

# Utilization of Skilled Birth Attendants and Associated Factors Among Women Having Children Less Than Two Years in Bench-Shako, South West of Ethiopia,2020

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## Research

**Keywords:** Utilization, skilled-birth-attendant, women, south west, Ethiopia.

**Posted Date:** September 29th, 2021

**DOI:** <https://doi.org/10.21203/rs.3.rs-919252/v1>

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# Abstract

**Introduction:** Skilled attendant delivery is considered the most critical intervention in reducing maternal death and ensuring safe motherhood. But, the level of maternal morbidity and mortality in Ethiopia is among the highest in the world: indicate the proportion of births occurring at health facilities is low. Globally, about 289,000 women die each year due to preventable causes, yielding a maternal mortality rate of 210 per 100,000 live births. In Ethiopia, institutional delivery is low 34%. From the treatable and preventable woman deaths, 16 % occurs during delivery.

To mitigate maternal death by identifying the utilization of skilled birth attendants and associated factors among women children less than two years is important.

**Objective:** Assess the utilization of skilled birth attendants and associated factors among the women children less than two years in South West, Ethiopia, 2020G.C.

**Methods and Materials:** Community-based cross-sectional study design was employed to collect data from 294 women children less than two years in Mizan- Amen, Bench Shako zone, 2020.

Structured questionnaires were to collect the data by face-to-face interviews of a systematically selected participant. The data were analysed by SPSS software version 21.

**Results:** Among the respondents (294), 30.6% of them had utilized skilled birth attendants. The contributing factors associated with the utilization of skilled birth attendants were:-Age of the respondents (21–25), governmental employees, having antenatal care follow-up, and nearest to the health facility.

**Conclusions:** Generally, this study has indicated the skilled birth attendance was low. Mothers with government-employed, Age in years, having antenatal care follow-up, and nearest to the health facility in less than 30minutes were predictors of skilled birth attendant.

## Plain English Summary

A skilled attendant delivery is considered the most critical intervention in reducing maternal and neonatal death to ensure safe motherhood. In Ethiopia institutional delivery is low whereas high prevalence of home delivery. Institutional delivery or skilled birth attendants can treat and prevent woman deaths, 16 % occurs during delivery. So, this study helps to mitigate maternal and neonatal death by identifying the utilization of skilled birth attendants and associated factors among women children less than two years in southwest, Ethiopia.

**In results;** Among participants 294, 90 of them had utilized skilled birth attendants. The top five factors associated with utilizing skilled birth attendants were:-Age of the respondents (21-25), governmental employees, having antenatal care follow-up, and living the nearest to the health facility.

**In conclusions;** participants who are living in the study area to utilize skilled birth attendants was low. These have informed that utilizing skilled birth attendants needs more attention to reduce maternal

and neonatal death which are preventable and treatable especially those occur during labor and delivery.

## Background

Skilled birth attendants have to be considered as qualified health experts such as midwives, doctors, and nurses who have been educated and trained to know how to manage normal pregnancies, labor and delivery, and the postpartum period, and to diagnose, manage and transfer to tertiary level of women and newborns with complications [1]. Some of the identified factors considered as a major cause of maternal mortality are hemorrhage, infection, unsafe-abortion prolonged labor, and eclampsia [2].

A lot of strategies were developed and applied by many countries to reduce the burden of maternal death. Of those strategies, according to pieces of evidences show, a health center intrapartum care strategy can be considered as the foremost to reduce the rate of maternal mortality [3].

Additionally, it is established that appropriate utilization of health care services surely decreases the risk of maternal mortality and disability [4].

The problem is shared throughout the world; however, there is an observable difference in the distribution of maternal health care service utilization in developing and developed countries. Particularly, Sub-Saharan Africa is the area with the lowest coverage of skilled delivery service utilization, with 53% of women having skilled delivery attendants [7].

In Ethiopia, Maternal mortality signifies 25% of the deaths among women aged 15-49. Currently, the maternal mortality ratio is 412 per 100,000 live births. Most of the deaths are attributed to poor utilization of skilled delivery attendants which is 34% based on EDHS 2016 [8&9].

## Methods And Materials

**Study period:**-The study was done in Mizan -Aman town which is the capital town of Bench shako zone in the southwest of Ethiopia. The zone is 561km far from Addis Ababa, capital city of the country. It is located in The Bench shako zone in Southern, Ethiopia.

### Study design

Community- based cross-sectional study was employed to assess the utilization of skilled birth attendants and associated factors among women of reproductive age who have children less than 2yrs old in Town.

### Source population

Women who were included in the reproductive age groups in Mizan -Aman town.

### Study population

All women who were giving birth in the past two years in Mizan-Aman town

## Eligibility criteria

Inclusion criteria:-Women live at least for 6moths before the data collection period.

