

Awareness of Obstetric Fistula and its Associated Factors among Reproductive-age Group Women in Bench Sheko Zone, Southwest, Ethiopia. Community based Cross-Sectional Study

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ABSTRACT

Background: Obstetric fistula is, without a doubt, the most severe of pregnancy-related disabilities. While the condition has disappeared in developed countries, it remains a source of concern in Ethiopia and serves as a proxy indicator of the status of Ethiopian women and the availability and access to quality maternal health services. However, to our best knowledge, there was no evidence of the study done in the study setting. Therefore, we tried to assess the awareness of obstetric fistula and its associated factors among reproductive-age women in Bench Sheko Zone, Southwest Ethiopia.

Methods: A Community based cross-sectional study was conducted in Bench Sheko Zone from February, 15, 2020 to March 15, 2020. Bench-Sheko zone was selected purposively, and the two districts and kebeles were selected randomly. A systematic sampling technique was used to assign 422 households, and kebele registration was used as a sampling frame. Data were managed using Kobo Collect v1.25.1 and descriptive frequency, bivariate, and multivariate regression analyses were performed using Stata version 16.

Results: This finding shows that 40.8% of reproductive group women had a good awareness of obstetrics fistula. Multivariable logistic regression analysis showed that who can read and write only (AOR=2.5;95% CI (1.2,5.1)), primary level of education (AOR=2.7;95% CI (1.7,4.5), high school and above (AOR=4.1;95% CI (1.6,10.6), ever participated on the Pregnant Women conference (AOR=23.8, 95% CI=5.6,58.7), and those who gave birth in a health institution (AOR=2.5, 95% CI=1.5,4.2) were significantly associated with awareness of obstetrics fistula.

Conclusions and Recommendations: This study revealed that awareness of obstetrics fistula was low. Education status, participation in pregnant women conference, and place of delivery were significantly associated with awareness of obstetrics fistula. This shows there is a gap in awareness of obstetrics fistula; therefore, it is good to emphasize providing information on maternal health care issues, particularly on obstetrics fistula.

Keywords: Obstetric Fistula, Awareness Level, Bench Sheko Zone, Southwest, Ethiopia

Abbreviations: UNFPA: United Nations Population Fund; USAID: United States Agency For International Development; VVF: VesicoVaginal Fistula; PWC: Pregnant Women Conference; WHO: World Health Organization

INTRODUCTION

Obstetric fistula is one of the most extreme and fatal childbirth accidents. It is caused by prolonged, obstructed labor without access to appropriate, high-quality medical intervention through the use of a gap between the birth canal and the bladder and/or rectum. It leaks urine, faeces, or both to women and sometimes contributes to chronic medical conditions, depression, alienation from society, and worsening poverty [1].

According to the World Health Organization (WHO), Strategies for the prevention of obstetric fistula include delaying the age of first birth, cessation of harmful traditional procedures, and prompt access to obstetric care. Obstetric fistula prevention and management help to sustainable development goal 3 of improving maternal health [2].

In all developing countries, obstetric fistulas are identified. The majority of obstetric fistulas, however, are limited to the "fistula belt" from Mauritania to Eritrea and in the developing countries

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of Middle East Asia throughout the northern half of sub-Saharan Africa [3].

Currently, more than 300 million women experience short- or long-term complications from pregnancy or childbirth, with about 20 million new cases occurring worldwide every year. Infertility, extreme anemia, uterine prolapse, and vaginal fistula are problems. It is estimated that with at least 33,000 of these located in Sub-Saharan Africa, about 50,000-100,000 women develop obstetric fistula annually [2].

In resource-poor countries, millions of girls and young women live in shame and loneliness, sometimes neglected by their husbands, and rejected by their families and societies. They typically live in extreme poverty, shunned or blamed by society, and several sinks further into poverty and more despair as they are unable to earn money. The justification for this misery is that these young girls or women, due to complications that developed during childbirth, are living with an obstetric fistula. Their babies are also probably dead, which adds to their depression, pain, and suffering [4].

