

BALLARD BRIEF

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Obstetric Fistulas in Sub-Saharan Africa

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Summary

An obstetric fistula is a hole in the vaginal canal, either to the bladder or the rectum. It is a childbirth complication caused by obstructed, prolonged labor. Sub-Saharan African mothers are particularly vulnerable to fistulas if they are poor, rural living, or young. Additionally, cultural barriers, distrust of Western health facilities, and birthing traditions play a role in the pervasiveness of obstetric fistulas in modernity. A hole in the bladder or rectum leads to loss of control over urination or defecation. However, there are secondary consequences, such as mental illness and social stigma, that cause just as much suffering as the physical symptoms of the obstetric fistula. There is a significant lack of resources for most survivors with fistulas today. Although obstetric fistulas are curable in many cases, millions of women and girls suffer without any hope of intervention. Because a significant contributing factor of obstetric fistulas is adolescent pregnancy, many of these women have to live with their fistulas and all the harmful consequences for well over half of their lifetimes. Even with successful treatment

options, the majority of the international aid and social problem-solving communities overlook this maternal health issue. Increasing knowledge about maternal health care and improving medical resource accessibility in sub-Saharan Africa is an essential step in ending the widespread prevalence of obstetric fistulas. This brief is written amidst a shortage of high-quality data on maternal mortality, obstetric complications, their causes, and obstetric fistula rates specifically. Nevertheless, it provides a comprehensive discussion on the existence and combat of obstetric fistulas in sub-Saharan Africa today.

Key Terms

Adolescent Pregnancy—The occurrence of pregnancy in girls aged 10–19 years.

Comorbidities—A disease or medical condition that is simultaneously present with another or others in a patient.

Global South—A geopolitical, historical, and developmental concept where nations of the world that tend to have low levels of economic and industrial development are

typically located to the south of more industrialized nations; not strictly geographic and have exceptions.

Incontinence—The health condition in which there is no voluntary control over urination or defecation.

Neonatal—Of, relating to, or affecting the newborn and especially the human infant during the first month after birth.

Obstetric Fistula—A fistula is an abnormal hole between an internal organ and the outside of the body. An obstetric fistula is an abnormal hole between the vaginal canal and the rectum, or the vaginal canal and the bladder, caused during childbirth.

Obstructed Labor—Failure of descent of the fetus in the birth canal for mechanical reasons despite good uterine contractions.

Prenatal or Antenatal—Before birth; during or related to pregnancy.

Prolonged Labor—When labor exceeds 20 hours for first-time mothers and 14 hours for those who have previously given birth.

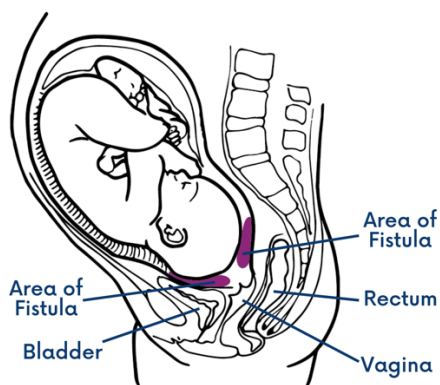
Spontaneous Abortion—Early pregnancy loss, also colloquially known as miscarriage.

Stillbirth—A stillbirth is the death or loss of a baby before or during delivery. Almost all labors resulting in fistulas also cause stillbirth.

Traditional Birth Attendant— A person who assists the mother during childbirth and initially acquired her skills by delivering babies herself or through apprenticeship to other traditional birth attendants.

Context

Q: What is an obstetric fistula, its causes, and its medical consequences?



A: An obstetric fistula is a hole that tears between the vaginal canal and the bladder or the rectum caused during childbirth. Obstetric fistulas become a danger once the time spent in active labor surpasses what is considered “normal labor,” which varies based on previous birthing experience. Prolonged labor begins after 20 hours for first-time mothers and 14 hours for mothers who have given birth before. Obstetric fistulas are most commonly caused by prolonged, obstructed labor pushing the baby’s head against a particular spot of the vaginal

canal, which cuts off blood supply until the tissue decays and makes a hole into the rectum or bladder. Obstructed labor was responsible for 76–97% of obstetric fistula cases, according to a sub-Saharan study. Left untreated, obstetric fistulas may result in the passage of stool via the vagina or permanent urinary incontinence. Generally, when an obstetric fistula develops without emergency medical intervention, the mother is in excruciating pain for days, and the fetus dies. If the fetal tissue is not removed before it decays, the mother is at risk for death and infection. In almost all obstetric fistula cases, the labor creating a fistula results in a stillbirth. Incontinence is a permanent side effect of an obstetric fistula that leads to secondary physical health defects that this report will further explore.

Q: When did this become a maternal health problem?