## Variables

- **Dependent**
- Utilization of skilled birth attendants
- **Independent variable**
- Socio-demographic factors

-Age

-Economic status

-Religious

-Occupational status

-Educational status

- Obstetric factors

-Age at first marriage

-Age at first pregnancy

-Place of last delivery

-Complication of last pregnancy

-Health related factors

-Transportation accessibility

Operational definition

**Skilled birth attendant utilization:**-when women give birth with the help of the Skilled birth attendants(5).

**Home delivery:**-when women give birth at home or outside of the health institutions.

**Close to the health care facility:** in this study, the term closes to the health facility if the time to take the health facility is less than 30minutes (9).

## Data collection tool and techniques

Using structured questionnaires, the data was gathered by three diploma midwives. Data collectors were moved from house to house through face-to-face interviewing of women who fulfilled the inclusion criteria in Mizan-Aman town.

BSc midwife was considered an immediate supervisor who speaks the local language fluently. The training was given for data collectors by the principal investigator for two days on clarification, ambiguity and assessment of tools, the aim of the study, benefit, risk, and confidentiality of respondent's information.

### **Data quality control**

The questionnaire was prepared in English and translated into Amharic to increase the understanding of the respondents, and translated back to English to keep the consistency of the question. The pretest was done to ensure clarity of words and logical sequence, and skip pattern of the questionnaire in Gura-Farda woreda with 15(5%). Data collectors and supervisors were trained and on the objective, techniques, and procedure of the study. Closely, an observation was made by the supervisor and principal investigator.

### **Data processing and analyses**

The filled questionnaires were checked for completeness manually. Then had entered and code in Epi-data version 4.2 and exported it into the SPSS version 21 for analysis. Data were analyzed after exported SPSS 21. Descriptive statistical analyses such as frequencies, graphics, and standard deviation were used for presentation. Bivariate analyzes were used on the candidate for multivariate analysis to control confounders. Variables in the bivariate analysis had a p-value <0.025 as a candidate for multivariable analyzes. Adjusted odds ratio with the 95% confidence interval was to show an association between predictors and dependent variables. Statistical significance was declared at a p-value < 0.05.

## **Results**

### **Socio-demographic characteristics of participants**

Among 294 women who had children less than 2 years old were participated in this study. The majority of participants 202(68.7%) were in the age group of 25–29 years followed by the 47(16.0%) age group of 20–24. Most of the participants 270(91.8%) were married and 8.2% were divorced, widowed, and single. Regarding religion, more than one half 162(55.1%) were protestant followed by orthodox (38%). Concerning ethnicity, majority of the respondents were 271(92.2%) Bench followed by (6.4%) Keficho. Concerning educational status, half of the participants, 148(50.3%) of mothers were illiterate followed by reading and writing 69(23.5%) and 58(19.7%) of fathers could read and write followed by fathers elementary 55(18.7%) (1) (Table 1).

Table 1  
frequency distribution of socio-demographic characteristics of mothers having children less than two years in the southern Ethiopia, 2020

<b>Socio-demographic Characteristics</b>		<b>Frequency</b>	<b>Percent (%)</b>
Age Category	15–19	23	7.8
	20–24	212	72.1
	25–29	47	15.9
	Above 30	12	4
Marital status	Single	33	11.2
	Married	230	78.2
	Divorced	31	10.6
Religion	Orthodox	84	28.6
	Protestant	137	46.6
	Muslim	43	14.6
	Catholic	30	10.2
4.Ethnicity	Bench	224	76.2
	Oromo	24	8.2
	Keficho	23	7.8
	Amhara	13	4.4
	Tigre	10	3.4
5. Educational Status of Mother	Illiterate	146	49.7
	Read and Write	63	21.4
	Elementary	45	15.3
	Secondary	24	8.2
	Higher institution	16	5.4
6. Occupational Status of Mother	House wife	94	32
	Farmer	66	22.3
	Merchant	61	20.6
	Governmental Employee	43	14.6
	Day labor	31	10.5
7. Educational status of the husband	Illiterate	58	19.7

Socio-demographic Characteristics	Frequency	Percent (%)
Read and write	98	33.4
Elementary	73	24.9
Secondary	38	12.9
Higher institution	27	9.1

### Obstetric characteristics of participants

The Majority 212(72.1%) of the women had married at age of 21–25 years and the rest were married at the age 15–20 years old. Regarding the age of first pregnancy, 233(79.3%) had pregnant at the age of 21–25, followed by 16.6% and 4.1% had pregnant at the age of 15–20 and > = 25 years respectively. With regarding the outcomes of pregnancy, almost all 273(92.9%) had a live birth and the rest were had an abortion and perinatal death.

