



PREVALENCE OF VESICO VAGINAL FISTULA AND COPING STRATEGIES OF WOMEN IN KEBBI STATE, NIGERIA

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ABSTRACT

Vesico-Vaginal Fistula (VVF) poses a significant challenge for women, particularly in Kebbi State, Nigeria, where a VVF Centre operates to provide surgical repair and healthcare professional training. Despite this, research on VVF prevalence and coping strategies in Kebbi State remains limited, warranting further investigation to address knowledge gaps. This study investigates the prevalence and coping strategies associated with Vesicovaginal Fistula (VVF) among women in Kebbi State. Employing purposive sampling, 49 questionnaires were distributed to women aged 15 years and above. Data analysis involved descriptive statistics, including frequency, and inferential statistics, with Spearman rank correlation analyzing variable associations. Results indicate that the mean age of marriage is 16, with the highest frequencies of married (35.9%) and divorced (27.4%) respondents. Occupation-wise, 33.4% are housewives, revealing low-income earners, especially among casual laborers (28.9%) and farmers (26.9%). VVF prevalence is concentrated among ages 14–19 (30.7%), and overall prevalence is 29.3 per 1000 deliveries. The disease exhibits an increasing trend, with the years 2011-2012 having the least frequency (17%) and a mean score of 5.1. Yearly variations are noted in documented VVF cases from Gesse VVF Centre in Birnin Kebbi (2011-2020). Knowledge of VVF prevalence is highest (100.0%) among age groups 30-34 and 40 and above, contrasting sharply with the smaller proportion (15-30 age group). Coping mechanisms predominantly involve accepting fate. Recommendations include implementing comprehensive health education, targeting girls and women to address early marriage and reproductive health, facilitated by government and health workers.

Keywords: Vesico-Vaginal Fistula (VVF), Coping strategies, Kebbi

INTRODUCTION

In Sub-Saharan Africa and many other developing countries, women and girls continue to endure a miserable and incredibly embarrassing life due to the ravaging effects of fistula (Wall, Arrow Smith, Lassey, Danso, 2010). Vesico-Vaginal Fistula (VVF) is a subdivision of obstetric fistula, characterized by an abnormal connection between the urinary bladder and the vagina (Orji, Aduloju, and Orji, 2007). It occurs when cephalopelvic disproportion (sustained pressure due to the baby's presentation) cuts off blood flow to the nearby pelvic tissues, leading to prolonged ischemia and tissue necrosis.

Prevalence, in this context, refers to the number of VVF cases divided by the population at risk. According to the 2008 National Demographic Health Survey, the prevalence of VVF in Nigeria is 0.4%, suggesting that approximately 150,000 women of reproductive age currently live with or have previously had VVF. The incidence rate is calculated to be 2 per 1,000 deliveries, assuming no easy access to a functional obstetric care center. This rationalizes an annual incidence of at least 11,000 new VVF patients in Nigeria, with a minimum of 150,000 VVF patients awaiting surgery. In other words, about 21 women are infected per day.

Coping, in this case, refers to the cognitive or behavioral tactics used by individuals to tolerate or mitigate the effects of stressors, such as VVF and its associated consequences.

The UNFPA deputy representative discovered that Nigeria accounts for 40% of the global fistula burden—a figure she deemed totally unacceptable. The Minister of Health recalls that thousands of women sustain vesico-vaginal fistula while trying to bring forth life each year (The Guardian, 2007). Several studies in northern Nigeria reveal the rate and pattern of VVF prevalence in the region. For example, Maiwada et al. (2003) reported that about 120 vesico-vaginal fistula patients

were admitted in Kano over two months. In Maiduguri, Jos, and Sokoto, studies reported 241 cases over two years, 932 cases over seven and a half years, and 31 cases in one year, respectively. Zaria and Katsina saw 44 cases over ten years and 27 cases over seven years (USAID, 2011). Waaidijik (2014) managed 1,716 fresh VVF cases (of less than three months' duration) in Katsina and Kano fistula centers.

However, Kebbi State, with an estimated population of 3.8 million (of which 836,000 are women of childbearing age), is located in the northwestern part of Nigeria. The maternal mortality rate for the state is estimated at 1,000 per 100,000 live births, and the total fertility rate is 8, both above the national average (NDHS 2018).

