

# Factors Associated with Obstetric Fistulae: A Snapshot of District Larkana and Sukkur, Sindh

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## Abstract

**Objective:** To determine the frequency of factors responsible for obstetric fistulae occurrence at Shaikh Zayed Women Hospital (SZWH) Larkana and Civil Hospital Sukkur, Sindh.

**Methodology:** This descriptive cross-sectional study was carried out in Obstetrics and Gynecology department of Shaikh Zayed Women Hospital (SZWH) Larkana and Civil Hospital Sukkur from 2016 to 2018. All the women of reproductive age from 15-45 years with any parity presenting with obstetric fistula followed by delivery in the gynecology/obstetrics department of the hospital were included. Patients were questioned about the causes of obstetric fistulae. Data collected through personal interviews through a structured proforma. Descriptive analysis was carried out on SPSS version 26.

**Results:** The mean duration of obstructed labor was 27.96±4.32 hours. There were 67% of cases who suffered delay in getting to a health facility. The mean duration to reach a health facility was 2.73±1.2 hours. Prolonged obstructed labor was seen in 94.5% of the patients. There were 84.9% patients who had late access to delivery services, while 74.0% of patients were away from the health facility.

**Conclusion:** Prolonged obstructed labor was seen in majority of the patients. There were a majority of patients who also experienced delay in accessing delivery services. Minimizing this delay requires community and pregnant women's knowledge of the significance of prompt health facility delivery and pregnancy hazard symptoms.

**Key Words:** Prolonged labor, vaginal fistula, early marriage, complicated delivery.

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## Introduction

Obstetric fistula seems to be the most health-affecting obstetric complication in low-and middle-income nations with limited access to maternal care is obstetric fistula.<sup>1</sup> Obstetric fistula, a traumatic birth injury, develops as a result of obstructed labour and delivery delay.

The tissues that typically divide the bladder from either the vagina is destroyed during prolonged obstructed labour, which results in a passageway by which urine leaks continually. A direct communication exists between the bladder and vagina or bladder and rectum.<sup>2</sup> There are few reliable statistics on the

incidence and impact of obstetric fistula. The incidence estimate that is frequently cited describe that there are two million individuals internationally and 50,000–100,000 new cases annually.<sup>3</sup> The majority of studies, on the other hand, are facility-based, and the few community-based investigations might have not been appropriate to correctly assess obstetric fistula.<sup>3,4</sup> The reported responsible factors of obstetric fistula are harmful traditional practices, violence against women, and insufficient maternal and health care that was not readily available or of high quality.<sup>1,5,6</sup> Evidence-based risk factors for obstetric fistula comprises > 24 hours labour duration, accessing obstetric treatment

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following<sup>6</sup> hours of labor's beginning, travelling > 2 hours to the hospital, and lower level of education or illiteracy.<sup>7</sup> In communities where unmanaged obstructed labour is widespread and maternal death is high, causing social isolation, obstetric fistula continues to be a serious public health issue.<sup>8</sup>

The majority of these women are young, but they are ostracized and shunned by their communities. Frequently, seven main and basic predicted risk factors are the, birth place, skilled birth attendant availability, early marriage, labour duration, partograph uses, inadequacy in prenatal care, and young age during birth.<sup>9-10</sup> One of the major and most stressful mother morbidities is obstetric fistula, and it is a birth-associated injury brought on by prolonged, difficult labour that has a huge negative impact on the patient and their families. It has severe repercussions on health, cultural, and socioeconomic levels and is a serious public health concern affecting thousands of reproductive age group females in developing nations,<sup>5</sup> as well as in Pakistan. It can be avoided by having access to trained birth attendants and emergency obstetric treatment.<sup>11</sup>

Obstetric complications seem to be the important risk factors in underdeveloped nations, whereas surgical procedures and radiotherapy seem to be the significant risk factors in industrialized nations. Obstetric care is essential for preventing of it in countries like Bangladesh, India, Afghanistan and Pakistan, where birthrate is higher, lower economic level of the women, and the poor obstetric services.<sup>12,13</sup> Some indirect causes reported in the literature as potent risk factors were poor socioeconomic status, poor nutritional status, academic gaps, early pregnancy and marriage, cultural norms, sexual assault and poor health system delivery. The complications which result from this malady are devastating in addition to social stigma, abandonment, depression, urological diseases such as renal failure, gynecological sequelae of vaginal stenosis, infertility, and foot drop as neurological involvement can also occur.<sup>14</sup> Numerous studies have been conducted to revisit the epidemiological spectrum of this disease. However, not much literature is available from our part of the world, especially rural Sindh. Our study will determine the frequency of factors associated with the occurrence of obstetric fistulae.

