

## Research Article

## Heterosexual Anal Intercourse Causes Obstetric Fistula: Implications for Promoting Timely Obstetric Fistula Care Seeking Behavior in Tanzania

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### Abstract

Several barriers restricting women from seeking obstetric fistula care timely have been established and addressed worldwide. Despite success recorded in removing barriers to accessing obstetric fistula care, many women in resource scarce countries continue living with fistulae without seeking treatment. From the behavior change perspective, this fact suggests there might be other unknown socio-cultural, myths, misconceptions and systemic barriers that have not been fully addressed. Among other objectives, we explored community perceptions on heterosexual anal intercourse as a cause of obstetric fistula. We reanalyzed data from two qualitative studies we conducted in Tanzania: one examining at heterosexual anal intercourse within the context of increased risk of HIV infection using four sites in Tanzania with the urban and rural general populations and selected key populations (2012) and a qualitative comparative study on borders, boundaries, peoples and states: a case of the Tanzania-Uganda borderlands (2017-2018). Findings indicate that populations studied hold perceptions that heterosexual anal intercourse causes obstetric fistula, which adds to stigma, rejection, isolation discrimination and even divorce facing obstetric fistula-affected women thus limiting them from seeking medical care and treatment timely in Tanzania. This finding adds to our understanding of another (major) barrier that would restrict women from seeking appropriate obstetric care timely. It is recommended that anti-obstetric fistula programmers should address this misconception for the success of the on-going interventions in the country.

**Keywords:** Heterosexual Anal Intercourse; Obstetric Fistula; Behavior Change Communication; Qualitative Study; Tanzania

### Introduction

Obstetric fistula (OF) is a hole between the vagina and rectum or bladder that is caused by prolonged obstructed labor that leaves a woman incontinent of urine or feces or both [1]. Given the secrecy surrounding the condition in developing countries especially in Tanzania, it is currently difficult to have exact estimates of the magnitude of the problem [2-6]. However, it is estimated 2-3 million women live with OF worldwide, majority of them living in resource-scarce countries and an additional 50 to 100,000 are newly affected each year [7-11]. UNFPA [12] estimated that as many as 1,200 new cases of OF occur each year in Tanzania. Raassen [13] estimated that between 30,000 and 130,000 and about 2,500 and 3,000 new cases of OF occur annually in Africa and in Tanzania respectively. According to Siddle, et al., [11], the most at risk group of women in Tanzania are young, poorly educated, subsistence farmers or housewives. They mostly experience obstructed labor as a result of delays occurring

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at home and or after reaching a health facility. Kupona Foundation [14] indicated that about 1000 repairs are conducted in Tanzania each year. Nevertheless, there are still many women who cannot access the services for various reasons that include socio-cultural, economic, and systemic factors.

In Dar es Salaam, there is a non-governmental organization (NGO) health facility that provides, among others, repairs of obstetric fistula in the country. The Comprehensive Community-Based Rehabilitation in Tanzania (CCBRT) is specializing in raising awareness among communities by maintaining extensive awareness via media, OF 'ambassadors' (women who have received OF repair), paying transport costs to enable OF-affected women access treatment [14]. Similarly, the organization has established a holistic, comprehensive approach to address psychological and economic hardships of patients and creating supportive networks for women facing same conditions in the country. In 2014, CCBRT had a goal of treating over 750 women and giving them another shot at life [14].

On the one hand, Mselle & Kohi [15] correctly observed that living with fistula (anal or vaginal) leads "to multiple losses that range from physical and emotional to social." OF-affected women face stigma and discrimination that have negative impact on their identities and value of life. Coupled with misconceptions on the causes and the treatability of OF, the women remain unaware of OF repair and not seeking proper care timely. In addition, studies have shown that penile-anal penetration or anal intercourse (male to male, male to female or female to male), carries an HIV risk higher than penile-vaginal intercourse [16]. The risk estimates of HIV infection through unsafe anal sex range from 10 times [17,18] to 18 times [19] to as high as 20-fold [20] (Boily, *et al.*, 2009). Voeller [21] reported that anal penetration carries HIV risk for women higher than that of penile-vaginal intercourse just as receptive anal intercourse carries a high risk for males.

