MEDITERRANEAN PUBLICATION
E-ISSN: 1116 - 3089 P-ISSN: 3026-9784
MPRI-JOMDR
INTERNATIONAL JOURNAL – OMDR
INTERNATIONAL JOURNAL OF ORGANIC & MEDICINAL DEV. RESEARCH, VOL. 03 NO. 3 JANUARY, 2024

SOCIAL DETERMINANTS OF OBSTETRIC FISTULA OCCURRENCE AMONG WOMEN ATTENDING FISTULA CAMP AT KITOVU HOSPITAL, UGANDA

AS LASSI[1], Y ADAMU[1], YY MIYA[2]

[1]Department of Public Health, Faculty of Basic Medical Sciences, Bauchi State University, Gadau, Bauchi State, Nigeria. [2]Galaxy School of Health Technology Bauchi, Bauchi, Bauchi State, Nigeria.
aslassi@basug.edu.ng

Keywords:
Obstetric Fistula, Vesico Vaginal Fistula (VVF), Labor and Delivery, Maternal Death and Pregnancy.

Abstract

Despite advancements in medical sciences, African countries are still battling cases of obstetric fistula among which are the vesico-vaginal and recto-vaginal fistula. In Uganda, the national prevalence of fistula is two percent among women aged 15–49 years and the prevalence is highest in the western region where one in 25 women were affected. The study aims to identify the determinants of obstetric fistula among women attending the obstetric fistula camp at Kitovu Mission Hospital. A descriptive and analytical cross-sectional study design with quantitative and qualitative data collection methods using the entire population attending fistula camp. Samples were obtained using a convenient sampling technique. Data were analyzed using SPSS, descriptive, and Cramer's V at 95% confidence interval. Belief, education level, Place of residence, and age at marriage, and, were actually the social determinants of obstetric fistula among women attending Kitovu mission hospital, with the X^2 =

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21.168, P – Value 0.047 and Cramer's V = 0.723, the Majority of respondent said no belief that might stop the them from hospital delivery and they've urine only as the severity of their condition, education level has X^2 =20.703, P – value = 0.043 & Cramer's V = 0.570 with majority of them 20 (62.5%) having primary certificate and had only urine incontinency, Place of residence has X^2 = 21.335, P – value = 0.002, and Cramer's V =0.650 in which majority of the respondents 22 (68.8) leaves in rural areas and the severity of their condition Age at marriage has X^2 = 18.303, P – value =0.021 and Cramer's V = 0.931, and majority of them 12 (44.4%) are at the age bracket of 20 – 24 years. Conclusions: Thus women who said no belief that prevent from hospital, those with primary education, those that live in rural areas, and women aged below between 20 -24 years, are more at risk of getting a fistula among all respondents interviewed.

Abbreviations;

VVF: Vesico Vaginal Fistula

WHO: World Health Organisation.

UNFPA: United Nations Population Fund.

INTRODUCTION

An estimated 289,000 maternal deaths, 2.6 million stillbirths, and 2.4 million newborn deaths occur globally each year, with the majority occurring around the time of childbirth. (*Ameh, C. A., & van den Broek, N. 2015)* The persistence of obstetric fistula—a devastating childbirth injury occurring largely among poor, marginalized women and girls—constitutes a human rights violation and a public health crisis. The Sustainable Development Goals (SDGs) aim to "leave no one behind." Failing to eliminate fistula jeopardizes the attainment of several of the SDGs. (Anastasi, Et Al 2020) Globally, the World Health Organisation (WHO, 2018) estimates that 50,000 to 100,000 women are affected by obstetric fistula each year. The prevalence of obstetric Vesico Vaginal Fistula (VVF) is directly related to the prevalence of obstructed labor, and the accessibility of emergency obstetric care, including facilities capable of performing cesarean

delivery, (Karateke et al., 2015). In Sub-Saharan Africa, 33,000 new fistula cases occur each year and this high incidence may be attributed to obstetric care services being unavailable, inaccessible, underutilized, or of low quality (UNFPA 2015). Social, cultural, and health system factors contribute to the prevalence of obstetric fistula in low-income countries. (Karateke et al., 2015). In Uganda, the national prevalence of fistula is two percent among women aged 15–49 years and the prevalence is highest in the western region where one in 25 women have ever been affected. (UBOS 2007)

