

## Male Partner Role on Reducing Delay in Decision to Seek Emergency Obstetric Care and Associated Factors among Women Admitted to Maternity Ward, in Hospitals of North Showa, Amhara, Ethiopia

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### Abstract

**Background:** Male partner had significant role in reducing delay decision to seek emergency obstetric care. Male partner those who were involved in emergency obstetric plan were more likely to reduce delay in decision to seek emergency obstetric care than those who were not involved. Therefore the main aim of this study was to assess male partner role on reduce delay in decision to seek emergency obstetric care and associated factors among women admitted to maternity ward, in hospitals of north showa, Amhara, Ethiopia.

**Methods:** A cross-sectional facility based study was conducted at north showa, among 420 women with obstetric complications and their spouse. Systematic sampling was used to select study participants and data was collected on socio-demographic and what roles spouses were during complications arise in reducing delay in decision to seek care. Finally multiple logistic regression were fitted and odds ratio with 95% CI were computed to identify associated factors with male involvement role in reducing delay in decision to seek care and determine strength of association. A p-value of <0.05 was considered as statistical significant.

**Results:** Mean age of women was 27.3 with SD  $\pm$  6.7 years, while mean age of their spouse was 31.2 with SD  $\pm$  6.0 years. Out of the respondent ninety seven (23.2%) women, made a decision seek emergency obstetric care on time and about sixty seven (69%) of them were made by male partners. On multiple logistic regression analysis women with formal occupation (AOR=2.98; 95% CI: 1.22, 7.25), women who had Antenatal care four and above visits (AOR=2.55; 95% CI: 1.23, 5.28), male partner education secondary and above (AOR=6.9; 95% CI: 2.9, 3.2), spouse saved money for emergency funds (AOR= 12.86; 95 % CI: 6.66, 18.86), spouse discussed on obstetric emergency plan (AOR= 2.24; 95% CI: 1.36, 3.68), women faced life threaten complications (AOR=4.24; 95% CI: 1.24, 6.09) were found to be significantly association with reducing delay in making decision to seek emergency obstetric care.

**Conclusion:** Male partner had colossal role on reducing delay in decision to seek emergency obstetric care. Programmes should give emphasis on raising awareness thought couple based education about maternal complications to reduce delay in making decision to seek emergency obstetric care.

**Keywords:** Delay; Male partner; Emergency obstetrics care

### Introduction

Delay in making decision to use emergency obstetric care during pregnancy, child birth and postpartum periods when obstetric complications occur is an important factor for maternal death in developing countries [1,2]. More than seventy percent of maternal deaths are due to the direct obstetric complications occurring during pregnancy, child birth and postpartum periods [3]. Maternal delay in utilization of emergency obstetric care is one of the contributing factors for high maternal mortality [4]. Maternal delays were described as having three levels: delay in making decision to seek care, delay in arrival at a health facility, and delay in receiving adequate treatment [5,6]. But this paper focused on delay in making decision to seek emergency obstetric care which accounts for about 40% of the 'three-delay model' [7]. Mothers in developing countries had lower chance for accessing emergency obstetric care due to socioeconomic, social, cultural, female decision making power and ignorance [8-13]. However, the husbands were the principal decision maker to use services for the management of obstetric complications this is because almost all men have social and economic power, and have great control over their partners [4,14-17]. Delayed in decision to seek care when the women experience some types of complications during pregnancy, child birth and postpartum periods, is still high [18,19]. This may be due to that, male partner remain poorly informed about women's health and low levels of participation in prenatal care, delivery and postnatal care attendance [20]. In sub-Saharan African, pregnancy and child

birth continued to be viewed as solely a women's issue [13]. Studies also indicated that in some sub-Saharan countries men generally are decision makers regarding the location at which their spouse should give birth [13-16,21]. However, low level male participation (34%) in prenatal care, delivery and postnatal care attendance [19,22]. And, very little preparation was made like; saving emergency funds (19.5%) and transportation plan (24.2%) [19].