On the other hand, although heterosexual anal intercourse (HAI) or penile-female's anus penetration is somehow becoming tolerable among some groups and communities in the country [22-24], it is still largely socially and culturally a taboo, unaccepted and illegal in Tanzania. The Penal Code Cap. 16 (RE of 2002) Unnatural Offence Contrary to Section 154 of the Penal Code states,

*(1) Any person who – (a) has carnal knowledge of any person against the order of nature; or (b) has carnal knowledge of an animal; or (c) permits a mate person to have carnal knowledge of him or her against the order of nature, commits an offence, and is liable to imprisonment for life and in any case to imprisonment for a term of not less than thirty years. (2) Where the offence, under subsection (1) of this section is committed to a child under the age of ten years the offender shall be sentenced to life imprisonment.*

Section 155 reads, "Any person who attempts to commit any offences specified under 154, commits an offence and shall on conviction be sentenced to imprisonment for a term not less than twenty years."

While the leading cause of OF in developing countries is prolonged and or obstructed labor whereby the constant pressure of the baby's head against the vaginal and bladder or intestinal wall tissue leads to necrosis, in developed countries the reported cause is abdominal hysterectomy [25, 26]. However, other causes depending on the type of OF have been reported by Arrowsmith, *et al.*, [27]. In developing countries, they include, for example, iatrogenic (traditional practices like female genital mutilation or caesarean hysterectomies performed under the worst of circumstances,) and sexual assault/sexual violence against women like rape and early marriages (traumatic fistula and post-coital fistula) [28].

Nuertey [29] identified three major predisposing factors for OF: age below 20 years; experienced total labor duration of more than 24 hours and being shorter than 150 cm tall. He further reported on four minor factors: giving still birth; delivery by caesarean section; residing in a rural area and lack of formal education. The researcher concluded, "Majority of women who suffer OF are young, poor, illiterate, of short stature, reside in remote areas and had experienced total labor for more than 24 hours." Mselle and Kohi [15] reported that some perceived health system causes of OF based on the poor quality of obstetric care women received at healthcare facilities: facility staff unaccountability, late referral and torture by nurses. Participants in studies at a OF clinic, Mulago Hospital in Uganda perceived delivery of a big baby (3.5 kg or more) a predisposing factor for OF [3,30].

Several misconceptions that could limit OF-affected women from seeking treatment and those who dare coming to the hospital too late have been reported. A study conducted in Uganda [31] reported traditional birth attendants (TBAs) perceiving having a full bladder and or a rectum during labor causing OF. The Women's Dignity Project and Engender Health [32] reported misconceptions held among OF-affected women, family members and community members in Tanzania. The women reported delivery-related procedures (the use of instruments during delivery); provider's fault perforating the urinary bladder; insertion of hands in the vagina by a healthcare provider, TBA, a family member or a friend during labor; operation (caesarean section, CS) and bewitchment.

Family members' explanations included bewitchment; the use of instruments during delivery; healthcare providers' mistakes and God's will. At the community level, the perceived main cause of OF was having too many children. Kazaura, *et al.*, [2] documented perceived OF causes reported by community members in rural southern Tanzania including sorcery, delivering by operation where doctors/nurses make mistakes puncturing the urinary bladder, poor skills of doctors/nurses to conduct caesarean section and a mother having sex before recovering from a

caesarean operation.

Participants in Kasamba, *et al.*, [28]'s study attributed fistula to a number of factors including misuse of modern family planning methods; having sex during the menstruation period; curses by relatives; sexually transmitted infections (STIs); rape and gender-based violence. Other factors attributed to OF were delay accessing medical care; induced abortions; conception at an early age; utilization of TBAs at delivery and some complications that could occur during surgical operations for difficult deliveries.

Several barriers restricting women from seeking timely care for OF have been established and addressed in OF interventions. Despite success recorded in removing barriers to accessing OF care in Tanzania, for instance, many women continue living with OF without seeking treatment [14]. From the behavior change (BC) perspective, this fact suggests that there might be other socio-cultural, myths, misconceptions and systemic barriers that are unknown and not addressed towards OF interventions. The finding presented in this paper, therefore, adds to our understanding of another (major) barrier that would restrict women from seeking OF healthcare timely that needs to be addressed for the success of the ongoing OF intervention in the country.