Hancock, Browning, (2009) also defined fistula as obstetric if it results from the process of labour or its management. It can result in incontinence of urine or feces. Complications may include depression, infertility, social isolation, and poverty, United Nations Population Fund (UNFPA, 2017) Obstetric Fistula is a maternal morbidity that occurs from prolonged and obstructed labor. Obstructed labor causes obstetric fistula when a prolonged labor especially due to cephalo-pelvic disproportion causes an obstruction without timely intervention of a trained physician (for a caesarian section) to relieve the obstruction (Baba. A, 2014). Obstetric fistula is a childbirth injury usually caused by unrelieved, prolonged obstructed labor. Obstructed labor can develop during the second stage of labor when the fetus cannot pass through the birth canal because the pelvis is too small; the baby is too big, or if there is a malpresentation. If the woman in labor does not die, the pressure of the baby's head on the mother's pelvis leads to the death of tissue in the birth canal which creates a hole called an obstetric fistula. From this hole, urine or feces constantly leak (Capes, T *et al.,* 2011). Women suffering from fistula live with chronic urinary and fecal incontinence, the social effects of which include divorce, abandonment, and abuse. Many women report feeling ashamed about their condition and therefore alienate themselves from friends and family. (Souza, J. P et al., 2013)

The decision to seek care may be delayed by the socio-economic, religion, occupation, age at marriage, and cultural factors in a woman's environment. For example, in a prospective study examining the profiles of women seeking obstetric fistula treatment, women in Bangladesh and Guinea were more likely to say that their husbands or other family members did not allow them to go to a

facility (Baba. A, 2014). Or the community may perceive women who deliver at a health facility as weak (Fistula Foundation 2015) Factors such as poverty, lack of education, and cultural practices that encourage child marriages lead to childbearing before the pelvis is mature. Malnutrition also leads to short stature and contracted pelvis (Miller 2015). Studies also show that socioeconomic characteristics of women such as maternal education, socioeconomic status, and place of residence have an impact on the risk of fistula. Maternal education has been found to be a protective factor against the risk of obstetric fistula (Donnay and Weil 2004; Johnson 2007; Muleta, Fantahun et al. 2007).

High levels of poverty also lead to low levels of education among impoverished women concerning maternal health. This lack of information in combination with obstacles preventing rural women from easily traveling to and from hospitals leads many to arrive at the birthing process without prenatal care. This can cause a development of unplanned complications that may arise during home births, in which traditional techniques are used. (Anastasi, Et Al 2020). For adolescents, pregnancy and childbirth are especially dangerous since they are not physically mature, which increases the risk of obstructed labor (UNDFP 2012). Research has shown that obstetric fistula predominately occurs among women with low economic status compared to their better-off peers (Bangser 2006; Johnson 2007; Meyer, Ascher-Walsh et al. 2007; Norman, Breen et al. 2007)

Material and Method

The research design is a cross-sectional descriptive survey where data collection occurs at a single point in time for the patients who attended Kitovu Mission Hospital and underwent through fistula operation, those waiting for the operation, and those who may not necessarily gone through that operation. The sampling procedure in this research is convenient due to the number of the target population, the researcher collects the names of those people registered to undergo and those who have already undergone a cesarean section at that particular time.

The study population is the patients attending Kitovu Mission Hospital for obstetric operation in June 2018 (second quarter) who undergo through fistula

operation, those who are waiting for the operation, and those who may not necessarily have that operation.

With a range of 40 to 70 and an average of 50 patients attending the camp every quarter for this treatment (Kitovu hospital record), the entire participants are selected as a sample size, since they're very small in number.