In Ethiopia, lifetime risk of maternal death was about four percent of women died during pregnancy, childbirth, or postpartum periods [21]. Eighty percent of maternal deaths are due to direct obstetric cause [13]. To prevent these complications and deaths, it is important to understand how and who make the decision to seek emergency

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obstetric care during pregnancy, childbirth and postpartum periods and male partner role on decision to seek emergency obstetric care when obstetric complications arise. If not, this makes the interventions on reduce delay in decision to seek emergency obstetric care very difficult [22]. This study assessed male partner role on delay in making decision to seek care (first delay of the 'three-delay model') and associated factors among women with obstetric complications admitted to maternity ward and their spouses in North showa, Amhara, Ethiopia.

## Methods

Institutional based cross-sectional study was conducted in three governmental Hospitals of north showa, Amhara, Ethiopia. Women with obstetric complications admitted to maternity ward and their spouse in all hospital within the study period was selected using systematic random sampling. Sample size was calculated using the following assumptions: P; was the proportion of male partners in the target population estimated to be reduce delay in decision to seek emergency obstetric on time when their spouses faced pregnancy and pregnancy related complications was unknown and hence set at 50% (0.5), and q was set at 0.5 (1-0.5).  $Z=1.96$ , with 95% CI and the level of significance ( $\alpha$ )=5%. Using the above formula and assumptions the estimated sample included 385 women with obstetric complication admitted to maternity ward and their spouse by considering 10% non-response rate the total sample rounded to 423. The total sample was proportionally allocated according to the average number of client flow to each hospital. Using semi-structured questionnaire, data was collected from 420 women and their spouse, the interview was done after the women get recovery from the acute complication and the interviewed women was followed up to discharge. The questionnaire was made in English and local language (Amharic). Six diplomas Midwives, from the maternity ward were our data collectors, and three degree Midwifery supervisor. Training was given for data collectors and supervisors on general principles of the questionnaire and how to use it during data collection.

The questionnaire was pre-tested on similar cases out of the study area before the initiation of the main study. Data was analyzed using SPSS version 20 to provide frequencies and percentages for categorical variables and means and standard deviations for numerical variables. At bivariate analysis, characteristics of the participants who had involved in reducing delay in making decision to seek emergency obstetric are compared with those who did not, using Crude odd ratio. Multivariate logistic-regression analysis was conducted to analyze factors that were independently associated with reducing maternal delay in making decision to seek emergency obstetric care. During the stepwise modeling for regression analyses, all variables of clinical importance on bivariate analysis were considered for inclusion. Then, multiple logistic regression p-value  $\leq 0.05$  was considered statistically significant.

The ethical approval and clearance was obtained from Department of Midwifery, University of Gondar ethical committee. Permissions were obtained from the concerned bodies of the Amhara Regional Health bureau and District Health Offices of North showa Zone and each hospital. Prior to interview and discussions data collectors inform study participants and request for consent. The consent form was written in Amharic and a copy of the English version was attached.

## Result

### Socio-demographic characteristics of the respondents

Out of the 423 women and their spouse identified for this study

420 (99.4%) women and their spouse were interviewed. The mean age of the women was 27.3 with  $SD \pm 6.7$  years and about. And three hundred thirty seven women (80.2%) were between the age of 20 and 39 years. The participants were predominantly Orthodox Christians and Amhara in ethnicity. Majorities (95.2%) of the participants were married and 38.8% of the women were farmers by occupation. Almost two-third (65.7%) of the women had gone to school.

In regard to their partners, the mean age was 31.2 with  $SD \pm 6.07$  years and three hundred two (71.9%) of them were between the age of 20 and 39 years and one hundred forty four (34.3%) were formally employed and 39.8% were farmers by occupation in an order manner. Also, about Two hundred sixty one (62.2%) male partner were educated (Table 1).

### Decision to seek emergency obstetric care and role played by male partner

Out of the interviewed cases ninety seven (23.2%) of them made a decision to seek emergency obstetric care. Sixty seven (69%) of the decision made on time to seek emergency obstetric care were made by male partner (Table 2).

The overall median time required to made a decision to seek care was eight hours, with a great discrepancy between women with life threaten complications and non-life complications (0.90 hours vs.14 hours) (Table 3).