## Materials and Methods

We reanalyzed data from two previous studies conducted in Tanzania. First, a formative qualitative study we conducted in 2012 to examine HAI within the context of increased risk of HIV infection. A full presentation of methodology used for this formative study is presented in [22-24]. In this study we used four sites: Dar-es-Salaam, Morogoro, Mwanza and Tanga regions. We targeted brothel- and street-based female sex workers (FSWs) in Dar-es-Salaam; truck drivers in Morogoro town and a rural general population in Ifakara, Morogoro region; females in food and recreational facilities (FRFs), men and females in fishing industry in Mwanza region and rural and urban general population in Tanga region. However, for the purpose of this paper, findings from Dar-es-Salaam (FSWs) and Tanga (urban and rural general populations) sites are presented. During the FGDs and IDIs, the study participants were asked to report on the perceived HAI-related health problems. Second, the qualitative comparative study on 'Borders, boundaries, peoples and states: a case of the Tanzania-Uganda borderlands (October 2017 – September 2018) in Bukoba Rural, Bukoba Urban, Missenyi and Kyerwa districts, Kagera administrative region. One of the objectives of this study was to document health problems facing communities in the study area. OF was reported affecting several women in the area. Study participants were further asked to report on perceived causes of OF.

In order to maintain quality and richness of IDIs and FGDs contents, we analyzed data in Kiswahili, the national (Tanzania) language and then

translated results into English. In both studies, data were analyzed in three stages. In the first stage, researchers read through the IDI and FGD transcripts and developed broad codes. These codes were both a priori as well as grounded in the data. In the second stage, finer codes were developed from further reading of the transcripts and discussions among the researchers across the collaborating institutions and researchers. All data collected was entered in NVivo 10 software for coding. In the third stage, we examined the individual codes for emerging patterns with regard to the connection between concepts related to participants' perceived causes of OF.

It is a standard ethical practice to seek consent of parents or legal guardians for study participants aged less than 18 years before their inclusion into the study. For the first study, we only sought consent of parents or legal guardians for participants less than 18 years from the general population. Among the key population groups, the FSWs and women working in FRFs, we sought a waiver on parental consent because such women were considered 'independent minors' and in most cases, it was not possible to identify their parents or legal guardians in the areas where they were recruited for this study. Participants (males and females) interviewed for the second study were aged 18 years and above who provided verbal consent.

The Ifakara Health Institute Review Board and the Medical Research Coordinating Committee of the Tanzania National Institute for Medical Research (NIMR) granted ethics clearance for the first study and the Muhimbili University of Health and Allied Science (MUHAS) Institutional Review Board granted research ethics clearance for the second study. We provided information about the studies to study participants in Kiswahili using the approved consent forms. We read the consent form to illiterate study participants. Given the sensitive nature of the HAI topic being studied and conducting a study in the borderlands, verbal consent was sought and obtained from each study participant.

## Results

In the first study, some participants in the FGDs and IDIs reported that HAI practicing females face a problem of passing feces, fluids or breaking wind (with bad smell) without control. Some participants observed that HAI loosens/weakens anus/rectum muscles leading to uncontrollable passage of feces, fluids or air. A brothel-based FSW, for instance, reported,

*"Females who engage in HAI face a problem of passing out fluids, which makes their buttocks wet most of the time .... Walking is also a problem ... As such; they put on pieces of cloth, cotton, wool or adult briefs [diapers] to protect themselves. Not all fat [females'] buttocks are original ... Some are fake ones" [33].*

Similar sentiments were reported by street-based FSWs. A street-based FSW reported,

*“I have a friend [FSW] who practices HAI... She is suffering from passing feces, fluids or bad smelling air uncontrollably ... She has to put on diapers, pieces of cloth or cotton to protect herself ... I feel sorry for her because this problem has no repair ... She will die unmarried and without children due to this problem”* [33].

A female in the general population who reported to have engaged in HAI narrated similar effect of HAI and its social-psychological ramifications as she said,

*“It is easy to recognize women practicing HAI... They are extra careful when laughing or sitting for a long time ... Their buttocks are always wet emitting bad smell that makes them uncomfortable sitting in a group and participating in social activities ... This situation forces them to become social isolates... Some women/girls you see with [fake] fat buttocks have this problem”* [33].

A 30 years old female interviewed observed that *“HAI practicing women pass out wind from nowhere ... They cannot control it because the practice [HAI] loosens the anus [rectum] muscles leading to the failure to control passing out air, fluids or feces”* [33].

