



A Descriptive Study of Obstetric Fistula Patients at the Hamlin Fistula Hospital Addis Ababa

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Introduction

Obstetric fistula (OF) is a complication that results from childbirth injury. Prolonged obstructed labor (commonly cited as 3+ days) causes an opening to form between the bladder, vagina, and rectum. The fetal head compression of the vaginal wall, against the vaginal neck, urethra, or rectum, causes pressure necrosis and thus the opening to form (1). Women afflicted are incontinent as their urine or feces leaks uncontrollably through the vagina or rectum. The significant damage to pelvic structures has the potential to prevent future childbirth and delivery (2). More immediate effects, however, are that the condition also causes social disruption (3). Women with obstetric fistula commonly report symptoms of anxiety and depression. Some withdraw from their communities due to shame of their condition or are isolated by family members due to stigma of the odor and constant passing of urine or feces (4). Due to this stigmatization of their condition, some women are unable to perform household chores or participate in income-generating activities (5).

OF is a unique condition. The cause of the condition is multifactorial in nature; living with the disease impacts women beyond the physical challenges. As an issue that disproportionately afflicts poor women, the condition underscores and helps perpetuate the inequalities that persist in societies. An examination of the social context of Ethiopia is imperative to understanding the burden of OF and from complications related to delayed time to clinical treatment. My research is unique in that the dependent variable is the length of incontinence starting from the time in which obstructed labor occurred to the time point when clinical treatment is sought at the Hamlin Fistula Hospital in Addis Ababa. Thus, the dependent variable length of incontinence can be used in this analysis both as a health outcome and an indicator for the length of time elapsed between injury occurrence and when care was sought by each patient.



Methods

This study was conducted at the Addis Ababa Hamlin Fistula Hospital. With the participants made aware of my role as a researcher, I took field notes during patient visits to the rehabilitation department. The rehabilitation team conducts Socio-Economic Assessment Surveys for all patients diagnosed with obstetric fistula who have either been treated or have a treatment plan scheduled. During my time at the hospital, I assisted the rehabilitation department with data collection and data entry of the patient survey information. A convenience sampling method was employed by collecting information from patients who came to the rehabilitation office or consented to interviews as I visited the various wards of the hospital. Oral consent was obtained from participants for any survey response data included in the results of this study. Using this method, a total of 35 patient survey responses were collected. The independent variables for this study are determined by the demographic variables that were collected from the survey participants include: age, marital status, region, education level, and way of livelihood (used as a proxy for rural residency). The dependent variable is length of incontinence measured in months. As with the other variables, length of incontinence was a self-reported measure. Since the women at the hospital are in the process of treatment at the time of the interview, the end time does not assure that incontinence has ended. Thus, length of incontinence is a proxy for timing when care is sought from the time fistula formation occurs due to obstructed delivery. While the results from this study present associations, it is important to acknowledge that the sample size for this study is very small (n=35) and may not be representative of the true relationship.

Study Setting



Results

Variable	Number of patients	Percent (%)
Age group (years)		
18-23	13	37.1
24-29	7	20.0
30-35	7	20.0
36-41	3	8.6
42-47	3	8.6
n/a	2	5.7
Total	35	100.0
Highest Education		
illiterate	24	68.6
read and write	4	11.4
elementary	3	8.6
6th to 8th grade	1	2.9
secondary school and above	3	8.6
Total	35	100.0
Marital Status		
divorced	4	11.4
married	20	57.1
single	1	2.9
separated	8	22.9
widow	2	5.7
Total	35	100.0

Table 1 presents the distribution of patients based on specific socio-demographic variables. The table illustrates the variability and trends in responses for each variable. From the multiple regression analysis, found that the only statistically significant result is age, with ever 1 year increase in age increasing length of incontinence by 5.3 months. While not statistically significant, protective signals were seen in specific education levels: elementary school and secondary school and above.