### Factors associated with delay in decision to seek emergency obstetric care among study participants

This multivariate analysis had identified that, women who had formal employee were 2.98 times more likely to reduce delay in decision to seek emergency obstetric care when complication arise than women no employee or informally employee (AOR=2.98; 95% CI: 1.22-7.25) and male partner education secondary and above had 6.92 times more likely to reduce delay in decision to seek emergency obstetric care than male partner with no education or primary school (AOR=9.62; 95% CI: 2.9-3.2). Also, this study revealed that women who had four and above antenatal care visit were 2.55 times more likely to make a decision to seek emergency obstetric care and reduce a delay than women had less antenatal care visit (AOR=2.55; 95% CI: 1.23-5.28). This multivariate analysis also revealed that spouse who saved money for emergency funds were 5.46 times more likely to reduce delay in decision to seek emergency obstetric care than spouse did not save money for emergencies (AOR=5.46; 95% CI: 3.26-12.46).

Women faced life threaten complication were 4.24 times more likely to reduce delay on decision to seek care than women faced non-life threaten complication (AOR=4.24; 95% CI: 1.24-6.09) and spouse discussed on emergency plan were 2.24 times more likely to reduce delay in decision to seek care than spouse who were not discussed (AOR=2.24; 95% CI: 1.36,3.68) (Table 4).

## Discussion

This study reveals that Ninety seven (23.2%) of the interviewed cases made a decision to seek emergency obstetric care on time, out of the cases made a decision on time sixty seven (69%) of them were made by their male partners.

Studies showed that more than 60% of the cases, husbands were the principal decision makers for their wives use of services for the management of obstetric complications [23]. In the current study, in case of life-threatening complication the median time required to make a decision to seek care was range from 0.80 hours to 0.95 hours while

Characteristics	Number (%)
<b>Respondent age</b>	
15-19	57(13.6%)
20- 29	200(47.7%)
30-39	99(32.5%)
40-49	26(6.2%)
Mean age (± SD)	27.3(6.7)
<b>Educational status</b>	
No education	144(34.4%)
Elementary	200(47.6%)
Secondary/above	76(18.0%)
Mean year of schooling (± SD)	5.2(4.78)
<b>Occupation</b>	
Housewife	112(26.8%)
Farmer	163(38.8%)
Employee	54(12.8%)
Private business	91(21.7%)
<b>Marital status</b>	
Married	396(94.2%)
Unmarried	24(5.8%)
<b>Partner age</b>	
20-29	144(34.3%)
30-39	158(37.6%)
40-49	118(28.15)
Mean age (± SD)	31.2(6.07)
<b>Partner education%</b>	
No education	159(37.8%)
Elementary	152(36.2%)
Secondary/above	109(26.0%)
Mean year of schooling (± SD)	6.0(4.95)
<b>Partner occupation</b>	
Farmer	184(43.8%)
Employee	154(36.8%)
Private business	82(19.3%)
<b>ANC visit %</b>	
1 -3	296(70.6%)
>4	124(29.4%)
Mean No <sup>a</sup> visit (± SD)	2.15(1.09)
<b>Parity</b>	
None	138(32.9%)
1-3	248(59.1%)
4-5	21(4.9%)
>6	13(3.2%)
Mean No <sup>a</sup> children (± SD)	1.4(0.85)
*ANC=Antenatal care	

**Table 1:** Socio-demographic and obstetric characteristics of study participants, in Hospitals of North showa, Amhara, March 1<sup>st</sup>-August 31<sup>st</sup> 2013.

in case of non-life-threatening complications; the median time was several times higher, 8 hours to 20 hours.

Studies from different developing countries reported similar findings as the current study [13,24,25]. The discussions essentially indicate that most delays are multi-causal and that the principal decision maker are not aware of the danger signs of pregnancy, thus not being prepared for an emergency. The decision-maker is considered to have influence on the mentioned delay. In most cases, the male partner played the key role in decision-making to seek emergency obstetric care [14,24,26].

Studies from different African countries also reported similar

finding [16,24]. The socioeconomic and obstetric indicators have influence on decision to seek care.

In inclusion, results of studies in Uganda [24] and Nigeria [25,27] showed that antenatal care visits had influence on decision to seek care and in this study, this association was justified.

Delay in making decision to seek emergency obstetric care was significantly higher among women who were non-life-threatening complications. This is possibly due to the decision maker understanding regarding maternal complications. This finding is also similar to that of another study conducted in, Bangladesh [28]. Formally employed women faced emergency obstetric complications were 2.98 times more likely to reduce delay on decision to seek care than other job categories. (AOR=2.98; 95% CI: 1.22, 7.25). This is in lined with study done in Uganda Kabale hospital on male involvement in birth plan, women who formally employed were 2.3 times more likely to had birth plan and reduce delay in seek health care than other job categories (AOR=2.3; 95% CI:1.14-4.8) [13].

