

Delay in Making Decision to Seek Institutional Delivery Service Utilization and Associated Factors among Mothers Attending Public Health Facilities in Dawuro Zone, Southern Ethiopia

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Submitted: 07 Dec 2019; Accepted: 17 Dec 2019; Published: 02 Jan 2020

Abstract

Background: Delay in institutional delivery refers to the time interval from the first onset of labour to start to receiving first healthcare. Delay in deciding to seek care (first delay), identifying and reaching medical facility (second delay), and receiving adequate and appropriate treatment (third delay) are three major factors that contribute to maternal death in developing countries. The time interval from the first onset of labour to decision to seek emergency obstetric care from health facility and time longer than the expected time (one hour) is considered as first delay.

Objective: This study was aimed to investigate delay in deciding to seek institutional delivery care and associated factors among mothers attending public health facilities in Dawuro zone.

Methods: Institution based cross-sectional study was employed from March 1-30, 2017. Consecutive sampling technique was used to interview mothers who presented to health facilities to receive delivery service. Data were collected using structured interviewer administered questionnaire.

Results: Total of 394 mothers were participated in the study. One hundred sixty six [42%] of the study subjects were delayed in making decision to seek delivery service utilization from health facilities. A significant relationship was found between mother's residence in rural areas, mother's educational level primary and below, average monthly income of the family < 1000 ETB & mother's antenatal care visit less than 4 times and first delay (maternal delay to seek institutional delivery care).

Conclusion: Significant number [42%] of mothers delayed in making decision to seek delivery service utilization from health facilities. Therefore, strategies to identify determinants of delay in making decision to seek institutional delivery service and enhance practices for further reduction in this delay is needed.

Keywords: Delay, Institutional Delivery Service Utilization, Laboring Mothers

Introduction

Delay in institutional delivery refers to the time interval from the first onset of labour to start to receiving first healthcare. Delays are the major contributing factors for high maternal mortality [MM] in developing countries. The time interval from the first onset of labour to decision to seek emergency obstetric care from health facility and time longer than the expected time (one hour) is considered as first delay. Around 15% of all pregnant women develop a possibly life-threatening complication that calls for skilled care, and some will require a major obstetrical intervention to survive. About 1,000 women die from pregnancy/childbirth related complications around the world every day and more than half a million women die each

year; of these, 99% occur in low-resource countries [1-4].

Institutional delivery plays an important role in reducing maternal and neonatal mortality because it provides timely obstetric and newborn care for life-threatening complications [5]. The occurrence of all obstetric complications may not be preventable but almost all are treatable before resulting in serious maternal and perinatal morbidity and mortality [6,7]. Institutional delivery is staggering low in our country. According to 2016 Ethiopian demographic and health survey (EDHS), only 26% of total pregnant women delivered in health facilities. Even with the best possible antenatal care, it is established that delivery could be complicated; therefore, timely referrals and access to appropriate health care had a great impact on reduction to maternal mortalities and disabilities [5,6,8].

Objective of the Study

To determine delay in deciding to seek institutional delivery service utilization and associated factors among mothers attending public health institutions in Dawuro zone.

Methods and Materials

Institution based cross-sectional survey was carried out from March 1-30, 2017 in 11 health facilities of Dawuro zone. Sample size was calculated by using single population proportion formula based on the following parameters: 95% confidence level (1.96), margin of error (0.05), 37.8% proportion [2]. The calculated sample size was 394. Multistage sampling was used to select health institutions which provide comprehensive delivery service and consecutive sampling technique was used to interview study participants. Data analysis was done by using SPSS version 20.0 and statistical significance was declared at p-value <0.05.

Definition of Terms

Delay in making decision to seek care: refers to the time taken ≥ 1

hour to make decision to seek care was considered as delay.

Institutional Delivery Utilization

When a mother gives birth at health institution and the delivery is assisted by skilled birth attendant or trained health professional.

Results

A total of 394 mothers participated in the study. Majority (82%) of respondents belongs to the Dawuro ethnic group, 98% were married, 56% had rural residence and 37% had at least secondary education (Table 1). One hundred sixty six [42%] of the study subjects were delayed in making decision to seek delivery service from health facilities. The mean delay time was 3 hours. It was found that rural residence; OR=11.282 (5.942, 14.279), primary & below level maternal education; OR=6.791 (2.376, 9.413), average monthly income of family <1,000ETB; OR=1.504 (1.201, 1.942) and antenatal care visit less than 4 times; OR=4.768 (2.281, 9.966) were significantly associated with maternal delay in deciding to seek emergency obstetric care (Table 2).

