

## ASSESSMENT OF VESICO VAGINAL FISTULA AMONG WOMEN ACCESSING HEALTHCARE IN FAMILY LIFE CENTRE ITAM, AKWA-IBOM STATE, NIGERIA FROM 2014-2017

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### Abstract

*Vesico vaginal fistula has become a societal burden and health problem that affects women's health. The aim of the study is to determine the prevalence of vesico vaginal fistula among women accessing Family Life Centre, Itam, Uyo from 2014-2017. A retrospective descriptive research design was used with a checklist to obtain data from the case files and medical records of the patients between the period of study. Analysis and interpretation of data was done with the aid of IBM SPSS version 24.0. Data analysis was presented with descriptive statistics using tables and means to represent information. Findings revealed a rising and falling trend of prevalence over the study period thus, a prevalence rate of 103 (7.7%) in 2014, 160 (8.4%) in 2015, 125 (7.4%) in 2016, 145 (9.6%) in 2017 respectively. The age group with highest prevalence of VVF is 24-34 years. Primiparous woman had the highest prevalence outcome of management which was successful and dry with 88 (85.4%) in 2014, 128(80.0%) in 2015, 102(81.6%) in 2016, 133(91.7%) in 2017, unsuccessful and wet 12 (11.7%) in 2014, 6 (3.8%) in 2015, 7(5.6%) in 2016, 7(4.8%) in 2017 respectively. In conclusion, the study revealed an unstable rise and fall prevalence of VVF with low prevalence in 2014 and high in 2017 at the centre. It affects age group 24-34 years. Primiparous women exhibited higher cases of VVF and a majority of the women had successful outcome of repair. It was recommended that sensitization and some measure of prevention, improvement in status of women and access to prompt medical services be emphasized.*

**Keywords:** Vesico Vaginal Fistula, Prevalence, Women.

### Introduction

Vesico vaginal fistula has become a societal burden and public health problem that affects women's health. It is an opening between the bladder and vagina (Rajaian, Pragatheeswarane & Pand 2019). Kumar, Vatsa, Bharti, Roy, Sharma, Singh, Meena and Singhai (2017) stated that urinary fistula is one of the worrisome complications that occur after strenuous vaginal deliveries, obstetric, and gynecological surgeries. The incidence of VVF arises from unpleasant cultural and religious practices such as child marriages and female circumcision (Nwanguma, 2017). Child marriage is a risk factor for developing VVF as the pelvic is not fully developed enough for safe vaginal delivery. Majinge, Siebenkotten-Branca and Daffey (2017) stated that 80-90% of VVF associated with prolonged labour could be caused by age, stature, parity, labour duration, malnutrition, chronic anaemia and Vitamin D deficiency.

Less than 50% of births are supervised by skilled birth attendants and access to obstetrics care is limited and these contribute significantly to maternal and child mortality and morbidity (Oshonwoh, Nwankwo, & Ekiyor 2014). Prolonged obstructed labour indicates poor obstetric care which is common among underprivileged and most vulnerable in the society. The frequency of VVF could be a result of ignorance of the causes of the condition which most of them attribute to

superstitious belief and myths. VVF is no respecter of anybody as it affects young women, primigravida, multiparous and grand multiparous women.

The prevalence of fistula in Nigeria is 0.4% in which the Northern Region has the highest prevalence than southern Nigeria. It was noted that the prevalence in the North Central accounts for 0.8%, followed by the North East 0.5%, North West 0.3% while in the Southern zone, the highest prevalence is seen in South-South 0.5% followed by South-East 0.3% and South-West 0.2% respectively (NDHS, 2008).

Ugochi, et al (2019) reported three peaks of prevalence in the year 2010 (73.8%), 2015 (77.2%) and 2017 (59.3%) and the highest peak was recorded in the year 2015 while the lowest was in 2014 (46.0%). Finally, the result showed that there was a decline in prevalence for 10 years. It was observed that most of the patients reside in the rural areas of the state, where there was lack of access to appropriate emergency obstetric care and most of them indulge in traditional practices. Adler, Ronsman, Calvert and Fillippi (2013) opined that pool prevalence in population-based studies was 0.29 fistula per 1000 of reproductive age women in all regions separated by region in sub-Saharan Africa and 1.20 per 1000 in South Asia. Adler et

al concluded that the, prevalence and incidence of fistula were relatively low.

