

Men's knowledge towards obstetric danger signs and their involvement on birth preparedness in Aneded woreda, Amhara Regional State, Northwest Ethiopia

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Abstract

Introduction: World Health Organization estimates that about 300 million women are suffering from short and long-term illnesses related to pregnancy and childbirth in developing countries. Men have social and economic power, and have tremendous control over their wives. Men decide the timing and conditions of sexual relations, family size, and utilization of health care services by their spouse. Male involvement will enable their spouses to utilize emergency obstetric services early and to prepare for birth and ready themselves for complications. This would lead to a reduction in delays to seek and receive care and there by positively impact birth outcomes.

Objective: To Assess men's awareness of obstetric danger signs and their involvement on birth preparedness practice in Aneded District, Amhara Regional state, Northwest Ethiopia 2017.

Materials and Methods: A community based cross sectional study was conducted from April to May 2017. Simple random sampling technique was used to select 422 samples. Data were analyzed using SPSS version 20.00 statistical software. Multivariate logistic regression was used to assess degree of association between dependent and independent variables and factors with $p < 0.05$ were statistically significant.

Result: Respondents who had good knowledge towards danger signs of pregnancy, child birth and post-partum were 44%, 53% and 49%, respectively. Sixty one percent of men had good knowledge towards birth preparedness and only 45.4% of them practiced birth preparedness plan. Variables associated significantly with men's knowledge towards obstetric danger signs were men's age group of 30–39 years [AOR:2.28; 95% CI (1.64 - 3.04)], 40–49 years [AOR: 3.25; 95% CI (1.12, 6.68)] and 50-59years [AOR: 3.55; 95%CI (1.64–8.85)]; men who live in the urban area [AOR: 3.52; 95%CI (3.98 -7.2)]; being governmental employee [AOR: 4.54; 95% CI (1.7, 24.0)]; partners whose wives delivered at health center [AOR: 1.67; 95% CI (1.32, 4.38)], hospital [AOR: 2.16; 95%CI (1.17, 5.04)]; men whose wives had antenatal care follow up in their previous pregnancy [AOR: 1.49; 95% CI (1.39, 3.37)] and danger signs of previous pregnancy [AOR: 1.29; 95%CI (1.39, 4.05)]. Variables significantly associated with birth preparedness practice of men's were men's age group of 30–39 years [AOR:2.28; 95% CI (2.14-4.04)] age group 40–49 years [AOR: 5.2; 95%CI (1.42, 6.78)], age group 50–59 years [AOR: 4.25; 95% CI(2.64–7.85)], being government employee [AOR: 3.9; 95%CI (1.25 - 13.0)], partners whose wives delivered at health center [AOR: 2.99; 95%CI (3.21, 4.28)], in hospital [AOR: 3.2; 95%CI (1.37, 6.14)] and partners whose wives had antenatal care follow up in their previous pregnancy [AOR: 2.45; 95%CI (2.29, 4.37)] were identified significant variables.

Conclusion: Men's knowledge towards obstetric danger signs and their birth preparedness practice for their wives were found low. So the government and stakeholders should give due emphasis to husband education to enable them to recognize obstetric danger signs so as to increase their involvement in birth preparedness practice.

Key words: Men's knowledge, obstetric danger signs, birth preparedness.

Introduction

Globally, 80% of maternal deaths are due to the five direct obstetric causes: severe bleeding, sepsis, unsafe abortion, hypertensive disorder of pregnancy and obstructed labor (Sebhatu 2012); and these problems result 800 women deaths every day. Around 99% of maternal deaths occur in developing countries and more than half of these deaths occur in sub Saharan Africa (USAID 2004). In sub-Saharan Africa, pregnancy and childbirth continue to be viewed as solely a woman's issues (Kabakyenga et al. 2011). Studies from East Africa showed that women have inadequate knowledge of obstetric danger signs as

well as a lack of birth preparedness plans (Pembe et al. 2008). Another studies conducted in this area also revealed that women depend on financial assistance from men for their reproductive and maternal health needs and men influence the decision where women could deliver, and what to do in case of an emergency (Aarnio et al. 2013). Similar studies done in Tanzania and Nepal showed that men involvement in reproductive and maternal health education may result in an increase in condom use, adhering to prevention of mother-to-child HIV transmission (PMTCT) and use of skilled birth

attendants (Magoma et al. 2010; Mullany et al. 2007).