Among mothers (78.1%) who were pregnant during the study, the period was started ANC follow-up. Most of the mothers (93.9%) reported that their last pregnancy was planned and most 261(89.8%) of them had received ANC service for this pregnancy, however only about one-third (35.5% had received ANC service at the right time. One-third of mothers 34.3% gave birth at the health facility with 42.7 assisted by a midwife followed by 38(12.9%) by a nurse and the rest were assisted by doctors and health officers (**Table 2**).

**Table 2.** Frequency distribution of Mothers Knowledge about pregnancy, labor and delivery service Mizan-Aman city, Southern Ethiopia,2020.

Knowledge about pregnancy, labor and delivery service)		Frequency	Percent (%)
Awareness of Health Risk During Pregnancy	Yes	234	79.7
	No	60	20.3
If yes What are Risks N=234	Pregnancy related disease	132	56.3
	Maternal death	66	28.3
	Fetal death	36	15.4
Knowledge on Danger Signs of Pregnancy	Yes	166	56.3
	No	128	43.7

### Health system and women decision-making factors

Most of the mothers 69.8% reported that they cannot decide by themselves on utilization of health services followed by 27.5 by themselves. Concerning health system-related factors, majority of respondents, 72.5%

reported that health professionals are skilled enough. Concerning the health facility, majority, 67.5% reported that the health facility is not well equipped to provide services

### **Knowledge about pregnancy, labor, and delivery service**

The respondents were asked a series of questions regarding their knowledge about pregnancy, labor, and delivery services. From the respondents, 89.2% of them were reported that they know health risk and factors related to pregnancy. 47.9% knew pregnancy-related diseases and 35.4% of them about maternal death. Of the participants, 58.3% know about the danger signs of pregnancy. Of those, 19.8% say leakage of amniotic fluid without labor, 13% said prolonged labor greater than 12 hours, and 7.6% increased blood pressure. 77.2% of the participants know about the benefits of giving birth at the health facility. 22.8% of respondents say early detection of problems followed by 41 (13.9%) low maternal mortality is the benefit of giving birth at a health facility (Table 2).

### **Prevalence of skilled birth attendants**

This study assessed the utilization of skilled birth attendants and its determinants among mothers who delivered 2 years preceding the survey in Mizan Aman Town. The point prevalence of skilled birth utilization was 30.5% (26.22%-37.38%). This proportion is lower than a study conducted in North West Ethiopia showed that 38.2 % of women gave birth in health facilities or in their most recent birth [11]. The variation could be explained by the difference in socio-demographic variables among study participants and the difference in tools used by researchers.

But this proportion is in line with the study conducted in the southern part of Ethiopia assisted about 31.5% of the women delivered by skilled birth attendants [12].

## **Discussion**

### **Prevalence of utilization skilled birth attendants**

The prevalence of utilization of skilled birth attendants was 30.5% (26.22%-37.38%). This proportion is lower than studies conducted in North West Ethiopia (38.2%), Hadiya in Ethiopia (53.6%), Haiti in the Caribbean (45.4%), and Ghana (78.3%) of women gave birth in health facilities for their most recent birth [11, 17, 18&19]. The variation could be explained by a difference in socio-demographic variables among study participants and a difference in tools used by researchers. However, this proportion is in line with the study conducted in the southern part of Ethiopia assisted about 31.5% of the women's delivery by skilled birth attendants [12]. This may be due to the participants relatively from similar from socio-demographic characteristics.

### **Factors associated with utilization of skilled birth attendants**

Ages of the mother less than 25 years were more likely to deliver their babies in a health facility than those above 30 years of age. This finding is in line with studies conducted in southern Ethiopia and Haiti in the Caribbean [13&18]. This could be due to exposure of information about risk-related pregnancy and delivery,

the decision of selecting the place of delivery, birth preparedness, and complication readiness from the health facilities through media coverage than old aged mothers. Moreover, they may be eager to search for information about reproductive health through Google search (Table 3).

Table 3  
Multi-variable analysis of factors predicting of Skilled birth Attendances south west Ethiopia. June, 2020  
(n = 294)

