Impact of Husband's Participation in Antenatal Care on the Use of Skilled Birth Attendant

Dampak Partisipasi Suami dalam Pelayanan Antenatal pada Penggunaan Tenaga Persalinan Terlatih

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DOI: http://dx.doi.org/10.21109/kesmas.v10i4.520

Abstract

Alternative approaches are needed to address the issues of reproductive health, one of which is by increasing participation of men on women's sexual and reproductive health. This study aimed to investigate the impact of husband's participation in antenatal care on the use of skilled birth attendant after controlling socio-demographic characteristics. Samples were 4,000 women aged 15 – 49 years who had their last childbirth in the past year before the survey drawn from 2012 Indonesia Demographic and Health Survey. The study used binary logistic regression model to identify the impact of husband's participation in antenatal care on the use of skilled birth attendant after controlling socio-demographic and maternal characteristics. The odds after controlling other factors indicated that women whose husbands attended at least one antenatal care visit were more likely to use skilled birth attendants than those whose husbands did not attend. In conclusion, husband's participation, through attending antenatal visit, positively affects the use of skilled birth attendant by women during delivery.

Keywords: Antenatal care, husband's participation, skilled birth attendants

Abstrak

Pendekatan alternatif diperlukan untuk mengatasi persoalan kesehatan reproduksi, salah satunya dengan meningkatkan partisipasi laki-laki pada kesehatan reproduksi perempuan. Penelitian ini bertujuan untuk menelusuri dampak partisipasi suami dalam pelayanan antenatal pada penggunaan tenaga persalinan terlatih setelah mengontrol karakteristik sosial demografi. Sampel sebanyak 4.000 perempuan berusia 15 – 49 tahun yang memiliki persalinan terakhir pada tahun lalu sebelum survei diambil dari Survei Demografi dan Kesehatan Indonesia tahun 2012. Penelitian menggunakan model regresi logistik biner untuk mengidentifikasi dampak partisipasi suami dalam pelayanan antenatal pada penggunaan tenaga persalinan terlatih setelah mengontrol karakteristik ibu dan sosial demografi. Peluang setelah mengontrol faktor lainnya mengindikasikan perempuan yang suaminya datang setidaknya satu kali kunjungan pelayanan antenatal lebih berpeluang menggunakan tenaga persalinan terlatih dibandingkan yang suaminya tidak datang. Sebagai kesimpulan, partisipasi suami dengan berkunjung ke pelayanan antenatal secara positif berdampak pada penggunaan tenaga persalinan terlatih oleh perempuan selama bersalin.

Kata kunci: Pelayanan antenatal, partisipasi suami, tenaga persalinan terlatih

Introduction

In recent years, maternal mortality has become one of the world public major concerns, especially in the context of the United Nations Millennium Declaration. The fifth Millennium Development Goals (MDGs) initially stated one target, that is "to reduce maternal mortality ratio (MMR) by three quarters by 2015". Furthermore, in the United Nations Conference on Sustainable Development (UNCSD) 2012 that declares Sustainable Development Goals (SDGs), the issue of maternal mortality remains a major concern. The first target in the third SDGs is to reduce global mortality ratio to less than 70 deaths per 100,000 live births in 2030. Maternal mortality also remains a major concern in Indonesia's health development. The Indonesian government has targeted the reduction of MMR from 390 deaths per 100,000 live births in 1991 to 102 deaths per 100,000 live births in 2015.

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Despite of the declined trend from 390 deaths per 100,000 live births in 1992 to 228 deaths per 100,000 live births in 2007, MMR increased to 359 deaths per 100,000 live births in 2012.[1]

Skilled birth attendant (SBA) during delivery is considered a key strategy in the reduction of maternal deaths.[2] A skilled birth attendant is an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to have proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, in the identification, management and referral of complications in women and newborns. Meanwhile, a skilled health professional can administer interventions to prevent and manage life-threatening complications, such as heavy bleeding, or refer the patient to a higher level of care when needed.[3] However, the limited progress in meeting the fifth MDGs of reducing maternal mortality in developing countries necessitates new approaches to maternal health interventions.[4]

