



Social and
Health
Development
Program (SHDP)

Survey Report on Prevalence of Obstetric Fistula among Women of Reproductive Age In Six provinces of Afghanistan



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Survey Report:

Prevalence of Obstetric Fistula among Women of Reproductive Age In Six provinces of Afghanistan

**Submitted by:
Social and Health Development Program (SHDP)**

**Submitted to:
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Sincerely yours,

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LIST OF ACRONYMS

AMDD	Averting Maternal Death and Disability program
APHI	Afghanistan Public Health Institute
IRB	Institutional Review Board
MoPH	Ministry of Public Health
OF	Obstetric Fistula
PPS	Probability Proportionate to Size
SHDP	Social and Health Development Program
UNFPA	United Nations Population Fund

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Executive Summary

Introduction

On a global scale, the continued incidence of obstetric fistula in low-resource settings is one of the most visible indicators of the enormous gaps in maternal health care between the developed and developing world. Despite its devastating impact on the lives of girls and women, obstetric fistula is still largely neglected in the developing world. It has remained a 'hidden' condition, because it affects some of the most marginalized members of the population—poor, young, often illiterate girls and women in remote regions of the world. Obstetric fistula has many known risk-factors including early age of marriage and first sexual activity, malnutrition, poverty, lack of access to emergency obstetrical care, lack of access to formal education for girls, lack of prenatal care and ignorance regarding the means for preventing unwanted pregnancies.

UNFPA works together with many partners in the Campaign to End Fistula to improve maternal health by increasing access to family planning, skilled attendance at birth and emergency obstetric care. The Afghan government, in coordination with international partners, is also engaged in a committed effort to extend access to basic health care all across Afghanistan and to reduce maternal mortality. Considering the need, UNFPA took the initiative of a study to estimate the prevalence of Obstetric Fistula.

The goal of the study was to provide the country of Afghanistan and the international public health community with a high-quality population based estimates of obstetric fistula prevalence among ever married women of reproductive age. This study is the first in Afghanistan to estimate the prevalence of obstetric fistula among ever married women of reproductive age.

Method

This is an observational population based cross sectional study with a probability proportionate to size (PPS) cluster sampling scheme. The study was conducted in 6 Provinces out of 34: Kabul, Nangarhar, Badakhshan, Bamyan, Faryab, and Kapisa provinces. Totally 3040 ever married women of reproductive age (15-49yrs) were interviewed, and suspected cases were referred to health facilities for clinical examination and verification.

Result

The prevalence of obstetric fistula is estimated to be 4 cases per 1000 (0.4%) women in the reproductive age group. 91.7% of women with confirmed cases of obstetric fistula cannot read and write while 72.7% of fistula patients reported that their husbands are illiterate. 77.8% of women with fistula reported their household average monthly income, to be less than \leq 5000 AFs equal to \$US 109 (approximate exchange rate of \$US 1= 46 AFs). 25% of women with fistula reported that they were less than 16 yrs old, and 67% reported they were 16-20yrs old when they had got married. 17% of women with fistula reported that they were less than 16 yrs old when they had their first delivery. 25% of women with fistula reported that they developed the fistula after their first delivery, while 64% reported prolonged labor. 66.7% of women with fistula reported that their husband made the decision, when the women need to get health services. All, who received treatment for their fistula problem, reported that their treatment was not effective.

Conclusion and Recommendations

The prevalence of obstetric fistula estimated to be 4 cases per 1000 reproductive age women. Low literacy rate, early marriage and having prolonged labor were important characteristics of women with obstetric fistula in Afghanistan. Further research is needed in clinical settings to determine the associated factors to obstetric fistula in Afghanistan.

Obstetric fistula is a complex health problem with broad causative factors such as poverty, education, women empowerment and early marriage, access to health services, which all have policy and program implication.

Based on the study results and literature review about obstetric fistula in developing countries, the followings are recommended.

- A comprehensive research in a clinical setting is recommended to identify and assess contributing factors for obstetric fistula.
- To strengthening the system for an early detection of fistula cases, surveillance on obstetric fistula should be included in the national health information system.
- Improve access to safe delivery and care for obstetric complications
- Increase the number of female skilled health personnel to improve detection, referral, and treatment of obstetric fistula.
- Increase equipped facilities and skilled personnel to perform fistula repair
- Identify and implement best practices to address the prevention and treatment of obstetric fistula.
- Improve public and community awareness about causes and medical and social consequences.

I. INTRODUCTION

On a global scale, the continued incidence of obstetric fistula¹ in low-resource settings is one of the most visible indicators of the enormous gaps in maternal health care between the developed and developing world. Despite its devastating impact on the lives of girls and women, obstetric fistula is still largely neglected in the developing world. It has remained a ‘hidden’ condition, because it affects some of the most marginalized members of the population—poor, young, often illiterate girls and women in remote regions of the world.¹