Table 1: Socio-demographic characteristics of mothers on delay in decision to seek delivery service utilization, Dawro zone, 2017

Residence	Urban	164	42%
	rural	230	58%
Age	<20 years	47	12%
	20-34 years	301	76%
	≥ 35 years	46	12%
Ethnicity	Dawro	325	82%
	Amhara	40	10%
	Oromo	16	4%
	Other	13	3%
Religion	Orthodox	246	62%
	Protestant	95	24%
	Catholic	45	11%
	Muslim	8	2%
Marital status	married	366	92.5%
	divorced	26	7%
	widowed	2	0.5%
Monthly income of family	<1000 ETB	210	53%
	1000-1999 ETB	36	9%
	≥ 2000 ETB	148	37%
Mother education	None	118	30%
	Primary	131	33%
	Secondary	126	32%
	Tertiary	19	5%
Husband education	None	41	10%
	Primary	184	47%
	Secondary	143	36%
	Tertiary	26	7%
Mother occupation	Employed	60	15%
	Unemployed	334	85%
Husband education	Employed	98	25%

	Unemployed	296	75%
Decision maker	Mother	74	19%
	Husband	206	52%
	Family	114	29%
Parity	Primipara	250	63%
	Multipara	144	37%
Type of previous delivery	No history of delivery	250	63%
	Spontaneous vaginal Delivery	127	32%
	Non spontaneous vaginal delivery	7	5%
No of ANC visit	< 4 visits	262	66%
	>= 4 visits	132	34%
Delay in making decision	No	228	58%
	Yes	166	42%

Table 2: Multivariate logistic regression analysis showing factors affecting decision making on delivery service utilization, Dawro zone, 2017

Variable		Delayed	Not delayed	COR	AOR	P value
Residence	Urban	58	116	1	1	
	Rural	96	124	9.130	11.282(5.942,14.279)	0.0001
Mothers education	Secondary & above	28	117	1	1	
	Primary or less	126	123	8.451	6.791(2.376,9.413)	0.0001
Monthly income of the family	>=1000 ETB	95	115	1	1	
	<1000 ETB	69	115	1.808	1.504(1.202,1.942)	0.023
No of ANC visit	>=4 visits	70	62	1	1	
	<4 visits	84	178	6.535	4.768(2.281,9.966)	0.001
Parity	Primipara	152	100	1	1	
	multipara	68	74	1.762	1.498(0.817,2.747)	0.788
Husband occupation	Employed	62	58	1		
	Unemployed	134	140	0.122	0.096(0.032,1.220)	0.142
Decision maker	Mother	28	44	1	1	
	Husband/family	206	114	1.658	1.236(0.573,2.665)	0.499
Type of previous delivery	Non spontaneous vaginal delivery	65	62	1	1	
	Spontaneous vaginal delivery	107	120	0.419	0.633(0.408,1.284)	0.589

Discussion

All pregnant women are at risk of obstetric complications. Numerous factors contribute to poor utilization of delivery service at health facility in developing countries. Maternal delay in utilization of emergency obstetric care is one of the contributing factors for high maternal mortality in developing countries. This study showed that 166 (42%) of mothers had delayed in deciding to seek emergency obstetric care. This finding is consistent with the study finding from Northern Ethiopia, Bahir Dar and UNFPA analysis [2,3]. But it is inconsistent with the study findings noted in Pakistan (71%), Bangladesh (69.3%), and Nigeria (57%) [5,9,10]. This might be due to differences in place and time of study, cultural diversity and quality of health service delivery system.

This study revealed that mother's educational level of primary & below was strongly associated with decision to seek emergency obstetric care. The odds of delay in deciding to seek emergency obstetric care is 6.791 times higher among women with primary

and below education when compared with those who attended secondary and above level of education. This finding is in line with finding from Ethiopia, Bangladesh, Nigeria and Iran [2,5,7,11,12]. This could be due to the reason that education could influence women's overall empowerment enhancing their ability to have self-determination, access to information, and financial freedom to support themselves to take transport to a health facility and pay for (if applicable) for services, as well as to easily absorb health messages through the media and from health professionals. These could collectively influence mothers' awareness to seek better medical services, including delivering in health facilities.

Antenatal care is the most favorable contact point for mothers to get more information about risks and problems they may encounter during delivery. Frequency of antenatal care was statistically significant factor to affect women's decision on utilization of institutional delivery. In this study, mothers who attended antenatal care less than four times were about 5 times more likely to delay

to seek institutional delivery service utilization when compared with their counterparts. This finding is in line with different studies undertaken in Ethiopia, Bangladesh and Nigeria [2,5,13]. Regarding physical access to health facility, about 55.8% mothers were found to have no access to health facility or live in a rural area with walking distance of greater than one hour. Women from rural area were 11 times more likely to delay to seek institutional delivery service utilization when compared their urban counterparts. Similar finding was observed in Ethiopia, Bangladesh, Nigeria, Iran and Nepal [4,5,9,11].

Delay in decision to seek institutional delivery service utilization was 1.5 times higher among mothers whose monthly income of the family is below 1000.00 ETB than those whose monthly income is 1000.00 ETB and above. This finding is consistent with the study finding from Northern Ethiopia, Bahir Dar [2]. Unlike other similar studies, this study didn't show significant relationship between delay in decision to seeking institutional delivery service utilization and socio-demographic variables such as employment status of the mother, lack of decision making power, parity and exposure to media.

Conclusion and Recommendation

Significant number [42%] of mothers delayed in making decision to seek delivery service utilization from health facilities in the study area. Mothers' residence in rural areas, educational level primary and below, average monthly income of the family < 1000 ETB & antenatal care visit less than 4 times are statistically significant determinants that affect first delay (maternal delay to seek institutional delivery care). Therefore, strategies to identify determinants of delay in making decision to seek institutional delivery service and enhance practices for further reduction in this delay is needed [14,15].

Acknowledgments

We are grateful for data collectors and study participants for their best cooperation in our study.

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