Obstetric fistula is a big public health issue in Ethiopia. While in developed countries the condition has diminished, in Ethiopia it remains a source of concern and serves as a proxy indicator of the status of Ethiopian women and the availability and accessibility of quality maternal health services. The most debilitating morbidity in pregnancy is obstetric fistula. It mostly affects young, disadvantaged women who lack the resources for their families to access quality maternal care. In remote villages, most of these women remain invisible. As demand is much greater than the capacity of existing facilities, for those who have access to surgical repair face long waits. As the demand is far greater than the capacity of existing facilities. In many areas, repair services simply do not exist [5].

Problem analysis reports that there are between 36,000 and 39,000 women currently living with obstetric fistula and that every year there are between 3,300 and 3,750 new cases of obstetric fistula in Ethiopia. In Ethiopia, data on birth outcomes is not yet uniformly or regularly available due to the low rate of institutional deliveries, so this data was created by model estimates [6].

Several obstacles to the treatment of fistula that function at the individual, community, and national levels. Therefore, the effective treatment of obstetric fistula may require many obstacles to be tackled, including depression, stigma, and shame, the lack of community-based referral systems, the financial cost of the operation, transportation issues, gender power imbalances, and the availability of fistula repair facilities, community reintegration, and the conflicting priorities of political leaders. A lack of fistula awareness is probably one of the most challenging hurdles [7].

Why women are prevented from receiving care is clarified by a lack of awareness. The fistula will be a problem before the world does something to stop it. This study will also provide a basis for the implementation of policies in the field of reproductive health, programs to better address healthy motherhood programs, and related women's complications. These may be additives to current information and could be used as a guide for public health providers. Since there was no research in this area and it was used as a guide. Therefore, we tried to assess awareness of obstetric fistula and its associated factors among reproductive-age group women.

MATERIAL AND METHOD

Study areas and period

The study was conducted in the two selected woredas of Bench

Sheko Zone of Southern Nations Nationalities and Peoples' Region, Ethiopia. Bench Sheko zone has two administrative towns, six woredas, one hospital, 26 health centers, 129 health posts. And 586 km distance from Addis Ababa. Conducted from February 15, 2020, to March 15, 2020.

Study design

A community-based cross-sectional study design with quantitative methods of data collection was used.

Source and study population

All reproductive age group women in the Bench Sheko zone were the source of population. All sampled reproductive age group women in the selected woredas were the study population.

Inclusion and exclusion criteria

All reproductive age group women in selected kebeles who lived in the kebeles for six or more months were included in the study. Reproductive age group women who were critically ill and mentally incapable to communicate were excluded from the study.

Sampling technique and sample size determination

The Bench-Shekozone were selected purposively. While two districts and kebeles were selected randomly. The sample size was determined using a single population proportion formula by considering the following assumptions: the proportion of awareness on obstetric fistula among antenatal care attendees was 39.5%, 5% level of significance ($\alpha = 0:05$), and 5% margin of error ($\omega = 0:05$). The final sample size was adjusted by adding a 15% non-response rate thus turned out to be 422 [8].

Based on the source population, the sample size of each district was proportionally allocated. From the selected district again, the kebeles were selected by the lottery method. Then, the sample size was proportionally allocated to each kebeles. Then, a systematic sampling technique was used to select eligible reproductive age group women. The list of reproductive age group women was taken from health posts of each kebele.

Operational definitions

Awareness level was categorized into two by calculating Mean. Those who scored above the mean were considered as good awareness, and those scored below the mean were considered as poor awareness [9]. Data collection technique and tools: A structured questioner was adapted from a previously conducted study in Burkina Faso, Eritrea, Awi Zone, North West, Ethiopia for socio-demographic and awareness part of the study question [9-11]. The questionnaire includes three parts background information, obstetric information, and, questions on obstetric fistula. Awareness of obstetric fistula was assessed by evaluating responses to 22 questions on obstetric fistula including the causes, risk factors, symptom prevention, and treatment of obstetric fistula. The questionnaire and statements were grouped and arranged according to the particular objectives that they could address. Ten data collectors who were nurses and midwives working at a nearby health facility were recruited purposively from their respective woredas, and two supervisors who are BSc in public health were recruited. The data collection method was done through face to face interviews by using Kobo collect.