An assessment was conducted by UNFPA together with partners including the International Federation of Gynecology and Obstetrics, Columbia University’s Averting Maternal Death and Disability program (AMDD), Engender Health.² The assessment, following a review of 11 African countries, namely Benin, Chad, Kenya, Malawi, Mali, Mozambique, Niger, Nigeria, Tanzania, Uganda, and Zambia, identified key factors that contribute to the incidence of fistula and its harsh impact on women’s lives. They are: Poverty; lack of knowledge about and access to family planning services; Lack of skilled attendance at birth; Lack of emergency obstetric care; Lack of transportation; Shortage of trained providers for fistula repair; Limited awareness about repair possibilities; Poor integration of services; Marginalization of women with fistula. These factors are applicable to affected countries not only in Africa but also in the Middle East and Asia, including India, Pakistan, Bangladesh, Nepal, Bhutan and the Maldives.³

Obstetric fistula (OF) around the world is closely related to lack of access to emergency obstetrical care. Obstructed labor remains a leading cause of maternal death and disability, and countries with high incidence of maternal mortality also have a high rates of OF for similar reasons.²

Obstetric fistula has many known risk-factors of obstetric labour, including lack of access to emergency obstetrical care, early age of marriage, teenage pregnancy, malnutrition, poverty, lack of access to family planning, ANC and lack of access to formal education for girls.² The consequence of OF on women and their families is tragic, well documented and goes beyond the merely physical repercussions – social isolation, increased financial hardship, depression and suicide, and divorce.²

The UNFPA works together with many partners in the Campaign to End Fistula to improve maternal health by increasing access to skilled attendance at birth and emergency obstetric care. The Afghan government, in coordination with international partners, is also engaged in a committed effort to extend access to basic health care all across Afghanistan and to reduce maternal mortality.

¹ In physiological terms, an obstetric fistula is a hole or tears in the tissue wall between the vagina and the bladder or rectum, or holes between them both, that results in incontinence of urine and/or feces.

² Study ToR (UNFPA)

Nonetheless, many Afghan women continue to deliver their children at home without the assistance of a skilled birth attendant. Based on literature reviews and population data from the UNFPA, there is unquestionably a large backlog of operable OF cases in Afghanistan.³

Despite the growing awareness of OF and its correlation with a lack of access to emergency obstetric care, strong epidemiological data on the prevalence and incidence of this condition were nearly non-existent in Afghanistan. The lack of good epidemiological information on OF is making it difficult to develop comprehensive policies and services aimed to prevent and treat OF in Afghanistan. Considering the need, UNFPA initiated a study to estimate the prevalence of Obstetric Fistula among women of reproductive age in Afghanistan. SHDP in partnership with Max Global consulting Services conducted the survey in six provinces out of a total of 34 provinces in Afghanistan. It is assumed that the study findings will be helpful in determining future health needs and development of program implementation strategies. Ultimately, it is anticipated that the health care policy makers, reproductive health care providers, District Health Offices, and researchers will use the research findings in order to plan effectively for OF prevention, for OF repair and social reintegration of women after treatment.

³ Study ToR (UNFPA)

II. STUDY OVERVIEW

Study Goal

The goal of the study is to provide the policy planners and decision makers in Afghanistan and the international public health community with high-quality population based estimates of obstetric fistula prevalence.

Study Objective

To determine the prevalence and distribution of obstetric fistula among ever married women of reproductive age in six provinces of Afghanistan.

III. METHODOLOGY

Research Design

This is an observational population based cross sectional study design. This study design is used to estimate the prevalence of obstetric fistula among women of reproductive age. The study was conducted in Kabul, Nangarhar, Badakhshan, Bamyan, Faryab, and Kapisa provinces.

The target population of this study was ever married women of reproductive age (15-49 years). The sample size for the study was 3041 women. It was calculated by using the standard formula for sample size estimation of descriptive studies⁴ at the 95% confidence level with an estimated proportion of 0.01 and desired precision (marginal error) of 0.005. The sample size was adjusted for estimated design effect of 2,⁵ and adjusted for an expected response rate of 95% resulted in a final sample size of 3041 individuals.

Sampling Method

A probability proportionate to size (PPS) cluster sampling scheme was used to select the population samples from targeted population. UNFPA purposively selected 6 provinces out of 34 provinces in Afghanistan. These selected provinces are namely Kabul, Nangarhar, Badakhshan, Bamyan, Faryab, and Kapisa.