Reproductive health has long been viewed as solely a woman's issue, family planning and reproductive programs have largely focused exclusively on women. This is due to the approaches that fertility is only experienced by women, so the role of men in reproductive health is often overlooked.[5]

However, in most families, the man as the breadwinner is the holder of financial power and the key decision makers of any problems, including reproductive health. So that, changing the approaches by increasing the participation of men in reproductive health problems may have positive impact on women's health, men's health, and the health of children.[5]

Several studies have shown that women want their partners to be more involved in maternal and child health care and that, in many cases, men are interested to be involved.[6] Increasing men's participation could yield health benefits for men, women and children by ensuring the use of antenatal care (ANC), healthy practices during pregnancy, institutional delivery and child care.[7,8]

Several studies have examined the role of men in influencing uptake of reproductive health services.[9,10] These studies define men's involvement in terms of men's roles as clients of health care services, as partners, or as agents of positive change. Current literature indicates that the influence of men's involvement on SBA uptake among women acts through husband's approval, agreement between couples on the importance of delivery at a health care facility, gender roles (perceiving services as being woman-focused), men's knowledge of the relevance of their involvement, and traditional perceptions of delivery as exclusively a woman's concern.[11-13]

However, the use of health services is a complex behavioral phenomenon. Beside the men's involvement, the use of health services is related to availability, quality and cost of services as well as social structure, health beliefs and personal characteristics of the users.[14]

This study aimed to identify the impact of husband's participation in ANC on the use of SBA in Indonesia after controlling socio-demographic and maternal characteristics.

Method

This study used data from 2012 Indonesia Demographic and Health Survey. Demographic and Health Survey is nationally-representative household survey that provides data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition. This survey used a three-stage sampling technique by probability proportional to size (PPS) to select a sample of 46,000 households spread across Indonesia. There were 55,200 women aged 15 – 49 year as selected for this survey. In this study, the unit of analysis was women who had their last childbirth in the past year prior to the survey. With this limitation, there were 4,000 women aged 15 – 49 years eligible involved in this study.

This study used binary logistic regression model to identify the impact of husband's participation in ANC on the use of SBA after controlling socio-demographic and maternal characteristics. Binary logistic regression is a statistical method for analyzing a data set in which there are one or more independent variables that determine an outcome. The outcome is measured with a dichotomous variable (there are only two possible outcomes).[15]

The dependent variable used in this study was the use of birth attendants during last delivery by the women aged 15 – 49 years. Birth attendants are classified as skilled if they are midwives, doctors, or nurses and unskilled if others.

The key independent variable investigated in this study was men's involvement in women reproductive health. Besides, age, place of residence, education level, employment status, wealth status, the ownership of health insurance status, parity, pregnancy status (planned or unplanned), having pregnancy problem status, number of ANC visits, and husband's education level were considered as independent variables in the model.

Several studies have examined the role of men in influencing uptake of reproductive health services,[9,10,16] but there was no single widely used indicator for measuring men's involvement. This study used husband's attendance in ANC as an indicator for measuring men's involvement in women reproductive health as used by Mangeni et al.[16]

Husband's attendance in ANC was classified in two categories. First, if the woman attended ANC and her husband accompanied her (at least once), it was classi-

fied as husband attended ANC. Second, if the woman attended ANC but her husband did not accompany her or if the woman did not attend ANC at all and therefore could not be accompanied by her husband, it is classified as husband did not attend ANC.

The model used in this study can be formulated as follow Equation 1, whereby $\pi(x)$ is probability to use an SBA during delivery, β_0 is a constanta to be estimated, β_p are parameters to be estimated, and x_p represent independent variables.

Equation 1.

$$ln\left(\frac{\pi(x)}{1-\pi(x)}\right) = \beta_0 + \beta_1 x_1 + \cdots + \beta_p x_p$$

Results

Distribution of husband's participation in ANC by the use of SBA was presented in Table 1. Socio-demographic and maternal characteristics were shown in Table 2.

Table 1. Distribution of Women Using Skilled Birth Attendants by Husband's Attendance at ANC

Husband's Attendance at ANC	Attended by SBA				Total	
	Yes		No			
	n	(%)	n	(%)	n	(%)
Yes	2.493	91.35	236	8.65	2.729	100.00
No	832	65.46	439	34.54	1.271	100.00

Meanwhile, univariate logistic regression results were shown in Table 3 by the outcome variables. Then multivariate logistic regression results were shown in Table 4.