According to the National Population Commission 2006 and NDHS 2018, antenatal care attendance (ANC), skilled birth attendants (SBA), and contraceptive prevalence rate (CPR) in Kebbi State are among the worst in the northwest geopolitical zone. Due to the state's negligence in terms of universal health coverage, VVF remained a neglected condition until the launch of the End Fistula Campaign by the United Nations Population Fund for Population Activities in 2003. Although precise data on VVF prevalence in the state are lacking, there are a significant number of new VVF cases recorded each year, with the state alone accounting for 0.2% of existing cases in the country (Maiwada et al., 2017). In 2004, the Kebbi State government launched a free fistula campaign with support from the Fistula Foundation Nigeria, Spotlight Initiative, the European Union, the World Health Organization, and the Task Force on Accelerated Reduction of Maternal Mortality in Sokoto, Kebbi, and Zamfara States. The Gesse VVF Centre, established in Kebbi State through the USAID Fistula Care Plus Initiative, operates on a critical mission. This center focuses on preventing and repairing fistula while also training health professionals in fistula care

management. Since its inception in 2005, the Gesse VVF Centre has been the sole facility in the entire state providing care for women suffering from Vesico-Vaginal Fistula (VVF). At the Gesse VVF Centre, surgeries are conducted in collaboration with the state government and the United States Agency for International Development (USAID)-funded program, Acquire Fistula Care Project, implemented by Engender Health Project. Over the years, this initiative has successfully repaired approximately 1,090 patients between 2011 and 2020.

Despite these efforts, precise research to quantify the backlog of VVF cases in the state remains lacking. While Gesse VVF Centre's quarterly reports provide valuable insights, the broader literature reveals a gap in research related to VVF prevalence analysis and coping strategies in the study areas. Although some studies touch on causes, risk factors, knowledge, attitudes, and awareness of VVF, none have specifically focused on the psychosocial and economic consequences of VVF in the study area.

The primary objective of our study is to quantify the backlog of VVF cases among women and explore their coping strategies in Kebbi State. Specifically, we aim to examine the prevalence of VVF in the study area and understand the coping mechanisms adopted by VVF patients to mitigate their condition within society.

MATERIALS AND METHODS

Study Area

Kebbi State is geographically defined between Latitudes 10° 0' - 13° 20' North of the Equator and between Longitudes 3° 30' - 6° 0' East of Greenwich Meridian. The State covers an extensive area of about 36,129 sqkm Kebbi State was found in north-western Nigeria. It was created in 1991 from the south-western part of Sokoto state. It shares borders with the nations of Niger to the west and Benin to the southwest, and it borders the Nigerian States of Sokoto and Zamfara to the north and east and Niger to the south. The State is characterized with Sudan Savannah consists of short-grass savannah that is drained south-westward by the Niger River and its tributary, the Sokoto (Kebbi) River. Most of the Kainji Reservoir, formed by the Kainji Dam further downstream on the Niger River, lies in the southern portion of the State (Kebbi State MOH, 2016).

Agriculture is the major economic activity among riverine community producing export crops such as groundnuts, cotton, and silk. Subsistence crops include sorghum, millet, cowpeas and onions. Kebbi State has a number of institutions, the Federal University Birnin-Kebbi, Federal University of Agriculture Zuru, the Rayhan University Birnin-Kebbi as well as numbers of colleges of education, such as the Adamu Augie College of education Argungu, the College of education Lolo and numbers of polytechnic institutions found in the State (NPC, 2006).

This research work was based on women with VVF that visit Gesse VVF Centre in Birnin Kebbi and shukura clinics days for their drugs and medications. Also documented records of VVF cases obtained from (2011-2020) at Gesse VVF Centre in Birnin Kebbi, Kebbi State would be used. While questionnaire and in depth interview were used to examine the prevalence and coping strategies used by VVF patients over a periods of (three months) because the available patients on bed are not up to required sample size.

Study Design and Sampling

This is descriptive cross sectional study aimed at quantifying the backlog of VVF and coping strategies on women in Kebbi State. The study employed purposive sampling technique to

achieve the desired sampling size. Recruitment of participant was based on the availability of respondents and in accordance with target sample size.