Quality control measures, data processing, and analysis

The data collection tool was translated into the Amharic language.

A pre-test was done on 5% participants and any ambiguity and missed points were incorporated in the final version of the questionnaire. The training was given for data collectors intensively for two days. Data collectors and supervisors were trained for two days to be familiar with all types of data, tools, and data collection methods and objectives, and one-day practical sessions on Kobo Collect. Close supervision was done to ensure adherence to correct data collection procedures, every day supervisors reviewed the filled questionnaires at the end of data collection for completeness. Also, every morning, the supervisors and data collectors conducted a morning session to solve if there were any problems encountered.

All data were electronically captured on-site and uploaded daily to the kobo server database using Kobo toolbox version 1.25.1. Database content was checked for missing answers, duplications, and inconsistencies. Then data were then exported to Stata software (version 16.0) for further analysis. Binary logistic regression analysis was used to identify predictors. Variables with a P-value of less than 0.25 in the binary logistic regression analysis were entered into the multivariable logistic regression analysis to control confounds. The odds ratio with a 95% confidence interval was used to examine associations between dependent and independent variables. The fitness of the model was checked by Hosmer and Lemeshow test. A P-value of less than 0.05 was considered significant. Finally, the results were presented using tables, figures, and narrative form.

RESULTS

Socio-demographic characteristics of the respondents

Four hundred twenty-two participants participated in the study with a response rate of 100%. The mean age of participants was 29.9 ± 6.1 with a range of 15-49 years. Most participants, 174 (41.2%), reported that they were not educated followed by those educated up to primary school education; 137 (32.5%). Protestant and Orthodox Tewahido were the dominant religions accounting for 46.2% and 40.3% respectively. The majority of the participants 389(92.2%) were >30 Minutes Distance from the nearest Health facility (Table 1).

Reproductive and obstetrics characteristics of the study participants

And the mean age at first pregnancy was 19.7 ± 2.8 years, and 289(68.5%) of the participants were <20 years age at first pregnancy. About forty-seven (11%) of the women have a history of induced abortion. Concerning family planning 342(81%) ever used modern contraceptives. The majority of the participants were multigravida 321(76.1%) and 288(68.3%) of the participants were ANC follow up for their last pregnancy. Two hundred fifty-one (59.5%) of participants knew about birth preparedness and complication readiness (Table2).

Table 1: Socio-demographic characteristics of participants (n=422).

Category	Variables	Frequency	Percentage
Age group	15-19	4	1
	20-24	75	17.8
	25-29	117	27.7
	30-34	106	25.1
	35-39	92	21.8
	40-44	19	4.5
	45-49	9	2.1
Religion	Orthodox	170	40.3
	Protestant	195	46.2
	Muslim	34	8.1
	Catholic	23	5.5
Marital status	Married	418	99
	Divorced	4	1
Occupational Status	House Wife	377	89.3
	Employed	19	4.5
	Merchant	26	6.2
Educational status	No formal education	214	50.7
	Read & write only	43	10.2
	Primary School	137	32.5
	Secondary school and Above	28	6.6
Husband Occupational Status	Farmer	377	89.3
	Employed	25	5.9
	Merchant	20	4.7
Husband Educational Status	No formal education	174	41.2
	Read & write only	68	16.1
	Primary education	129	30.6
	Secondary school and above	51	12.1
Distance from the nearest Health facility	<30 Minutes	33	7.8
	> 30 Minutes	389	92.2

Table 2: Reproductive and obstetrics characteristics of the study participants, (n=422).

