

# Factors Affecting Husband Participation in Antenatal Care Attendance and Delivery

**R Rumaseuw<sup>1</sup>, S M Berliana<sup>2</sup>, N Nursalam<sup>3</sup>, F Efendi<sup>3</sup>,  
R Pradanie<sup>3</sup>, P D Rachmawati<sup>3</sup>, and G E Aurizki<sup>3</sup>**

<sup>1</sup>Badan Pusat Statistik, Supiori District of Papua Province, Indonesia

<sup>2</sup>Sekolah Tinggi Ilmu Statistik – Badan Pusat Statistik, Jakarta, Indonesia

<sup>3</sup>Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

Email: praba-d-r@fkip.unair.ac.id

**Abstract.** The government has implemented several programs to prevent and reduce a mother's mortality rate by enhancing active role of the family. The most responsible family member on maintaining the pregnancy and delivery process is the husband. The husband must be active to take care of his wife. Active participation of the husband in accompanying his wife during pregnancy and the delivery process is one of the substantial factors, which helps the husband to take decisions related to the health of his wife. This study aimed to identify variables and its trends, which significantly affect a husband's participation in accompanying his wife during pregnancy and the delivery process. The data used in this study was from an Indonesian Demographic Health Survey 2012. The study used binary logistic regression as the analysis method. The result showed as many as 8,237 husbands accompanied their wife in antenatal care and the delivery process. The significant variables affecting the husband participation are the age of the wife, the education of wife, the education of the husband, the occupational status of the wife and the husband, the number of children, pregnancy status, and residency region. The possibility for a husband to accompany his wife is larger in several factors, such as the wife being between the ages of 21 – 35 years old, a husband who minimally graduated from junior high school, a working husband, as well as a wife, and the number of children less than and equal to two and the expected pregnancy. The government should consider those factors to create policy related women's health and integrate the factors into various sectors.

**Key words:** Husband participation, Indonesian DHS, Women's Health

## 1. Introduction

Indonesia is the country with the fourth largest population in the world after China, India and the United States, and the third in Asia. The total population of Indonesia from the Census in 2010 is 237,641,326 people and continues to increase each year. It is estimated that the population until 2035 will reach 305,652,400 people. This large population makes Indonesia have many kinds of problems related to population, one of which is high a mortality rate.

The Maternal Mortality Rate (MMR) is an important indicator of the health status of a region. MMR describes the number of women who died per 100,000 live births. The cause of deaths are related to pregnancy or treatment disorder (excluding accidents or incidental cases) during pregnancy, childbirth and in the puerperium (42 days after delivery) without taking into account the length of pregnancy [1]. The World Health Organization (WHO) 2014 estimates that 800 women die every day due to pregnancy complications and the birth process. Approximately 99% of all maternal deaths



occur in developing countries. Approximately 80% of maternal deaths result from increased complications during pregnancy, labor and after delivery. Based on the Millennium Development Goals (MDGs), the Ministry of Health Republic Indonesia, targeted to reduce maternal mortality (MMR) to 3/4 in the period 1990 - 2015 at 102 per 100,000 births [2].

The Indonesian Demographic Health Survey (SDKI) report recorded that MMR in Indonesia decreased from 1991 to 2007, to 228 deaths per 100,000 live births, and again increased in 2012, to 359 per 100,000 live births. Although the mortality rate in 2012 is decreasing and is slightly smaller than what it was in 1991, the potential to achieve the 5th MDG target to reduce maternal mortality rate is off track, meaning that it takes hard work and earnestly to achieve it [2]. Many of the things that resulted in the death of the mother in Indonesia is high, the Ministry of Health Republic of Indonesia divide the cause of death of this mother into causes ie directly and indirectly. The direct maternal death is caused by bleeding, hypertension/eclampsia, infection, serotinous and abortion. Meanwhile, the indirect causes were 3 delays and 4T (too young to give birth, too old to give birth, too close to birth spacing and too frequent childbirth). The three delay phases are, firstly, late recognizing the alarm, and are late in making a decision to seek help individually, or either from family or both. The second one is late for referring to a health care facility. Factors affecting this phase too are the duration of transportation, road conditions and transportation costs. The third late is late for a lack of service because of limited facilities and human resources [3-5].

