2015.
9. E. Dwi Wulandari, Mirta., Zoraya, "Pengaruh Pemberdayaan Wanita terhadap Pemilihan Penolong Persalinan pada Tenaga Kesehatan Terampil," *Media Kesehat. Masy.*, vol. 16, no. 1, pp. 116–126, 2020.
10. R. King and L. Jones, "Key factors deterring women's engagement with skilled birth attendants in three districts of Timor—Leste. A qualitative descriptive study," *Midwifery*, vol. 79, p. 102555, 2019.

11. A. Nurrachmawati, A. M. Wattie, M. Hakimi, and A. Utarini, "Otonomi Perempuan dan Tradisi dalam Pengambilan Keputusan Pemilihan Tempat dan Penolong Persalinan," *J. Kesehat. Masy. Andalas*, vol. 12, no. 2, pp. 3–12, 2018.
12. D. Fitriani et al., "Faktor yang Mempengaruhi Ibu Hamil Memilih Penolong Persalinan di Wilayah Kerja Puskesmas Malakopa Kabupaten Kepulauan Mentawai Factors Affecting Pregnant Women Choosing Childbirth attendants in the Work Area of Malakopa Health Center Mentawai Islands Dis," *J. Penelit. dan Pengemb. Pelayanan Kesehat.*, vol. 2, no. 3, pp. 153–162, 2018.
13. K. K. RI, *Profil Kesehatan Indonesia 2018*, vol. 40, no. 5. Jakarta: Kementerian Kesehatan RI, 1987.
14. R. R. Abrori, Mardjan, "Dukungan, Kepercayaan Keluarga Dan Peran Suami Terhadap Keputusan Pemilihan Penolong Persalinan Pada Masyarakat Suku Madura Abrori," *J. Kesehat. Masy.*, vol. 16, no. 2, pp. 86–92, 2017.
15. L. Novianti, In., Rabbani Karimuna, Siti., Tina, "Jurnal Ilmiah Mahasiswa Kesehatan Masyarakat VOL. 3/NO.1/ Januari 2018; ISSN 2502–731X," vol. 3, no. 1, pp. 1–9, 2018.
16. N. Nurhayati and M. Sugiharto, "Perilaku Memilih Tenaga Penolong Persalinan pada Ibu Melahirkan di Desa Blambangan, Kecamatan Penengahan, Kabupaten Lampung Selatan, Indonesia," *Bul. Penelit. Kesehat.*, vol. 47, no. 3, pp. 165–174, 2019.
17. A. Kebede, K. Hassen, and A. N. Teklehaymanot, "Factors associated with institutional delivery service utilization in Ethiopia," *Int. J. Womens. Health*, vol. 8, pp. 463–475, 2016.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