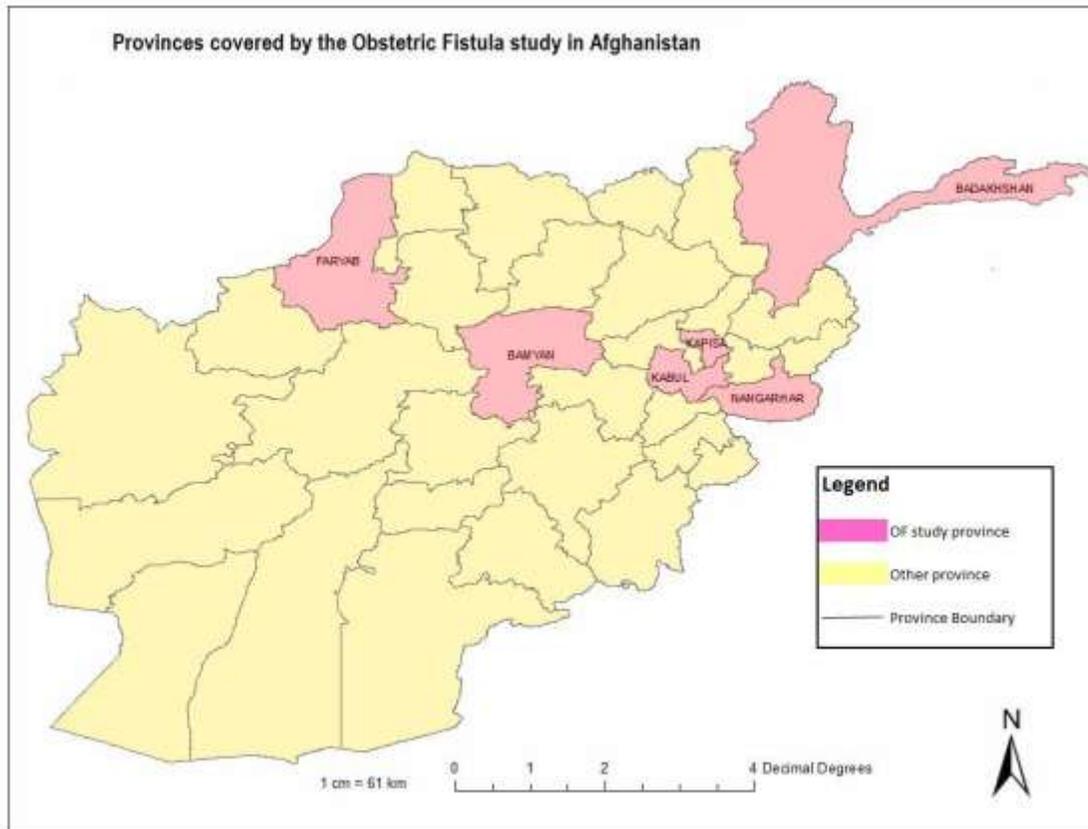


Figure 1. Provinces covered by the Obstetric Fistula Study

Within the province, each district is divided into smaller population unit, called a village/Guzar. Each village/Guzar was considered a cluster and was listed in the sampling frame. As specified by the PPS method, the sampling was carried out in two stages. In the first stage, 101 clusters ($3041/30= 101$) were randomly selected from a sampling frame of all villages/Guzars. In the second stage, 30 households⁴ were randomly selected in each cluster.

Using this method, the first sampling unit was the cluster, and the second sampling unit was the households that were randomly selected. In each household, one eligible person (ever married woman of reproductive age) was interviewed.

Data Collection Tool and Procedure

Data collection was carried out using a pre-coded structured questionnaire. The questionnaire was developed by a group of medical professionals with background of research in two languages (Pashto and Dari) based on review of literatures and similar studies conducted in other developing countries. During the entire course of the study tool, frequent meetings were conducted with

⁴ A household was defined as a unit of people that usually take their meals from the same cooking pot, share household assets and accumulate their earnings to procure household materials.

reproductive health professionals, Gynecologists/Obstetricians and well known institutions such as Malalai Maternity hospital and Cure international. The questionnaire was field tested with 40 respondents (20 in a rural area, 20 in an urban area) and necessary alteration and modifications were made before the questionnaire was widely administered. The questionnaire included demographic questions, questions about reproductive health knowledge, attitude, and practice, questions on pregnancy & delivery history, and questions on current obstetrical/gynecological status.

Qualified data collection teams were assigned to do the data collection in the targeted provinces. The selection of the interviewers was based on set criteria. This included having at least the following: having medical background or medical knowledge, familiar with the region/province, fluent in local language and familiar with surveys and data collection.

All data collectors and field supervisors were trained on questionnaire/ assessment tools and process of data collection and ethical issues of the survey based on already developed training plan. The data collectors were trained for 4 days. In order to ensure that the enumerators understating of the survey contents, at the end of training a questionnaire reliability test was conducted during which each participant filled a questionnaire in a role play and the trainers scored them. The scoring was evaluated in a matrix for each participant as well as for each question (over 90% result for reliability test was acceptable). If any of the interviewers needed further clarification, more instruction was provided. Meanwhile, a field exercise was held after training to prepare the surveyors for practical work. During this field exercise, the surveyors gained knowledge and skill of data collection process. For example, they learned how randomly select households and how to approach the target group and do the actual interview. In the same time, it gave the opportunity for surveyors and facilitators to identify potential practical short falls during the field exercise and improve it.

Ahead of starting the data collection process at the field level, the issue of the survey implementation was communicated and coordinated with the MoPH at the central level. The MoPH issued a letter of authorization and introduction to all Provincial Public Health Departments of those provinces targeted in this survey.

After training of the field data collectors, the process of data collection started according to already set sampling strategy. During the data collection the survey teams after identifying randomly selected households would approach the selected households and asked for the eligible individual (an ever married woman of reproductive age).The survey team were ensuring that all eligible individuals must voluntary agree to participate in the interview and verbal consent of interviewee was taken. The survey team described, in simple language the nature and objectives of the study; the issues being investigated; and the information being required from the participants. The survey teams assured participants that the personal information obtained during interview would be kept

confidential. The questionnaires were filled in a way that the privacy of respondent was seriously considered.