The government has made various efforts to prevent and reduce maternal mortality. Some government efforts include Making Pregnancy Safer (MPS). One of the MPS strategies of encouraging the empowerment of women and families, and the expected output of the strategy is to establish family involvement in promoting maternal health and enhance the family's active role in pregnancy and childbirth. In addition, the government also launched the Birth Planning and Complication Prevention Program (P4K), where the general objective of P4K is to increase coverage and the quality of health services for pregnant women and new infants through enhancing the active role of families and communities in planning a safe delivery and preparing for complications, and maternal obstacles for giving birth to healthy babies [5].

These programs show the importance of family participation in pregnancy and childbirth. The most responsible family member in maintaining pregnancy and childbirth is the husband, where a husband should be able to be SIAGA (*Siap/Ready, Antar/Delivery, and Jaga/Guard*), a husband who is always ready when his wife needs it, be more alert and act/or anticipate if you see a sign. He should also be aware of the dangers of pregnancy, always take the wife wherever the wife wants to go, especially when examining the womb by the doctor or midwife. The husband should accompany the wife during the process of examination of pregnancy and childbirth, and maintain the health and safety of the wife and baby. Being a standby husband is clear proof that the husband fully supports the wife's pregnancy [6] [7].

Active participation of husbands during pregnancy can help the success of a wife through pregnancy and childbirth. According to [8] in his book entitled "Pregnant Mother Care", the husband's support is important during pregnancy because the wife is sometimes faced with the situation of fear and solitude, so that the husband is expected to always motivate and accompany his wife. In addition, the support provided by the husband during the pregnant can also reduce anxiety and restore confidence in the expectant mother in the process of pregnancy. This study aims to find out how the general description of husbands' participation in accompanying wives during pregnancy and delivery, and also knows what variables significantly affect the participation of husbands, and knowing how the trends of significant variables affect the participation of husbands in accompanying the wife during the examination of pregnancy and childbirth in Indonesia.

## 2. Methods

This study uses secondary data, the Indonesia Demographic and Health Survey (SDKI) 2012. The data is used to analyze the participation of the spouse/husband in accompanying the wife during pregnancy and childbirth examination. Some of the topics of SDKI-WUS 2012 used in this research concern

background respondents, the birth history, pregnancy care, husband background and occupation of respondent and husband.

Implementation of SDKI 12 was conducted from May to August 2012 in 33 provinces. The population in this study were all women of reproductive age between the ages of 15 – 49 years, who had children up to 5 years old in the survey. Furthermore, the sample in this study were women who had given birth and who had the last child in the last 5 years period, that is 2007 to 2012 and married/live together with the husband/spouse. The number of samples used in this study was as many as 8,237 respondents.

The data collection in the SDKI 2012 was conducted through direct interviews using four questionnaires, namely household questionnaires, female fertile age questionnaires, marriage man questionnaires, and teenage male questionnaires who had never been married. This study used nine independent variables, namely wife age, husband /spouse, wife education, husband/spouse education, wife's work status, husband's working status, the number of children, pregnancy status, and residence area. Besides, this research uses three variables bound by the participation of husbands in accompanying the wife during the examination of pregnancy, childbirth, and the combination of both. The method of analysis used in this research is descriptive analysis and inferencing analysis. In the inferential analysis, the analysis used was Binary Logistic Regression Analysis.