A: Fistulas have been a significant consequence of childbirth throughout history. However, with the development of modern medicine, suffering from obstetric fistulas has become obsolete for economically developed countries with access to quality healthcare. Obstructed

labor, the primary cause of obstetric fistulas, does not resolve naturally and requires intervention. Therefore, the advent of the cesarean section, which emerged in the 1940s and became widely adopted in the following years, became the primary treatment option for obstructed labor. The cesarean section successfully prevented prolonged obstructed labor and, thus, obstetric fistula formation in Europe and the United States.⁷ The persistence of obstetric fistulas decades later in economically developing countries is evidence of a distinct gap in obstetric healthcare between high-income and middle to low-income countries. To maintain transparency, deaths that happen because of obstructed labor are hard to measure as they may be recorded as uterine rupture, hemorrhage, or sepsis; examples of common consequences of prolonged obstructed labor. The difficulty in measuring deaths due to obstructed

Q: Where are obstetric fistulas most prevalent now?

A: Today, obstetric fistulas persist within a clear geographic divide. Currently, no worldwide survey records the prevalence and persistence of

labor is an inherent challenge with maternal mortality data and makes issues like obstetric fistulas harder to quantify. In general, healthcare systems that are better equipped to provide extreme surgical measures and internal monitoring, including capabilities to perform cesarean deliveries, are more likely to treat obstructed labor successfully. In this brief, medical facilities, hospitals, and clinics are considered Western. Regions with robust maternal healthcare, such as North America and Europe, can solve obstetric fistulas in most patients. In addition to preventing fistula formation, surgery can permanently repair obstetric fistulas. Today, surgery has an over 85% success rate at fistula closure in Africa.⁸ Surgery is integral to the conversation of obstetric fistulas because there are limited cases in which obstetric fistulas have closed on their own.

obstetric fistulas by region. However, other measurements, such as obstructed labor data, indicate their familiar presence in sub-Saharan Africa. This report uses obstructed labor data as a substitute for obstetric fistulas due to the lack of research. Understanding the prevalence of obstructed labor is indicative of the risk of

potential obstetric fistulas a population could be suffering from. With significant medical advancement, maternal death due to obstructed labor in the United States has been almost completely eliminated, with only 2 deaths occurring in the last 20 years total. European countries show similar trends. In the same time frame, fewer than 5 deaths per country are recorded on average. This difference is significant in comparison with rates in the Global South, where obstructed labor affects 3–6% of all laboring mothers and is responsible for 22% of obstetric complications and 9% of all maternal deaths in low to middle-income countries (LMICs). In sub-Saharan Africa, obstructed labor is responsible for 24% of maternal deaths. This region consists of the geographical area of the African continent below the Sahara Desert. It contains all African countries, excluding Western Sahara, Morocco, Algeria, Tunisia, Libya and Egypt.



Q: Who is most at risk
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for an obstetric fistula?

A: Worldwide, the problem of obstetric fistulas is highly debilitating for a conservatively estimated 2–3 million girls and women worldwide, almost exclusively in Asia and sub-Saharan Africa. Each year, it is estimated that 30,000–130,000 girls and women will be added to that total in sub-Saharan Africa alone.” This is not a definitive number due to the silent suffering many obstetric fistula survivors engage in and the difficulty tracking obstetric outcomes on a worldwide level.

Physiological maturity plays an essential role in healthy childbirth, especially when it comes to avoiding the chances of prolonged labor, which may lead to a fistula. In other words, children who give birth are more at risk for obstetric complications. Due to the lack of obstetric fistula records, child marriage offers a window to view how often they may occur, as child marriage is indicative of age at sexual debut for girls.”” Because physiological immaturity increases risk, sexual relations during childhood are an indicator of obstetric fistula frequency. For this reason, countries in which child marriage is popular have a much higher risk of obstetric fistula prevalence. Six of the top 10 countries in the world with the highest child marriage rates fall into sub-Saharan Africa:

Niger, Central Republic of Africa, Chad, Mali, Burkina Faso, and Guinea. In West and Central Africa, 4 in 10 girls will be married before age 18, and of these, 1 in 3 before age 15. In comparison, South Asia is the second most suspected prevalent region for obstetric fistulas, and it is also a region with some of the highest rates of child marriage, behind Africa. However, this area has had much more progress than Africa in decreasing child marriage. In the last 50 years, a South Asian girl's chance of getting

Contributing Factors

Rural Living



Rurality is a significant factor in the risk of developing an obstetric fistula for sub-Saharan African mothers as it increases the danger of untreated prolonged labor. The odds of a rural mother delivering in a medical facility are almost half that of an urban mother. Most mothers in rural settings either deliver by themselves, with

married before adulthood dropped by a third, from almost 50% to below 30%. In contrast, West, Central, Southern, and East Africa still have rates above 30%, ranging from 32–37%. Child marriage rates and age of sexual debut for the female populations of countries represent an increased risk of developing obstetric fistulas. Throughout this report, the link between physiological development and childbirth complications will be expanded on.

a family member, or a traditional birth attendant. Because of common misconceptions about the "normal length of labor," no party knows when emergency obstetric care is needed. In the event of complications such as obstructed labor, delays in the decision to seek emergency treatment can have significant consequences, such as obstetric fistulas. A study of sub-Saharan African countries found that the most frequently cited barrier to preventing obstetric fistulas was a lack of awareness of when to seek emergency care, which was most common in rural areas with low levels of education. Another study explained that the main reason for the decision to deliver at home was little knowledge of labor itself. These findings demonstrate the reality that unsafe home births in rural areas are due, in part, to a lack of awareness and ill-informed care-seeking behaviors. Home births increase

the risk of birth complications, which can lead to long-term conditions like obstetric fistulas.