During the administration of the questionnaire, if any of the respondents mentioned to have any signs and symptoms of fistula, in coordination with field team leaders, field supervisors and research officers, they were referred for clinical examination. After discussing this issue with the head of family or husband of the patient, the suspected cases were transported to a higher level health facility for clinical confirmation. At the health facility, the suspected cases were either confirmed as Obstetric fistula or dismissed by gynecologists of health facility. The women diagnosed with OF were referred to OF treatment centers.

IV. DATA QUALITY CONTROL

High quality of data is essential for a study to get the most representative results, therefore, to ensure a high quality of survey data efforts were made at three stages.

- 1. Training prior to data collection:** Qualified researchers were assigned as trainers to conduct a comprehensive training for data collectors. During training, trainees were trained on different aspects of data collection process and the data collection tools were introduced to them. They were provided with the opportunity to exercise data collection in the class environment through role playing and simulations. Trainees also participated in field exercises to apply their gained knowledge and skill.
- 2. During data collection:** A supervisor was assigned for each team to supervise and monitor the data collection process in the field, including randomization and conducting interviews in order to ensure quality of data collection in the field,. The assigned supervisors ensured that the surveyors were following the sampling method; the questionnaires were filled properly; and the collected data was accurate.
- 3. Data entry:** To further ensure the quality of data for analysis, qualified data entry clerks were assigned and trained on the contents of questionnaire, coding and requirement of the survey, so that they would be able to avoid making any mistake while entering the data into data set. To ensure the quality of data, double entry of the data was carried out.

V. DATA MANAGEMENT

The following steps were taken during the data management phase of this study:

Data Entry

Collected data was entered into a database created using SPSS Inc 18 statistical software. Data entry was carried out by trained research assistant/data entry clerks.

Data Cleaning

Data were screened and inspected for missing data and potential errors. At this stage, the data were checked for quality through various methods, such as frequency counts and cross tabulations.

Initial Data Analysis and Data Preparation

During this stage, the variables were scanned in terms of measurement, scale, and categories. New variables, variable combinations, and composite scores were created. At this stage, data coding was also carried out.

Final Data Analysis

Following data cleaning, addressing any outliers and implausible values, and necessary recoding, weighting and preparing the data for analysis, a combination of statistical analysis methods were used to analyze the data.

VI. ETHICAL APPROVAL

SHDP obtained ethical and technical approval from the Institutional Review Board (IRB) of Afghanistan's MoPH (APHI-MoPH, letter No 112856, dated 28.08.2010).

VII. STUDY LIMITATION

The study was conducted in 6 pre-selected provinces and districts by UNFPA. The survey covered only married women of reproductive age; however, there could be some women living with fistula who are beyond that age range.

VIII. STUDY RESULTS

A. Survey Demographics

In total, 3040 individuals participated in the survey. The largest proportion of survey participants were from Kabul City (28.6%), followed by Faryab (19.3%), Bamyan (17.7%), Badakhshan (12.3%) and Kapisa province (4.3%).

The mean age of respondents was 31.39 years (mode 30 years), with minimum and maximum reported ages of 16 and 49 years, respectively. At the time of survey, among the survey participants, 97.66 % of them were married, 1.97 % widows, and 0.36% divorced.

Ethnically, approximately half (43.7%) of the respondents were Tajik, followed by Pashtun (19.8%), Uzbek (18.3%), and Hazara (16.6%). Only 15.9 % of respondents were able to read and write, while 84.1 % could not. 48.3 % of respondents' husband were able to read and write, while 51.7 % could not read or write.

The average household income was reported with a median level of 6000 AFs (Mode=5000AFs), minimum and maximum of 200 AFs and 150000 AFs, respectively (approximately \$US 4 - \$US 3261).

In terms of household income status, the respondents were divided into three categories: households with incomes of up to 5000 AFs per month (47.8%), households with incomes between 5001-10,000AFs per month (30.8%), and households with incomes of more than 10,000AFs per month (21.5%). (See Table 1 for details of Survey demographics)

Table 1. Survey Demographics

Variables	Frequency	%
Survey participants by province		
Kabul	869	28.60%
Faryab	587	19.30%
Nangerhar	541	17.80%
Bamyan	539	17.70%
Badakhshan	374	12.30%
Kapisa	130	4.30%
Total	3040	100%
Participants' age group (year)		
15-19	64	2%
20-24	505	17%
25-29	692	23%
30-34	608	20%
35-39	577	19%
40-44	370	12%
45-49	224	7%
Total	3040	100%
Participants' Ethnicity		
Tajik	1327	43.70%
Pashtun	603	19.80%
Uzbek	557	18.30%
Hazara	506	16.60%
Others	47	1.60%
Total	3040	100%
Participants' Level of Education		
Primary (grades 1-5)	89	18.70%
Secondary (grades 6-8)	108	22.60%
High school (grades 9-12)	210	44.00%
University	57	11.90%
Other	13	2.70%
Total	477*	100.00%
Participants' Monthly Family Income		
Income ≤ 5000AFs	941	47.70%
Income 5001-10,000AFs	608	30.80%
Income > 10,000AFs	423	21.50%
Total	1972*	100%
Participants' Husband Level of Education		
Primary (grades 1-5)	170	11.60%
Secondary (grades 6-8)	296	20.20%
High school (grades 9-12)	584	40.00%
University	275	18.80%
Other	137	9.40%
Total	1462*	100%

*Total number of participants who provided the information

B. Respondents' Reproductive Health Characteristics

The participants were asked about the decision making process for visiting a health facility, only 29% of respondents reported that, they make the decision, while 62% reported their husbands and 9% reported other family members (See Figure.2).