### 3. Results

The general description of a husband's participation in pregnancy and delivery in Indonesia can be explained through the results of descriptive analysis. Based on the result of the data processing of SDKI-WUS 2012, most of the husbands accompanying their wives during pregnancy examination is equal to 81.4%, meanwhile, the number of husbands accompanying their wives at the time of delivery is greater than 86.5%, and the rest do not accompany their wives, and, and if seen percentage of husband who accompanied his wife at the time of checking pregnancy & childbirth, the percentage decreased that is equal to 73.2%.

Regarding the 95% confidence level, the results among variables were varied. For the wives' education, the wife who has a minimum of junior high school education has a greater tendency to be accompanied during the pregnancy examination 1,632 times and accompanied during the examination of pregnancy and labor 1,411 times, compared to wives who have education under junior high school level. The wife who has a husband with a minimum of junior high school education has a greater tendency to be accompanied during pregnancy examination 1,822 times, during labor 1,218 times, and during pregnancy and labor 1,651 times, compared to the wife who has a husband with education in under graduate junior high school.

Furthermore, the working wife had a greater tendency to be accompanied during the pregnancy examination 1,303 times, during labor 1,277 times, and, at the time of pregnancy and labor 1,273 times, compared to the unemployed wife. The wife who had a husband that worked had a greater tendency to be accompanied during the pregnancy examination 2,062 times and during the examination of pregnancy and labor 1,799 times, compared to the wife whose husband did not work. When compared to the number of children, the most respondents accompanied by their husbands in the examination of pregnancy, childbirth, or both, are respondents who have children less than equal to 2, although, at the time of birth, not too different participation of husbands who accompany his wife. The respondents whose pregnancies were desirable had a greater tendency to be accompanied during pregnancy checks 1,429 times, during labor 1,246 times, and during pregnancy and labor 1,385 times, compared to wives who did not want pregnancy at the time of pregnancy. Based on the 95% confidence level, it was concluded that wives with an amount of two, or less than two, had a greater tendency to be accompanied during pregnancy checks 1,641 times and, at the time of pregnancy and labor 1,463 times, compared to wives with more than 2 children.

**Table 1.** Estimation of the Parameters and the Ratio of the Husband's Inner Parent's Tendency - Pregnancy and Delivery Checks

Husbands' Participation	Demographic (%)	Pregnancy (%)		Delivery (%)		Pregnancy & Delivery (%)	
		B	OR	B	OR	B	OR
Participating		81.40		86.50		73.20	
Not-Participating		18.60		13.50		26.80	
Total		100		100		100	
Participation Percentage in the Demographic Data							
Age of Wife							
<21	4.95	80.39		86.30		72.10	
		0.008	1.008	-	-	-	-
21 – 35	72.72	83.67		86.50		75.10	
		0.175*	1.191	-	-	-	-
>35	22.33	74.44		86.30		67.40	
		-	1.00	-	-	-	-
Age of Husband							
<26	9.03	83.10		87.20		74.50	
		-	-	-	-	-	-
26 – 35	50.87	84.20		86.40		75.30	
		-	-	-	-	-	-
>35	40.10	77.60		86.40		70.40	
		-	-	-	-	-	-
Education of Wife							
<Junior High School	21.12	69.30		85.40		62.50	
		-	1.00	-	-	-	1.00
≥Junior High School	78.88	84.70		86.80		76.10	
		0.490**	1.632	-	-	0.344**	1.411
Education of Husband							
<Junior High School	22.00	69.10		84.40		61.70	
		-	1.00	-	1.00	-	1.00
≥Junior High School	78.00	84.90		87.10		76.50	
		0.600**	1.822	0.198**	1.218	0.502**	1.651
Occupation Status of Wife							
Working	47.91	79.50		85.10		70.80	
		0.264**	1.303	0.245**	1.277	0.242**	1.273
Not Working	52.09	83.60		88.00		75.90	
		-	1.00	-	1.00	-	1.00