Result

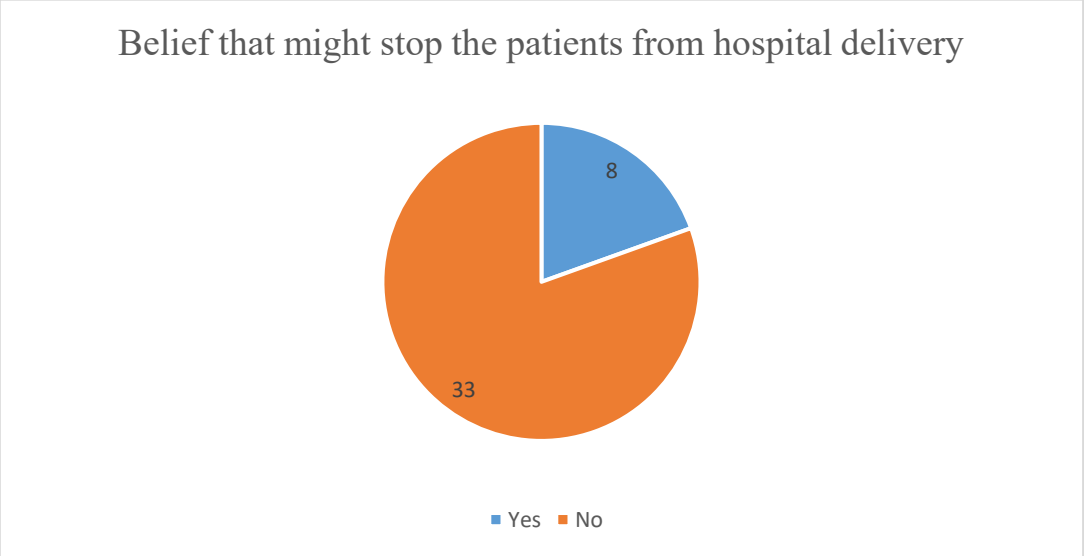
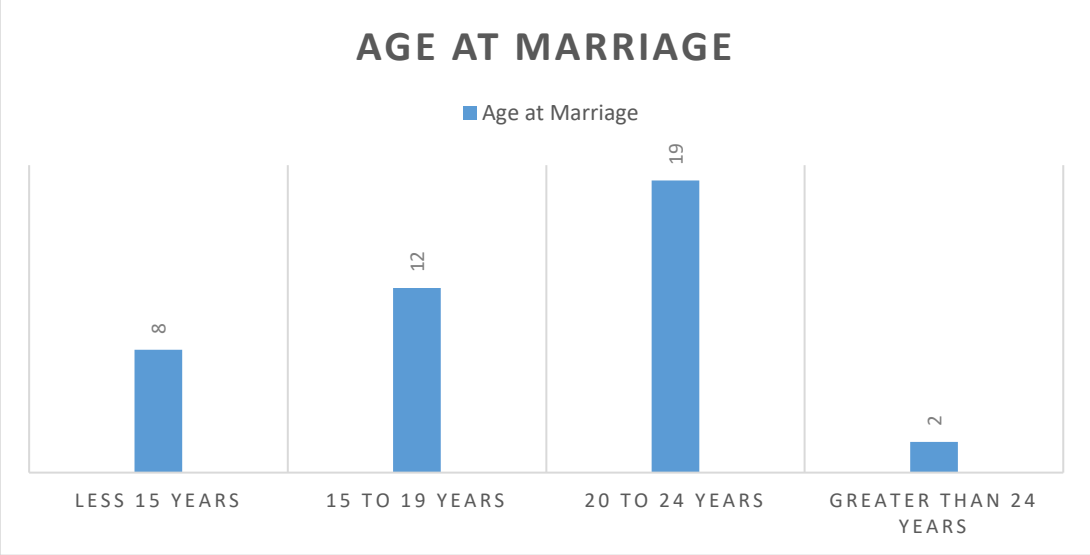


Fig. 1.1: Among the 41 respondents, 33 (81.5%) responded that "Yes" there is a belief that stops them from delivering in the hospital, while 19.5% (8) responded that "No" is any belief that stops them from hospital delivery.



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Fig. 1.2: Among the 41 respondents, majority of the respondents are 19 (46.3%) were within the age range of 20 to 24 years, while 12 (29.3%) respondents are within the age range of 15 to 19 years and those who are less than 15 years were 8 (19.5%) and the least 2 (4.90%) among the respondents are those that are greater than 24 years.