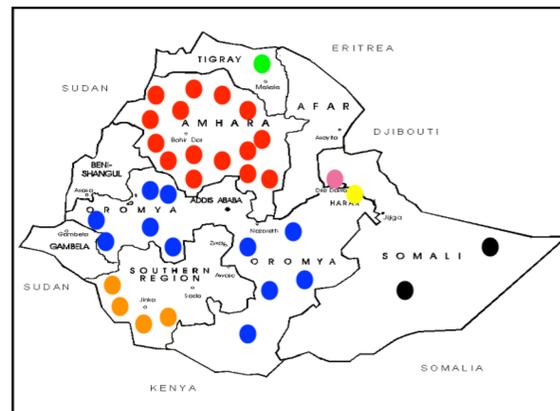


Figure 1: Map of the regional distribution of obstetric fistula patients surveyed in this study. Red: individuals from the Amhara region; Blue: individuals from the Oromiya region; Black: individuals from the Somali region; Orange: Southern Nations, Nationalities, and People's region; Green: individuals from the Tigray region; Pink: individuals from Dire Dawa; Yellow: individuals from the Harrar region.

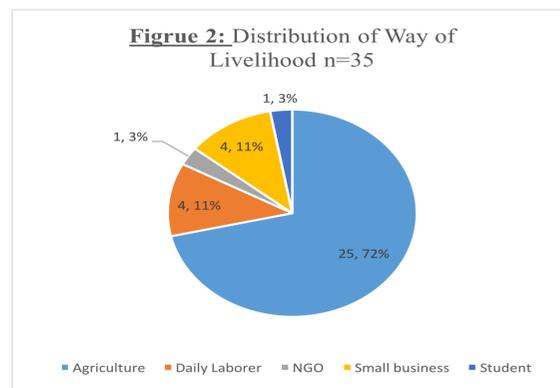


Figure 2 illustrates the distribution of way of livelihood. The majority of women (72%) work in agriculture which is a proxy measurement for understanding rural residency.

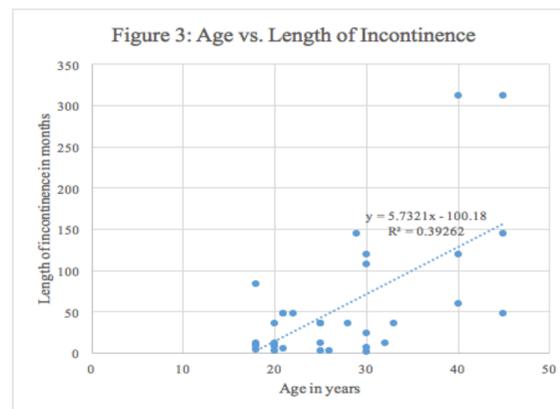


Figure 3 presents the significant spread in length of incontinence. Can see that age can potentially explain approximately 39% of the variation in length of incontinence. The results show that the younger population have lower lengths of incontinence perhaps due to increased awareness of repair services or the potential prioritization of maximizing fertility. Older populations, had higher lengths of incontinence. This could be due to the low success rates of repair surgeries or lack of awareness of fistula repair services offered during the time of their delivery.

Results

Place of Delivery	Number of participants	Percent (%)	Average length of incontinence in months [+/-SD]	Average age of participants in years [+/-SD]
Hospital	5	14.3	27.6 [+/- 23.0]	28.4 [+/- 9.8]
Home	5	14.3	168 [+/- 139]	36.6 [+/- 10.5]
Home to Hospital	22	62.9	36.0 [+/- 42.2]	25.5 [+/- 5.6]
Health Center	3	8.6	47.0 [+/- 63.2]	25.3 [+/- 12.7]
Total	35	100.0	54.6 [+/- 76.7]	27.5 [+/- 8.28]

Table 2 shows a signal that home births have the worst outcomes. This aligns with the main understanding that delivering at home means that there is a delay in time to care at a health facility for delivery and fistula care. The women who are delivering and going to the hospital are already presenting that health facility seeking behavior and thus have shorter lengths of incontinence.