A cross-sectional study conducted by Swain et al (2020) revealed that prevalence was 0.3% and the factors responsible for obstetric fistula were less in number in terms of antenatal visits, prolonged labour, delay in timely intervention, delay in accessing emergency obstetric care and more of movements from home to the delivery place. Akintunde et al (2017) conducted a longitudinal retrospective study on management of VVF for over 30 years period from 1984-2013 at Obafemi Awolowo University Teaching Hospital Ile-Ife. Finding revealed that there were 213 patients with VVF over the period of the study with a prevalence rate of 3.9 per 1000 deliveries with the year range of 15-45 with a mean of age of 24.8 years. The peak prevalence was within the age range of 15-24 years and a majority of them were primiparous.

Tukur, Ijaiya, Su, Chan and Mohammed-Baba (2015) reported that a majority of the women had only vesico vaginal fistula, while others had recto-vaginal fistula, combined vesico-vaginal fistula and recto vaginal fistula respectively. It was noted that the patients had early marriage (before age 20 years) with mean age (15 years) at first marriage. However, a majority of the patients had fistula during the first deliveries. It was concluded that the study showed that child marriage, low education, unskilled birth attendance and low contraceptive uptake were common among the obstetric fistula patients in North Western Nigeria.

The study conducted by Mohamed, Ilesanmi and Dairo (2018) revealed that women with obstetric fistula are faced with socio-economic, physical and psychological related experiences. Moreso, age at which they developed fistula showed that a majority of them were between 15 and 24 years. It was concluded that a majority had no formal education. A study conducted by Sih et al (2016) on association between parity and fistula location in Malawian women with obstetric fistula revealed that a majority (56.6%) were multiparous women and were more likely to have laboured less than 24 hours, delivered a live-born infant. Consequently, multiparity and history of caesarean delivery were associated with development of a high fistula.

Wright, Ayenachew and Ballard (2016) conducted a study in Ethiopia which revealed that incidence of fistulae was on the increase from 26.9% to 36.2%. A greater proportion of multiparous women had high bladder fistula (70.3%) compared with primigravid women (29.7%). A review article by Stamakos, Sargedi, Stasinou and Kontzoglou

(2014) on diagnosis and management revealed that mean successful rate is 91-97% and noted that there was a high rate of successful repair at first attempt.

Similarly, Junior, Junior and Lourenco (2018) did a case report and literature search on Vesicouterine fistula (Youssef syndrome). Results revealed that vesicouterine fistula have a fairly good prognosis, provided accurate diagnosis is made. It was noted that almost all patients had successful repair which was through surgical means. Lastly, late diagnoses were common. Another study was conducted by Adler, Hanzal, Pablik, Koelbi and Bodner (2017) on management of vesico-vaginal fistulas (VVF) in women following benign gynecological surgery revealed success rate of conservative management to be 92.86%, 97.98% in surgical cases. It was concluded that the study indicated that surgery was generally through a vaginal approach which is the most preferred treatment strategy in females with postsurgical VVF.

A study conducted by Egziabher, Ngoga and Kateera (2015) in Rwanda revealed that obstructed labour complication and iatrogenic factors accounted for 69.5 and 26.5% respectively out of 272 women with obstetric fistula and 89% success was recorded among women with index repair. Another study conducted by Delamou, et al (2016) revealed that out of 646 women who had obstetric fistula repair 87(13.5%) were successful. It was reported that factors responsible for failure were age at presentation, mode delivery, vaginal scarring, and status of the urethra. Another study by Heller (2017) showed that out of 61 women that had surgery, 22 (36%) were successful 39(64%) had unsuccessful surgery. A similar study by Sunday-Adeoye, Daniyan Ekwegwe, Dantani and Uguru (2016) revealed that ninety-five (95%) percentage of the patients had successful repair. Vesico-vaginal fistula (VVF) is stigmatized in many communities making a majority of the women not to seek care. Therefore, it is pertinent to determine the prevalence rate of Vesico Vaginal Fistula amongst women accessing Family Life Centre Hospital, Itam, Uyo between 2014 to 2017. Specifically, the study is to identify the age group that is most affected by VVF from 2014 to 2017, parity of those affected and the outcome of the surgical management of the VVF between 2014 to 2017.

