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Research Article

Male Partner's Involvement and it's Associated Factors in Promoting Skilled Birth Attendance among Fathers who have Children Less than One Year of Age in Ambo Town, Ethiopia, 2017

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Abstract

Background: Male partner's involvement in maternal health care has been described as a process of social and behavioral change that is needed for men to play in maternal health care with the purpose of ensuring women's and children`s wellbeing. Available literature suggests that male involvement, affects the choice of institutional service utilization of their spouse. However, little has been explored about level of male involvement and associated factors in promoting skilled birth attendance in the study area.

Methods: Community based cross sectional study design was undertaken to assess level of male partner's involvement in promoting skilled birth attendance in Ambo town, central, Ethiopia. A structured pre-tested questionnaire was used to collect data. The collected data were analyzed using SPSS version 21.0. Binary and multivariable logistic regressions were used to identify the association between dependent and independent variables.

Result: The study revealed that 166 (41.9%) of male partners were involved in promoting skilled birth attendance of their spouse. Being in the Age group of 20 - 29 years [AOR = 16.34; 95 CI: 7.582 - 35.238], having diploma and above educational status [AOR = 2.85; 95% CI: 1.013 - 8.057], being civil servant [AOR = 2.51; 95% CI: 1.449 - 4.351], and having knowledge about maternal health care [A0R = 2.73; 95% CI: 1.617 - 4.636] were significantly associated with male partner's involvement in promoting skilled delivery attendance.

Conclusion: Male partner's involvement in promoting skilled birth attendance was low. Age of male partners, educational level, occupational status and having knowledge about maternal health care were factors found to be associated with male partner's involvement. Therefore, increasing male partner's knowledge about maternal health care through health education is the main area of intervention.

Keywords: *Male Involvement; Skilled Birth Attendance; Ethiopia*

Abbreviations

EDHS: Ethiopia Demographic Health Survey; MMR: Maternal Mortality Ratio; ANC: Ante Natal Care

Introduction

Pregnancy and childbirth is natural and often an eventful process. Many women are at risk for developing complication at any time during this period [1]. Globally in 2015, an estimated 303,000 women died as a result of pregnancy and childbirth-related complica-

tion [2]. Developing countries accounted for about 99% of global maternal deaths, with the maternal mortality ratio (MMR) of 239 per 100,000 live births, 14 times higher compared to the developed regions 17 maternal deaths per 100,000 live births [2]. A vast majority of maternal deaths are due to preventable direct obstetric causes such as hemorrhage, infection, obstructed labour, unsafe abortion and high blood pressure [3].

Delay to make a decision to seek care is considered as one of the contributing factors that is attributed to maternal morbidity and mortality and is preventable [4]. Hence, access to skilled care before, during and after childbirth is among the key strategies to reduce maternal mortality (MM) and improve the health of women [5]. A Prompt decision in seeking reproductive health service like having a skilled birth attendance (SBA) at every delivery has been found to be markedly influenced by husbands [6-9].

In Ethiopia husbands and relatives decisions to the place of delivery has an increasing effect of utilizing health care delivery than decision made by the mother herself. If women are encouraged by husbands and relatives they would also get financial and other social supports to go to health facility which would allow them to have skilled birth attendance [10,11].

The 1994 International Conference on Population and Development (ICPD), held in Cairo, recommended males to be involved in the reproductive health of their wives or partners. It also encouraged reproductive health care programmers to adopt a more holistic approach that includes men and focuses on couples rather than focusing on the women alone [12].

The determinants of male partners' involvement in promoting skilled birth attendance have been explored. However, most of them were either qualitative or descriptive studies [13-16]. In addition, only a few studies have examined the characteristics of husbands' involvement in three different phases including antenatal, delivery, and postnatal periods [13,14,16].

Although husbands critically influence maternal health, little has been explored about the role of husbands in maternal health. Moreover, little is known about how husbands are involved in their spouses' utilization of skilled birth attendance. Therefore, this study aimed to identify the level of husbands' involvement in skilled birth attendance and its associated factors in Ambo town.

Materials and Methods

Study design and period

A community based cross sectional study design was used to collect data on involvement of male in promoting skilled birth attendance and associated factors May 2017.

Study area

This study was undertaken in Ambo town West Shoa Zone which was located 114kilometres to west of Addis Ababa, the capital city of Ethiopia. The town has 6 kebeles (small administrative units) with an estimated population of 80712. According to the records kept by Health Bureau of Ambo town Administration, the study area at the time of the study had a total of 2566 households with children less than one year of age [17].