Even if the mother, her birth helpers, or traditional birth attendants (TBAs) are able to identify the point of prolonged labor, transportation to a medical facility is its own obstacle. Various studies concluded that longer distance traveled to health facilities increases the odds of adverse birth outcomes.²⁷ Delays such as hesitancy to seek medical care, long travel time, and elongated wait times upon arrival to medical facilities exacerbate the risk of obstetric fistula development. A Tanzanian study of obstetric fistula patients found that women's median travel time to the facility was over an hour, where almost 30% of them waited over an hour to receive care, and over 65% of them were required to be transferred to another, better-equipped facility. In total, the women surveyed spent over a median time of 48 hours laboring, 34 hours past the point of normal labor for first-time mothers. Additionally, a Rwandan study found that mothers who endured longer ambulance travel time suffered worse neonatal outcomes. These studies demonstrate how poor access to healthcare elongates rural mothers' labor time, elevating the probability of prolonged labor. In Malawi, 69% of women with fistulas surveyed reported at least 2 delays in receiving care when they experienced

obstructed labor. If transporting the mother to a medical facility is not feasible or affordable, any medical procedures performed at home are significantly riskier.²⁸ Definitive statistics on home birth outcomes are largely unavailable due to the contingency of medical facilities to record maternal health data. However, there is a recognized, legitimate risk of unsafe home birth in sub-Saharan Africa due to several reasons, starting with the cleanliness and resources in the house. Most rural homes do not have any source of running water, a basic necessity to maintain sanitation during birth and any potential medical procedure. In rural areas, piped water is absent for the bottom 40% of the poorest households. Additionally, only 30% of sub-Saharan Africa has sanitation systems. Surgical intervention is necessary to treat obstructed labor, and the lack of clean water exemplifies the ill-equipped nature of rural homes to perform such surgical interventions as cesarean sections. For these reasons, rural births have significantly higher risks of developing obstetric fistulas than urban births.

Across sub-Saharan Africa, pregnant mothers who live farther from medical facilities are less likely to receive medical care during the pregnancy period. The absence of prenatal care increases the likelihood of adverse obstetric outcomes, including obstructed labor. Rurality is

the definitive pre determinant of access to medical care, as both wealthy and poor rural mothers reported the same low amount of prenatal care visits. Urban living women in both the lowest and highest wealth quintiles were 68% more likely to use prenatal care services than rural living mothers. The WHO recommends that every population of 500,000 should have access to 5 facilities that offer basic obstetric and neonatal care and one that offers comprehensive emergency obstetric and neonatal care (EmOC). In a study that included 16 sub-Saharan countries, only the country of Benin met this requirement. There was a stark lack of basic EmOC facilities that provide the primary prenatal care necessary to prevent birth complications. Even so, obstructed labor needs a higher level of treatment than basic EmOCs can provide. In terms of preventative measures regarding obstetric fistulas, the most immediate action during the prolonged birth period is an emergency cesarean delivery. For rural living mothers, this presents a significant problem. Even if countries had sufficient, comprehensive EmOC facilities, they still need to be geographically well distributed. EmOCs are usually located in urban centers like the capital cities; this means mothers in rural communities must travel long distances to access the main roads that connect to the urban areas. Delays in

seeking treatment, due to financial strain, transportation inaccessibility, lack of confidence in the facility, or lack of knowledge as to the warning signs of potential birth complications cause many rural mothers to arrive too late to the comprehensive EmOCs for successful treatment of obstetric fistulas.

Distrust of Modern Western Medicine

No matter the accessibility of modern Western medical care, many intentionally forgo such care, equally contributing to the prevalence of obstetric fistulas. Distrust of modern Western medicine has led to reliance on traditional cultural practices that may inadvertently cause more harm than good. For instance, many continue to rely on community resources such as Traditional Birth Attendants (TBAs). TBAs are the traditional caregivers during childbirth who gain their skills through apprenticeship to a mentor TBA or through delivering babies herself; there is no required formal medical training. In Ethiopia, births attended by TBAs rose from 28% to 46% between 2000 and 2016. A study of African women's perceptions of prenatal and obstetric care explains the preference for TBAs, as sub-Saharan women reported feeling that healthcare workers in hospitals were rude, abusive, and did not treat

them in an empathetic manner. For example, some women reported feeling as if they were not allowed to voice pain during the birthing process or cited feeling a need to adjust their behavior in hospitals. They described feelings of hesitancy that people would shame them if, for example, they did not have clothes prepared for their baby or felt that clothing was unnecessary for their newborn. Women are unlikely to seek hospital care if they are afraid of being shamed or unable to communicate their needs and feelings successfully. A meta-analysis of maternal healthcare across sub-Saharan Africa found that 44% of mothers experienced disrespect and abuse during the childbirth process at health facilities. In a study conducted at the Enugu State University Teaching Hospital in Nigeria, 98% of the 446 respondents reported at least one instance of disrespectful or abusive care during childbirth. In South Ethiopia, the overall regularity of disrespectful care was recorded at 98.9%. These experiences indicate the trust patients are willing to place in these health facilities. The widespread trends of disrespect and abuse signal wariness to return or seek out care at Western clinics and hospitals.