The descriptive survey method was used for the study, a total of 49 VVF patients who are currently on bed at Gesse VVF Centre in Birnin Kebbi, Kebbi state formed the population for the study. Purposive sampling was used to select participants who were VVF patients at Gesse VVF Centre for the study. The instrument used for data collection was questionnaire developed by the researcher and structured in 3 sections. Section A; covered demographic information of the respondents, Section B; Prevalence of VVF among respondents and Section C; were based on preventive measures used by VVF patients. The questionnaire was self-administered during the survey and lasted for a period of 2-months. The data obtained were organized and analyses using Pearson product and spearman rank correlations analysis. Documented records of VVF patients were used to down sample size. Based on the combine records of VVF, RVF and Gishiri cut obtained from Gesse VVF Centre from 2011-2020. They made up of a total of 1090, for all the patients that visits the Centre.

Source of Data

The primary source of data is through field surveys which involved administration of research instrument (questionnaire) with VVF patients in the study area. The questionnaire was designed to cover information on the demographic characteristics of the respondents, and data on the coping strategies employed by VVF patients. Relevant information with regard to background to the study area, literature review and historical background will be sourced from existing official and unofficial statistics from both state and national publications, including Textbooks, Journals, Articles, Newspaper, Magazines, Conference Papers, Thesis, Dissertations, and National surveys reports.

Data Collection and Analysis

The purpose of this study was to interview with questionnaire as a base; VVF patients admitted at Gesse VVF Centre Birnin Kebbi, Kebbi State formed the population of the study. Information on the prevalence and coping strategies would be analysed. The study was based on a semi-structured questionnaire, as well as interview. Data collected was coded and entered into SPSS for analysis. Ethical permission was obtained from Kebbi Sate Ministry of Health, because this types of research requires such clearance. The clearance was used in the hospital to gain access to the respondents during data collection. Results were analysed using SPSS statistical package for social scientists. Mean and percentages were used to describe quantitative and qualitative data separately.

RESULTS AND DISCUSSION

The socio-demographic characteristics of the respondents are presented in Table 1. About 31% of the respondents are within the age range of 15-19 years, with Married and Divorce having 35.9% and 27.4% respectively which is the highest frequency across all age groups. Similarly most respondents are married (38.7%). With regards to occupation, about 33% are housewives, few respondents are farmers (28.9%) and casual labourers (26.9%) which suggests that they are low income earners. The educational level of the respondents indicates that majority (32.7%) have Qur'anic education as the highest level of education. In terms of religion, majority (79.6%) are Muslims. Among all age groups 15-19 have the highest frequencies and they are married. This suggest that majority of the respondents marry early immediately after

attaining their first menstruation period which in most cases is associated with teenage pregnancy. This leads to the conclusion that early marriage together with prolong labour represent the two major causes of VVF among many respondents. This is in line with the report by National Taskforce on VVF (2015) who observed that about 83% of girls in Nigeria acquire VVF due to early marriage between ages 14 and 19 years. This is buttressed by different participants in a KII with expert on VVF at Gesse VVF Centre in Birnin Kebbi LGA:

“In the contemporary finding, the age at which women acquire VVF range from 14 to 18 years. I could remember during our fistula fortnight in Katsina State, I ask one

participant which I examined, she narrated that, if she had delayed her marriage until she was matured enough to be married, she would not have these condition.”(Surgeon, at Gesse VVF Centre, Birnin Kebbi, 11th Oct., 2021)

In an in-depth interview, one of the women stated that:

“Pregnancy is biologically related to those who are matured and physiologically competent enough to conceive, if I did not get married at age 13, I would not engage in sex, and I would not be pregnant, look at me I still look like a girl who should not think about getting marriage until the next 10 years. Marriage at early age is not a good practice”. (Woman from Zuru LG, on 11th Oct., 2021).