Furthermore, the participants were asked, how far (walking distance) is the nearest Health Facility from their home, 36.9% reported less than half an hour, while 14.3% reported more than two hours (see Table2).

The participants were asked if they had ever used the nearest health facility, 85.9% (n=2611) of respondent reported that they had used the nearest health facility while, 14.1% (n=429) reported that they had not used the health facility.

Age marriage, younger than 20 years, was a key finding among study participants. 38.8 % reported got married being less than 16yrs old, while 0.3% reported being between 31-40yrs old (see Table. 2). Similarly, first delivery in younger age, less than 20 years, was common finding among the study participants. 10.5 % reported their age at the time of delivery to be less than 16yrs old, while 0.5% reported between 31-40yrs old (see Table. 2).

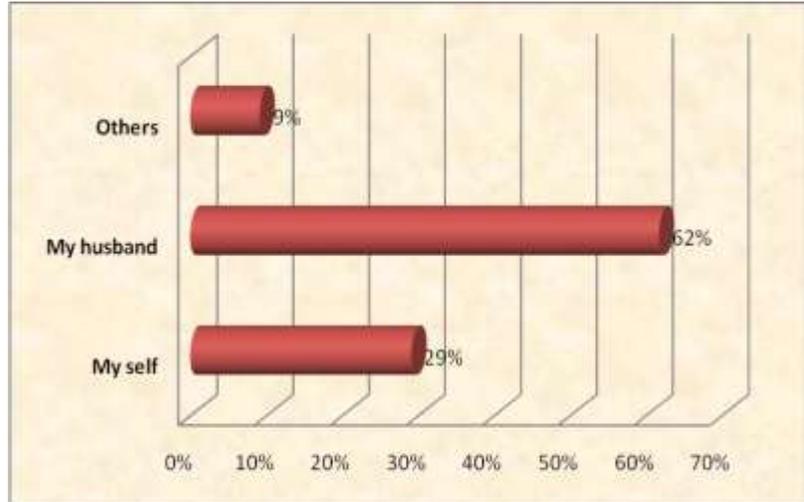


Figure 2. Respondents by decision categories for using health services

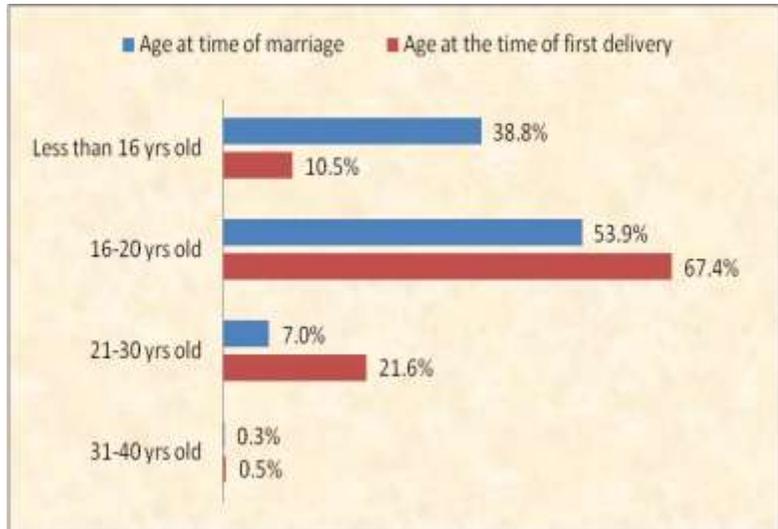


Figure 3. Participants by age at the time of marriage and first delivery

The majority of study participants experienced three or more than three deliveries(77.6%), while 12.6% had experience of two deliveries and 9.8% one delivery (see Table2). Among the study participants, 84% of them had at least one child below the age of five years at the time of survey.

Meanwhile, 28.9% of participants reported the death of at least one child below the age of five years during their reproductive life. 78% of participants who had delivered within two years preceding the survey reported to visit a care provider at least one time during their last pregnancy; 76% of the participants reported that they visited Public clinic/hospital 23% reported that they visited private clinic/hospital and 1% reported health post (see Figure.4).