There is an intense stigma surrounding Western medical facilities as being neglectful, shaming, abusive, and disrespectful, which creates hesitancy to visit such facilities in vulnerable times like childbirth. Specifically regarding fistulas, medical facilities are viewed as exacerbating the problem. A study of Ugandan TBAs, in which almost every single interviewee knew someone with a fistula, cited the widespread belief by both pregnant mothers and TBAs themselves that delivering at a medical facility caused fistulas. The most reported reason for this was doctor negligence. As previously mentioned, prolonged, obstructed labor causes obstetric fistulas, and medical professionals typically treat this condition by performing surgical intervention with a cesarean section. Many believe obstetric fistulas are caused by doctors during this procedure where they “scratch mothers on the bladder” or take too long to operate, causing the mother to be unable to hold urine. This belief often results in a

distrust of Western medical care, and thus, obstetric fistulas often go untreated.

In contrast, the majority of mothers had positive attitudes about TBAs. For example, Ugandan mothers viewed TBAs as more capable of dealing with emergencies than physicians during birth. Some studies reported a widely held belief that TBAs had near-supernatural powers that allowed spiritual protection over pregnancy and birth. Additionally, in sub-Saharan Africa, TBAs outnumber medical officials a hundredfold or more. However, many TBAs exercise unsafe practices or possess little knowledge regarding birth complication risks, including obstetric fistulas.” Ethiopian mothers, for example, are increasingly relying on unskilled TBAs to assist in the birthing process, especially rural, poor, uneducated mothers. The use of unskilled TBAs is a significant indicator of poor maternal health outcomes, including the development of obstetric fistulas. A study in Malawi reports the same conclusions—28 Malawian women diagnosed with obstetric fistulas said TBAs delay seeking extenuating care after the onset of labor and negligence, such as needlessly cutting their vaginas or pushing on the stomach. The international development community has recognized the maternal mortality consequences in conjunction with this trust gap between mothers and Western medical facilities. The

WHO has led a significant effort to train TBAs to transition them into Skilled Birth Attendants, or SBAs. The attempt to train TBAs is a convergence of Western medicine and cultural practices to address the trust gap and help mothers receive more expensive medical care. However, distrust is a significant factor in the prevalence of obstetric fistulas, as obstructed labor requires medical intervention beyond the scope of skilled birth helpers to solve and thereby circumvent fistula development.

Adolescent Pregnancy



As mentioned previously, age at childbirth can play a significant role in childbirth outcomes such as obstetric fistula development. Several studies confirm that sub-Saharan Africa has high rates of adolescent pregnancy relative to other world regions. Nearly one-fifth of all African adolescents, children between the ages of 10–19, become pregnant. Child marriages significantly contribute to the risk of obstetric fistulas due to

the substantial impact on the ages of sexual debut for young girls in sub-Saharan Africa. As of 2019, sub-Saharan countries with the highest rates of child marriage were Niger at 81.7%, Chad at 77.9%, Guinea at 72.8%, Mali at 69.0%, and Nigeria at 64.0%. Within the region, country-level trends demonstrate a relationship between the high frequency of child marriage and lowered age at first sex, correlating with lower ages at first birth and the development of obstetric fistulas. Girls who enter into child marriage do not have the biological development necessary to sustain successful pregnancy and childbirth at healthy rates compared to women. Mature physiological development indicates a successful birth for both the mother and child. An important reason for the increased mortality for child mothers is that pregnant girls' pelvises are too small and unable to properly dilate to accommodate for the baby to pass through into the vaginal canal. This complication escalates the risk of obstetric fistulas. If the baby's head gets stuck due to the narrow pelvis, the prolonged pressure of the head against part of the vaginal wall can create a fistula. Children between ages 10–15 are especially vulnerable because their pelvic bones are not fully developed; their risk for fistula formation is as high as 88%. In other words, for every 10 girls who labor, 8 of them will develop an obstetric fistula. Delaying the

age at first sexual encounter until full physiological maturity is one of the main preventative measures to reduce the number of obstetric fistulas among adolescent sub-Saharan mothers.

Risk of Obstetric Fistula Development in Labor for Girls 15 and Under



8 out of every 10 girls who deliver a baby will develop an obstetric fistula.