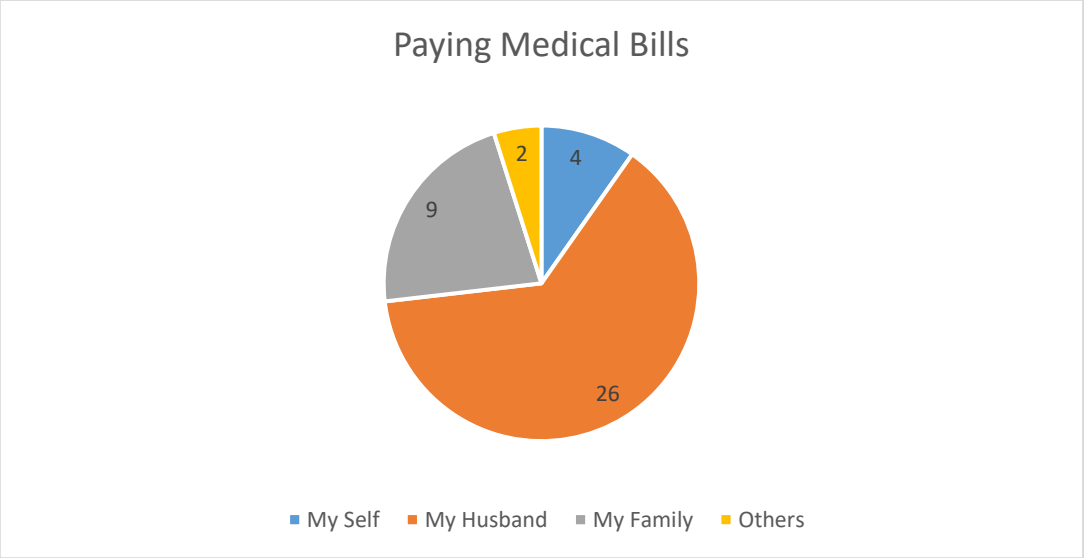


Fig. 1.3: Among the 41 respondents, majority of the respondents 26 (63%) stated it's there husband who pays their bill, while 9 (22%) state that their medical bills were settled by their family members, 4 (10) pay their bills and the least 2 (5%) among them state the bills were paid by others.

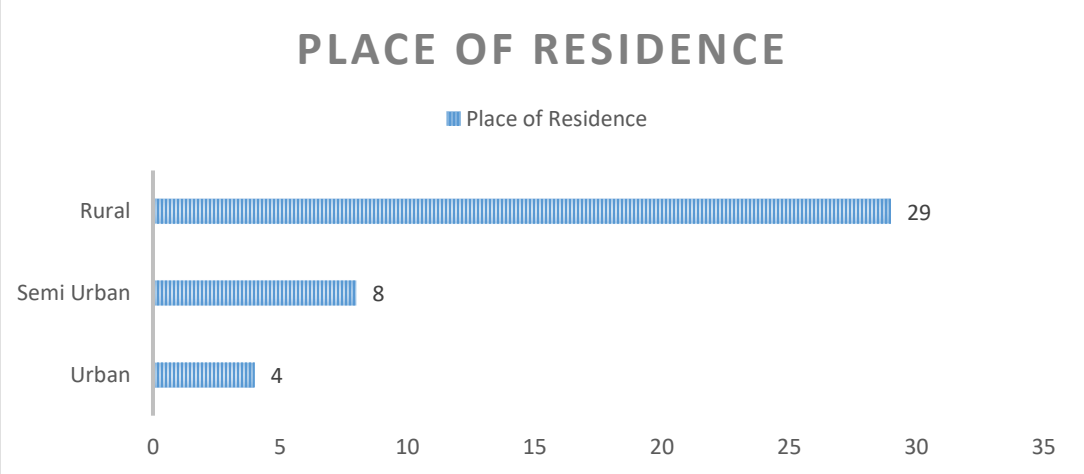


Fig. 1.4: Among the 41 respondents, majority of the respondents 29 (70.80%) resides in the rural areas while 8 (19.5%) leave in the semi urban areas and the least among the respondents 4(9.8%) actually resides in Urban areas.