### Objectives of the study

1. To determine the prevalence of Vesico-vaginal fistula (VVF) among patients from 2014-2017
2. Examine the age group most affected with VVF from 2014-2017

3. Find out prevalence of VVF by parity.
4. Examine the outcome of the management of VVF from 2014-2017.

### METHODOLOGY

The research is a longitudinal retrospective descriptive study. The research setting is Family Life Centre Hospital in Mbiribit Itam, Uyo, Itu Local Government Area in Akwa Ibom State, Nigeria. Uyo is the administrative capital of Akwa Ibom State. The city is populated by people who are fairly educated, the rural areas have some lowly educated and not-so-well-to-do individuals. The family Life Centre Hospital is a Mission hospital, established in 1937 by the Roman Catholic Mission Uyo Diocese. Administratively, the centre is managed by the Medical Missionaries of Mary Congregation whose Foundational House is in Rosemount Dublin, Ireland. It is the oldest VVF center in sub-Saharan Africa and the only one in the region. The initial objective of the hospital was to reduce and restore the dignity of women living with VVF/RVF. But now, the objective has been extended to general improvement of health in the community by introducing general outpatient department, immunization programme, safe-motherhood, family planning and HIV counselling and others. It has two main wards with 40 beds in each of the medical and surgical wards. The main service of the centre still remains battling the scourge of Obstetric Fistula in Nigeria through curative and preventive measures.

The research population comprises six thousand four hundred and fifty-one (6,451) women who accessed the Family Life Centre Hospital between January 2014 to December 2017. The sample size is a total of all the women between January 2014-December 2017 who were present at the centre with Vesico vaginal fistula for 2013, (103 women); 2015, (160 women, 2016, (125 women); 2017, (145 women); making a total of 533 women and it is the same as the target population. The purposive sampling technique was used to sample 533 women who had VVF between 2014-2017 from records department of the Hospital.

The research instrument, a checklist was based on the hospital records of cases managed. Question guide (Check list) was formulated based on the objective of the study. The Checklist consisted of: date of admission, age, parity, ethnic group, marital status, and treatment outcome. Other parameters were duration of labour, choice of birth place, and outcome of birth. The instrument and methodology used was reliable as the researcher did not manipulate any information but used the question checklist to obtain data from the hospital

medical records which were face-validated by experts.

Two research assistants were trained on the aim and objective of the study and how to use the checklist. All data collected were from records of patients admitted within the period of 2014-2017 from the Medical Records Unit of the Family Life Centre Hospital Mbiribit Itam Uyo. A checklist which contained a list of needed variables was used. All the case files of patients between January 2014 to December 2017 were accessed and detailed information obtained with the checklist. The checklist was used to take record of the date of admission, age of patient at time of development of fistula, parity that caused the fistula, marital status, ethnic group/tribe, outcome of surgical management (if successful/dry, unsuccessful/wet, or referred). Other parameters include duration of labour, first place the birth took place or attempted, outcome of birth of baby (Alive or stillbirth). This took a period of two weeks at different times in the month of August 2019 which were suitable times for both the researcher and the Hospital's Record management office. The data collected was analyzed using frequencies, percentages, and means. Data was coded and analyzed based on the research objectives using the International Business Machine (IBM) Statistical Package for the Social Sciences (SPSS) version 24.0.