The most of women (91.35%) whose husbands accompanied them for at least one ANC visit used an SBA during delivery. The univariate logistic regression showed that husband's participation in ANC significantly affected the use of an SBA. The women accompanied by their husbands at least one ANC visit were more than five times more likely to use SBAs than for women who had ANC but not accompanied by their husbands or women who did not attend ANC (OR= 5.575, 95%CI = 4.672 - 6.650).

As shown in Table 2, a proportion of women whose husbands' education level were secondary or higher used SBAs higher than those whose husbands' education level was primary or lower (93.26% compared to 73.84%). The univariate logistic regression showed that husband's education level significantly affected the use of an SBA. Women whose husbands' education level was secondary or higher were almost more than five times more likely to use SBAs than for women whose husbands' education level were primary or lower (OR= 4.900, 95%CI = 3.997 – 6.007).

A proportion of women living in urban areas used SBAs was higher than those living in rural areas (94.37% compared to 73.81%). Women in urban areas were almost six times more likely to use SBAs during delivery

Table 2. Distribution of Women Using Skilled Birth Attendants by Socio-Demographic and Maternal Characteristics

Variables	Category	Attended by SBA				Total	
		Yes		No			
		n	(%)	n	(%)	n	(%)
Age group	< 20 years old	248	76.78	75	23.22	323	100.00
	20 – 35 years old	2,606	84.01	496	15.99	3.102	100.00
	> 35 years old	471	81.91	104	18.09	575	100.00
Place of residence	Urban	1.710	94.37	102	5.63	1.812	100.00
	Rural	1.615	73.81	573	26.19	2.188	100.00
Education level	Secondary or higher	2.519	91.00	249	9.00	2.768	100.00
	None or primary	806	65.42	426	34.58	1.232	100.00
Employment status	Employed	1.532	82.95	315	17.05	1.847	100.00
	Unemployed/don't know	1.793	83.28	360	16.72	2.153	100.00
Wealth index	Poor	1.405	70.43	590	29.57	1.995	100.00
	Middle	659	92.30	55	7.70	714	100.00
	Rich	1.261	97.68	30	2.32	1.291	100.00
Having health insurance	Yes	1.363	88.05	185	11.95	1.548	100.00
	No	1.962	80.02	490	19.98	2.452	100.00
Parity	1	1.317	88.63	169	11.37	1.486	100.00
	>1	2.008	79.87	506	20.13	2.514	100.00
Planned pregnancy	Planned	2.817	82.97	578	17.03	3.395	100.00
	Unplanned/mistimed	508	83.97	97	16.03	605	100.00
Having pregnancy problem	Yes	2.088	90.51	219	9.49	2.307	100.00
	No	1.237	73.07	456	26.93	1.693	100.00
Number of ANC visits	0	70	30.57	159	69.43	229	100.00
	1-3	333	65.68	174	34.32	507	100.00
	4+	2.922	89.52	342	10.48	3.264	100.00
Husband's education level	Higher than secondary	1.784	93.26	129	6.74	1.913	100.00
	Secondary or lower	1.541	73.84	546	26.16	2.087	100.00

Table 3. Determinants of the Use of Skilled Birth Attendants (Bivariate Model)

