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## Knowledge of front-line healthcare-workers on the role of urethral-catheterization for primary prevention of obstetric fistula in selected primary health care centres of north-central, Nigeria

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### Abstract

**Introduction:** Obstetric fistula can be vesicovaginal fistula/recto-vaginal fistula, is an abnormal opening between a woman's vagina and bladder and/or rectum through which urine and/or feces continually leak.

**Aim:** The aim of the study was to assess the frontline health-workers knowledge on urethral-catheterization as primary prevention of obstetric fistula, their practice towards prevention of obstetric fistula. And to find out statistically significant association between their levels of knowledge with their selected socio-demographic variables.

**Methodology:** Purposive sampling technique was used to select 50 frontline health workers in selected Primary Health Care Centres (PHCs) in Northcentral, Nigeria.

**Result:** The results showed that, majority of the respondents 38.0% of the respondents had good knowledge, 94.0% had positive attitude. And there was no association between their knowledge scores with their selected socio-demographic variables.

**Conclusion:** Recommendation was given to conduct the study in different setting using large sample.

**Keywords:** Knowledge, front-line healthcare-workers, urethral-catheterization, obstetric fistula, north-central

### Introduction

Obstetric fistula can be vesicovaginal fistula/rector vaginal fistula, is an abnormal opening between a woman's vagina and bladder and/or rectum through which urine and/or feces continually leak, this condition has destructive impact on a woman's life <sup>[1]</sup>. Is a dehumanizing issue of childbirth that has severe psychosocial effect almost all developing countries, it's still a public health problem in a country like Nigeria and other countries in Sub-Saharan Africa. Nearly 100,000-1,000,000 women are living with obstetric fistula and approximated 50,000-100,000 new cases occur every year in Nigeria. The main aetiology of this condition in Nigeria is prolonged obstructed labour which occur due to delay in seeking medical attention because of cultural, financial and social issues. Other causes include lack of facilities for obstetric emergencies services. Insufficient accessibility or reaching the health care facilities as a result of inadequate number of midwives and equipment's <sup>[2]</sup> In addition, the commonly cause occurs when there is abnormal fetal presentation, this led to prolonged labour and causes permanent disabilities. Except if there is midwife's intervention <sup>[3]</sup>. Additionally, it's a public health problem in United State and its member state because of significant number of women nearly 2 to 3.5 million are affected. Mostly in developing countries including Nigeria and other Sub-Saharan Africa with over 10,00000 women are also afflicted by it. Nowadays, there is lack of satisfaction in the rate of prevention and treatment of obstetric fistula. The World Health Organization (WHO) estimated that, more than two million women in Sub-Saharan Africa, Asia the Arab region, Latin American and the Caribbean are living with the condition and some 50,000 to 10,000 new cases developed annually with 30,000- 90,000 new cases occurring each year in African continent alone.

It is approximately more than 20,00000 young women live with untreated condition in Sub-Saharan Africa and Asia. Vesicovaginal or rectovaginal fistula victims are experiencing feelings of powerless, physical injury, social capital and loss of health status. Union Nationale des Forces Populaires reported that, 50,000-100,000 new cases 99% occur in the developing nation <sup>[4]</sup>. In generally, different researcher reported that still there is a lack of awareness about the condition in different Africa countries such as 52% in Nigeria, 45.8% in Ghana, and 39.5% - 40.8% in Ethiopia. Even though there is high burden of this condition in Sub-Saharan Africa <sup>[5]</sup>. Therefore, the researcher felt the need and desire to conduct a study on Knowledge of Front-line HealthCare-Workers on the Role of Urethral-Catheterization for Primary Prevention of Obstetric Fistula in Selected Primary Health Care Centres of North-Central, Nigeria.

### Aim

The aim of the study was to assess knowledge of front-line healthcare-workers on role of urethral-catheterization as primary prevention of obstetric fistula; practice towards prevention of obstetric fistula. And to find out the statistically significant association between their levels of knowledge regarding catheterization as primary prevention of obstetric fistula with their selected socio-demographic variables.

### Research Hypotheses

**H<sub>1.2</sub>:** There was statistically significance association regarding knowledge of catheterization as primary prevention of obstetric fistula.

**H<sub>1.2</sub>:** There was statistically significance association regarding practice towards prevention of obstetric fistula.

**H<sub>0.3</sub>:** There was no statistical significance between their levels of knowledge regarding catheterization as primary prevention of obstetric fistula with their selected socio-demographic variable's.

### Materials and Methods

#### Research Approach

Quantitative method of approach was adopted for this study.