Ethical approval was obtained from the appropriate authorities which was that of Family Life Centre Hospital Uyo, Akwa Ibom State, Nigeria. Though the research is a retrospective study, all procedures were carried out according laid down protocol that was approved by the local ethics committee of the Family Life Centre Hospital. Records were accessed in private enclosure without being taken from the records department to ensure privacy. The information about patient's private details were not included with the other data. No reference to the patients' identity was made at any stage during data analysis in order to ensure confidentiality.

### RESULTS

Table 1 shows the socio-demographic characteristics of patients in the study centre from 2014-2017. 425 (79.7%) are married, while the remaining 108 (20.3%) were single. 433 (81.2%) are from the Akwa Ibom ethnic group, 56(10.5%) are Igbos, 27(5.1%) are from Rivers, while others 17 (3.2%) are from Edo/Delta States.

**Table 1:** Socio-demographic characteristics of patients with VVF from 2014-2017

Variables	Attributes	Frequency	Percentage
Marital Status	Married	425	79.7
	Single	108	20.3
Ethnicity	Akwa-Ibom	433	81.2
	Igbo	56	10.5
	Rivers	27	5.1
	Others (Edo/Delta)	17	3.2

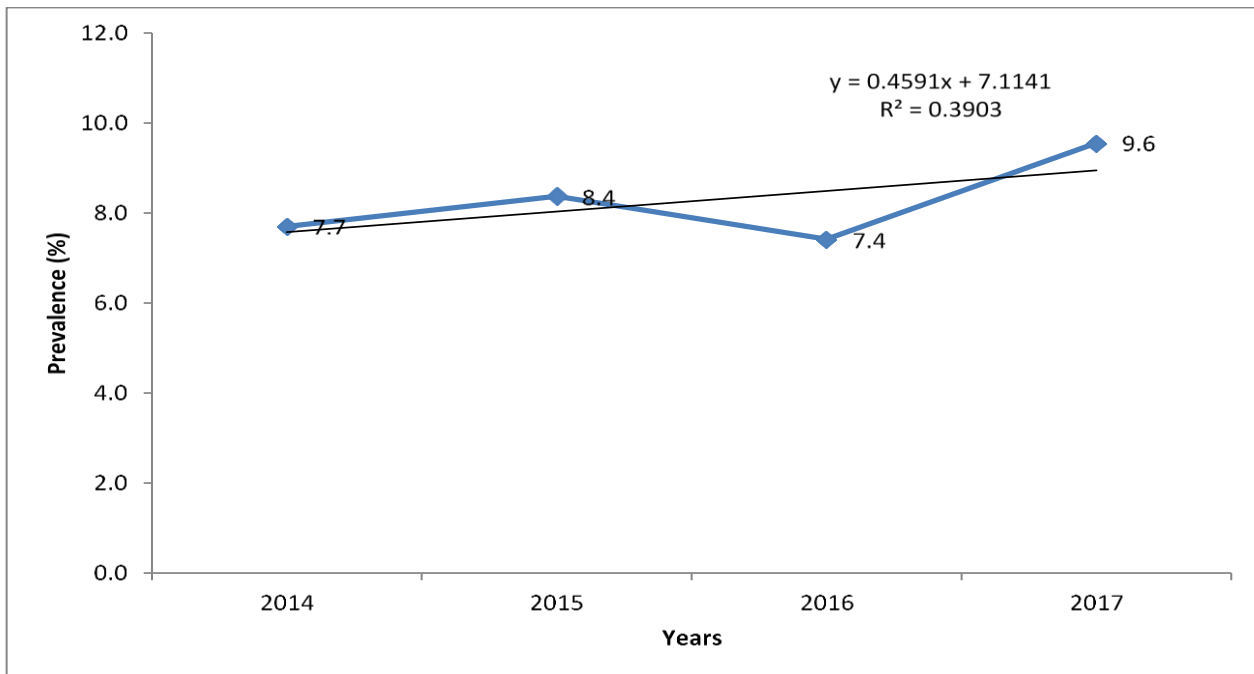
**Objective one**

To determine the prevalence of Vesico-vaginal fistula (VVF) among patients from 2014-2017.