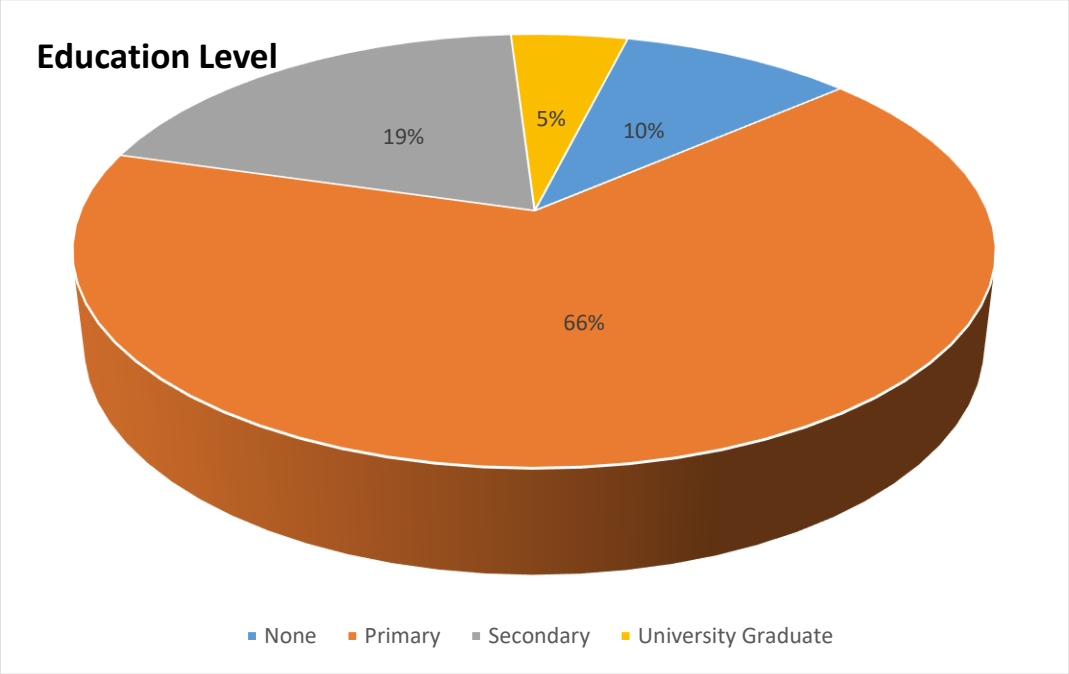


Fig. 1.4: Among the 41 respondents, 66% (27) had primary education while 19% (8) had secondary education and 10% (4) of them did not attain any formal education while minority of them 5% (2) are University graduate.

Variable		Severity of condition Urine (%) Feces (%)		Chi – square	Cramer's V	P – value
Belief that might stop the patients from hospital delivery	Yes No **Total**	7 (21.9) 25 (78.1) **32 (100.0)**	1 (11.1) 8 (88.9) **9 (100.0)**	21.168	0.723	0.047
Age at marriage	<15years 15 – 9years 20 – 24years	5 (14.3) 10 (28.6) 18 (51.4)	2 (25.5) 1 (12.5) 3 (37.5)	18.303	0.931	0.021

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	25> **Total**	2 (5.7) **35 (100.0)**	0 (0.0) **7 (100.0)**			
Paying medical bills	My self My husband My family Others **Total**	4 (12.5) 21 (65.6) 5 (15.6) 2 (6.3) **32 (100.0)**	0 (0.0) 5 (55.6) 4 (44.4) 0 (0.0) **9 (100.0)**	4.458	0.330	0.216
Place of residence	Urban Semi urban Rural **Total**	3 (9.4) 7 (21.9) 22 (68.8) **32 (100.0)**	1 (11.1) 1 (11.1) 7 (77.8) **9 (100.0)**	21.335	0.113	0.002
Education level	None Primary Secondary Uni. Graduate **Total**	4 (12.5) 20 (62.5) 7 (21.9) 1 (3.1) **32 (100.0)**	0 (0.0) 7 (77.0) 1 (11.1) 1 (11.1) **9 (100.0)**	20.709	0.570	0.043

Table 1: Table1 showing the result of multivariate analysis of Social Determinant of Obstetric Fistula Occurrence.