This might be due to, when women are formally employee; they

Characteristic	Number (%)
Male partner role on delay in decision to seek care.	
Identify emergency obstetric danger signs on time	71(17%)
Respond immediately in events of an emergency to avoid delays	57(13.5%)
Seeking care without delay when complication occurred	118(28%)
Decision making role in seeking care	311(74.1%)
Made a decision to seek emergency obstetric care on time	67(69%)

**Table 2:** Male partner role on reduce delay in decision to seek emergency obstetric care, among women with obstetric complication admitted to maternity ward, in North showa, Amhara, Ethiopia, March to August 2013.

Types of complications	Median time (hrs) taken for first phase of maternal delay.
Life-threatening complications	
Haemorrhage	0.6
Eclampsia	1.3
Ruptured Ectopic	0.8
Uterine rupture	1.0
Eclampsia/ prolonged labor	0.9
Uterine rupture/obstructed labor	1.6
Hemorrhage/pre-eclampsia	0.85
Postpartum fever/anemia	1.2
Retained placenta with haemorrhage	0.4
Median time(hrs)	0.9
No-life threatening complications	8
Pre-eclampsia	14
Prolonged /obstructed labor	12
Term Premature Rupture Of Membrane	16
Alter fetal movement	14
Anemia	12
Retain placenta/ Puerperal sepsis	18
Malpresentation	19
Pregnancy Induced Hypertension	8
Term PROM and altered fetal movement	20
Prolonged labor and Pregnancy Induced Hypertension	14
Median time(hrs)	

\*PROM= premature Rupture of membrane, \*hrs=hours

**Table 3:** Median time required for decision to seek emerge obstetric care by types of Complications, among women admitted maternity ward, in Hospitals of North showa, Amhara, Ethiopia March to august, 2013.

Characteristics	Reduce delay in decision to seek Emergency obstetric care		Odds Ratio	
	No (%)	Yes (%)	Crude(95%CI)	Adjusted (95%CI)
Respondent age	20(35%)	37(65%)	3.68(1.39-9.75)	0.31(.16-2.61)
15-19	120(60%)	80(40%)	1.07(.47-2.45)	0.38(.19-1.76)
20- 29	40(29.2%)	97(70.8%)	1.11(.48-2.58)	0.30(.11-1.87)*
30-39	7(35%)	19(65%)	1.0	1.0
40-49				
Educational status				
No education	46(31.9%)	98(68.1%)	1.0	1.0
Elementary	70(35%)	130(65%)	1.06(1.52-2.09)	0.66(.40-1.07)
Secondary/above	40(52.6%)	36(47.4%)	0.65(.34-1.22)	0.97(.47-1.97)
Occupation				
Housewife	32(28.6%)	80(71.4%)	1.0	1.0
Farmer	63(38.7%)	100(61.34%)	0.95(.56-1.63)	1.14(.64-2.050)
Employee	30(55.6%)	24(44.4%)	0.27(.11-.71)	2.98(1.22-7.25)**
Private business	60(66%)	31(34%)	0.72(.34-1.51)	0.64(.29-1.39)
Partner age				
20-29	34(23.6%)	110(76.4%)	1.0	1.0
30-39	60(38%)	98(62%)	0.52(.32-.84)	2.59(0.45-3.06)
40-49	72(61%)	46(39%)	1.1(.62-1.92)	1.06(.60-1.90)
Partner education				
No education	65(41%)	94(59%)	1.0	1.0
Elementary	67(44%)	85(56%)	1.02(.64-1.63)	.91(.30-1.90)
Secondary/ above	68(62.38%)	41(37.6%)	1.4(1.79-2.33)	6.9(2.9-3.2)*
Partner occupation				
Farmer	62(33.7%)	122(66.3%)	1.0	1.0
Employee	80(52%)	74(48%)	1.14(.66-1.96)	1.15(.65-2.04)
Private business	50(61%)	32(39%)	1.14(.57-2.28)	1.18(.57-2.46)
Antenatal care visit	176(59.46%)	120(40.54%)	1	1
	76(61.3%)	48(38.7%)	0.62(.29-1.31)	2.55(1.23-5.28)*
Parity %				
None	52(37.7%)	86(63.3%)	1	1
1-3	160(64.5%)	88(35.5%)	0.74(.23-2.28)	1.59(.42-5.94)
4-5	9(42.86%)	12(57.14%)	0.57(.18-1.76)	1.15(.31-4.22)
>6	6(46.0%)	7(54%)	0.55(.14-2.15)	1.15(.24-5.41)
Spouses involved on saving money for emergency funds				
Involved	100(41.6%)	140(58.3%)	1.43(1.03,2.05)	5.46(3.26-12.46)*
Not involved	60(33.35)	120(66.6%)	1	1
Obstetric complication				
Life threaten	15(12.2%)	110(88.8%)	3.7(2.58,6.68)	4.24(1.24-6.09)**
Non-life-threaten	238(80.4%)	56 (19.6%)	1	1
Spouse involved on obstetric emergency plan				
Involved	68(35.8%)	122(64.2%)	2.06(1.32,3.19)	2.24(1.36-3.68)**
Not involved	80(34.8%)	150(65.2%)	1	1