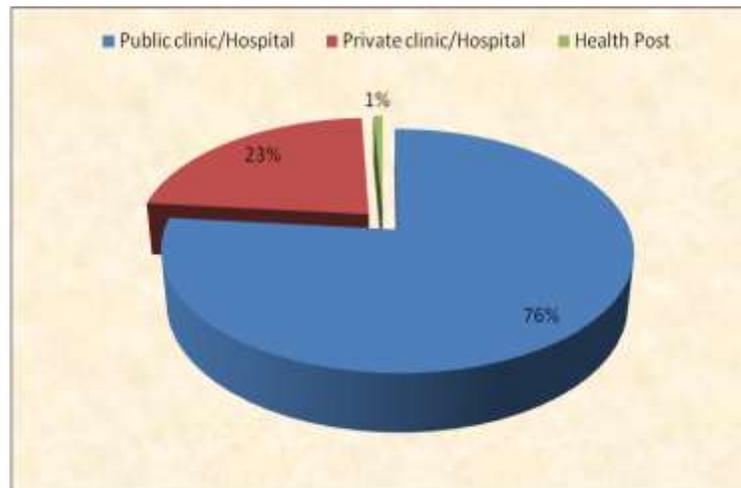


Figure 4 Participants by the type of facility they visited during last pregnancy

More than half of the participants (n=1736) reported experiences of delivery within two years preceding the survey, of which, almost half of them reported delivery in any type of health facility, while, the remaining big portion reported home delivery (47%). Hospital was the common reported place among those gave birth at the health facilities (37.2%) followed by Public health facility (10%), and private clinic (5.3%).

The participants in a response to a question about who helped them during the last delivery (the last delivery within preceding two years of the survey), 32.7% reported Midwife, while 0.3% reported CHWs (see Table. 2).

Table 2. Summary of Respondents' Reproductive Health Characteristics

Deliverables	Frequency	%
Walking distance from nearest health facility		
Less than half an hour	1090	36.90%
Less than one hour	869	29.50%
less than two hours	569	19.30%
More than two hours	422	14.30%
Total	2950 *	100%
Respondents' age at the time of marriage		
Less than 16 yrs old	1175	38.80%
16-20 yrs old	1633	53.90%
21-30 yrs old	213	7.00%
31-40 yrs old	8	0.30%
Total	3029 *	100%
Respondents by number of deliveries		
One delivery	298	9.80%
Two deliveries	382	12.60%
Three and more deliveries	2360	77.60%
Total	3040 *	100%
Participant's Reported Place of Delivery		
Hospital	646	37.20%
Public Health Facility	174	10.00%
Private Clinic	92	5.30%
Health Post (CHWs)	4	0.20%
Home	820	47.20%
Total	1736 *	100%
Participants' reported people who helped with delivery		
Doctor	343	19.90%
Midwife	562	32.70%
Nurse	38	2.20%
CHW	5	0.30%
TBA	355	20.60%
Family members	400	23.20%
Total	1703	100%

*Total number of participants who provided the information

C. Current Obstetrical /Gynecological Status to Assess the Presence of Fistula

Study participants were asked if they had leakage of urine uncontrollably from their vagina or have leakage of feces from their vagina to identify the provisional suspected cases of obstetric fistula. The provisional OF suspected cases were further investigated by the survey team supervisors and technical consultants at the field level. The technical team assessed the cases based on the standard criteria^{6,7,8,9} for suspected case of obstetric fistula and either accept or reject the suspected cases. Then decide on referral or dismissal of the case.

After investigation of technical team at the field level, only 29 cases were defined as OF suspected cases and referred for further clinical examination to a higher level health facility.

The suspected cases were physically examined by gynecologist/obstetrician at the health facility level. Finally, 11 cases out of 29 were clinically confirmed as vesico-vaginal-fistula cases (see Table. 3), While only one case was clinically confirmed as Recto-Vaginal-Fistula case.

(See Figure 5 for OF Cases Identification and Verification Flow)

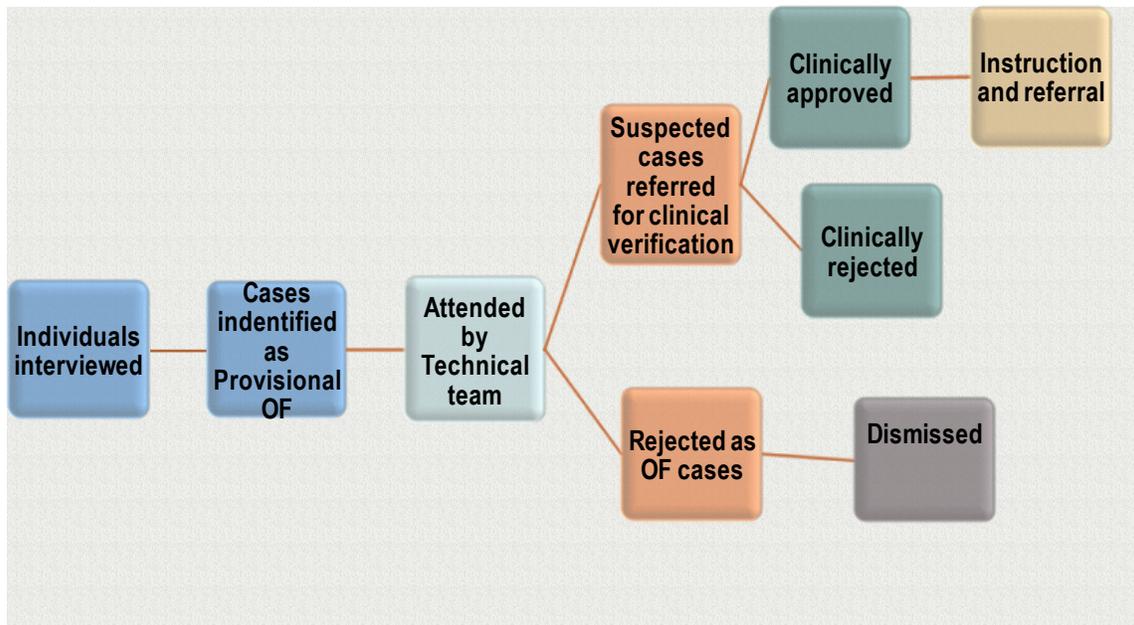


Figure 5. OF Cases Identification and Verification Flow

Totally 12 cases of obstetric fistula were identified and clinically confirmed among 3040 of ever married women of reproductive age. Out of these 12 cases, 7 cases were identified in Badakhshan, 2 cases in Faryab, 2 cases in Nangarhar and 1 case in Kapisa provinces (see Table. 3).