Teenage mothers have inherent disadvantages relating to maternal healthcare. As mentioned previously, prenatal care decreases the likelihood of adverse birth outcomes, such as the formation of an obstetric fistula. Teen mothers are less likely to seek prenatal care than older mothers, even after accounting for socioeconomic standing. The trend persists when considering other factors like rurality or financial ability, indicating a consistent pattern of reduced prenatal care among teen mothers compared to their older counterparts. A critical issue with teenage sub-Saharan mothers is desire in relation to pregnancy. A Kenyan study found most adolescent pregnancies to be unplanned. This trend in adolescent pregnancies may be the cause of the prenatal service gap between older and adolescent mothers;

unintended or unwanted pregnancies are less likely to receive prenatal care.

Furthermore, adolescent mothers also experienced a teenage disadvantage, in which they received worse delivery care than older mothers. They were also less likely to deliver in a medical facility; instead, they often used unskilled birth attendants. Specifically, a study of 29 sub-Saharan countries reasoned that adolescent mothers feared the extreme stigmatization, devaluation, and shaming that young pregnant mothers receive from trained personnel at healthcare facilities. Studies in Ghana, Nigeria, Myanmar, and Guinea found that much of the abuse faced by pregnant adolescents in delivery facilities is due to healthcare workers' prejudice against their age, specifically inferring that their youth means they are of lower socioeconomic status, immorally engaging in early sex, have lower education levels, and have limited autonomy. Adolescents are almost twice as likely as older women to experience physical abuse, and adolescents with no

education were three times as likely to experience verbal abuse. Additionally, education is a prevalent factor in using maternal healthcare resources. Researchers identified low educational attainments, dropping out, and ignorance as significant predictors of teenage motherhood in sub-Saharan Africa. The lower her education level, the less likely a mother is to have access, knowledge, or power to seek healthcare services. These assorted factors make adolescent mothers less inclined to deliver at medical centers. All of these patterns for adolescent mothers did not vary in cross-country analysis, meaning this finding can be generalized for the sub-Saharan region as a whole. It is consequential that adolescent mothers are less likely to be at a medical facility at delivery because it is the only place equipped with the means of prevention of obstetric fistula development in the event of prolonged, obstructed labor. This finding, in conjunction with teenage mothers being physiologically immature, signifies their acute susceptibility to obstetric fistulas.

Consequences

Physical Health Outcomes

Quality of life decreases sharply and

significantly for mothers who develop obstetric fistulas. Women may suffer for decades with this condition if left untreated following fistula development in adolescence. Women undergo a significant change when saddled with incontinence, a common consequence of obstetric fistulas. As a result, it is difficult for these women and girls to maintain hygiene and continue their everyday lives. Constantly leaking urine uncontrollably means that the women and girls are wet all the time. To battle the pungent scent, 80% of Ugandan women increased their water intake. The strategy of drinking more means that the urine is less odorous and concentrated, in turn reducing the rashes, sores, and "burning" in the genital and thigh areas. On the other hand, Ethiopian women tend to decrease liquid intake to curb leakage. This tendency makes the urine very concentrated and strong smelling. Malawian women with fistulas generally recount continually switching between these strategies of drinking a lot of water to minimize the smell and drinking very little water to reduce wetness. Sometimes, the presence of pads around their wounded and rashed area creates an intensely painful situation that limits body

movements due to the chemical makeup of urine. One study participant with an obstetric fistula explained that after 2 years with her condition, her cloth pads create burning in her genitals, and her open wounds around the area cause her to walk lamely. Women and girls who suffer from obstetric fistulas spend a significant amount of energy innovating padding with layers and plastic to stem the leakage, with 83% of Ugandan survey respondents reporting washing bedding and clothing and constantly cleaning their skin and body to combat skin defects from the urine. When women and girls live in rural settings or share community latrines and wash houses, cleaning their bodies or going to the toilet multiple times a day can be a debilitating inconvenience to life. Researchers more widely study urinary incontinence from fistulas among sub-Saharan mothers, but rectum-vaginal fistulas suffer similarly. Women and girls who have a rectum-vaginal fistula that leads to feces leakage have similar problems with smell, skin conditions, and very poor quality of life. Women participants in a Tanzania study often could not afford all the soap they felt necessary to keep themselves clean or

were geographically unable to obtain supplies; only a minority of women in several samples could afford to try to mask smells with perfumes or powders.

Mothers with obstetric fistulas will likely deal with infertility problems unless they get it medically repaired. In a study of fertility outcomes for almost 300 Malawian, Zambian, and Mozambican obstetric fistula survivors, only 49% had reproductive potential after repair, and only 21% became pregnant again, with most pregnancies ending in cesarean deliveries. At a gynecology clinic in Togo, over three-quarters of the women with obstetric fistulas interviewed were purported to be unable to give birth. These studies suggest that infertility is a commonality among obstetric fistula survivors. However, in Malawi, 45% of obstetric fistula sufferers reported the desire to conceive again. Therefore, access to medical repair for the obstetric fistula is vital to rectify the consequences of infertility. However, the repair procedure is not a guaranteed remedy for infertility caused by obstetric fistulas. Even 2 years after repairing their obstetric fistula, women can continue to experience its side effects, such as infertility, spontaneous abortion, and

stillbirth, according to a Malawian study. These side effects underscore the importance of prevention of obstetric fistulas, considering consequences such as infertility and incontinence may still occur following surgical repair.