Variables	Category	B	Standard Error	p Value	Unadjusted Odds Ratio	95% CI
Husband's attendance at ANC	No (ref.)					
	Yes	1.718	0.090	0.000	5.574	4.672 - 6.650
Age group	< 20 years old (ref.)					
	20 – 35 years old	0.463	0.141	0.001	1.589	1.206 - 2.093
	> 35 years old	0.315	0.171	0.065	1.370	0.980 - 1.913
Place of residence	Rural (ref.)					
	Urban	1.783	0.113	0.000	5.948	4.767 - 7.422
Educational level	None or primary (ref.)					
	Secondary or higher	1.677	0.089	0.000	5.347	4.487 - 6.372
Employment status	Unemployed/don't know (ref.)					
	Employed	-0.024	0.085	0.779	0.976	0.827 - 1.153
Wealth index	Poor (ref.)					
	Middle	1.616	0.149	0.000	5.032	3.760 - 6.734
	Rich	2.871	0.191	0.000	17.651	12.136 - 25.672
Having health insurance	No (ref.)					
	Yes	0.610	0.093	0.000	1.840	1.533 - 2.209
Parity	>1 (ref.)					
	1	0.675	0.096	0.000	1.964	1.628 - 2.369
Planned pregnancy	Unplanned/mistimed (ref.)					
	Planned	-0.072	0.120	0.548	0.931	0.736 - 1.177
Having pregnancy problem	No (ref.)					
	Yes	1.257	0.090	0.000	3.515	2.948 - 4.190
Number of ANC visits	0 (ref.)					
	1-3	1.469	0.171	0.000	4.347	3.108 - 6.081
	4+	2.966	0.154	0.000	19.407	14.339 - 26.265
Husband's education level	Secondary or lower (ref.)					
	Higher than secondary	1.589	0.104	0.000	4.900	3.997 - 6.007

Table 4. Determinants of the Use of Skilled Birth Attendants (Multivariate Model)

Variables	Category	B	Standard Error	p Value	Adjusted Odds Ratio	95% CI
Husband's attendance at ANC	No (ref.)					
	Yes	0.782	0.108	0.000	2.186	1.768 - 2.702
Age group	< 20 years old (ref.)					
	20 – 35 years old	0.576	0.185	0.002	1.778	1.238 - 2.554
	> 35 years old	0.775	0.233	0.001	2.171	1.375 - 3.428
Place of residence	Rural (ref.)					
	Urban	0.832	0.130	0.000	2.298	1.783 - 2.963
Education level	None or primary (ref.)					
	Secondary or higher	0.627	0.113	0.000	1.873	1.501 - 2.337
Employment status	Unemployed/don't know (ref.)					
	Employed	-0.143	0.104	0.169	0.866	0.706 - 1.063
Wealth index	Poor (ref.)					
	Middle	0.834	0.164	0.000	2.303	1.668 - 3.178
	Rich	1.562	0.209	0.000	4.767	3.164 - 7.184
Having health insurance	No (ref.)					
	Yes	0.351	0.110	0.001	1.420	1.144 - 1.763
Parity	>1 (ref.)					
	1	0.542	0.134	0.000	1.719	1.321 - 2.236
Planned pregnancy	Unplanned/mistimed (ref.)					
	Planned	-0.185	0.146	0.206	0.831	0.624 - 1.107
Having pregnancy problem	No (ref.)					
	Yes	0.382	0.107	0.000	1.465	1.187 - 1.809
Number of ANC visits	0 (ref.)					
	1-3	0.856	0.200	0.000	2.354	1.590 - 3.485
	4+	1.757	0.183	0.000	5.796	4.046 - 8.301
Husband's education level	Secondary or lower (ref.)					
	Higher than secondary	0.412	0.128	0.001	1.509	1.174 - 1.940

(OR= 5.948, 95%CI= 4.767 – 7.422) than rural women.

Also, a proportion of those in the two richest wealth quintiles (97.68%) used SBAs higher than those in the two poorest wealth quintiles (70.43%). The opportunity of using an SBA decreased consistently as one got to the lower wealth quintiles. Women in the rich wealth quintiles were more likely to use SBAs than those who were poor (OR= 17.651, 95%CI= 12.136 – 25.672).

Meanwhile, 13 variables were found to be statistically significant (p value < 0.05) affected the use of an SBA. There were age group, place of residence, education level, wealth status, number of ANC visits, ownership of health insurance, having pregnancy problem, parity and husband's education level (Table 4).

After adjustment for other factors (Table 4), the husband's attendance at ANC significantly affected the use of SBA. Women whose husbands attended at least one ANC visit were more than two times likely to use than for those whose husbands did not attend ANC (ORadj= 2.186, 95%CI= 1.768 – 2.702).