Our study estimation for the prevalence of Obstetric Fistula is 4 cases per 1000 (0.4%) of ever married women of reproductive age with a best estimation for the true prevalence of obstetric

fistula among ever married women of reproductive age in population to be between 2 and 6 per 1000 ever married women of reproductive age (95% CI 4 ± 2 per 1000).

Table 3. Fistula confirmed cases per province

Province	District	Vesico-Vaginal Fistula	Recto Vaginal Fistula	Total
Badakhshan	Faizabad	1		1
	Jurm	2		2
	Kishm	4		4
Faryab	Qaisar	2		2
Kapisa	Mahmood Raqi	1		1
Nangarhar	Surkh Rud	1	1	2
Total		11	1	12

D. Characteristics of confirmed cases of obstetric fistula

The majority of confirmed cases were illiterate, 91.7% (n=11), could not read and write. In addition, 72.7% of fistula patients reported that their husband cannot read and write. Most of the women with fistula (77.8%) reported belong to with an average monthly income of household less than \leq 5000 AFs. A quarter of confirmed cases of obstetric fistula (25%) reported that they were less than 16 yrs old when they got married. In addition, 17% reported that they were less than 16 yrs old when they had their first delivery (see Figure. 5).

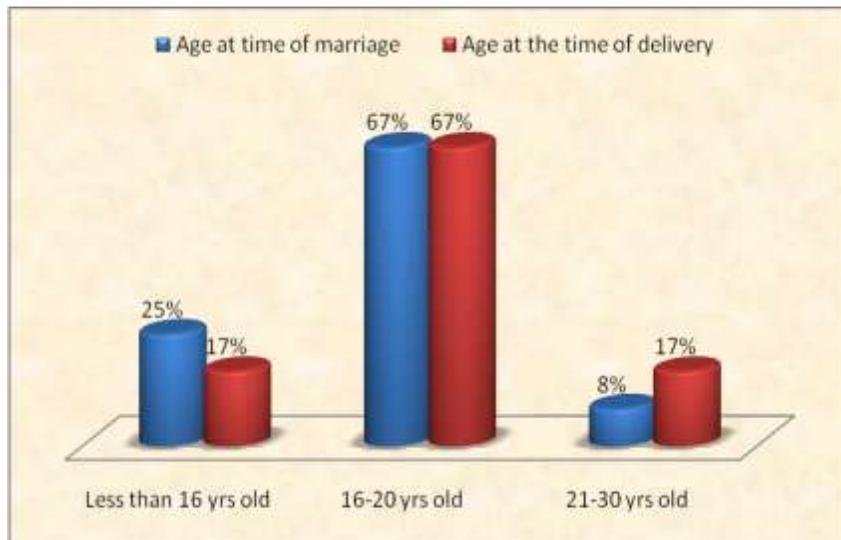


Figure 6 Fistula patients reported age at the time of marriage and first delivery

Weak participation of women in decision making when needed to receive health service were obvious among the confirmed cases. When the study participants were asked who decides for you, when you need to get health services, 66.7% of women with fistula reported that their husband made the decision. In addition, when asked where the delivery took place, after which the patient

got the problem, 50% of fistula patients reported hospital and 50% reported home as a place of delivery. When asked who had helped with delivery, 50% of reported doctor⁵, while 16.7% reported family members (see Table. 4). Only 25% of women with fistula reported that they developed the fistula after first delivery (see Table. 4) When asked how long the delivery had lasted after which the fistula developed, 64% reported that it lasted more than 24 hours (see Table. 4). When asked if they received any treatment for their fistula, 33% (n=4) reported that they had an operation, 50% (n=6) reported they received medication while 17% (n=2) reported no treatment. All, who received the treatment, reported that their treatment was not effective.

Table 4. Characteristics of confirmed cases of obstetric fistula

Variables	Frequency	%
Individuals attended delivery of after which the OF developed		
Doctor	6	50%
Midwife	1	8.30%
Nurse	1	8.30%
TBA	2	16.70%
Family members	2	16.70%
Total	12	100%
Order of delivery after which OF developed		
After 1st delivery	3	25%
After 2nd delivery	2	17%
After third delivery	1	8%
After 4th delivery	2	17%
After fifth	2	17%
After ninth	1	8%
After twelfth	1	8%
Total	12	100%
Labor time reported by women after which OF developed		
less than 8 hrs	1	9%
8-12 hrs	2	18%
13-24 hrs	1	9%
more than 24 hrs	7	64%
Total	11 *	100%

* One woman reported that she did not know, hence data for one woman is not reflected in the table.