Ostracization and Isolation

Family Repercussions

Women with obstetric fistulas are commonly abandoned or ostracized by their families due to their condition. Obstetric fistulas cause marital strain, starting with one's spouse. An obstetric fistula can negatively impact the survivor's sex life. Sex is an essential indicator of a healthy marriage for these women. Some Malawi women purportedly avoid obstetric fistula repair surgery due to a fear of potential marital repercussions during the necessary recovery period when abstaining from sex is required. That being said, sex with a vaginal fistula can be difficult as well. Women lose confidence and self-stigmatize, and the smell and cleanliness of their genitals cause extreme difficulty when having sex. A study of 30 women with obstetric fistulas in Uganda found that all participants stopped having sex with their husbands as a result of their condition

and felt that was detrimental to their marriages, with 30% reporting their marriages ended.

Real Survivor Story

The extreme social stigmatization suffered by fistula survivors is illustrated through the example of an Ethiopian named Mahabouba Muhammad, who described her community's rejection of her after her fistula. She became pregnant at age 14 after being a child bride. After suffering in obstructed labor for over seven days, she developed two fistulas in her vaginal canal to her bladder and rectum respectively. With two separate fistulas and consequent nerve damage from the prolonged labor, she could not walk nor stand and suffered incontinence. Her aunt believed her to be cursed by God, so the villagers carried her to a hut on the edge of the village and took the door off so she could be eaten by the hyenas in the roundabout area. Muhammad spent the night fending off hyenas with a stick and then dragging herself to a Western missionary's doorstep in a neighboring village, a journey that took all day.

Nicholas D. Kristof and Sheryl WuDunn, *Half the Sky: Turning Oppression into Opportunity for Women Worldwide* (New York: Vintage Books, 2010), 94-95.

Spousal abandonment and divorce are very common in the event an untreated fistula develops.” The majority of survey respondents in Nigeria disclosed abandonment by their husbands, and 82% described their husbands withdrawing social support or neglecting them. Even if the husband is supportive, survivors face stigmatization within their families. A different study in Ethiopia found that husbands who were supportive of their

wives with this fistula condition were advised by their families to abandon them. The same survey also reported over half of the women with fistulas were not allowed to eat with their families at meal times. In Tanzania, women with obstetric fistulas disclosed not being allowed to cook for their families or being forced to relocate to their parents or other relatives due to stigmatization. These studies expound on the various ways obstetric fistula survivors experience familial rejection.

Community Repercussions

The most common coping method for obstetric fistulas was self-isolation.” Community disgrace or ridicule prompts women to become reclusive, refusing to leave their houses. Stigmatization can lead society to label survivors of fistulas as unclean, dirty, or cursed. In Guinea, communities considered obstetric fistula survivors perpetually unclean, and some reported being barred from food preparation, social events, and prayer ceremonies. Other testimonies demonstrate the community's extreme rejection and abandonment of women with fistulas.” To escape this stigmatization, obstetric fistula survivors self-isolate

themselves. Ninety percent of Ugandan women interviewed with an obstetric fistula reported hiding from the general public. All 25 Malawian women with obstetric fistulas interviewed suffered from “anticipated stigma,” where their fear of embarrassment and reactionary ostracization from the community led to tactics of self-isolation. Additionally, some obstetric fistula survivors believe they suffer alone. In one instance, an Ethiopian woman hid her condition carefully from her husband and never discussed her condition because she believed it was uncommon. For all of Ethiopia, the awareness rate for obstetric fistulas was recorded at 38%. This rate is generally comparable with other countries, such as Nigeria at 57% and Ghana at 45%. Lack of awareness of the commonality of obstetric fistulas intensifies the shame survivors feel. Findings suggest that seeking decisions to rectify their obstetric fistula are not made exclusively or even primarily by the survivors themselves. Familial and community support has a significant positive impact on women with fistulas seeking care. Therefore, community and family rejection often perpetuate the condition, meaning women suffer from

fistulas without seeking treatment because of these social factors.

Poor Mental Health

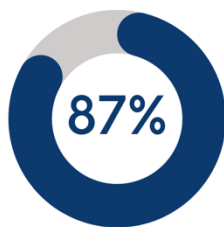
The misfortune of an obstetric fistula, compounded by the later social isolation and exhausting personal hygiene cycle they deal with, leads to poor mental health among women with fistulas. The fistula itself increases stress for women and girls. The increased stress may be due to constantly maintaining cleanliness to avoid odors and further rashes. Other studies mention the psychological toll of social rejection and lowering status. Additionally, women with obstetric fistulas often have diminished self-worth and low self-esteem. These can be exacerbated by a widely circulated “blame the victim” mentality in which the survivors are led to believe they caused their fistula. In Ethiopia, almost 40% of women interviewed believed their fistula to be punishment for their sins. This belief extends to other sub-Saharan countries; a Nigerian study and a Ugandan study both discussed this same theory that fistulas were divine punishment as popularly circulated between both men and women. The internal shame caused by this belief can culminate in severe mental

illness. One survivor notably described her life to be "only a little better than dead." This attitude is not uncommon among women with obstetric fistulas. Almost half the women from the Ethiopian study reported suicidal ideation. In a smaller qualitative study of 8 Ethiopian survivors, 6 revealed having suicidal thoughts, and one reported attempting suicide due to shame and stigmatization. These findings are evidentiary of the necessity of mental health services in obstetric fistula treatment.