Table 1: Socio-economic and demographic characteristics of the respondents

Variables	Option	Frequency	Percentage
Age Group	15-19 years	15	30.7
	20-24 years	10	20.4
	25-29 years	9	18.3
	30-34 years	4	8.2
	35-39 years	4	8.2
	40 and above years	7	14.2
Marital status	Married	19	38.7
	Single	6	12.3
	Widow	9	18.3
	Divorce	15	30.7
Occupation	Civil servant	2	4.0
	Farmer	12	24.4
	Petty trading	7	14.2
	Casual labourer	12	24.4
	Housewife	16	32.7
Educational qualification	Noneformal Education	17	34.7
	Primary	14	28.6
	Secondary	2	4.0
	Tertiary	0	0.0
	Qur’anic	16	32.7
Religion	Islam	39	79.6 %
	Christianity	10	20.4 %

Trend Analysis of VVF Prevalence in the Study Area

The aim was to determine the trend of VVF prevalence among women in Kebbi State over the study period. The prevalence of VVF in the study was examined and the result is presented

in Figure 1. It can be seen that, the year 2020 had the highest (3.6 per 1000 deliveries) prevalence rate of VVF while 2011 and 2017 had the lowest (1.9 per 1000 deliveries) in the study area.

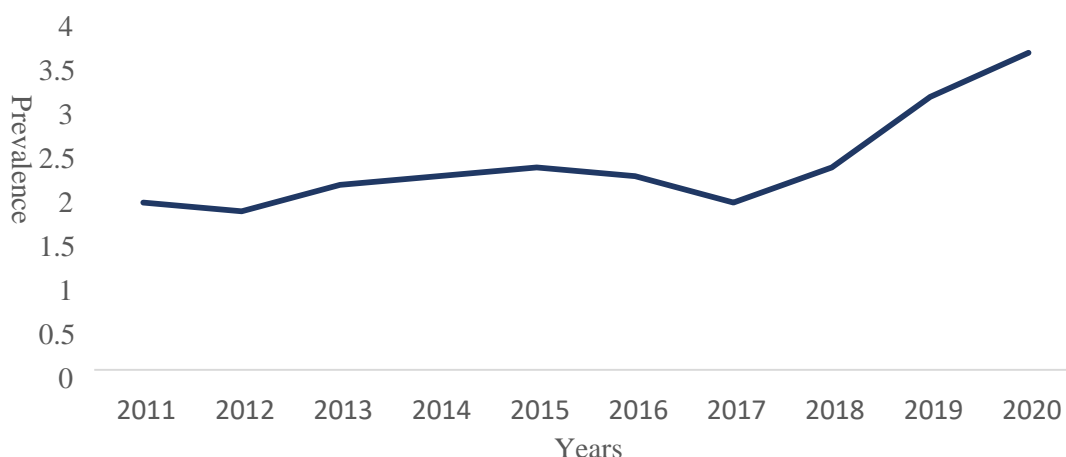


Figure 1: Prevalence of VVF between the years of 2011–2020 in the Study Area

The increasing trend of VVF in the study area cannot be attributed to lack of awareness as many organizations e.g. Campaign to End Fistula, sponsored by UNPFA, NGOs, and private individuals are intensifying messages to end VVF, especially through mass media, particularly the radio, tends to be the major carriers of the VVF campaign in the State. In addition, medicine San Frontier (Doctors without borders) is vigorously battling VVF in all the states of the North Western Nigeria with numerous awareness campaigns, free treatment of VVF patients and rehabilitation/reintegration programs. It is surprising that despite all these efforts however, many people are still left in the dark corner as to what actually causes VVF, its prevention and control as this is obvious in the increasing trend of VVF in the study area. This can be connected to the accessibility, affordability of emergency obstetrics facilities, high birth rate, early marriage, home delivery, obstructed labour, the attitude of pregnant women towards ANC, and post-natal care among others. This result corroborates with the findings of Ugochi, et al., (2019) who in the paper "Trend Analysis of Vesico-vaginal fistula among Attendee's at Fistula Centres in Kano State, Nigeria" revealed that the prevalence of VVF is increasing in Kano state, Nigeria.