Source and study population

All male partners having children less than one year of age who are permanent residents of Ambo town were our source population. Male partners having children less than one year of age who are permanent residents of Ambo town and randomly selected were our study population.

Sample size and sampling procedure

Sample size required for this study was calculated by using single population proportions formula with the assumptions of: P is Prevalence of male partner's involvement in promoting skilled birth attendance = 41% (taken from a study done at Mareka woreda, Southern Ethiopia), with 95% confidence level. By considering 10% non-response rate, the final sample size was 408.

In Ambo town there are 6 kebeles (small administrative units) with a total of 2566 households having children less than one year of age which was taken from urban Health extension workers. After having a list of all households who had children less than one years of age we had proportionally allocated to all six kebeles based their number of households. Computer generated Simple random sampling technique was employed to select 408 male partners who have children less than one year of age with SPSS version 20 (Figure 1).

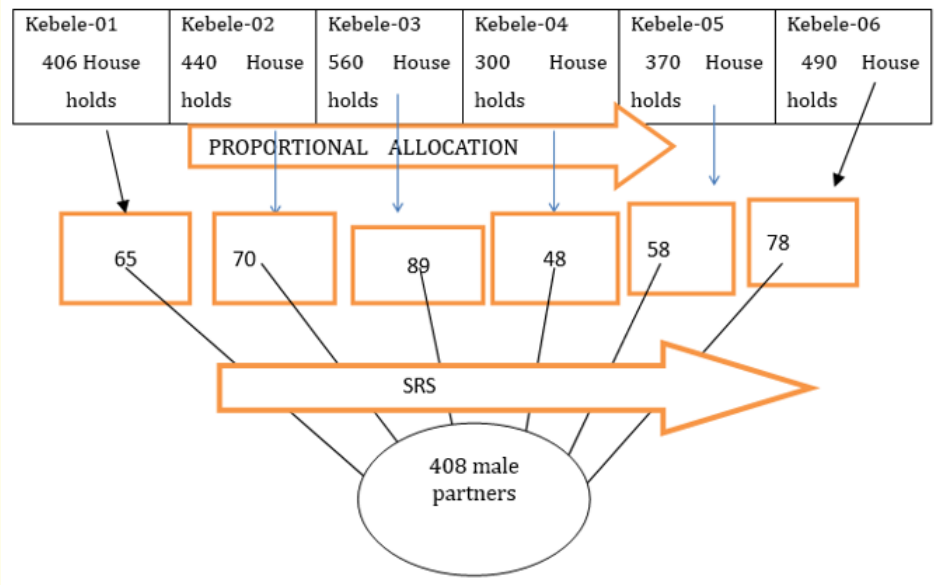

Figure 1: *Diagrammatic representation of sampling procedure, Ambo town Ambo town, Oromia, Central Ethiopia, May 2017.*

Data collection tool, procedure and measurement

A structured, interview administered questionnaire was used to collect data from the study participants. The questionnaire was prepared in English and translated in to local language Afan Oromo by translator, and then translated back to English by a third person to check for consistency. The tool has four sections and it was adapted from the survey tools developed by African Medical and Research Foundation (AMRF), Child and Reproductive Health Programme and modified according to local context [18]. Health extension workers were used for data collection and Bsc nurse who have experience in supervising was recruited for supervision. Data collection instrument was pretested for its relevance and clarity to address the research problems appropriately and it were corrected according to the local context one week prior to the actual data collection period. In addition, the data collectors were trained for one day on the techniques of data collection and purpose of the study for study participants before the start of data collection.

Male involvement is the variable of interest. It refers to 1) discussion with health professionals on the place of their spouses' delivery; 2) accompanying spouse for ANC; 3) birth preparedness and complication readiness plan [saving money for delivery, arranging of transportation for delivery purchasing essential items for delivery, planning for a place and skilled birth attendant for delivery], 4) discussion with relatives about place of delivery of their wife, 5) discussion with friends about place of delivery of their wife.

Male involvement in promoting skilled birth attendance was measured by scoring one point for each characteristic, and it was categorized as "involved" or "not involved". The cut-off score was three in accordance with the mean score. Moreover, prior studies on male involvement in promoting skilled birth attendance applied this approach of categorization [15,19-21].

Knowledge of male partner's about maternal health care accessed by their knowledge of the danger signs of pregnancy and childbirth, importance of institutional delivery and knowledge of utilization of ANC of their spouse. One point was scored for each danger sign, importance of institutional delivery and utilization of ANC of their spouse. The total score was summed and cut-off score was seven in accordance with the mean score. Moreover, prior studies on male involvement in promoting skilled birth attendance applied this approach of categorization [20,22].