Besides, as shown in Table 4, holding all other factors constant, older women had higher probability of using SBAs than those younger. Women who living in urban areas had higher probability of using SBAs than those living in rural areas. Women who had health insurance had higher probability of using SBAs than those had no health insurance. Women who had pregnancy problem had higher probability of using SBAs than those had no pregnancy problem. Women who had health insurance had higher probability of using SBAs than those had no health insurance. Women with fewer children had higher probability of using SBAs than those with many children. Women whose husbands were more educated had higher probability of using SBAs than those whose husbands less educated. It also observed that, after adjusting for other factors, women who did not attend any ANC visit had lower probability of using SBAs than those attended ANC. Also, women who were less educated had lower probability of using SBAs than those who were more educated. Also, women in the rich wealth quintiles had higher probability of using an SBA than those who were poor.

Discussion

Men's Participation

Maternal mortality remains a major concern in Indonesia's health development. SBA during delivery is considered as a key strategy in the reduction of maternal deaths. However, the limited progress in reducing maternal mortality necessitates new approaches to maternal health interventions. There has been increasing attention to men's role in the uptake of maternal health care because, in most families, the men are the holders of financial power and the key decision makers of any problems, including reproductive health. Besides, in many cases, women want their partners to be more involved in maternal and child health care and that, men are interested in being involved.[5-8] Therefore, this study explored man partner (husband)'s participation in maternal health care as a determinant, alongside other factors, of the SBA.

After controlling socio-demographic variables, this study found that women whose husbands attended at least one ANC visit were more than two times likely to use SBAs than for those whose husbands did not attend ANC. The positive effect of husband's participation on the use of SBA was probably due to a lot of women still had to act to uptake the maternal health care through their husbands' approval. Meanwhile, husband's approval could be affected by their knowledge of the relevance of their involvement in maternal care.[11-13] Thus, when husbands attend ANC, they know the danger signs of pregnancy and delivery, they may act as life-saving agents, ensuring that their wives get appropriate attention in obstetric emergencies.[17,18]

Further, this finding reinforced other studies showing that women were more likely to have better outcomes when their husbands got directly involved in maternal health care by attending ANC visits and supported their wives during pregnancy.[10,16,19]

Other Determinants of Skilled Birth Attendant Use

In the multivariate analysis, this study found that age group, place of residence, education level, wealth status, number of ANC visits, ownership of health insurance, having pregnancy problem, parity, and husband's education level were significantly related to the use of an SBA during delivery. This finding was in line with the findings of other studies.[14,20-27]

It is well recognized that women's current age plays an important role in the use of medical services. Women's age may sometimes serve as a proxy for women's accumulated knowledge of health care services, which may have a positive influence on the use of health services.[14]

Living in urban areas increases the probability of pregnant women using trained professionals for birth deliveries. In general, rural areas have poorer road networks, more inadequate transportation, and fewer health facilities compared to urban areas. Those make women from rural areas less likely to have access to health facility deliveries.[20]

Women's education is an important predictor for the use of maternal health care services. It is well recognized that a woman's education level has a positive impact on the health care use. Higher education influences service use by increasing woman's decision-making power, increasing awareness of health services.[20,21]

Socioeconomic factors, such as household wealth and the ownership of health insurance are shown to be an im-

portant determinant of health service use. The cost to financing the use of health service use is the reason why these factors have positive effect on the use of SBAs.[22]

Frequency of ANC and the absence of any pregnancy problem also had significant positive effect on the use of SBAs. These findings were in line with other studies in Indonesia, Cambodia and Nepal.[23-25]

Husband's education is also important predictor of the use of maternal health care services. It can be considered a proxy of family income, as well as social status.[25] Besides, studies from India and Uganda supported the view that men's knowledge of pregnancy-related care increased its use. The Indian study further proposed that men's presence during antenatal visits might increase the likelihood of institutional delivery.[26,27]

Conclusion

This study has shown that husband's attendance at ANC is an important determinant of the SBA use during delivery. In addition, the use of SBAs during delivery were also affected by age, education level, number of ANC visits, ownership of health insurance, wealth status, pregnancy problems, parity, residential area and husband's education level.

These findings strongly indicate the policy need to mainstream men's participation in women reproductive health. Such policy should address men's role and constraints and also include an educational component to sensitize men to the benefits of their participation in pregnancy care and outcomes.

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