Contrary, some participants, mainly those who have been engaged in HAI for some years, asserted HAI does not make a woman to pass out feces, fluids or bad smelling air uncontrollably. A 34-year old brothel-based FSW interviewed, for example, reported,

*“I have been offering HAI for about seven years now and I really enjoy it ... I could say that HAI has no any serious health problems ... Like vaginal sex, it hurts the first time... As I got used to it, it became more enjoyable and gratifying than vaginal sex .... My clients like it ... I can serve four clients in a working day [two shots per client between 4 pm and mid-night] in addition to several rounds of vaginal penetration ... I had no problems delivering my three children who are now living with my mother in the village”* [33].

A 29 years old female with two children interviewed equated HAI to giving birth experience saying, *“I felt a bit of pain the first time I had HAI but soon recovered ... It is the same experience as giving birth for the first time [it feels painful, but], the second time one is already used to it ... HAI has no health complications as some FGD participants claimed”* [33]. A male aged 28 who reported being actively practicing HAI stated, *“I have had three HAI partners in the past three years ... They are now married and have children ... They have had no any health problems as claimed in yesterday’s discussion [FGD]”* [33].

Findings from the qualitative study in the Tanzania-Uganda borderlands (2017-2018) show that OF is a public health problem facing several women in that area. However, its magnitude is not well established due to stigma and discrimination (from community members and healthcare providers) limiting OF-affected women from seeking treatment at the health facilities; communities’ and OF-affected women’s poor awareness of OF repair available and neglect from the healthcare system. A healthcare provider interviewed in Missenyi district, for example, reported; *“We receive several cases [of OF] every year at this facility. However, we have never established its magnitude ...*

*We have no doctors to conduct repairs ... So we refer such cases to Bugando Hospital [Mwanza] or CCBRT hospital in Dar-es-Salaam”* [34].

A female in the mid-30s interviewee in Mutukula border town, Missenyi district described OF, its effects as well as causes as she reported,

*“We refer to this problem as ‘kajojolo’ ‘kajolojolo or kanyaala’ in Oluhaya [participant’s first language] or fistula in Kiswahili ... It is affecting some women in this area ... We recognize affected women because they pass urine, feces or wind uncontrollably ... They have bad smell all the time ... I am told it [OF] is caused by witchcraft or having anal penetrations ... However, the nurses once told us it is due to prolonged labor ... I am not sure ... You better ask them [Nurses]”* [34].

A female interviewed in Malehe, Bukoba Rural district reported knowing two FSWs at the fishing camp with this problem saying,

*“I know two women [FSWs] at this [fishing] camp who uncontrollably pass urine, feces or wind and exert bad smell all the time ... They are alcoholic and offer anal sex ... Anal sex loosens muscles in the rectum and can perforate the [urinary] bladder leading to this situation ... Anal sex is socially unaccepted and condemned by religious teachings ... However, they claim [they] were bewitched after having their first babies in their home villages”* [34].

A male interviewed in Bukoba Town observed, *“Most of the women and girls in this [Bukoba] town now have big buttocks because they offer anal sex ... Some have been affected ... They pass feces, urine and wind uncontrollably ... They remain indoor most of the time ... They have to put on pieces of clothes or diapers like children when they go out”* [34]. A single businesswoman and sex buyer interviewed in Bunazi, Missenyi reported *“Women and girls offering anal sex face risk of ‘kajojolo’ or ‘kajolojolo’ [OF] ... They end up being unable to control passing feces, urine and wind nonstop ... They have bad smell ... So, we know that a woman or girl with these characteristics is chatoka [term for a woman or girl offering HAI in Tanzania]”* [34].

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A female street-based sex worker interviewed in Bukoba Town reported,

*“I had two colleagues in business [FSWs] who used to offer exclusively anal sex ... They worked for about four years and earned a lot of money ... They used to escort truck drivers and other businessmen within Tanzania and beyond the borders [Uganda and South Sudan] ... However, they developed ‘kajololo or kanyaala’ passing urine, feces and wind all the time and had very bad smell ... They had to quit business ... That is why I do not temper offering anal sex ... I better starve or go back to my home village rather than facing this shame” [34].*

A village leader interviewed in Isingiro, Kyerwa, district observed,

*“I am not quite sure of what causes ‘kajololo’ or ‘kanyaala’ [OF]. However, when I was visiting my relatives in Mbarara [Uganda], I heard that some women and girls in that area with this problem have had anal sex ... I was told a girl or woman practicing anal sex has her rectum and urine bladder punctured; hence she passes wind, urine and feces continuously and have very bad smell ... They remain indoor most of the time making it difficult for non residents to identify them ... It is possible we have such cases in this area [Isingiro] ... You may wish to interview older women and men in this area on this problem” [34].*