Variables	Frequency	Percentage	
Age at first pregnancy	<20 years	289	68.5
	> 20 Years	133	31.5
History of induced abortion	No	387	91.7
	Yes	35	8.3
History of birth-related complication	No	375	88.9
	Yes	47	11.1
Family planning	No	80	19
	Yes	342	81
Ever pregnant	No	7	1.7
	Yes	415	98.3
Number of Delivery	Primigravida	101	23.9
	multigravida	321	76.1
ANC	No	134	31.8
	Yes	288	68.3
Know the benefits of institutional delivery	No	171	40.5
	Yes	251	59.5
Know danger sign	No	141	33.4
	Yes	281	66.6
Know birth preparedness and complication readiness	No	171	40.5
	Yes	251	59.5
Place of delivery for recent childbirth	Home	141	34.5
	Health Facility	268	65.5

Awareness of obstetric fistula

In this study, 172 (40.8%) of the participants had a good awareness of obstetric fistula. The major source of information was a health professional 146(84.9%). The cause, risk factors, symptoms of obstetric fistula, prevention method, and availability of obstetric fistula treatment and prevention methods identified by 160 (93%), 167 (97.1%), 172 (100%),155 (90.1%), and 139(80.8%) of the participants, respectively (Table 3).

Determinants of women awareness status on obstetric fistula

Bivariate analysis was done to assess any relationship between independent variables and awareness of obstetrics fistula. In bivariate analysis, occupational status of respondents, education status of the respondents, History of Induced Abortion, ever participate in pregnant women conference, know benefits of institutional delivery, know danger sign, know birth preparedness and complication readiness, place of delivery, were considered statistically significant with the awareness of obstetrics fistula. Multivariable logistic regression analysis showed that respondents who can read & write only were 2.5 more likely to have awareness than Respondents who have no formal education (AOR=2.5:95% CI (1.2,5.1)). Similarly, Respondents who have a primary level of education were 2.7 times more likely to have awareness than Respondents who are the no formal education (AOR=2.7:95% CI(1.7,4.5). Likewise, Respondents who have high school and above 4.1 times more likely to have awareness than Respondents who have no formal education (AOR=4.1:95% CI(1.6,10.6). Respondents who had ever participated in PWC were 23.8 times more likely awareness of obstetric fistula than those who had not participated (AOR=23.8, 95% CI=5.6,58.7), and those who gave birth in health institution were 2.5 times more likely aware of OBF

than who gave birth at home (AOR=2.5, 95% CI=1.5,4.2)(Table 4).

DISCUSSION

This study shows that less than half (40.8%) of the participants had a good awareness of obstetric fistula. This finding was lower than studies conducted in Northern Ghana, Nigeria, and Tanzania (45.8%, 57.8%, and 60.1%) respectively [12-14]. The difference might be in the study population, study design, and socio-demographic characteristics. The figure in this study is in line with 2016; EDHS and Awi Zone, North West, Ethiopia (39% and 39.5%) were reported as they had heard about obstetric fistula at national levels [8,15]. This similarity of the finding might be due to the same socio-demographic characteristic of the respondents.

In this study, we have identified that respondents who attend formal education were two times higher than those who did not attend formal education. This study agrees with studies done in the Awi zone of North West Ethiopia, Burkina Faso, and Northern Ghana [8-12]. This might be those attending formal education have greater opportunities to get information, asking, and getting health services than those who had not attended formal education.

This study also pointed out that respondents who had ever participated in PWC were 23.8 times more likely awareness of obstetric fistula than those who had not participated (AOR=23.8, 95% CI=5.6-58.7). This could be explained as those participants who had ever participated in PWC would have a high chance of getting information from health personnel in the form of health education about obstetric fistula.

Similarly, our study revealed that those who gave birth in health institution were two points five times more likely aware of obstetric fistula than who gave birth at home. This finding is in

Table 3: Participants' characteristics of awareness on obstetric fistula (n=422).