Prevalence over the temporal period of the study

$$2011P = \frac{87}{45521} \times 1000 = 1.9$$

$$2012P = \frac{86}{45521} \times 1000 = 1.8$$

$$2013P = \frac{100}{45521} \times 1000 = 2.1$$

$$2014P = \frac{102}{45521} \times 1000 = 2.2$$

$$2015P = \frac{106}{45521} \times 1000 = 2.3$$

$$2016P = \frac{103}{45521} \times 1000 = 2.2$$

$$2017P = \frac{88}{45521} \times 1000 = 1.9$$

$$2018P = \frac{106}{45521} \times 1000 = 2.3$$

$$2019P = \frac{144}{45521} \times 1000 = 3.1$$

$$2020P = \frac{168}{45521} \times 1000 = 3.6$$

$$\frac{\text{Number of cases}}{\text{Total number of population at risk}} \times 100$$

$$P = \frac{\text{Number of cases of VVF}}{\text{Total records of deliveries}} \times 100$$

$$P = \frac{1090}{45521} \times 100 = 0.02 \times 100$$

$$P = 23.9$$

The result of the analysis shows that great yearly variations exist across the obtained documented records of VVF patients from Gesse VVF Centre in Birnin Kebbi (2011-2020). From the analysis, it is clear that the prevalence of VVF among women by the year 2011 is 1.9 per 1000 deliveries. While that of 2012 is 1.8 per 1000 deliveries. The variations here compared to 2011 drops in descending direction. The observed yearly variations may be connected to the increasing awareness of the respondents about the existence of Gesse VVF Centre in Birnin Kebbi and the consequences of early marriage, home delivery and complications that may followed due to prolong labour through ANC and campaign to end fistula by the Government. Correspondingly, the prevalence of VVF by the year 2013 was 2.1 per 1000 deliveries. The

observed yearly variations here compared to 2011-2013 were on increasing trend.

About 2.2, and 2.3, prevalence of VVF per 1000 deliveries were observed for 2014 and 2015 respectively. The variations pattern observed across these years' shows increasing trends compared to 2013. This may be connected to the attitude and negligence of pregnant women towards ANC, and post-natal care. It could also be related to the lack of awareness by VVF patients about existence and function of Gesse VVF centre. Furthermore 2.2 and 1.9, prevalence of VVF per 1000 deliveries were observed for 2016 and 2017 respectively. Conversely, at the moment the observed yearly variations compared to 2014 and 2015 were contrariwise where the pattern of variability drops in descending direction (see Figure 1). The transition in the observed yearly variation may be linked to the increase in the awareness of VVF by many women through campaigns (e.g. Campaign to End Fistula, sponsored by UNPFA) NGOs, private individuals and organizations. The mass media, particularly the radio tends to be the major carriers of the VVF campaign in the State.

In addition, medicine San Frontier (Doctors without borders) is vigorously battling VVF in all the states of the North Western Nigeria with various awareness campaigns, free treatment of VVF patients and rehabilitation programs. Despite all these, many people are still left in the dark corner in what actually causes VVF, its prevention and control. The incidence of VVF for 2018 is 3.1 and 3.6 for 2020 per 1000 deliveries. Finally, the prevalence of VVF in the study area was found to be 23.9 per 1000 deliveries, great yearly variations occur on the pattern of VVF prevalence where 2020 recorded the highest frequency of 3.6 per 1000 deliveries. This finding is in line with works of Chuike (1994) who submitted that the areas with the highest prevalence of VVF in Nigeria are: Kano, Bauchi, Kaduna, Kebbi and Zamfara States. The findings of the study tend to corroborate the works of Ugochi, et al., (2019) where in a paper "Trend Analysis of Vesico-vaginal fistula among Attendee's at Fistula Centres in Kano State, Nigeria" found that pattern of VVF prevalence show exceptionally high variations in the study area, with rather erratic but minor variations across the temporal period of the study. This finding is also in conformity with the reports of national taskforce on reduction of VVF (2015) which observed great yearly variations on the patterns of VVF occurrence among women across the study period.

In general, an overall fluctuating trend was observed in reported cases of VVF within the study period. Highest peak was recorded in 2020, this may be connected to the high birth rate, early marriage, home delivery, prolong labour, the attitude of pregnant women towards ANC, and post-natal care. While the lowest was recorded in 2011 which may be associated to the increasing awareness of women towards consequences of early marriage and home delivery as well as the existence of Gesse VVF Centre for free treatment. The study suggests that these yearly variations observed support the contention that the precise figure of VVF is difficult to realize due to paucity of data, poor knowledge of VVF causative agents, unaware of the existence of Gesse VVF Centre and poor means of communication regarding campaign to end fistula with free treatment serve as the predisposing factors for many patients living with VVF.