Correlation between Obstetric Fistula Formation and Stillbirth



Worldwide obstetric fistula cases resulting in stillbirth



Ugandan obstetric fistula cases resulting in stillbirth.

Poor mental health is extremely common for women living with fistulas, especially after the incidence of stillbirth. Aside from incontinence due to the fistula, stillbirths, and infertility are two comorbidities of obstetric fistulas that cause significant psychological distress. First, it is estimated that in 90% of obstetric fistula cases, labor

results in a stillbirth. This worldwide rate holds true for sub-Saharan mothers; among Ugandan obstetric fistula patients, 87% lost their baby in the birth that brought about the fistula.” Women who experience stillbirth are associated with psychological disorders such as depression and anxiety, sometimes even decades later after subsequent pregnancies and healthy childbirths. Sub-Saharan mothers are no exception to this and face additional cultural repercussions. Grief following a stillbirth is challenging to process when cultural beliefs dictate stillborn babies to be dishonorable and made to be kept a secret. Additionally, fertility is of great social importance to many communities across Africa. As a result, infertile women can be stigmatized as a failure in womanhood. For some Malawian women interviewed, infertility was an offense to their capabilities as a wife and mother. Their infertility induced fears of partner abandonment or anxiety that they would never be able to find a supportive spouse. As mentioned previously, this fear is well-founded, as it is a recorded reality for many obstetric fistula survivors. One woman who had to have her uterus removed during her obstetric fistula repair revealed that her

husband left her and their 2 children due to her lack of childbearing ability. Among 25 Malawian obstetric fistula survivors, 5 divorcees revealed they deliberately avoided remarriage for fear that disclosure

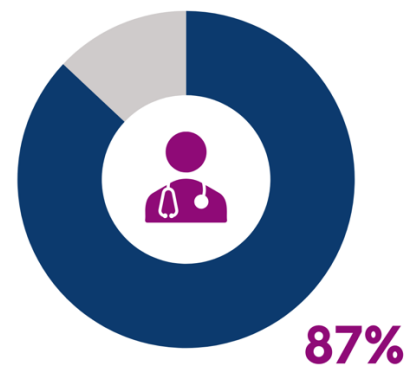
Practices

Accessible Robust Maternal Care

Access to quality health care for mothers in sub-Saharan Africa will address both sides of the obstetric fistula problem, prevention, and treatment. As previously explained, the most common reason for the development of an obstetric fistula is prolonged obstructed labor. If medical resources were available during this situation, medical options, such as cesarean sections, are possible and may not only prevent the formation of a fistula but also potentially save the life of the mother or baby. Additionally, maternal care encompasses prenatal care, which can also reduce the chance of an obstetric fistula during labor, as explained in this report. Mothers having access to prenatal care such as oral supplements, ultrasounds to check the position and size of the baby, and monitoring possible pregnancy

would lead to further abandonment. These findings demonstrate the anxiety women with obstetric fistulas feel about their infertility and the emotional scarring caused by familial abandonment. complications (for example, iron deficiency anemia, gestational diabetes, preeclampsia, and so on) has proven to be a critical factor in reducing adverse birth outcomes. Mechanisms of preventing obstetric fistulas such as these are an integral part of eliminating the social problem of obstetric fistulas in the modern world.

87% of East African obstetric fistula survivors are NOT receiving treatment for their condition.



Secondly, accessible maternal health care also envelopes the treatment of mothers who already have obstetric fistulas. To reiterate, the procedure to surgically close fistulas has a success rate of over 85% in Africa, offering a beacon of hope for the

millions of women and girls currently enduring life with a fistula. The success of surgical repair for obstetric fistulas is determined using a multilevel evaluation system that can vary across studies to assess continence level, fertility, pain, sex ability, and more. At its baseline, successful repair results in anatomical closure of the fistula hole. Each fistula needs its own surgical approach and the details regarding this lie beyond the scope of the paper. However, such a surgery requires surgical expertise, sterilized tools in a sterile environment, specific preoperative assessments, and humane measures for pain relief. These requirements indicate an increase in comprehensive maternal health clinics in rural areas. Though the exact numbers of obstetric fistulas are not known, estimates suggest that 80% of women with fistulas in East Africa are not receiving medical services for treatment. This estimation indicates an imperative need to increase access to medical resources for obstetric fistula survivors. Finally, comprehensive maternal healthcare includes education and resource access for family planning methods. Comprehensive maternal healthcare will address the prevention of adolescent

pregnancy, a critical factor in the persistence of obstetric fistulas. Physiological maturity plays an essential role in healthy childbirth, so girls who give birth before adulthood are especially at risk for obstructed labor and obstetric fistulas. Local healthcare increases the opportunity for delivery in a facility in which surgical interventions such as cesarean sections are more readily available for these at-risk mothers. However, comprehensive health facilities also improve accessibility to contraceptive options and family planning education. This accessibility can cause considerable reductions in adolescent pregnancy trends, cutting down the number of obstetric fistula victims preventatively as well.