#### Research Design

The design used for the study was descriptive survey design.

#### Setting of the Study

The research setting for this study was selected Primary Health Care Centers (Akuruba, Kwandare, and Lafia East) in Lafia, Nasarawa State North-Central, Nigeria.

#### Target Population

Front-line HealthCare-Workers.

#### Study Design

The design used for the study was descriptive survey.

#### Sample Size and Sampling Technique

The sample size of this study was 50 respondents who are selected from the target population which are front-line healthcare-workers; and purposive sampling technique was used to select the study participants.

### Sampling Criteria

**Inclusion Criteria:** Front-line healthcare-workers that are working at selected Primary Health Care Centres in Nasarawa North-Central Nigeria; those that are willing to participate, and were available during data collection were included in the study.

**Exclusion Criteria:** Healthcare-workers that are not working at selected Primary Health Care Centres in Nasarawa North-Central Nigeria; those that are not willing to participate in the study, and those that were not available during data collection were excluded from this study.

### Study Variables

**Demographic variables** (age, gender, marital status, religion, profession, years of experience, name of the primary health care, and area of residence).''

**Research variables:** (Knowledge of obstetric fistula and its prevention).

### Development and Description of Tool

A self-structured questionnaire was developed by the researcher to obtain answer from healthcare-workers. The tool used for the research study was self-structured questionnaire which was prepare to assess the knowledge of front-line healthcare workers on the role of urethral-catheterization for primary prevention of obstetric fistula. The tool was formulated base on the investigators' clinical experience, extensive Library search, consultation of experts, and review of literature. The instrument for data collection was a self-structured closed-ended questionnaire to suit the research objectives. The questionnaire consisted of three sections, section A, B, and C.

**Section A:** It consisted of demographic variables of the respondents included six items such as age, gender, marital status, religion, profession, years of experience, and name of Primary Health Care Centre.

**Section B:** It consisted of self-structured questionnaire on knowledge regarding urethral-catheterization as primary prevention of obstetric fistula. There were 20 awareness questions, each question had multiple choice with four responses (a, b, c and d). Each correct answer was given a score of one mark, while wrong answer and unanswered score zero. The maximum score was 20. The levels of knowledge score were interpreted as good, average, and poor.

**Table 1:** Level of Knowledge Score

Level of knowledge	Score	Percentage
Good	15-20	≥75%
Average	10-14	≥50<75%
Poor	0-9	≤45%

**Section C:** It consisted of structured questionnaire on attitude towards prevention of obstetric fistula. There were 10 practice questions, each question had multiple choice with four responses (a, b, c and d). Each correct answer was given a score of one mark, while wrong answer, and unanswered score zero. The maximum score was 10. The level of attitude score was interpreted as positive and negative.

**Table 2:** Level of Practice Score

Level of knowledge	Score	Percentage
Positive	5-10	≥50%
Negative	0-4	≤40%

**Ethical Consideration**

The study was conducted after the approval of Ethical Committee of the Nasarawa State Ministry of Health Lafia, North-Central Nigeria; and consent were also obtained from the Heads of selected Primary Health Care Centres, and the study participants. The healthcare-workers were assured for confidentiality of their responses.

**Method of Data Collection**

The data was collected from the respondents was analyzed using descriptive and inferential statistics with the aid of IBM SPSS version 23.0. Sample criteria were analyzed by frequency, and percentage distribution tables. Chi-square test was used to find out the statistically significant

association between their levels of knowledge regarding urethral-catheterization as primary prevention of obstetric fistula with their selected socio-demographic variable.