Ugandan women were more likely to have a birth plan if they were accompanied by their partner to the emergency obstetric care, and if their spouses helped them on household tasks and child care (Kakaire et al. 2011). In Malawi, a study on men perception of birth preparedness and severity of danger signs showed that more men pursued care in health facilities when women had severe bleeding, convulsions or swelling of hands and feet; and a quarter of men went to traditional healers for care of pregnant women in the case of convulsions (Kululunga et al. 2011).

In certain communities, it is unlikely to find male accompanying a woman to the labor room (Babalola et al. 2009). However, men have social and economic power, especially in Africa, and have tremendous control over their partners. Men have power to decide the timing and conditions of sexual relations, family size and utilization of spouses' health care services (Berhan et al. 2014). Hence these situations make partners involvement critical to improve maternal health and to reduce maternal morbidity and mortality.

Strategies for involving men in maternal health services should aim at raising their awareness about emergency obstetric conditions, and engaging them in birth preparedness and complication readiness (Barco 2004). Male involvement will enable men to support their spouses to utilize emergency obstetric services early and the couple would adequately prepare for birth and ready themselves for complications. This would lead to a reduction in delays to seek care, transportation and to receive care (Abdella 2010) and there by positively impact birth outcomes. Moreover, birth plan is also a very important strategy in developing countries where obstetric services are weak and thus contribute significantly to reduce maternal and neonatal morbidity and mortality (Keyes et al. 2011). The key elements of the birth plan include a plan for skilled birth attendants, place of delivery, and arrangement of money for transport or other costs (Wilder 2008).

In Ethiopia, the top four causes of maternal mortality in the last decade were obstructed labor/uterine rupture (36%), hemorrhage (22%), hypertensive disorders of pregnancy (19%), and sepsis/infection (13%) (Yifru and Asres 2014)). Ethiopia, being one of the countries with highest maternal mortality in the world, is striving hard in reducing maternal mortality. In the last five years, substantial effort has been made in the health service in order to address the demand of pregnant and delivering women to avert morbidity and mortality associated with pregnancy and child birth. Even though there is substantial reduction in maternal

mortality; still Ethiopia is one of the countries with excess of maternal deaths (CSA and ORC Macro 2006; CSA 2012; CSA 2014).

With understanding of unacceptable death due to common obstetric complications, the Ethiopian government has expressed its commitment to improve maternal health and reducing maternal mortality by three-quarters (MDG5), by launching innovative health extension program (Sebhatu 2012). Since the government's introduction of this new health program in 2003, individual counseling about danger signs of obstetric complications and birth preparedness have been emphasized. Furthermore, those women identified as being "at risk" of a complicated birth can be advised to give birth at a healthcare facility or government hospital, having a health worker with midwifery skills, and this is now seen as one of the most critical interventions for making motherhood safer (Dunn et al. 2011; Rashad and Essa 2010). However, the majorities of women in Ethiopia have poor status in the society and lack of decision-making power that can contribute significantly to adverse pregnancy outcomes.

Studies in Africa, particularly in Ethiopia, have found that husbands and other family members often make the decision about where a woman will deliver (Medhanyie et al. 2012). And although it is unlikely that men are actively ignoring the signs of complications during pregnancy and labor. It is possible that lack of awareness of what to look for, thereby hindering their ability to judge when emergency actions must be taken. If men are acting as gatekeepers to women's health, it is of paramount importance if they are able to recognize the danger signs of obstetric complications and be involved in birth preparedness practices (Hailu et al. 2011).

According to EDHS 2016, Ethiopia has an estimated Maternal Mortality Rate (MMR) of 412 per 100,000 live births and contributes significantly to the global MMR. So, this study will generate evidence on men's awareness of obstetric danger signs and their involvement in birth preparedness practice. Men involvement in this regard is important to decrease maternal mortality related to obstetric complications and increase their involvement in birth preparedness practice and also used to decrease child mortality.

Materials and Methods

A community based cross sectional study design was conducted in Aneded worda, East Gojjam zone, Amhara region from April to May /2017. Men who had lived at least for six months in selected kebeles and who had a child under two years of age were the study population. A sample size of 422 was determined using single population proportion

formula. Data were collected by using pre-tested, structured questionnaire. Data were analyzed using SPSS window version 20 statistical packages for descriptive and inferential statistics. Independent variables having $P \leq 0.25$ on the bivariate analysis were candidates for the multivariate analysis and those factors with $p < 0.05$ in the multivariate analysis were taken as statistically significant. The degree of association between dependent and independent variables was assessed using AOR at 95% CI. Ethical clearance was obtained from Research and Ethics committee of Addis Ababa Medical and Business College.