Coping Strategies Employed by VVF patients

Coping in this case refers to the intellectual or behavioural procedures used by person to tolerate or lessen the effects of a stressor, in this case VVF and its associated effects. Table 3 shows the respondent's perception on the use of a particular coping strategy to manage the perceived psychosocial and

economic consequences of VVF. Based on decision rule: (mean score of <2.5 means occasionally adopted coping strategy; 2.5 and above means commonly adopted coping strategies). The mean scores on the table revealed that

majority of the respondents have adequate knowledge of a particular and most commonly adopted coping strategy to minimize the ravaging effects of VVF.

Table 2: Coping strategies used by women with VVF in the Study Area

Strategies	Mean	Rank
Accepting fates	20.4	1 st
Moving with extra pads	18.8	2 nd
Living in group as sisters	13.0	3 rd
Involve in religious activities	2.2	4 th
Street begging	2.0	5 th

(Decision rule mean < 13 means occasionally adopted coping strategy while mean > 15 means commonly adopted coping strategy)

Based on decision rule majority of the respondents strongly employed compulsory accepting fates as the most commonly adopted preventive measure of living with VVF. With the mean score of 20.4 and ranked 1st coping strategy employed by the respondents. Suggests that majority of the respondents employed emotion-based coping by accepting fate from God, believing that VVF is "God sent disease" and view it as their destiny from God. Because substances like urine, vomiting and other bodily fluids are considered disgusting and unhygienic in most cultures and hence call for privacy and proper management in terms of when, where and how to dispose of them.

In order to maintain proper hygiene, henceforth one learns the way of managing such bodily substances in a socially acceptable manner at an early stage in life. For example, in most cultures one is socially expected to learn and maintain bladder and bowel control as early as five years and that socially signifies self-discipline. Losing control over one's bladder and/or bowel secretion might therefore be contrary to social expectations, hence attract ridicule, humiliation, embarrassment, anxiety, shame, loss of dignity and social life. Women with VVF in this regards have reflection on such socially grounded norms to anticipate negative reactions from others. Therefore, to avoid such reactions, they responded by concealing their condition from others; disclosing to close relatives only, who in turn kept the condition secret. This finding corroborates the work of Changole et al., (2017), in a paper "I am a person but not a person: Experience of women living with obstetric fistula in the central region of Malawi", where 45% of the respondents coped with the VVF condition by accepting fate as the best coping strategy. One of the respondents expressed her views in the quote below:

"God gave it to me, what can I say?" [Woman, 24 years old, four years

Living with VVF, from Kontagora LG Niger State. 21th Oct., 2021].

However, majority of the respondents also strongly agree and agreed that they commonly adopted moving with extra pads as the most occasionally adopted preventive measure of living with VVF and is ranked 2nd after preventing fates with the mean score of 18.8. Therefore, women living with VVF explained that they tried to maintain general neatness by moving with extra cloths. One respondent explained thus:

"I try to bathe regularly with perfumed soap and powder to cover up the smell. I do not stay out long hours to prevent people from observing the weight of urine and pour. Rubbing powder always on my inner thighs helps me walk well". [Woman from Bachaka 23 years, 8 Month living with VVF 11th Oct., 2021]

However, least score of the respondents agreed and reported that they occasionally adopted living in groups as sisters of suffering and is ranked 3rd with the mean score of 13.0. This suggests that some of the respondents preferred to stay at the hospital or the fistula Centre because they feel more comfortable there by perceiving it as an alternative home. Since they are humiliated by their immediate family and societies, believing that associating with patients of similar agony allow them to enjoy greater satisfaction. This network of friendship gives them solidarity in their syndicate and feel better that they were conveniently in the same cycle. This findings is in conformity with the reports of WHO (2010) where at Niamey National Hospital Fistula Pavilion in Niger, nearly about 50% of VVF patients were found living in group as sisters of suffering while waiting for surgery. They formed community where they interact, cooked for one another, sewed and braided each other's hair and lived without embarrassment. One respondent said:

"If I necessarily want to associate with anyone, it would rather be with people who we have the same or feel similar condition, since I came to this centre for surgery, I am less worry because we are all in the same cycle, we have similar thing in common" [Woman from Gwandu LG 24 Years, 2 Months living with VVF 11th Oct., 2021]

Similarly, meagre percentage of respondents strongly agreed that occasionally they rely on partaking in religious activities and is ranked 4th among the preventive measure occasionally adopted as a strategy of living with VVF with mean score of 2.2. This suggests that few working women mentioned that they involves in religious activities by sweeping and fetching water for mosques in a bit to seek cure and forgiveness from God. However, by so doing their pain and agony may significantly reduce. One participant said:

"I involved myself in taking care of Mosques compound and sometimes sweeping ground for special prayers, my believe is by so doing my pain would be eliminated". [Woman, 23 years old, five months living with VVF from Bunza LG 21th Oct.,2021]

In all, lesser percentage of respondents strongly reported and agreed that they occasionally adopted street begging as a coping measure of living with VVF and is ranked 5th with the mean score of 2.0. Although the easiest and simplest form of making money for women with any form of disability is street begging. Though this is not so for women with VVF condition, because many adopt it on rare cases as a coping strategy. Majority of respondents relied on different strategies to cope with their conditions.

In general, the respondent's utilization of a particular coping strategy is good with an overall mean score of 56.4. Similar

method was used by Muhammad (2011) on "Perceived causes, prevalence and effect of Vesico Vagina Fistula among Hausa/Fulani women in Kano State. Where the results revealed that all the respondents have good knowledge of a particular coping strategy they used to manage the perceived multidimensional effects of VVF.

CONCLUSION

The findings of the study shows that, majority (30.7%) of the respondents are within the age range of 15-19 years. Married and Divorce with (35.9%) and (27.4%) respectively have the highest frequencies among the respondents. This lead to the conclusion that majority of the respondents embrace marital union early immediately by attaining the menarche period and henceforth acquired early pregnancy prior to physiological development of child bearing. This socio-cultural tradition of early marriage associated prolong labour are the intermediate causes of VVF in the study area.

The results of the analysis further shows that great yearly variations exist in the obtained documented records of VVF cases from Gesse VVF Centre in Birnin Kebbi from 2011-2020. The prevalence of VVF in the study area was found to be 23.9 per 1000 deliveries. This leads to the conclusion that, an observed fluctuating trend in the reported cases of VVF within the study period was recorded. Highest peak was recorded in 2020, this may be connected to the high birth rate, early marriage, home delivery, prolong labour, the attitude of pregnant women towards ANC, and post-natal care. While the lowest scores was recorded in 2011 which may be associated to the increasing awareness of women towards consequences of early marriage and home delivery as well as the existence of Gesse VVF Centre for free treatment.

The most popular method of coping was accepting fates and moving with extra pads. This lead to the conclusion that majority of the respondents followed the teaching of their religion by accepting fate good or bad from Allah as their destiny under religious doctrine. Henceforth majority follow the tradition of moving with extra pads for purification.

RECOMMENDATION

It is recommended that Health workers at primary health care centres should refer very early to an appropriate health facility any woman with the issues of prolong labour.

Intensified health education mainly tailored towards girls and women regarding early marriage and reproductive health should be introduced by the government and health workers and provision of laws that would go against prohibition of early marriage among young girls and standardization of age at marriage by government.

Government have to go further from creating awareness against VVF to provide equal access to basic and comprehensive emergency obstetric care for VVF patients by creating more VVF centres and training of TBA.

Promote sexual and reproductive rights and privileges among young girls that will fight and minimize teenage pregnancy.

REFERENCES

Abubakar, M. and Badure D.Y (2014). *Analysis of annual reported cases of Vesico-vaginal Fistula among Attendee's in Gesse VVF Centres in Kebbi State, A case study of Zuru local government. Genitourinary reconstruction in obstetric fistulas*". J. Urol. V12.