**Table 1.** Continued

Husbands' Participation	Demographic (%)	Pregnancy (%)		Delivery (%)		Pregnancy & Delivery (%)	
		B	OR	B	OR	B	OR
Occupation Status of Husband							
Working	98.4	69.90		85.70		61.70	
		0.724**	2.062	-	-	0.587**	1.799
Not Working	1.6	81.60		86.50		73.40	
		-	1.00	-	-	-	1.00
Number of Children							
≤2	70.86	85.00		86.90		76.50	
		0.495**	1.641	-	-	0.381**	1.463
>2	29.14	72.70		85.50		65.30	
		-	1.00	-	-	-	1.00
Pregnancy Status							
Planned	84.64	73.20		84.10		64.70	
		0.357**	1.429	0.220**	1.246	0.326	1.385
Not Planned	15.36	82.90		86.90		74.80	
		-	1.00	-	1.00	-	1.00
Residential Status							
Rural	36.70	78.40		86.60		70.90	
		-	1.00	-	-	-	-
Urban	63.30	83.20		86.40		74.60	
		-0.157*	1.170	-	-	-	-
Constant		-0.992		1.409		-0.856	

The respondents whose residence was in the urban area is mostly accompanied by the husband in the pregnancy examination and the examination of pregnancy and childbirth, while, at the time of more labor accompanied by the husband is the respondent/wife residing in rural areas, but the difference is not too far away. Based on the 95% confidence level, it was concluded that wives living in urban areas had a greater tendency to be accompanied during pregnancy checks 1,170 times, compared to wives living in rural areas.

The variables that significantly influence the participation of husbands in accompanying wives during pregnancy and labor can be researched using binary logistic regression. By using this method, we can know the influence between a wife's age, the husband's age, the wife's education, husband's education, wife's working status, husband's work status, number of children, pregnancy status and residence area to a husband's participation in accompanying his wife during pregnancy and delivery.

The results show that with a 95% confidence level, independent variables that significantly influence a husband's participation in accompanying his wife during pregnancy examination are the wife's age, wife's education, husband's education, wife's working status, husband's working status, number of children, and pregnancy status. Independent variables that significantly influence the participation of husbands in accompanying wives during childbirth are a husband's education, the wife's working status and pregnancy status.

#### 4. Discussion

The variables that significantly influence the participation of a husband in accompanying his wife during pregnancy examination are the wife's age, wife's education, husband's education, wife's working status, husband's work status, number of children and pregnancy status. Some of these independent variables also have a significant effect on a husbands' participation in pregnancy and delivery, but only the wife's age variable does not have a significant effect on the participation of husbands during pregnancy and childbirth.

Pregnancy is a time when a mother undergoes major changes, both psychologically and physiologically, these changes in pregnant women can cause anxiety and stress during pregnancy [9]. Stress in pregnant women is a very easy condition to occur [10] [11] and research says that the age of respondents who are in the early adult age range, most of whom will experience moderate stress during pregnancy [9].

Most of the respondents in this study had an age in the range of 21 - 35 years; this is the age of early adulthood. Children, less than 2 children, this shows little experience in the delivery process. Support and role as husband SIAGA is very important during the process of pregnancy [12].

A mother's mortality rate increases according to the 2012 IDHS, as an effort to prevent Indonesia to mobilize the SIAGA husband program. SIAGA means the husband is ready to take and keep his wife who is pregnant and facing the process of childbirth, and the role of husband as husband SIAGA as this is a form of a husband's participation or support to the wife during pregnancy [13]. One of the factors that significantly influence the participation of a husband in accompanying his wife during pregnancy examination is the wife's age. The wife's age in this research mostly ranged in the age of a young adult. The task of early adulthood development is the age at which one begins living with a partner, starting a new family and performing roles and functions within the family. According to MOH, the role of a husband in accompanying his wife during pregnancy is always ready to provide time to take the faithful wife while including checking her pregnancy [14]. Characteristics of wives in this study are mostly located in the age of 21 - 35 years, where, at that age, is in the stage of development of the family and at the stage of married couples and families with children aged under five [15]. Newly-married couples also have the characteristics to plan to have children, and this is in accordance with the results of research that most respondents who have husbands participate in the examination of pregnancy and have a planned pregnancy status. This wife's age factor does not have a significant effect on the husband's participation during pregnancy and labor due to the age of 21 - 35 years being a safe age for a wife to conceive and give birth [16]; therefore, in this study, the participation of husbands focused only on the examination of pregnancy only.