Results

Socio-demographic characteristics of respondents:

Three hundred and ninety three respondents participated in the study with 93% response rate. The mean age of respondents was 32 years ($SD \pm 5.12$ years) and 140 (35.7%) of them were found within the age of 35-44 years. About 292 (74.3%) of the respondents were farmers; 116 (29.5%) were unable to read and write; 357 (90.8%) were Orthodox Tewahido followers. In order to reach the health facilities, 295 (75%) of the respondents had to walk over 30 minutes (Table 1).

Knowledge towards obstetric danger signs: Among 332 (85%) of the respondents who had health information about maternal health, 245(74%) and 72 (22%) of them obtained the information from health professionals and medias, respectively. Respondents' awareness towards direct and indirect causes of maternal health problems was assessed. Hence, 48%, 17% and 16% of them had awareness about problems related to pregnancy, nutrition and sexually transmitted diseases. Three hundred forty (88%) of husbands accompanied their wife while attended antenatal care; 17% of men's responded that their wives had history of pregnancy danger signs. Regarding to place of delivery, respondent wives gave birth at home (23.9%), health post (10%), health center (58.5%) and hospital (7.4%). Forty-four percent of respondents had known about danger signs of pregnancy: some of the danger signs known by them were severe headache (23%), excessive vaginal bleeding (30%), high grade fever (26%), swollen hands and legs (15.5%) and severe abdominal pain (14%). Nearly 53% of the respondents knew about danger signs occurred during child birth: some of these danger signs were high grade fever (29.5%), severe abdominal pain (32%), excessive vaginal bleeding (38%), retained placenta (13%), severe headache (21%), swollen hands and legs (20%), loss of consciousness (15.5%), prolonged labor (21%). Furthermore, 49% of the respondents knew about danger signs that occur after child birth and type of

danger signs mentioned by them were high grade fever (26%), severe abdominal pain (34%), excessive vaginal bleeding (31%), foul smelling vaginal discharge (20%), severe head ache (29%) and loss of consciousness (14%) (Table 2).

Table1: Socio demographic characteristics of respondents in Aneded District, Amhara Region, Northwest Ethiopia, 2017.

Variables	Frequency (n=393)
Age	
≤19	7 (1.78)
20–29	72 (18.3)
30–39	140(35.6)
40–49	146(37)
50–59	61 (15.5)
Occupation	
Farmer	292(74.3)
Daily laborer	39(9.9)
Merchant	28(7)
Govt. employee	34(8)
Educational status	
Unable to read and write	116(29.5)
1 -4 grade	127(32)
5-8 grade	93(24)
9-12 grades	34(9)
Higher education	23(6)
Religion	
Orthodox	357(90.8)
Muslim	13(3.3)
Protestant	23(5.9)
Place of residence	
Urban	331(84)
Rural	62(16)
Average monthly income	
<1000	32(8)
1000-2500	254(64.6)
>2500	107(27)

Knowledge and practice towards birth preparedness:

Sixty one percent of the respondents knew about birth preparedness information given during pregnancy. Specific elements they knew include saving money (56%), arranging transport (51%), identify where to go during labour (49.5%) and seeking skilled birth attendants (33%). About (45.4%) of men were practiced birth preparedness plan for their partners. Preparations they did were saving money (42%), transport arrangement (39%), identify where to go during labour (36.6%) and seeking skilled birth attendants (21.8%) (Table 2).

Factors Associated with obstetric Danger signs:

In the binary regression, age of husbands, residential area, educational status, men's occupation, health facility distance, previous ANC follow up, number of alive children, place of delivery and previous pregnancy danger signs showed association with knowledge of obstetric danger signs. Among these variables husbands age, residential area, men's occupation, previous ANC follow up, place of delivery and previous pregnancy danger signs were found statistically significant with men's knowledge of obstetric danger signs (Table 3).

Table 2: Knowledge respondents towards obstetric danger signs in Aneded District, Amhara Regional State, Northwest Ethiopia, 2017.