## Methodology

This descriptive cross-sectional study was carried out in Obstetrics and Gynecology department of Shaikh Zayed Women Hospital (SZWH) Larkana and Civil Hospital Sukkur from 2016 to 2018. A total of 73 patients with obstetric fistula were included in the study, calculated on the basis of 16% prevalence based on the data retrieved from meta-analysis on the prevalence and incidence of vaginal fistula at a confidence level of 95% confidence level and precision of 8%.<sup>8</sup> Sample was selected through a non-probability consecutive sampling technique. All the women of reproductive age from 15-45 years with any parity presenting with obstetric fistula followed by delivery in the Gynecology/obstetrics department of the hospital were included. All women with co-morbidities such as gynaecological cancer, bladder disease, or vaginal infections were excluded. After taking approval from the hospital ethical committee, data was collected. Patients included in the study were first informed about the objectives of the study, and once consent was taken information was obtained. All patients were evaluated based on their age, marriage age, parity, length of obstetric labor, any delay in assessing healthcare facility, and time taken to reach a health facility. The study proforma was used to collect all the information, and SPSS software version 26 was employed to analyze it.

## Results

In this study, the mean age of patients was 29.7+2.3 years, with a minimum and maximum age of 25 years and 37 years. The average age at marriage was 23.5+2.63 years, with a minimum and maximum age of marriage was 18 years to 28 years. Majority women 45.2% were delivered twice, 38.4% were delivered three times, while the rest of the women, 16.4% were delivered 4-5 times. The mean duration of obstructed labor was 28+4.3 hours. Patients who encountered delay in assessing professional help were 67%. The mean duration to reach a delivery center was 2.73+1.2 hours. Prolonged obstructed labor was seen in 94.5% of the patients. There were 84.9% of patients who had late access to delivery services, while 74.0% of patients were away from the health facility. (Table I)

On the stratification, the factors of obstetric fistulae were found statistically insignificant according to age and parity, p-values were quite insignificant (>0.05), as shown in tables II & III.

**Table I: Factors of obstetric fistulae according to age (n=73)**

Factors of obstetric fistulae		N	%
Prolonged obstructed labor	Yes	69	94.5
	No	4	5.5
Delayed access to health facility	Yes	62	84.9
	No	11	15.1
Distance from health facility	Yes	54	74.0
	No	19	26.0

**Table II: Factors of obstetric fistulae according to age (N=73)**

Factors of Obstetric Fistulae	Age groups				p-value	
	≤ 30 years		> 30 years			
Prolonged obstructed labor	Yes	56	93.3	13	100	<b>0.338</b>
	No	4	6.7	0	0	
Delayed access to health facility	Yes	52	86.7	10	77	<b>0.373</b>
	No	8	13.3	3	23	
Distance from health facility	Yes	44	73.3	10	77	<b>0.789</b>
	No	16	26.7	3	23	

**Table III: Factors of obstetric fistulae according to parity (n=73)**

Factors of Obstetric Fistulae	Parity				p-value	
	2-3		4-5			
Prolonged obstructed labor	Yes	57	93.4	12	100	<b>0.362</b>
	No	4	6.6	0	0	
Delayed access to health facility	Yes	52	85.3	10	83.3	<b>0.866</b>
	No	9	14.7	2	16.7	
Distance from health facility	Yes	45	73.7	9	75	<b>0.929</b>
	No	16	26.3	3	25	

## Discussion

Obstructed labor is the result of the arrest of the movement of the fetus through the pelvis, in spite of ongoing vigorous uterine movements.<sup>15-17</sup> Among five most common factors leading to maternal mortality is untreated prolonged obstructed labor.<sup>17</sup> In addition, it is also a major factor responsible for obstetrics fistula which is one of the most devastating morbidities associated with pregnancy.<sup>18</sup>