## Discussion

Obstetric fistulae, either vesicovaginal (a hole between the urinary bladder and the vagina; VVF) or rectovaginal (a hole between the rectum and the vagina; RVF) [35] are types of morbidity normally caused by prolonged labor during childbirth without timely, adequate and appropriate treatment or medical intervention like a CS. A Three Delays Model developed by Thaddeus and Maine [36] provides a framework for the understanding of barriers or OF pathway to accessing OF care at three synergistic and vicious cycle triggering phases. Phase I is a delay in deciding to seek care by an individual, family, or both. Operating factors at this phase relate to OF treatment seeking decision making process, OF-affected woman's status, OF complexity/characteristics (a combination of RVF and VVF or when a woman has significant scar tissue, Bellows, et al., [37], role of a family member or a TBA, traditions, family dynamics, family economics/financial capability to meet OF treatment costs involved (transport, accommodation, food and procedure; that is, surgery, post-operative care and physical rehabilitation), perceived quality of care, previous health system experiences and awareness of OF repair/treatment availability.

Referring to our findings, a woman living in an environment/context (like in Tanzania) where HAI is generally a taboo, illegal and strongly perceived a cause OF would not share her conditions with her spouse, family or community members, which could delay seeking treatment to OF symptoms or illness experienced. If a spouse, a family or community

member knew about it, it would fuel stigma, discrimination, rejection, isolation and abandonment or divorce to avoid shame and disgrace to the family, clan or community. On the one hand, an abandoned OF-affected woman without social support would be pushed further into poverty incapable of raising enough funds to cover for OF repair costs. She would even lack networks and information regarding OF treatment services available. In worst conditions, the woman would face worsening poverty leading to worsening malnutrition, suffering from stress, depression, illnesses and diseases that could force her attempt committing suicide or may die prematurely [38].

On the other hand, she may succeed using both problem- and emotion-focused coping strategies dealing with discrimination, isolation, rejection and stigma associated with OF [3]. She may even opt moving to distant areas to begin ‘new’ life or “begging in the streets, motor parks and market to make ends meet” [39]. Life on the street might not be that much friendly as she may perceive herself without “social support, helplessness, full of sadness, struggling with suicidal thoughts, feelings of worthlessness, social withdrawal, shame, stigmatization” [40] and fear of violence). In rare cases though, this woman would land in good Samaritans’ hands (individuals, NGOs, government- or internationally-supported groups) that would rescue her from these hardships, helping her access adequate and appropriate treatment; after which she would be supported to set up an income generating project and finally supported to reintegrate into her/ the community [14] and maybe get pregnant after repair recovery [41].

Phase II is delay in identifying and physically accessing/reaching an adequate care facility. Operating factors at this phase include facility location in relation to OF-affected woman's place of residence, distance to and travel time to the facility, mode of transport available and cost. As Bellows, et al., [37] correctly observed, “Even when transportation is available [and] affordable, women may experience too much pain or discomfort to travel, or may be turned away from public transportation due to their condition.” Phase III comprises delay in receiving adequate and appropriate care at the facility, including the sufficiency of the referral system, shortages of doctors, surgeons, other trained personnel, electricity/power, supplies, equipment as well as competence and professionalism of available personnel. In addition, “institutional inefficiencies in predicting, preventing, diagnosing, and managing clear cases of obstructed labor [caused by] unbalanced volume of service compared to need, poor management of health facility resources, and, sometimes, corruption [42] may be some of the underlying factors at this phase.

Fatima's [39] study on perceived causes, prevalence and effects of vesicovaginal fistula among Hausa/Fulani women in Kano State, Nigeria revealed that despite the availability, accessibility and affordability of adequate and appropriate OF care in Kano, synergies of factors at the other delay phases restricted OF-affected women from utilizing repair

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services available pushing them far deep into the vicious cycle of poverty.

Different studies have reported different perceived causes of OF based on the context within which the study was carried out. Delivery-related procedures include use of instruments during delivery, provider's fault due to limited skills of lack of equipment, woman afraid of pushing, insertion of hands or instruments in the vagina by service provider/family/TBA or friends during labor and undergoing operation (CS). Delivery delay-related factors include delay in making decision on seeking OF treating, prolonged delivery, delay in reaching the hospital and delay in getting adequate and appropriate care, mainly a CS. Context-based factors include but not limited to bewitchment, God's will, mother having sex before recovering from a caesarean operation, misuse of modern family planning, having sex during the menstruation period, curses by relatives and STIs effects.