Babayemi, A.W. and Olorunpomi, O. T. (2014). International Journal on model prediction of the reported cases of VVF in Kebbi State. [www.ijmsi.org/vol.2\(12\)18-27](http://www.ijmsi.org/vol.2(12)18-27).

Chuike, (1994). Research Report on Social Study of Patients with Vesico Vaginal Fistula (VVF) Attending ABUTH Nigeria Page 1 – 6.

Changole Josephine: Viva Combs Thorsenand Ursula Kafulafula (2017) "I am a person but not a person" Experience of women living with obstetric fistula in Malawi. December 2017DOI: 10.1186/s12884-017-1604.

Guardian(2007). Article "Early Marriage and Vesico-vaginal Fistula" The New Nigeria,

Kyari, (1991). Victims Management and Conselling of VVF. RVF. Paper presented at the National Workshop on the Management and Counselling of VVF Patients, Katsina 22 – 25 June.

Kebbi State Ministry of Health and UNFPA (2016) State of the world population. Retrieved from the web 10/01/2007 www.unfpa.org/org/sup/2004/english/sh7/page4.htm.

Lazarus D.and folkmanG (1961) stigma and coping theory, a review on the management and coping of obstetric fistula. London, Penguin.

Maiwada, A. M., Rahman, A., Azlina, N., Abdul Rahman, S., &Mamat, N. M. (2003). Health care seeking behaviour of pregnant women; a discuss of VVF in Gusau Metropolis of Zamfara State, Northern Nigeria. *Int J SciGlo Sus*;2(1): 75-85.

Maiwada, A. M. (2017). An Unpublished Lecture Notes on Demographic Analysis.

Muhammad (2011). Perceived causes, prevalence and effect of Vesico Vagina Fistula among Hausa/Fulani women in Kano State. An Unpublished masters. Thesis. Department of Education, Ahmadu Bello University, Zaria.

Nigeria Demographic Health Survey [NDHS] (2008). *Household population and Housing characteristics. National Population Commission (NPC). Federal Republic of Nigeria, Abuja, Nigeria, 11-29.*

NDHS (2018) Nigeria Demographic Health Survey <https://dhsprogram.com/pubs/pdf/FR359/FR359.pdf> Nigeria by the sisterhood method. *International Journal of Population Research, 2012.*

National Population Commission (2006). Religion, Gender and Educational Level of Nigerians. National Demographic Health Survey.

National Taskforce on reduction of VVF (2015). Health risk and resilience: An overview of Obstetric in Nigeria. *International Journal of Population Research, 2017.*

Naushiba Rizwan, Ambreen Mughal lumhs, Jamshoro, Pakistan (2018) Frequency of maternal morbidity in women with obstructed labor: A study at Liaquat University Hospital Hyderabad Sindh. *Applied Medical Research, Vol 4, No. 1, Page 1-4*

Ozge, T. Adamu, I. Evelyn, L.C. K. Stanton (2013).Community-Based Screening for Genito-Urinary Fistula in Nigeria: A novel approach, 28, 62-63.

Orji Adeloju, Ogah, O. K. Adewole, A. A. (2007). Vesico-vaginal fistula: A review of Nigerian experience. *West African Journal of Medicine*, 29(5), 294–298.

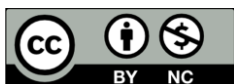
Samaila B. B., (2013). Birth and sorrow: The psycho-social and medical consequences of Obstetric fistula. *Family Health International (FHI360)*, Bauchi State Office, Nigeria.

USAID 2011. Under-5 Child Mortality. <https://data.unicef.org/topic/child-survival/under-five-mortality/> [Retrieved 09 May, 2021].

Ugochio. okoye, nkechiamma-echiegu and perpetua. Tanyi (2009). Living with vesico-vaginal fistula: experiences of women awaiting repairs in Ebonyi State, Nigeria *Tanzania Journal of Health Research*, Volume, Number 4.

Waldjiik, K. (2014). Community misconception about the aetiopathogenesis and treatment of vesico-vaginal fistula in northern Nigeria. *International Journal of Medicine and Biomedical Research*, 1(3), 193–198.

World Health Organization (2010). *Maternal Mortality in 1995: Estimates developed by WHO, UNICEF and UNFPA*. Geneva: World Health Organization. P15-18.



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