In this study, prolonged obstructed labor was found in 94.5% of the patients, followed by 84.9% patients reached late to delivery services, while 74.0% patients lived away from the health facility and they faced transport issues. In Kenya, a case control study revealed that duration of labor of >24 hours had an odds ratio of 4.7 associated with obstetric fistula, looking for professional help after 6 hours of onset of labor had an odds ratio of 6.9, distance to the health

facility had an odds ratio of 5.7, having no education or primary education had an odds ratio of 9.6 and referred to another facility had an Odds ratio of 8.6.<sup>3</sup> Studies conducted in Nigeria highlighted lack of education and prolonged duration of labor as potent risk factors for obstetric fistula.<sup>19-20</sup> Other risk factors were short stature and early age of marriage. Other significant factors were low social class, no satisfactory employment, failure to book for antenatal care, and rural location with a distance to a health facility.<sup>19</sup> Early marriages, practiced in many countries results in premature pregnancies, which in turn leads to devastating physical and social consequences', one of them being vesicovaginal fistula.<sup>19</sup> In present study, the mean age of marriage was 23±2.63 years. The major factor observed in our study leading to obstetric fistula was prolonged labor which was observed in 95% patients, delay in reaching the health facility was in 67% cases, these findings are similar to the studies conducted in African countries.

In a study conducted in Zambia, participants informed that the main delay was at home only inability to make a decision<sup>12</sup> Evidence has shown that a woman should seek medical attention as soon as she enters active labour in order to have optimal management and a successful outcome.<sup>21</sup> Cultural norms, financial limitations, and attitudes toward healthcare services could all be factors in this delay.<sup>21,22</sup> It is also reported that attendance by inexperienced individuals who failed to identify approaching issues in time to seek immediate obstetrics care could not be a factor in the delay in obtaining delivery services.<sup>21,22</sup>

In this study on the stratification, the factors of obstetric fistulae were found statistically insignificant according to age and parity, p-values were quite insignificant (>0.05). A review reported that the reported cases of fistula ranged from 79.4% to 100% obstetrical, with the other cases resulting from many other etiologies. One to eight percent of fistulas were rectovaginal, while the remainder were vesicovaginal.<sup>10</sup> During management, 86 percent of cases with obstetrical fistulae were teenagers and between 31% and 67% females were primigravida.<sup>10</sup> Majority delivered at home with a range of 9-84%. Short stature was also evident in in majority of the reviewed cases and yet the majority labored for more than 24 hours. The risk factors identified in the group were mostly preventable. So, using contraception, avoiding obstructed labour, or optimizing the consequences for patients who do experience obstructed labour can all help prevent obstetric fistulas.

There is no good screening test to identify blockage in early labour, and contraception is of little help to pregnant women.<sup>22</sup> Early diagnosis and quick management are essential for improving the course of obstructed labour. The time between obstruction and delivery is crucial because obstructed fistulas are brought on by tissue compression.<sup>22</sup> Delays in making the decision to seek care, in getting to the medical facility, and in evaluating the management once there all add time to this period. Communities may legitimately call for improvements to the second and third phases of the three-delay model of safe motherhood. Initial delays in seeking hospital care are brought on by failing to recognize that labour is prolonged, uncertainty about what should be done (often resulting from competing therapeutic pathways), lack of predictability and fear of hospitals and the treatments they provide, particularly surgical procedures, and financial barriers to care.<sup>22</sup> The main strength of this study is that scarce data regarding obstetric fistula is available from rural Sindh and the data is collected by the researcher herself. However, sample size can be increased for future researches with a case-control study design as an efficient option.

## Conclusion

Prolonged obstructed labor was observed to be the commonest factor linked to the obstetric fistulae, followed by delaying in access to health facility and health facility away from residence. Increasing awareness and importance of timely health facility delivery and danger signs in pregnancy among pregnant mothers and the community is important in reducing this delay. Community health workers can be mobilized to educate mothers on antenatal care, perinatal and postnatal care.

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