We found one study that reported a similar finding. Markland, et al., [43]'s study among 6,150 adults aged 20 and above concluded "The findings support the assessment of anal intercourse as a factor contributing to fecal incontinence in adults, especially among men." "In the case of heterosexual anal intercourse it is the woman who is at risk to develop fecal incontinence" [44]. Participants in our two studies perceived HAI or penile-female's anus penetration, causing OF that affected women in their communities. The composition of communities studied; the FSWs and the general population in Tanga and Kagera regions could, in part, explain this situation. HAI has been reported common among key population. The HIV behavioral and biological surveillance survey among FSWs in Dar-es-Salaam, 2010, for instance, showed that 17.2% of the 537 FSWs sampled reported ever having had HAI [45].

FSWs offer HAI for different reasons: it pays more than other types of sex including vaginal penetration, demanded by clients willing to pay more and for pleasure with full time partners [22-24]. Kamazima & Kakoko [24] reported that comparing the two populations studies, the general population in Tanga knew more terms expressing HAI, HAI behaviors and practices and terms referring to a female or a male engaged in HAI than the FSWs in Dar-es-Salaam. This finding, suggested, in part, that HAI behaviors and practices were relatively common in that study population.

Uncontrolled exposure to pornographic materials, intergenerational sexual relationships, HAI curiosity among the youth and adults, virginity protection, avoiding unwanted/planned pregnancies, desire for money and material goods among women and girls and substance use and abuse were reported key predisposing factors for engagement in HAI behaviors and practices. In addition, deep-rooted religious (Christianity and Islam) beliefs among Tanga and Kagera resident communities that HAI is a taboo, against nature and religious teachings and that anyone engaging in HAI commits a sin, could have influenced their perception and reporting

HAI a factor for OF development.

According to United Nations Population Fund-Ministry of Health and Women Dignity Project [46], in 2001 there were 50 hospitals reported to perform fistula repairs and several doctors with specialized training in Tanzania. However, fistula service points are limited as not all hospitals are doing fistula repair. A mapping exercise conducted by Women & Dignity Project [46] recognized that Mwanza, Coast, Ruvuma, Kagera, Kigoma (north part), Kilimanjaro and Arusha regions have the largest number of hospitals performing fistula repairs. The area with high concentration of services is in the Lake Zone, including Mwanza, Kagera and Northern Kigoma regions [46]. Three hospitals perform high proportions of fistula repairs in the country. These hospitals are Bugando Medical Centre followed by CCBRT and Kilimanjaro Christian Medical Center (KCMC).

As Banke-Thomas, et al., [47] suggested, there is urgent need to increase emphasis on crafting and disseminating/communicating OF social and behavior change (SBCC) health messages tailored to targeted groups' or communities' local contexts, whether urban or rural, "and multi-sectoral efforts need to be exerted to maximize use of other sectoral resources and platforms, including existing routine health services to ensure sustainability of OF health literacy efforts." Correcting misconception that HAI causes OF should be part of the 'End OF' intervention communication package.

## Conclusion and Recommendations

Perceived causes of OF vary with contexts. Perceived causes of OF illness could adversely prohibit timely seeking for correct, adequate and appropriate OF treatment or intervention. As Abrams, et al., [41] have correctly observed, in order to design effective and efficacious program interventions aiming at OF treatment, prevention, elimination or promoting timely OF care seeking behavior in Tanzania for example, comprehensive understanding of the perceived origins of OF is a cardinal step. In other words, there is no possible preventive intervention without thoroughly balancing the understanding of what we target to prevent. The disparity in the causes of OF among affected individuals, families and communities is a potential barrier to organized and harmonized, non-governmental organizations' (NGOs), national, international effort. OF in the targeted communities and countries might be a completely different concept from OF in the program organizers' perspectives and the differences boil down to cause. However, while barriers to OF treatment or the OF pathway operating separately or in synergy would be easily identified, reducing their effects is difficult and requires sustained interventions that may simultaneously target several barriers at the three delay phases [46]. It is hence recommended that continued researching on perceived causes of OF, the barriers operating at the delay phase I, is mandatory. Identified factors, therefore, ought to be controlled/addressed through efficacious OF health education and promotion communication

messages in all OF interventions aiming at promoting timely OF care seeking behavior in Tanzania.

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