The number of children also significantly influenced the participation of husbands in the examination of pregnancy and childbirth, and the results of this study are that most of the new couples have less than two children. Having less than two children indicates the experience of pregnancy and childbirth is still less, so that the husband participates in the examination of pregnancy with the aim to learn together about the condition of his pregnant wife, and this can hopefully play an active role in keeping the wife safe during pregnancy. Experience effect on one's behavior [17]. This is in accordance with the results of the Marina research that the husband who did not provide support SIAGA occurs in multigravida, meaning that the husband has a lot to learn to have a smooth pregnancy experience with his wife.

Another factor that significantly affects the participation of husbands in the examination of pregnancy and childbirth is the occupation of the wife and the husband. Characteristics of respondents in this study indicate that the number of percentage of wives and husbands who work and participate in the examination of pregnancy is greater than the number of husbands and wives who do not work. This suggests that the economic conditions affect the role of the husband in participating in the wife's pregnancy examination. The higher the economic conditions affect the husband's support during pregnancy [18]. Family income will affect the behavior of a person in using health services as the lower the family income, the lower the family activity on the health of pregnant women. This is due to



the high cost of daily living that they prioritize, compared with the maternal health of pregnant women.

The results showed that from the participation of husbands during pregnancy, labor and childbirth, the largest percentage is the husband accompanying the wife during childbirth. The role of the husband is very important in the process of the pregnancy of the wife, both during pregnancy and during childbirth. A husband's support will affect the success of labor [19]. Good interaction between husband and wife during childbirth will affect the wife's emotional state during childbirth, thus decreasing anxiety and improving the success of labor and early breastfeeding initiation [21-[21].

A husband's participation in the delivery process is influenced by the tendency of the wife to get emotional support during childbirth. The process of labor is a condition that requires a good physical and mental readiness for a mother. The results showed that 86% of pregnant women experience stress in the 3rd trimester; one of the causes of stress in pregnant women is the mother's fear of labor. A husband's support is very important in the process of childbirth, and research indicates that the wife with her husband accompanying her in childbirth will experience fluency during labor, compared to the wife who was not accompanied by the husband during childbirth [11]. A husband's support during labor will reduce anxiety during postpartum wives [12].

Educational factors are also one of the factors that influence the participation of husbands in accompanying their wives during childbirth. This is in line with the statement [8], that factors affecting the role of the assistant in delivery are socioeconomic, cultural, environmental, experiential, age, and educational factors. Education will affect the need for maternal assistance during childbirth [22]. The educational background of respondents in this study mostly have more education than junior high school levels. Education will greatly affect a person's knowledge and coping. A person with a higher education may also have good health literacy [13]; thereby, impacting on improving a good knowledge of the importance of the husband's role in accompanying during labor.

The wife's working status also becomes one of the factors influencing husband participation during childbirth. Within this research, wives who work have a tendency to be accompanied during labor. One of the factors that influence the accompaniment of the husband during childbirth is socioeconomic [16]. The higher the socioeconomic person, the better the husband in accompanying the wife during the labor process. Wives who work in a family can help the family economy, so tend to have a better economic level, compared with wives who do not work.