Obstetric fistula		Frequency	Percentage
Heard obstetric fistula	Ever heard obstetric fistula	172	40.8
Awareness	Good awareness	172	40.8
	Poor awareness	250	59.2
Source of Information	Health professional	146	84.9
	Family and friend	78	45.4
	School	19	11.1
	Media	49	28.5
Know the cause of obstetric fistula (n=172)	No	12	7
	Yes	160	93
Which cause of obstetric fistula	Prolonged labor	130	75.6
	Sexual violence	94	54.7
Know the risk factor of obstetric fistula (n=172)	No	5	2.7
	Yes	167	97.1
Which risk factors of obstetrics fistula do you know?	Early marriage	102	59.3
	Early pregnancy	89	51.7
	Home delivery	120	70
	Female genital mutilation	46	26.7
	Prolonged labor	22	12.8
	Malnutrition	6	3.5
Know Symptoms of obstetrics fistula (n=172)	No	-	-
	Yes	172	100
Symptoms of obstetrics fistula	Unable to control urine	157	91.3
	Unable to control feces	130	75.6
	Unable to control urine and feces	101	58.7
	Bleeding and pain during sex	17	9.9
Know the prevention method of obstetrics fistula (n=172)	No	17	9.9
	Yes	155	90.1
Prevention method of obstetrics fistula	Delaying the age of early marriage	102	65.8
	Cessation of Early pregnancy	77	49.7
	Timely access to the health facility	55	35.5
	Delivery with a skilled birth attendant	76	44.2
	Health Facility Delivery	67	39
Believe that obstetrics fistula will be treatment (n=172)	No	33	19.2
	Yes	139	80.8

Table 4: Multivariate logistic regression analysis showing the impact of selected associated factors of obstetric fistula among women in 2020 (n=422).

Variables	Good awareness	Poor awareness	COR	Value AO	R	p-value	
			[95%Conf Interval]		[95% Conf Interval]		
Educational Status	No formal education	156	58	-	-	-	
	Read and write only	21	22	2.8(1.4,5.5)	0.002	2.5(1.2,5.1)	0.01
	Primary School	65	72	3.0(1.9,4.7)	0	2.7(1.7,4.5)	0
	Secondary school and above	8	20	6.7(2.8,16.1)	0	4.1(1.6,10.6)	0.003
PWC	No*	246	152	-	-	-	
	Yes	4	20	8.1(2.7,24.1)	0	23.8(5.6,58.7)	0
Place of delivery	Home*	100	41	-	-	-	
	Health facility	142	126	2.2(1.4,3.3)	0.001	2.5(1.5,4.2)	0.001

*** p<0.01, ** p<0.05, * reference

line with a study conducted in Awi Zone, North West, Ethiopia [8]. The similarity of this finding might be due to the same socio-demographic characteristic of the respondents.

CONCLUSION

In this study, the reproductive age group women who had a good awareness of obstetric fistula were lower than studies conducted in Northern Ghana, Nigeria, and Tanzania. The study identified important determinants like educational levels of the respondents, pregnant women conference participation, and place of delivery were having a positive association with the awareness of obstetric fistula.

RECOMMENDATIONS

Therefore, in light of these findings, there is a need to improving the level of awareness, by strengthening and scale-up of interventions geared towards addressing these factors, promoting women's education, and creating different strategies. We also recommend further studies to come up with additional detailed findings.

ETHICAL APPROVAL

Ethical clearance was obtained from the Institutional Review Board of the Institute of Health, Jimma University. The official letter of cooperation was written to Bench Sheko Zone Health Office for permission. The aim of the study was fully explained to the study participants to obtain their written consent before participation in the study and data was kept confidential. Written informed consent was obtained from each respondent before the interview.

CONTRIBUTION OF AUTHORS

All authors participated in analysis, and manuscript preparation. The conception of the manuscript was prepared by ZerihunAsefa.

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