**Organization of the Study Findings**

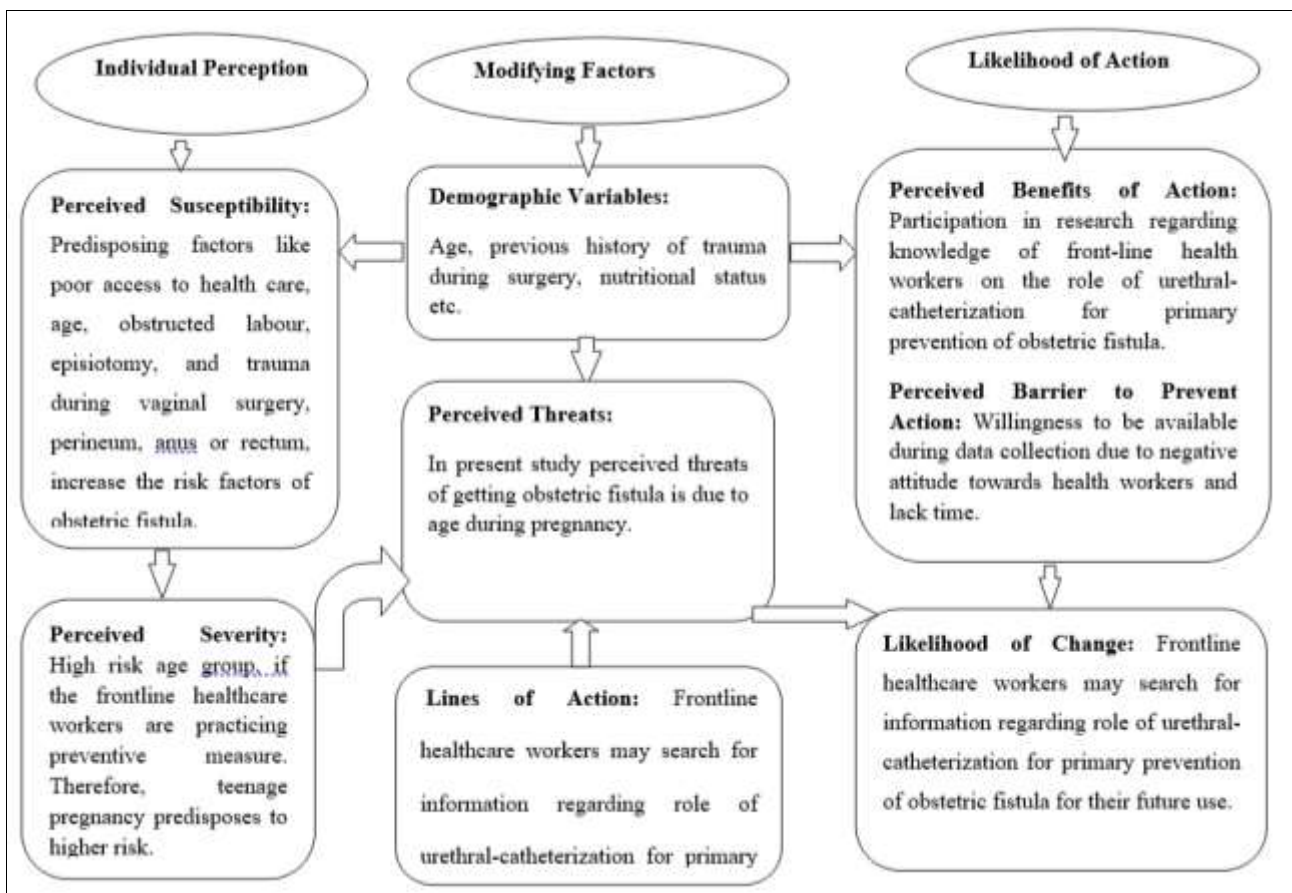
**Section I:** Respondents socio-demographic variables.

**Section II:** Respondents levels of knowledge regarding obstetric fistula.

**Section III:** Respondents practice towards prevention of obstetric fistula.

**Section IV:** Association between their knowledge scores of the respondents with their selected socio-demographic variables.