Distance to Nearest Health Center	Number	Percent (%)	Average Length of Incontinence in months [+/-SD]
30 minutes	2	5.7	3.00 [+/- 2.83]
60-120 minutes	10	28.6	60.2 [+/- 95.0]
180-360 minutes	18	51.4	36.1 [+/- 39.7]
420 minutes +	5	14.3	131 [+/- 113]

Table 3 shows a signal that says overall, distance seems to be important and increase length of incontinence. However, there is a second trend, seen in the middle distance categories between 60-360 minutes, where this trend is reversed. Shorter length of incontinence for the further distance categorization. This could be due to the small data set or that there is a potential signal to investigate here, perhaps looking at other factors outside of proximity to health facility that influence when individuals are accessing care.

Limitations

Length of time with incontinence, is both a health outcome in itself, and a proxy/indicator variable for the amount of time between postnatal complications resulting in obstetric fistula and the point when medical attention and care begins. While this is not a specific limitation to interpreting the findings of this study, the need for additional variables that can assess maternal health outcomes in this scenario is clear, and an important area for future research. The length of incontinence is measured at the time in which the patients are interviewed. This has its limitations since fistula surgeries are notorious for being complex cases. Physicians themselves acknowledge the complexities of such surgeries and the difficulties of "reconstructing all the continence mechanisms [which]...is the challenge of fistula surgery" (38). The nuances of fistula repair are such that even once an individual seeks care for treatment, the length of incontinence may still accrue depending on the success of the repair however, this too depends on the time in which care is sought. Thus, when taking into account these nuances of fistula surgery, the outcome variable measured in this study likely underestimates the true burden of obstetric fistula and may not be the best indicator for access to care since women could have accessed care elsewhere but had unsuccessful treatments. Moreover, the results from this study can only infer association and not causation.

Another factor that is attempted to be understood in this study is access to care. Since antenatal care adherence provides insight on health-seeking behavior, asking women the number of times they visited a health center during their pregnancy and what services they received could be beneficial in understanding the resources available to women (10). Directly asking who is making the decision in delivery location choices and why that individual is making the decisions would also be useful to understand each woman's individual context and position in her community. Information on the sources in which women are obtaining their maternal health education and decisions will also prove useful in understanding where interventions are working and where interventions should be placed. Other studies have found that first delivery is truly predictive of OF formation. Thus, in a future study, it would also be imperative to determine the number of pregnancies for each patient and in which pregnancy order she developed the fistula. Moreover, barriers such as transportation and monetary shortages were found in other studies, thus collecting information on income level and transportation resources for each individual could have also been useful in understanding economic factors as barriers to access and OF prevalence.

Conclusions

My study is contributing to a growing body of literature on OF. The associations and signals found with the social factors examined and their effect on decision making ability justify the need for more research and a larger data set. While this study is only presenting one potential cause of delays to seeking care, the body of knowledge must also try to understand why decision makers are choosing to delay health facility care—is it due to perceptions of rural health facilities or previous experiences? Nevertheless, to enable analytical epidemiology to determine best practices for understanding fistula reduction the full context must be understood. Once health knowledge and information increases, interventions to achieve OF reduction and elimination efforts may be determined and prove to be more effective.

Acknowledgments

I would like to thank my faculty mentors, Dr. Patrick Baron, Dr. Naila Mamoon, Dr. Ann Fox, and Dr. Fuji Lozada, for the guidance and encouragement from the beginning of the CIS process to the culmination of this research project. I would also like to thank Dr. Shannon Pittman for supporting me in analyzing my data. I would like to thank the study participants and staff of the Hamlin Fistula Hospital in Addis Ababa for welcoming me into the hospital for two consecutive years. To the Medical Director, thank you for approving my research project and providing me with the resources to effectively answer my research questions. *References on website