Variables	Categories	Number	Percent
Major maternal health problems in the community	Pregnancy related problems	189	48
	Nutritional problems	68	17
	Sexually transmitted infections	63	16
Purpose of antenatal care follow up	Yes	348	88.5
	No	45	11.5
Number of alive children in the family	≤1	35	9
	2 or more	358	91
Knowledge of Danger sign during pregnancy	Yes	173	44
	No	220	66
Type of danger signs of pregnancy they knew	High grade fever	102	26
	Severe Abdominal pain	56	14
	Excessive Vaginal Bleeding	118	30
	Severe Head ache	91	23
	Swollen Hands and legs	61	15.5
Knowledge danger signs during Child Birth	Yes	208	53
	No	185	47
Type of danger signs of child birth they knew	High fever	116	29.5
	Severe Abdominal pain	125	32
	Excessive Vaginal Bleeding	151	38
	Retained placenta	52	13
	Severe Head ache	82	21
	Swollen Hands and legs	78	20
	Loss of consciousness	61	15.5
	Prolonged labor	82	21
	Yes	193	49
Knowledge regarding danger signs of postpartum	No	200	51
	Yes	193	49
Type of danger signs of postpartum they know	High fever	106	26
	Severe Abdominal pain	135	34
	Excessive Vaginal Bleeding	121	31
	Foul Smelling Discharge	79	20
	Severe Head ache	113	29
	Loss of consciousness	56	14

Men with the age groups of 50-59 years, 40-49 years and 30-39 years were 3.55(AOR: 3.55; 95% CI: 1.64-8.85); 3.25 (AOR: 3.25; 95% CI: (1.12, 6.68) and 2.28 (AOR: 2.28; 95% CI: 1.64 - 3.04) times more knowledgeable than those men's of less than 19 years of age, respectively. Husbands who were living in the urban area were 3.41 times (AOR: 3.52; 95% CI: 3.98 -7.2) more knowledgeable than those were living in the rural areas. According to occupational status, governmental employees were 5.94 times AOR: 5.94; 95% CI: 1.07, 33.0) more knowledgeable compared to farmers. Partners whose wives delivered in the health center were 1.67 times (AOR: 1.99; 95% CI: (1.32, 4.38) and those gave birth in the hospital were 2.16 times (AOR: 2.16; 95% CI: 1.17, 5.04) times more knowledgeable than partners whose wives gave birth at home. Men whose wives had ANC follow up were 1.49 times (AOR: 1.49; 95% CI: 1.39, 3.37) who had

not. Moreover, men whose wives had danger signs in previous pregnancy were 1.29 times (AOR: 1.29 (1.39, 4.05) more knowledgeable than who had not.

Factors associated with birth preparedness practice:

Men who found within the age group of 30-39 years, 40-49 years and 50-59 years had 2.28 times (AOR: 2.28; 95% CI: 2.14-4.04); 5.21 times (AOR: 5.2; 95% CI: 1.42, 6.78) and 4.25 times (AOR: 4.25; 95%CI: 2.64-7.85) practiced more than those men found with the age group of less than 19 years, respectively. Being governmental employee had 3.94 times (AOR: 3.94; 95% CI: 1.25 - 13.0) practice compared to farmers. Husbands whose wives delivered in the health center and public hospital were 1.99 times (AOR: 2.99; 95% CI: 3.21, 4.28) and 3.16 times (AOR: 3.16 (1.37, 6.14) more likely to practice than husbands whose wives delivered at home, respectively.

Table 3: Factors associated with men's awareness of danger signs of obstetric complications in Aneded District, Amhara Regional State, Northwest Ethiopia, 2017.