As presented in Table 2 and Figure 1, the trend of the prevalence of VVF in the study centre from 2014-2017. 103 (7.7%) cases of VVF were reported in 2014, 160 (8.4%) in 2015, 125 (7.4%) in 2016, while 145 (9.6%) cases were reported in 2017. This shows a rising and falling trend of prevalence over the study period. The year with the lowest VVF cases recorded in the centre was 2014, while the highest prevalence rate is 160 in 2017. On fitting to the line of best fit, it shows that there is a linear increasing trend in the prevalence of VVF in the centre from 2014 – 2017.

**Table 2:** Prevalence of Vesico-vaginal fistula (VVF) among patients from 2014-2017

Year	Number for VVF	Attendance to hospital	Prevalence (%)
2014	103	1337	7.7
2015	160	1911	8.4
2016	125	1685	7.4
2017	145	1518	9.6



**Figure 1: Prevalence of VVF**

**Objective two**

Examine the age group most affected with VVF from 2014-2017.

are 46years and above. The highest prevalence of VVF was recorded in age group 24-34years in the year 2015, while the lowest was in 2015 among age group 46years and above.

As presented in Figure 2, the age most affected with VVF from 2014-2017 was 24-34years, followed by 13-23years, the age group least affected is those who

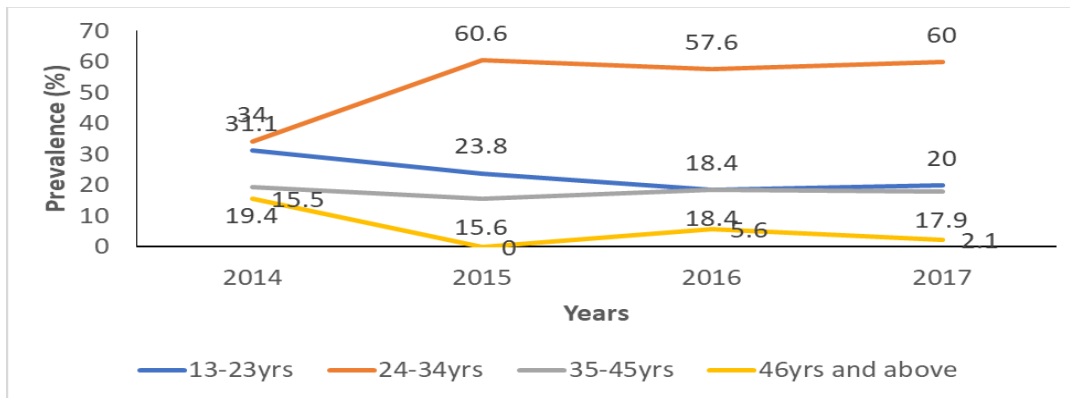


Figure 2: Age group most affected with VVF from 2014-2017

**Objective three**

To find out prevalence of VVF by parity. Figure 3 presents the prevalence of VVF by parity. Primipara women had the highest prevalence of VVF, while the lowest prevalence was recorded for women that are para 3. The prevalence of VVF among primipara women showed an increasing trend from 2014-2016, with a little decrease in 2017;

while for para 3 mothers, there was a decrease in the prevalence from 2014-2015 which has consistently been increasing since 2015-2017. Para 4 mothers have decreasing prevalence of VVF from 2014-2017. In 2014-2016, para 2 women showed a decreasing prevalence of VVF which increased after 2016, from 13% to 21%.