Perception

The respondents were asked to reflect whether or not they perceived pregnancy and childbirth as life-threatening conditions and maternal care as a necessity. Respondents with cumulative scores equal to or more than the mean score about their opinion on a serious of questions concerning delivery and skilled attendance were considered as having good perceptions while those with scores below the mean was regarded as having poor perception [23].

Data analysis

The data were entered into statistical software Epi data version 3.1.and exported to SPSS version 21 for further analysis. Data cleaning was done by sorting and running frequency distribution with SPSS to check for missing or incomplete data. Descriptive statistics such as frequency distribution and mean and standard deviation was computed to describe variables of the study. To identify the existence of association between the dependent and independent variables, both bivariate and multivariable logistic regression with 95% C.I was used. For all of statistical test used in this study, the significant level was p-value < = 0.05.

Ethical considerations

Ethical approval was obtained from Research Ethical Committee of the Department of Nursing and Midwifery, Addis Ababa University. Written letter of permission was obtained from Ambo town health office and verbal informed consent was obtained from each participant after the data collectors had explained the nature, purpose and procedures of the study. Anonymity and confidentiality of the data provided was strictly maintained. Participants were assured that their participation is voluntary, and they have right to withdraw or refuse to give information at any time in the study without any penalties.

Results and Discussion

Socio-demographic Characteristics of Male Partners

In this study a total of 396 participants had fully responded to the questionnaire making response rate of 97.1%. The mean age of the respondents were 33.25 with the standard deviation of 8.4 years. The study participants were predominantly Oromo 360 (90.9%) and protestant 199 (50.3) by their ethnicity and religion respectively. 147 (37.1%) of the participants have completed grade 1 - 8 and 101 (25.5%) were getting monthly income of less than 24USD$ (Table 1).

Variables	Frequency	Percentage
Age categories		
20 - 29	143	36.1
30 - 39	150	37.9
40 - 49	103	26.0
Religion		
Orthodox	164	41.4
Muslim	26	6.6
Protestant	199	50.3
Others*	7	1.8

Ethnicity		
Oromo	360	90.9
Amhara	25	6.3
Others**	11	2.8
Occupation		
Civil servant	222	56.1
farmers	21	5.3
Merchant	153	38.6
Educational status		
Un able to read and write	51	12.9
Primary education (1 - 8)	147	37.1
Secondary education (9 - 12)	70	17.7
Diploma and above	128	32.3
monthly income		
< 24 USD$	101	25.5
25 – 62 USD$	97	24.5
63 - 129 USD$	109	27.5
> 130 USD$	89	22.5
Type of marriage		
monogamous	366	92.4
polygamous	30	7.6

Table 1: *Socio-demographic characteristics of male partner's involvement in promoting skilled birth attendance in Ambo town, Oromia, Central Ethiopia, 2017.*

**: Others, wakefata, catholic.*

***: Others, Tigre, Gurage.*

Knowledge of male partner's about maternal health care

This study showed that majority 241 (60.9%) of the respondents have poor knowledge about maternal health care and 155 (39.1%) of the respondents were found to have good knowledge. More than half 249 (62.9%) of respondents reported that they know about Ante Natal Care (ANC) follow up of their spouses but only 111 (28.0%) know correctly the recommended minimum number of times that a pregnant needs to attend ANC. Regarding reasons for taking their spouse to a health facility for delivery; 107 (27.0%) of them stated to avoid delay in getting medical care in case of emergency, 56 (14.1%) to get access to skilled attendants, and 188 (47.5%) to get immediate treatment for mother and new born. Whereas 105 (26.5%) of them did not know why institutional delivery is important. When asked about pregnancy related complications, 94 (23.7%) mentioned vaginal bleeding as a sign of complication and 279 (70.5%) reported they did not know sign of pregnancy complication (Table 2).

Male partner's perception on skilled birth attendance

To ascertain the respondents' level of perception on male partner involvement in choice of delivery site, the respondents were asked to reflect their opinion on serious of questions concerning delivery and skilled attendance by using likert scale. The study results indicated that 235 (59.3%) of the male partners had good perception on delivery complication and benefits of being attended by skilled attendants, while 161 (40.7%) had poor perception.