Characteristics	Male awareness (%)	COR (95% CI)	AOR (95% CI)
Resident			
Rural	331 (84.2)	1	1
Urban	62 (17.7)	8 (3.01, 6.39)	8.41 (4.99, 14.2)*
Age of husband			
≤19	3 (0.76)	1	1
20–29	72(18.3)	1.69 (0.25, 11.6)	0.69 (0.25, 1.26)
30–39	140(35.6)	1.88 (1.64, 2.94)	2.28 (1.64, 3.04)*
40–49	146 (37)	1.35 (1.12, 4.78)	3.25 (1.12, 6.68)*
50–59	61 (15.5)	2.55(1.64–2.85)	3.55(1.64–8.85)
Occupation status			
Farmer	292(64)	1	1
Government employee	34 (16.28)	6.53 (1.37, 30.9)	0.52 (0.24, 1.15)
Merchant	28(10.2)	3.26 (1.78, 5.97)	5.94 (1.07, 33.0)*
Daily laborer	39(9.9)	1.85 (1.16, 2.89)	1.11 (0.51, 2.43)*
Distance			
Lessthan30minutes	98(25)	3.26(1.78, 5.97)	1.11(0.51, 2.43)*
Greaterthan30minutes	295(75)	1	1
Number of children alive			
1	58 (15)	1	1
2 or more	335 (85)	1.54 (0.89, 2.62)	0.50 (0.12, 0.83)*
Place of delivery			
Home	94 (24)	1	1
Health post	40 (10.2)	1.88 (1.45, 4.24)	2.09 (0.39, 3.37)
Public health center	230 (58.5)	1.39 (1.02, 2.01)	1.67 (1.32, 4.38)*
Public hospital	29(7.3)	1.22 (0.72, 2.09)	2.16 (1.17, 5.04)*
ANC follow up in previous			
Yes	348(88.5)	1.88 (1.45, 4.24)	1.49 (1.39, 3.37)*
No	45(11.4)	1	1
Danger signs in previous pregnancy			
Yes	68(17.3%)	1.05 (1.03, 4.24)	1.29 (1.39, 4.05)*
No	325 (83.7%)	1	1

*Statically significant ($P < 0.05$)

Discussion

In this study, about 44% and 49% of partners had good knowledge about danger signs of pregnancy and post-natalcare is in line with a study done in southern Ethiopia, which reported a prevalence of men's awareness 42.2% for pregnancy and 46% post natal danger signs (Alemu et al. 2014). The similarity in the result could be attributed to analogous socioeconomic and cultural characteristics. But this result is higher than a study conducted in rural Tanzania which reported 34.6% men's awareness of danger signs during post-natal period (Furaha et al. 2015). Regarding men's knowledge about danger signs which occur during delivery, 53% of men in this study had good knowledge, which is higher than a study done in rural Tanzania (43.9%) (Furaha et al. 2015). The difference could be attributed to different in socioeconomic characteristics and due to the strength in implementation towards engender health services in Ethiopia. In this study, proportion of respondents who identified vaginal bleeding as an obstetric danger sign were 30% during pregnancy, 38% during delivery and 31% after child birth which is in line with the study done in southern Ethiopia, vaginal bleeding during pregnancy was (34%), in relation to postpartum period(32.2%) but lower for delivery (60.4%) (Alemu

et al. 2014). Vaginal bleeding (30%) was the most recognized danger sign and severe abdominal pain (14%) was the least mentioned danger sign during pregnancy. Likewise, vaginal bleeding (38%) and retained placenta (13%) were the highest and the least recognized danger signs of labor. Moreover, severe abdominal pain and loss of consciousness were the highest and the least recognized danger signs after childbirth (34%) and (14%), respectively. Respondents who were living in the urban area were found to be 3.4 times more knowledgeable than who were living rural areas. This finding contradicted with the study done in southern Ethiopia, which showed that husbands who were living in the rural areas were 8.4 times more knowledgeable than urban residents. This could be that respondents who live in the urban areas of the present study were getting more information than rural areas since most of the messages those transmitted are by using various medias which are available in the urban settings. Respondents those employed in the governmental organizations were 4.5 times more knowledgeable than farmers. This finding was higher than the study done in southern Ethiopia, in which government employees were 3 times more knowledgeable

compared to farmers. This could be by the fact that government employee can easily get information from newsletters, mass medias and magazines at work place compare to others. Partners whose wives delivered at health center were 1.67 times and whose wives delivered at hospital 2.16 times more knowledgeable compared to those whose wives delivered at home. This result is in line with the study done in southern Ethiopia, which shows husbands whose wives gave birth at health center are 1.99 times and those who gave birth in the hospital are 2 times more knowledgeable than husbands whose wives delivered at home (Alemu et al 2014). This could be explained by health education offered by health professionals and to women and they also share information to their husbands.

Conclusions and Recommendations

Men's knowledge towards obstetric danger signs and their birth preparedness practice for their wives were found low. So the government and stakeholders should give due emphasis to husband education to enable them to recognize obstetric danger signs so as to increase their involvement in birth preparedness practice.

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