\*=P-Value<0.05, \*\*=P-Value<0.001 and \*\*\*=P-Value<0.0001

**Table 4:** Analyses of factors associated with reduce delay in decision to seek emergency obstetric care among study participants, in Hospitals of North showa, Amhara, Ethiopia, March to August 2013.

might have the power to make their own decision in matters related to their own health and expected expenses.

Male partner education secondary and above had 6.9 times more likely to reduce delay on decision to seek care when his spouse has faced obstetric complications than no education or primary (AOR=6.9; 95% CI: 2.9, 3.2).

This is similar with studies done in Northern Nigerian Community [16] on birth preparedness, Complication readiness and Fathers' Participation in Maternity Care and in Kathmandu, Nepal [29] on

Involvement of males in antenatal care, birth preparedness, exclusive breast feeding and immunizations for children.

The possible explanation may be due to that educated male partner are easy to access information and involve in complication readiness plan and this help them to made decision to seek care on time.

Ethiopian DHS 2011 revealed that, economic status of women has a positive relationship with delivery care. In line with this, in the findings of this study, women who saved money for emergencies were 5.46 times more likely to reduce delay on decision to seek care than

not saved money when obstetric emergency occur (AOR=5.46; 95% CI: 3.26, 12.46).

Women who had Antenatal care four and above visits were 2.55 times more likely to reduce delay on decision to seek care than less visits (AOR=2.55; 95% CI: 1.23, 5.28). This finding implies an emphasis to be given to the provision of appropriate information about complication readiness plan during antenatal care follow up in promoting Emergency obstetric care.

This study elucidated several reasons for the delay in making decision to seek emergency obstetric care for women with obstetric complication was, inability to judge the graveness of the problem, women those who faced life threaten complication were 4.24 times more likely to reduce delay on decision to seek care than women faced non-life threaten complications (AOR=4.24; 95% CI: 1.24-6.09).

This is similar with studies in rural Uganda on male involvement in birth preparedness and Complication readiness for emergency obstetric referrals and in Northern Uganda peri-urban Gulu district on male partner attendance of skilled antenatal care [23].

Spouses who discussed on emergency readiness plan were 2.24 times more likely to reduce delay on decision to seek care than not discussed (AOR=2.24; 95% CI: 1.36-3.68). This indicates that the ability to judge the graveness of the complications of pregnancy by male partner which helps reduce the time to make decision to seek care. Similar situation has also been observed elsewhere [5,28].

## Limitation of the Study

Since, this was facility based study, may not explore traditional and social related issues and unable to avoid recall bias, because time calculations for delays were collected from the cases on admission and their spouse.

## Conclusion

Male partner played colossal role in making decision to seek care on time. Spouses discussed on obstetric complication readiness plan had reduced delay in decision to seek care as compared to those who did not discuss. For life threatening complications women reduce delay in decision to seek care but not women face non-life threatening complications. This all could be indicators for independent decision making power of women on their own health is low. Decision to seek care was significantly higher among elderly women, women faced non-life-threatening complications, multi parity and women who were not save money for emergencies. Therefore, along with the Health centers (delivery centre's) assistance, the programme should give more emphasis on raising awareness through couple/family based education regarding maternal complications and dispel fear of clinical care to accelerate seeking making decision to seek emergency obstetric care.

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