Foundation for African Medicine and Education (FAME) works to offer comprehensive maternal and child health

services while also serving as a referral destination for high-risk pregnancies in Karatu, located in rural Tanzania. They have a prenatal program and a family planning program and added surgical intervention to their agenda in 2017. In addition to regular primary care, FAME provides operations, laboratory diagnostic tests, emergency care, delivery services, prenatal or neonatal care, family planning resources, and educational programs to mothers. The level of patient care FAME has achieved through expanding its services makes it an ideal place for safe childbirth and fistula treatment for Tanzanian mothers. Local Tanzanian healthcare workers staff their facilities and have fully incorporated an initiative to include the TBA community in patient care to increase referrals for rural clientele. Twenty-six percent of women delivering in the maternity ward come from outside the Karatu district, demonstrating its success in attracting rural mothers to its facilities. This organization is an excellent example of increasing robust maternal healthcare access to rural areas through its extensive services and community outreach programs.

Impact

Proven improved maternal outcomes in conjunction with increased medical resources are well established. There is a specific absence of data regarding treatments of obstetric fistula survivors in sub-Saharan Africa, which invites supplementary data to support the minimal publications. Access to quality emergency obstetric care and quality prenatal care are both directly linked to the prevention of stillbirths, which is a nearly ubiquitous consequence of fistula-forming labor. Quality maternal care is essential to improve labor outcomes, including preventing fistula formation. A Nigerian study found that women who lived farther than 60 minutes away from their nearest maternal healthcare center were 12 times more likely to have a stillbirth compared to those who lived 15 minutes away. A Rwandan study had comparable results, including findings suggesting severe effects regarding travel time to healthcare facilities for obstructed laboring mothers in need of emergency cesarean sections. These findings suggest local access to quality care can cause a significant reduction in obstetric fistula cases. For fistula repair itself, a sub-Saharan study of 581 patients who sought treatment for an

obstetric fistula induced by obstructed labor reported an overall closure rate of 93.8%. Additionally, researchers found that early surgical repair, within 3 months of fistula formation, improved patients' surgical outcomes and social status. The success of early surgery demonstrates the immense benefits of comprehensive, local healthcare for obstetric fistula survivors. Geographic accessibility is essential for expediting surgery to achieve these early treatment benefits, physically and socially.



Finally, access to contraceptives and family planning resources is an established way to reduce teenage pregnancy. More research is needed for the sub-Saharan region, but the causal link between family planning

access and lowered adolescent fertility has been proven across the globe. Northern Ireland saw a significant drop in live births to teenage mothers due to improved access to contraceptives and sexual education. Similarly, an American study into the decline of adolescent fertility rates found the primary deterrent was increased contraceptive access. These exemplify the consequences of the unmet need for quality reproductive healthcare and family planning resources in sub-Saharan Africa on the adolescent girl population, which has been acknowledged and documented among international health organizations. Therefore, robust, accessible maternal healthcare is a two-pronged solution that addresses the prevention and treatment of obstetric fistulas for all sub-Saharan mothers.

Gaps

Increasing the number of health facilities does nothing to ensure the proper clientele frequent the facilities. The solution of developing more comprehensive maternal health centers will fail without proper redress of the cultural distrust in such facilities and interventions to make fistula survivors aware of their potential

prognosis with medical intervention. First, modern medical facilities in sub-Saharan Africa must prioritize implementing patient care training, disciplinary systems, and patient advocacy procedures to elevate the standard of care and address the widespread neglect that patients experience from healthcare professionals. Then, socially based interventions must coexist alongside this best practice to combat misgivings and suspicions about receiving treatment from Western medical centers. Without these steps, building more medical centers will be useless because of avoidance or refusal to use such facilities. Additionally, obstetric fistula survivors must know how to identify their condition and seek treatment accordingly. A study involving 61 Ugandan TBAs reported most participants were unsure whether fistulas could be healed. Because TBAs are regarded as medical authorities in their

communities, this finding suggests the perpetuation of misinformation regarding the prognosis of the obstetric fistula condition. Data analysis of surveys across 16 sub-Saharan countries found that 21.4% of the women with obstetric fistulas did not know that a fistula could be solved, and 17.4% did not know where to go to get a repair. A meta-analysis of women of reproductive age across sub-Saharan Africa revealed pooled awareness of obstetric fistulas as a medical condition to be 40.85%. Moreover, there was significant heterogeneity in the pooled estimates; Gambia had the lowest levels of awareness at 12.8%. These findings explicitly underscore the lack of awareness surrounding the condition of obstetric fistulas, which severely hinders treatment-seeking behavior for those suffering from one. The lack of awareness must be addressed to ensure proper utilization of fistula repair services.

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