In this study, most of the respondents had a planned pregnancy status. Planning a pregnancy itself is also a form of co-operation and effective communication between the husband and wife; thus, the husband also has the responsibility to participate in maintaining the health of the wife and the fetus that she contains during pregnancy until the birth process. One of the responsibilities of the husband is accompanying the wife during the examination of pregnancy until the process of childbirth. In addition, mothers with experience who were accompanied during the previous labor had a tendency to be recharged during labor. The psychological state of the mother will affect the process of childbirth so that it takes the support of a husband, at least in the form of touch and words of praise that can make her comfortable, give reinforcement, and improve family harmony [23].

## 5. Conclusion

The variables that significantly influence the participation of a husband in accompanying his wife during pregnancy examination are the wife's age, wife's education, husband's education, wife's working status, husband's working status, number of children and pregnancy status. Independent variables that significantly influence the participation of husbands in accompanying wives during childbirth are the husband's education, wife's working status and pregnancy status. Independent variables that significantly influence a husband's participation in accompanying his wife during pregnancy and delivery are his wife's education, husband's education, wife's work status, husband's employment status, number of children and pregnancy status.

## 6. References

- [1] Ministry of Health RI 2012 *Maternal Mortality Rate*. (Jakarta: Ministry of Health RI)
- [2] Ministry of Health RI 2014 *Maternal Health Situation*. (Jakarta: Ministry of Health RI)
- [3] Kurniati A, Chen CM, Efendi F and Berliana SM 2017 *Health Care Women Int* 1–17,
- [4] Efendi F, Chen CM, Kurniati A and Berliana SM 2016 *Women Health* **57** 614–629,
- [5] Ministry of Health 2010 *National Strategy for Making Pregnancy Safer (MPS) in Indonesia 2001-2010*. (Jakarta: Team of Directorate General of Community)
- [6] Mullany BC, Becker S and Hindin M 2006 *Health Educ. Res* **22** 166–176
- [7] Setyobudihono S, Istiqomah E and Adiningsih S 2016 *Procedia - Soc. Behav. Sci* **222** 160–168
- [8] Kusmiyati *The Caring Of Pregnant Women (Perawatan Ibu Hamil)* (Yogyakarta: Fitramaya)
- [9] Armini NKA, Wahyuni ED and Rachmawati PD 2017 *J. Ners* **3** 72–76
- [10] DiPietro JA 2012 *J. Adolesc. Heal.*, **51** 3–8
- [11] M. Michael W.O'Hara; Katherine L. Wisner MD 2014 *Best Pract. Res. Clin. Obstet. Gynaecol.*, **28** 3–12
- [12] Liamputtong P and Naksook C 2003 *Midwifery* **19** 27–36
- [13] Rakhmawati M and Indawati R 2014 *Biometrika dan Kependudukan*
- [14] Ministry of Health of the Republic of Indonesia 2001 *Guidelines for the implementation of Neonatal Improvement Efforts*. (Jakarta: Ministry of Health of the Republic of Indonesia)
- [15] Friedman MM 2010 *Family Nursing Teaching Textbook: Research, Theory, and Practice*. (Jakarta: EGC)
- [16] Bobak 2005 *Maternity Nursing* (Jakarta: EGC)
- [17] Azwar 2009 *Human Attitude: Theory and Measurement* (Jakarta: Pustaka pelajar).
- [18] Yanuasti 2001 *Husband's Social Support for ANC Services*.
- [19] Sapkota S, Kobayashi T and Takase M 2013 *Midwifery* **29** 11 1264–1271
- [20] Retno S, Nursalam NN, Santoso BS and Rachmat RR 2016 *J. NERS* **11** 224
- [21] Story WT, Burgard SA, Lori JR, Taleb F, Ashraf Ali N and Emdadul Hoque D 2012 *BMC Pregnancy and Childbirth* **12**
- [22] Suto M, Takehara K, Yamane Y and Ota E 2017 *J. Affect. Disord.* **210** 115–121
- [23] Umiati T, Rakhmawati M, Simangunsong W, Lukitowati B, Fauzi E, Setiawan E 2013 *Indones. J. cancer*