Variables		Frequency	Percentages
Male partners had known about ANC follow up of their spouses	Yes	249	62.9
	No	147	37.1
Institutional delivery has access to skilled attendants	Yes	56	14.1
	No	340	85.9
Institutional delivery prevent delay in getting medical care in a case of emergency	Yes	107	27.0
	No	289	73.0
Institutional delivery has important to get immediate treatment for mother and new born	Yes	188	47.5
	No	208	52.5
Male partners did not know why institutional delivery is important	Yes	105	26.5
	No	291	73.5
Mentioned vaginal bleeding as a sign of complication during pregnancy	Yes	94	23.7
	No	302	76.3
Mentioned fever as a sign of complication during pregnancy	Yes	80	20.2
	No	316	79.8
Mentioned abdominal pain as a sign of complication during pregnancy	Yes	7	1.8
	No	389	98.2
Mentioned difficult in labor as a sign of complication during pregnancy	Yes	91	23.0
	No	305	77.0
Mentioned convulsion as a sign of complication during pregnancy	Yes	8	2.0
	No	388	98.0
Did not know sign of pregnancy complication	Yes	117	29.5
	No	279	70.5

Table 2: *Knowledge of male partner's about maternal care in Ambo town, Oromia, Central Ethiopia, May 2017.*

Socio-cultural barriers that affect involvement of male partners in promoting skilled birth attendance

This study showed that Socio-cultural barriers that affect involvement of male partners in supporting their Spouses to access skilled delivery services. For instance, about 103 (26%) of them said that childbirth is a woman's affair which does not require their participation, 195 (49.2%) stated that the placentas must be buried secretly to avoid babies from being bewitched which they felt was impossible if deliveries took place at health facilities. Male partners also have limited knowledge regarding complications related to childbirth as 68 (17.2%) of them stated that delivery is a natural phenomenon that do not require men's participation, and 21 (5.3%) of the male partners said that they will be ridiculed by their peers and be seen as being "ruled" by their wives if they were seen accompanying them to health facilities for delivery (Table 3).

Socio-cultural beliefs	Frequency (N = 396)	Percentages (%)
Child-birth is a woman's affairs that does not require men participation	103	26
Child-birth is natural phenomenon that should not be given much attention	68	17.2
It's not our culture to discuss with wife about place of delivery	62	15.7
Placenta must be disposed secretly which is not possible with in health facility	195	49.2
Fear of being seen by others	21	5.3

Table 3: *Socio-cultural barriers of male partners in Ambo town, Oromia, Central Ethiopia, May 2017.*

Male partners' involvement in promoting skilled birth attendance

This study showed that 166 (41.9%) of men were involved in skilled delivery care on their recent childbirth while more than half 230 (58.1%) of them were not involved. 183 (46.2%) of men accompanied their spouse for ANC follow-up, 211 (53.3%) of men made prior arrangement for delivery, 254 (64.1%) of men discussed with health provider on the place of delivery. Among husbands who made prior arrangement for delivery 81 (20.5%) identified transportation, 126 (31.8%) save money, 45 (11.4%) identified a skilled provider for delivery assistance and 38(9.6%) Prepare essential items for delivery of their recent child (Table 4).

Variables		Frequency	Percentages
Accompanied their spouse for ANC follow-up	Yes	183	46.2
	No	213	53.8
Birth preparedness support by male partners for recent child during delivery	Yes	211	53.3
	No	185	46.7
Discussed with health provide on the place of delivery	Yes	254	64.1
	No	142	35.9
Discussed with their friends	Yes	164	41.4
	No	232	58.6
Discussed with their relatives	Yes	138	34.8
	No	258	65.2

Table 4: *Distribution male partners' involvement in choice of delivery site, Ambo town, Oromia, Central Ethiopia, May 2017.*

Factors associated with male involvements in promoting skilled birth attendance among males having children less than one year

On multivariable analysis, Age of male partners, educational level, occupational status and Knowledge of male partner's about maternal health care were significantly associated with male partner's involvement in promoting skilled birth attendance.

Male partners who were in the age group of 20 to 29 and 30 - 39 were sixteen times and three times more likely to involved in promoting skilled birth attendances than those who were the age group of 40 - 49 (AOR = 16.34, 95%CI: 7.58 - 35.23), (AOR = 3.18, 95%CI: 1.52 - 6.68) respectively.

Male partners who have diploma and above education were almost three times more likely involved compared with those unable to read and write. (AOR = 2.85, 95%CI: 1.01 - 8.05) and those men who were a civil servant were 2.5 times more likely to be involved in skilled birth attendance than those who were merchant (AOR = 2.51, 95 % CI: 1.449 - 4.351).

Furthermore, knowledge of male partners on skilled birth attendance was also found to affect the outcome variable. Respondents who had good knowledge on institutional delivery were about three times more likely to be involved in promoting institutional delivery than those with poor knowledge (AOR = 2.72, 95%CI: 1.61 - 4.59) (Table 5).