With the X^2 = 21.168, P – Value 0.047 and Cramer's V = 0.723, the Majority of respondent said no belief that might stop the them from hospital delivery and they've urine only as the severity of their condition, this has a link with the awareness that is been created in our community which means I'm 96% confidence that 72.5% of the severity this condition is cause is cause by believes.

Age at marriage has X^2 = 18.303, P – value =0.021 and Cramer's V = 0.931, and majority of them 12 (44.4%) are at the age bracket of 20 – 24 years which means I'm 98% confidence that the strength of association between severity of condition and age at married is 93%.

Place of residence has $X^2 = 21.335$, P – value = 0.002, and Cramer's V =0.650 in which majority of the respondents 22 (68.8) leaves in rural areas and the severity of their condition is only the incontinency of urine which this highlight the lack of equality in health care delivery that we have in developing countries this shows the researcher is 99.8% confidence that the strength of association between place of residence and severity of this condition is 65%.

Education level has $X^2 = 20.703$, P – value = 0.043 & Cramer's V = 0.570 with majority of them 20 (62.5%) having primary certificate and had only urine incontinency this have a link with the fact that those with higher education level know how to leave a health lives and have high income level compare to those that didn't which means the researcher is 96.7% confidence that the strength of association between education level and severity of condition is 57%. Above are the only social determinants that are found statistically significance.

Discussion

Beliefs ($X^2 = 21.168$, P – Value 0.047 and Cramer's V = 0.723) with 25 (78.1%) of the respondent said NO and they've urine only as the severity of their condition this has a link with awareness that's been created in our community, Age at marriage ($X^2 = 18.303$, P – value =0.021 and Cramer's V = 0.931) where by majority of them 12 (44.4%) are at the age bracket of 20 – 24 years this has a direct link with the way women in our society usually got marriage at the age of 20 and above, and place of residence ($X^2 = 21.335$, P – value = 0.002, and Cramer's V =0.650) in which majority of the respondents 22 (68.8) leave in rural area and the severity of their condition is only the incontinency of urine which this highlight the lack of equality in health delivery that we have in developing countries, are the only social determinant that are statistically significance to obstetric fistula occurrence which is contrary to the study conducted by Miller in 2005 which stated that the factors associated with fistula are poverty, lack of education and cultural practices that encourage child marriages lead to childbearing before the pelvis is mature. Malnutrition also leads to a short stature and contracted pelvis. Studies conducted by Donnay and Weil 2004; Johnson 2007; Muleta, Fantahun et al. 2007 also show that socioeconomic characteristics of women such as maternal education,

socioeconomic status, and place of residence have an impact on the risk of fistula. Maternal education has been found to be a protective factor against the risk of obstetric fistula.

Beliefs (X^2 = 21.168, P – Value 0.047 and Cramer's V = 0.723) with 25 (78.1%) of the respondent said NO and they've urine only as the severity of their condition this has a link with awareness that's been created in our community this is almost contrary to what so many researchers found in their research like Wall at el in 2011 stated that a number of beliefs also contribute to fistula formation. Amongst the Hausa in Nigeria, gishiri (salt) is a traditional medical practice in which it is thought that an imbalance between salty and sweet foodstuffs can cause a film to form in the vaginal wall, leading to a number of gynecological or obstetric complications, including infertility and obstructed labor. When this happens, the genitalia is cut using a sharp object. The gishiri fistula typically presents as a longitudinal cut through the bladder neck or urethra, or a similar finding posteriorly through the rectum (Wall at el 2011)

But one interesting facts is among those 8 (19.5%) women who responded that Yes stated that some of people in their community told them delivering in hospital is a sign weakness like women from Gomba (Namuyovu) said " when you deliver in hospital even you family feels ashamed because you showed that you can't endure the pain that ladies used to endure....." which is in line with what Fistula Fundation publish in 2015 which they stated that in some communities they have harmful cultural practices which make them to perceive women who deliver at a health facility as weak.