**Results and Discussion**



**Fig 1:** Conceptual Frame Work Based on Becker's Health Belief Model

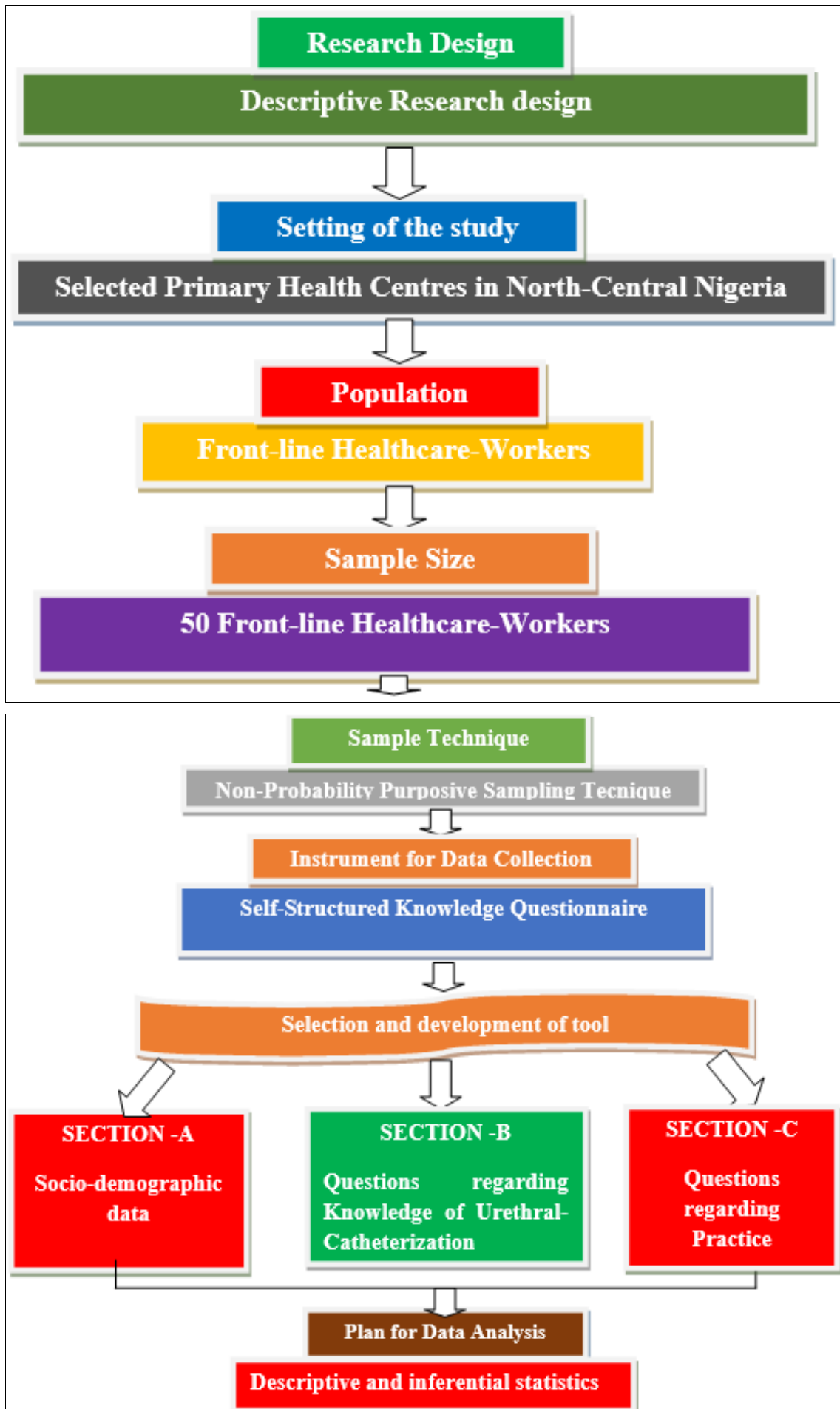


Fig 2: Representation of Research Methodology

**Table 3:** Respondents Socio-demographic Variables N=50

S. No.	Variable	Frequency (F)	Percentage (%)
1.	<b>Age</b>		
	20 - 29years	24	48.0
	30 - 39years	23	46.0
	≥ 40years	3	6.0
2.	<b>Gender</b>		
	Male	18	36.0
	Female	32	64.0
3.	<b>Marital Status</b>		
	Unmarried	17	34.0
	Married	27	54.0
	Divorce	4	8.0
	Widow	2	4.0
4.	<b>Religion</b>		
	Christianity	27	54.0
	Islam	22	44.0
	Others	1	2.0
5.	<b>Profession</b>		
	Community health	16	32.0
	Medicine	13	26.0
	Nursing/Midwifery	21	42.0
	<b>Years of experience</b>		
6.	1 - 5years	35	70.0
	6 - 10years	12	24.0
	≥ 11years	3	6.0
7.	<b>Name of Primary Health Care Centre</b>		
	Akuruba	10	20.0
	Kwandare	21	42.0
	Lafia East	19	38.0
9.	<b>Name of Primary Health Care Center</b>		
	Urban	26	52.0
	Rural	24	48.0

The table above shows that, the age range of the respondents are between 20 – 29 years, 30-39 years, and >= 40 years which accounted for 48.0%, 46.0%, and 6.0% respectively. Minority of the respondents are male 18 (36.0%), while majority are female 32 (64.0%). 17 (34.0%) are unmarried, 27 (54.0%) are married, 4 (8.0%) are divorce, and 2 (4.0%) are widows. In religion practice, 27 (54.0%) practice Christianity, 22 (44.0%) Islam, while 1 (2.0%) practice another region. According to profession community health, medicine, and Nursing/Midwifery, accounted for 32.0%,

26.0%, and 42.0% respectively. 35 (70.0%) had 1-5years of experience, 12 (24.0%) had 6-10years, and 3 (6.0%) had ≥11years of experience. 10 (20.0%) of the participants are from Akuruba, 21 (42.0%) from Kwandare, similarly 19 (38.0%) from Lafia East. 26 (52.0%) comes from urban area, whereas 24 (48.0%) from rural area.