Variables	Male involvement		COR 95%CI	AOR95%CI
	Yes	No		
Age				
20 - 29	98	45	15.07 (7.636 - 29.768)	16.34 (7.582 - 35.238)**
30 - 39	55	95	4.00 (2.052 - 7.830)	3.18 (1.522 - 6.683)*
40 - 49	13	90	1.00	1.00
Occupation				
Civil servant	118	104	2.81 (1.813 - 4,357)	2.51 (1.449 - 4.351)*
Farmers	4	17	(0.186 - 1.830)	1.240 (0.284 - 5.420)
Merchant	44	109	1.00	1.00
Educational status				
Diploma and above	81	47	4.13 (2.051 - 8.341)	2.85 (1.013 - 8.057)*
Secondary education (9 - 12)	19	51	0.89 (0.402 - 1.990)	0.55 (0.183 - 1.649)
Primary education (1 - 8)	51	96	1.27 (0.639 - 2.546)	1.47 (0.565 - 3.869)
un able to write and read	15	36	1.00	1.00
Knowledge of male partner's about maternal health care				
Good knowledge	93	62	3.45 (2.262 - 5.269)	2.72 (1.619 - 4.596)**
Poor knowledge	73	168	1.00	1.0

Table 5: *Bivariate and multivariable logistic regression analysis of male involvement in promoting skilled birth attendance, Ambo town, Oromia, Central Ethiopia, May 2017 (N = 396).*

**P value is significant at P < 0.05; **p value is significant at P < 0.001.*

Discussion

This study showed the level of Male partner's involvement in promoting institutional delivery was 41.9%, (95%CI: 37.1 - 46.2). This finding was in line with the findings of studies done in mareka district (41.3%), lemmo district (38.2%) of Southern Ethiopia and Jinja district of Eastern Uganda (43%) [14,20,23]. The present study finding is lower than a study conducted in Kenya (68%) of males were involved in skilled delivery care [24]. This might be due to socio-cultural variation and health care setting.

In this study, male involvement was significantly higher among younger participants (AOR = 16.34, 95% CI: 7.58 - 35.23) than older participants. This finding was similar to other studies conducted in Nigeria, Mareka district and Lemmo district, southern Ethiopia [14,20,23]. This could be due because younger men has less risk perception and communication to get services. An alternative explanation could be that they might have a better chance of an education which is known to positively influence health seeking behaviours [14].

The association between education and health behaviours reinforces the significant role that education plays in improving utilization of maternal health services. Though the relationship between education level and male involvement in supporting their spouses to access skilled birth attendance is well established throughout the existing literature [14,23-25], this study suggests that the education level of the decision maker (i.e. male partners) is also a significant factor in supporting their spouses to access skilled birth attendance. This might be due educated male partners are more likely to have access to different sources of information about the importance of having maternal health care services and possible complications related to pregnancy and childbirth and it is also likely that men with high level of education have some formal employment which enables them to raise funds that they can use to pay hospital bills for delivery services.

Male partners who are a civil servant were more likely to participate in skilled birth attendance than those who were merchant (AOR = 2.51, 95%CI: 1.449 - 4.351). This result was consistent with a study conducted in Kenya Busia [24]. This might be male partners with incomes can pay the delivery fees at health facilities for their spouses.

This study showed that husbands were involved more in maternal health programs if they had higher maternal health care knowledge. With respect to previous studies, lower knowledge on maternal health precluded husbands from positive participation and interest in maternal health care [26-28]. As a result, those husbands subsided their support on their spouses' utilization of maternal care services [28,29]. Therefore, this study highlights a call to recognize husbands as clients of maternal care services and to understand possible complications related to pregnancy and childbirth.

Limitations of the Study

A limitation of this study is that it is purely quantitative and doesn't have the capacity to explore the myriad of contextual and social factors that may be limiting male partner involvement in birth, so it would be very worthwhile to suggest future qualitative research to follow-up on these findings. In addition, recall bias could be present although the study included fathers of children less than one year and this study setting was in urban; therefore, the findings could not be generalizable in large cities and rural areas

Conclusions

Male partner's involvement in promoting skilled birth attendance was low. Age, educational level, occupational status, Knowledge of male partner's about maternal care and were the contributing factors for low involvement in promoting skilled birth attendance.

To strengthen male involvement in promoting skilled birth attendance, maternal health interventions should target husbands as consumers of maternal health services and raise their knowledge of male partner's on maternal health care through health education. Further qualitative studies are also recommended to address the underlying reasons of their less involvement and design effective interventions to improve their involvement.

Conflict of Interest

The authors declare that they have no competing interests.

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