Age at marriage (X^2 = 18.303, P – value =0.021 and Cramer's V = 0.931) where by majority of them 12 (44.4%) are at the age bracket of 20 – 24 years this has a direct link with the way women in our society usually got marriage at the age of 20 and above which is totally contrary to what UNDFP in 2012 publish where they revealed that for adolescents, pregnancy and childbirth are especially dangerous since they are not physically mature, which increases the risk of obstructed labor. Preventing adolescent pregnancies, by enabling wider access to information and services and stopping child marriages, would decrease the risk of pregnancy-related morbidity such as obstetric fistula within this highly vulnerable group (UNDFP 2012)

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Place of residence (X^2 = 21.335, P – value = 0.002, and Cramer's V =0.650) in which majority of the respondents 22 (68.8) leave in rural area and the severity of their condition is only the incontinency of urine which this highlight the lack of equality in health delivery that we have in developing countries which is in line with the research done by Cook, Dickens et al. 2014; Wall 2011 Johnson 2007 which stated that living in rural areas put women more at risk of developing fistula, because not only are they marginalized in terms of health infrastructures but also because they often live in remote areas, too far from clinics to receive timely care.

Education level (X^2 =20.703, P – value = 0.043 & Cramer's V = 0.570) with majority of them 20 (62.5%) having primary certificate and had only urine incontinency this have a link with the fact that those with higher education level know how to leave a health lives and have high income level compare to those that didn't this findings is line with the findings of the studies carried out by John Middleton in 2015 which reveals that high levels of poverty also lead to low levels of education among impoverished women concerning Maternal health. This lack of information in combination with obstacles preventing rural women to easily travel to and from hospitals lead many to arrive at the birthing process without prenatal care. This can cause a development of unplanned complications that may arise during home births, in which traditional techniques are used.

In addition, studies by Kristof et al. In 2009 found that education is associated with lower desired family size, greater use of contraceptives, and increased use of professional medical services. Educated families are also more likely to be able to afford health care, especially maternal healthcare. The research carried out by Bangser in the year 2006 reveals that the reasons underlying this association include the fact that education may directly improve an individual's knowledge, as well as ability to process information, regarding healthy pregnancy behaviours.

Conclusions

Age at marriage, Place of residence, and Educational level are the major socio demographic factors found to be statistically significance in relation to obstetric fistula occurrence in the above study area. Most of the respondents have only primary education which signifies the impact of educational level toward

occurrence of this condition, surprisingly, belief was not a factor that influences hospital visit and subsequent development of fistula in this community.

Recommendations

Information, Education, and Communication programs should be strengthened and implemented to make mothers utilize health facility during pregnancy and child birth.

Community base sensitization campaign on the negative impact of early marriage towards the health of the girls and their upspring because if you look at this study 68% of the respondent are between the age of 20 to 25years.

Organizing seminars and conference among stakeholders in order to gain political commitment or will on this disease

Competing Interest

Authors have declared that no competing interests exist.

Acknowledgement

All praises, adoration and glory belong to GOD Almighty (ALL KNOWING), gratitude must be expressed and displayed to those who deserve it; ingratitude is monstrous and harder to bear. Describing the relentless efforts of my parents (Mallam Samaila lassi and Hajia Karimatu) as well as my uncle (Hon Abdurrazak Nuhu Zaki) so far is like describing my entire lived life; they have strongly handled and supported every pursuit I embark on. high degree of perfection can never be achieved in academic writings without proper guidance; I appreciate the guidance and tutoring of the Research team of the School of Postgraduate and Research Studies Cavendish University Uganda. My undiluted appreciation goes to Mr Nabassa Bruse and my mentor Mr Kibwika Brian for their patience and commitment to ensure that I am properly guided from my proposal writing. For any inadequacies or imperfection that may remain in this work, the responsibility is entirely mine.

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