## Section II

### Findings Related to Knowledge Regarding Obstetric Fistula among Front-line HealthCare-Workers

**Table 4:** Respondents Levels of Knowledge Regarding Obstetric Fistula N=50

S. No.	Level of knowledge	Score range	Frequency	Percentage
1.	Good	15 - 20	19	38.0
2.	Average	10 - 14	15	30.0
3.	Poor	0 - 9	16	32.0

The table above shows that, out of 50 (100%) respondent 19 (38.0%) had good knowledge, 15 (30.0%) had average knowledge, while 16 (32.0%) had poor knowledge of obstetric fistula.”

## Section III

### Findings Related to Practice towards Prevention of Obstetric Fistula

**Table 5:** Respondents Practice Towards Prevention of Obstetric Fistula N=50

S. No.	Level of Knowledge	Score Range	Frequency	Percentage
1.	Positive	5 - 10	47	94.0
2.	Negative	0 - 4	3	6.0

The table above shows that, majority 47 (94.0%) had positive, and 3 (6.0%) had negative practice towards prevention of obstetric fistula.

## Section IV

### Findings Related to Association of Knowledge Regarding Knowledge Obstetric Fistula with their Selected Socio-Demographic Variables

**Table 6:** Association between their Levels of Knowledge Scores of the Respondents with their Selected Socio-Demographic Variables N=50

S. No.	Demographic variables		Level of knowledge						Chi-Square	P Value
			Poor		Average		Good			
			F	%	F	%	F	%		
1.	Age	20-29years	12	14.4	10	8.2	2	1.4	2.114	0.715
		30-39years	16	13.8	6	7.8	1	1.4		
		>=40	2	1.8	1	1.0	0	0.		
2.	Profession	Community	9	9.6	4	5.4	3	1.0	9.219	0.056
		Medicine	10	7.8	4	4.4	0	0.0		
		Nursing	11	12.6	7	7.1	0	0.0		
3.	Year of experience	1-5years	23	21.0	10	11.9	2	2.1	2.492	0.646
		6-10years	6	7.2	5	4.1	1	0.7		
		>=11	1	1.8	2	1.0	0	0.0		
4.	Name of PHC	Akurba	10	12.6	9	7.1	2	1.3	3.832	0.429
		Kwandare	6	6.0	3	3.4	1	0.6		
		Lafia East	14	11.4	5	6.5	0	0.0		

The table above shows that, there was no statistically significant association between their level of knowledge scores with their selected socio-demographic variables such as age, gender, marital status, religion, profession, years of experience, and name of Primary Health Care Centres.

### Summary

The results revealed that, majority 38.0% of the respondents had good knowledge of urethral-catheterization as primary prevention of obstetric fistula. 94.0% had positive practice towards prevention of obstetric fistula. There was no association between their levels of knowledge scores with their selected socio-demographic variables such as age, profession, years' experience, and name of Primary Health Care Centres.

### Conclusion

In conclusion, the results revealed that majority of the respondents had good knowledge, and positive attitude towards prevention of obstetric fistula. There was no statistically significant association between their levels of knowledge scores with their selected socio-demographic variables such as age, profession, years' experience, and name of Primary Health Care Centres.

### Nursing Implication

The finding of the study has implication in the field of nursing research, nursing education, nursing practice, and nursing administration.

**Implication to nursing research:** The study findings will be use by nursing researchers for review of literature.”

**Implication to nursing education:** The results of this study will be use to nurse educators to identify the gabs and continue strengthen health education regarding obstetric fistula and its prevention.

**Implication to nursing practice:** The study findings will be useful to nurse practitioners to health educate the public regarding obstetric fistula and its prevention.

**Implication to nursing administration:** The study results will be useful to nurse managers/administrators to organize sensitization to frontline health workers and client regarding obstetric fistula and its prevention.

### Recommendations

Base on the study findings of the study, the researcher recommends that a similar study to be conducted on attitude towards prevention of obstetric fistula among front-line HealthCare-Workers using different setting and large sample for generalization of the findings.

Comparative study can be done to compare the knowledge and attitude of front-line HealthCare-Workers regarding urethral-catheterization as primary prevention of obstetric fistula using different setting and large sample for generalization of the findings.

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### Author's Contribution

Not available.

### Conflict of Interest

Not available.

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