⁵ Comment: it should be interpreted with cautious. First these findings are based on the patients recall, there is no source of verification to certify that if the patients were attended by doctors. In Afghanistan, especially in rural areas it is difficult for women to distinguish between different type of health workers, e.g. doctor, nurse or midwife. From other side, in Afghanistan, especially in rural areas women are referred to doctors and health facilities when they are in a very serious and worse condition.

IX. DISCUSSION

The study, the first in Afghanistan, was conducted to estimate the prevalence of obstetric fistula among women of reproductive age.

Study result indicates that the prevalence of obstetric fistula is 4 cases per 1000 (0.4%) of the population of ever married women of reproductive age in the selected provinces. All mentioned cases were identified through a population based survey and clinically confirmed at the health facilities level.

The result of this study is higher than the findings of other studies conducted in developing countries. A study in Nepal reported 5 cases of obstetric fistula among the sample of 1,998 women¹⁰ while, in Bangladesh, the number of women living with fistula is estimated to be 1.69 per 1000 ever married women.¹¹

There have been no surveys to assess the incidence or prevalence of fistula in neighboring Pakistan.¹²

Some sources estimate the obstetric fistula rate at 1 to 3 per 1000 deliveries for West Africa in general¹³. A study in Malawi, found that the prevalence of obstetric fistula was 1.6 per 1000 women¹⁴ and another study in Kenya estimated the prevalence of obstetric fistula to be 1 per 1000 women¹⁵.

Poverty, malnutrition, poor health services, early childbearing, and gender discrimination are interlinked root causes of obstetric fistula.¹⁶

This study finding indicates that poverty is a characteristic of obstetric fistula in Afghanistan, as 77.8% of women with fistula reported their household average monthly income, less than \leq 5000 AFs (approximately \$US 100). An analysis of social factors conditioning fistula in developing countries, indicates that poverty at national health-service and family levels often predisposes pregnant populations to suffer high rates of fistula³, and poverty is the main social risk factor because it reduces a woman's chances of getting timely obstetric care and is associated with early marriage and malnutrition¹⁶. Similarly, a study conducted in Nigeria reported that the overwhelming majority of fistula patients were from poor-rural backgrounds.¹⁷

This study results indicate that early marriage and childbearing were important characteristics of women with fistula in 25% and 17% of cases respectively in Afghanistan, while results of a study in Nigeria reported that 33.6% of patients with fistula had been married by the age of 14yrs where 39.1% had not yet menstruated at the time of marriage.¹⁷

Low literacy rate or lack of education is documented as an important characteristic of women with fistula.^{13, 17} This fact is further supported by this study findings where 91.7% of women with

obstetric fistula and 72.7% of their husband cannot read and write. A study conducted in Malawi reported similar findings, where fistula symptoms were more likely to be reported among rural, poor, uneducated women¹³, while a study in Nigeria, reported that 77.9% of patients with fistula were illiterate with impoverished rural backgrounds.¹⁷

Because of women's low status in many communities, they often lack the power to choose when to start bearing children or where to give birth¹⁶. The study findings supported the fact of low status of women where 66.7% of women with fistula reported that their husband made the decision when they needed health services.

Our study findings indicate that 64% of women with fistula reported to have prolonged labor (delivery duration more than 24 hours), while a study in Kenya reported that 73% of women with fistula had prolonged labor¹⁵. Though there is a possibility of recall bias, but still it can be an indication of the contribution of prolonged labor in formation of obstetric fistula in Afghanistan. 33% of the fistula patients reported that they had surgical treatment or operation for their problem, but they reported that the treatment was not effective. It indicates the lack of skilled personnel who can perform repair of obstetric fistula appropriately.

Though the study has its limitation, but it was the first step that at least estimated the magnitude of the problem of fistula in Afghanistan. The study was conducted in purposively preselected districts and provinces, which can be considered another limitation of this study. Further research is needed to estimate prevalence of OF at the national level. Moreover, further research is needed to assess the relationship between obstetric fistula and contributing factors in a clinical setting.

X. CONCLUSION AND RECOMMENDATION

The prevalence of obstetric fistula estimated to be 4 cases per 1000 reproductive age women. Low literacy rate, early marriage and having prolonged labor were important characteristics of women with obstetric fistula in Afghanistan. Further research is needed in clinical settings to determine the associated factors to obstetric fistula in Afghanistan.

Obstetric fistula is a complex health problem with broad causative factors such as poverty, education, women empowerment and early marriage, access to health services, which all have policy and program implication.

Based on the study results and literature review about obstetric fistula in developing countries, the followings are recommended.

- A comprehensive research in a clinical setting is recommended to identify and assess contributing factors for obstetric fistula.
- To strengthening the system for an early detection of fistula cases, surveillance on obstetric fistula should be included in the national health information system.
- Improve access to safe delivery and care for obstetric complications
- Increase the number of female skilled health personnel to improve detection, referral, and treatment of obstetric fistula.
- Increase equipped facilities and skilled personnel to perform fistula repair
- Identify and implement best practices to address the prevention and treatment of obstetric fistula.
- Improve public and community awareness about causes and medical and social consequences.

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