s.n	variables		Skilled birth attendants				COR	AOR
			yes		no			
			Frequent	%	Freq	%		
1	Maternal age	15–19	6	3.3	5	0.5	1.5(0.26–7.354)	0.8(0.085–4.344)
		20–24	81	77.8	162	68.3	1.441(0.732–2.456)	0.772(0.348–1.712)
		25–29	12	15.5	31	12.7	2.8(1.179–5.275)	1.86(1.201–3.416)
		Above 30	7	2.2	45	18.5	1	1
2	Occupation of mothers	Farmer	7	6.7	78	32.2	1	1
		Merchant	62	57.8	17	6.8	1.664(0.346–5.861)	0.729(0.07–7.341)
		Government	11	10	32	13.2	0.185(0.042–0.817)	1.569(0.495–74.412)
		Daily labor	8	7.8	6	2.4	0.416(0.025–1.798)	1.226(0.143–7.313)
		House wife	5	4.4	107	43.5	0.947(0.229–3.911)	1.76(0.053–23.33)
		others	14	13.3	5	1.9	0.99(0.238–4.124)	0.534(0.053–5.378)
3	Antenatal care	Yes	66	73.3	204	95.1	0.491(0.281–0.857)	0.615(0.375–0.803)
		No	14	26.7	10	4.9	1	1
4	Numbers of ANC visits	Once	19	22.2	13	3.9	1	1
		Twice	6	13.3	23	13.1	0.901(0.438–1.853)	0.915(0.375–2.233)
		Three times	76	35.7	61	49.2	0.438(0.466–1.138)	1.214(0.762–2.356)
		Four times	72	28.8	42	33.6	0.123(0.029–0.476)	5.215(1.851–17.24)
5	Distance from health facility	< 30min	102	95.6	24	9.8	0.619(0.271–0.646)	3.516(1.906–5.058)
		> 30min	5	0.4	219	90.2	1	1

Mothers with four times ANC visits were more likely to deliver in a health facility than those with one-time follow-up. This is similar to findings from different parts of Ethiopia like North West, Dalloch in southern and Hadiya zone, Haiti in the Caribbean, and Ghana [13, 16, 17, 18&19]. This might be due to advice from healthcare workers during antenatal care increasing a woman's use of skilled birth attendants and they may get advice on danger signs of pregnancy and uncertainty of labor and delivery, safety for their babies after birth and mothers also get advice during antenatal care about place of delivery. Attending antenatal care could be a marker of familiarity of women with maternal health services (Table 3).

Based on this finding, mothers whose house distance was less than 30 minutes from the health facility were more likely to utilize institutional delivery than counteract. It is consistent with the study conducted in North West Ethiopia [13&15]. This might be due to the common cultural share between people who live in the study area. As the distance decrease between supply and demands the opportunity to access is increasing. Mothers whose residence was near to the facility could have access to health education and ANC services. Moreover, mothers who resided at nearby health facilities had no problem of transportation to attend the institutional and were able to early manage obstetric problems at any time.

## Conclusions

Conclusion, this study revealed the prevalence of skilled birth attendance below one-third. Age of the mother 21–25 years, mothers with government-employed husband, mothers with ANC follow-up, mothers with four times ANC visit and Mothers with the nearest health facility in less than 5km distance were predictors of skilled birth attendance utilization.

## Acronyms And Abbreviations

ANC: Antenatal Care

EDHS: Ethiopian Demographic and Health Survey

GHI: Global Health Initiative

ID: Institutional Delivery

MCH: Maternal and Child Health

MDG: Millennium Development Goal

MNH: Maternal and Newborn Health

NDHS: Nigeria Demographic Health Survey

PPH: Post-Partum Hemorrhage

SBA: Skilled Birth Attendants

SDA- Skilled Delivery Attendant

TBAs: Traditional Birth Attendants

UN: United Nations

UNFPA: United Nations Population

## Declarations

### Authors' Contributions:

SS Conceived and designed the study, analyzed the data and wrote the manuscript. WA and MB, Involved in data analysis, drafting of the manuscript and advising the whole research paper and also were involved in the interpretation of the data and contributed to manuscript preparation. Similarly, all authors have read and approved the final version of the manuscript

### ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study was in accordance with the declaration of Helsinki. The Mizan-Tepi University ethical Review Committee was approved the ethical clearance of written consent for 18 years and assent form for under 18 years of age parents/guardians for this research on January /10/2020 with Reference number C/AC/R/D /01/878/2020. Before the initiation of the data collection, informed, voluntary, **Written and signed consent was obtained from each participant.** The participant's information that you provide for us will not be disclosed. The questionnaires have no information which will disclose your personal identity specifically.

All possible identifiers were excluded from the data collection tools to ensure participant's confidentiality.

**FUNDING :** None.

### AVAILABILITY OF DATA AND MATERIALS

Data will be available upon reasonable request from the corresponding author and after approval from all authors

### CONFLICT OF INTEREST

For sure, there is no conflict of interest regarding the publication of this paper.

### ACKNOWLEDGMENTS

First of all, we would like to express our deepest gratitude and appreciation to Mizan-Tepi University College of health science department of Midwifery for giving this valuable chance to conduct this research.

The last but not list, we would like to acknowledge our study participants for their valuable response and our data collectors.

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