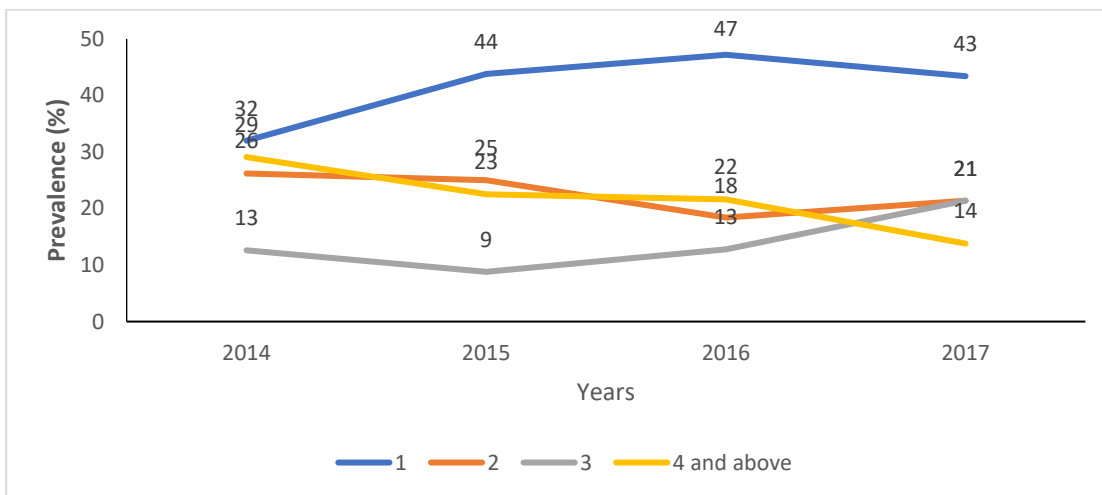


Figure 3: Prevalence of VVF by parity

**Objective four**

To examine the outcome of the management of VVF from 2014-2017.

Table 3 shows the outcome of the management of VVF in the study centre. In 2014, 88(85.4%) of the cases of VVF were successfully repaired and dry, 12(11.7%) were unsuccessful/wet, 3(2.9%) were referred, while there was no case of not done. In 2015, 128(80.0%) were successfully repaired and dry, 6(3.8%) were unsuccessful/wet, 17(10.6%) were referred, while 9(5.6%) were not done. In 2016, 102(81.6%) cases were successfully repaired/dry, 7(5.6%) were unsuccessful/Wet, 11(8.8%) were referred, while the remaining 11(8.8%) were referred that year and 5(4.0%) were not done. The cases of successfully repaired/dry in 2017 is 133(91.7%)

which is the highest success recorded in the study period, 7(4.8%) of the cases were unsuccessful/wet, 3(2.1%) were referred, while 2(1.4%) were not done. This shows that the centre has recorded a high outcome of successfully repaired/dry VVF over the years, with significant reduction in referral cases.

Table 3: Outcome of the Management of VVF for the period 2014-2017

	2014	2015	2016	2017
Successfully repaired & Dry	88(85.4)	128(80.0)	102(81.6)	133(91.7)
Unsuccessful & Wet	12(11.7)	6(3.8)	7(5.6)	7(4.8)
Referred	3(2.9)	17(10.6)	11(8.8)	3(2.1)
Not done	0(0.0)	9(5.6)	5(4.0)	2(1.4)

## DISCUSSION OF FINDINGS

The study was to determine the prevalence of vesico-vaginal fistula among women. Five hundred and thirty-three (533) women with VVF were studied using checklist for the study.

The result of this study showed a rise and fall of VVF in the study centre from 2014-2017. Specifically, there was a low prevalence in 2014 and high prevalence in 2017. This could be due to stigmatization in some communities making a majority of the women not to seek care. This finding is supported by the Ugochi et al., (2019) study which identified three peaks in prevalence indicating rise and fall with the lowest prevalence in 2014 and highest in 2015. This is also at variance with National Demographic Health Survey (NDHS, 2008) that reported highest prevalence of VVF in South-South, Nigeria with Akwa-Ibom being one of the Southern States.

Finding revealed that the highest prevalence of vesico-vagina fistula (VVF) is among age 24-34 years. This is at variance with the work of Tukur et al., (2015) which revealed that a majority of their patients had VVF at age 16 years which was as a result of child marriage. This is also supported by other studies in which the women with VVF were aged between 15-24 years (Akintunde et al., 2017 & Mohammed, Ilesanmi and Dairo 2018) respectively. This implies that VVF in this study may not necessarily be due to child marriage rather may be due to prolonged obstructed labour or other delays in obstetric care.

The finding indicates that prevalence is more among the primiparous women. This is in line with studies of Akintunde et al (2017) & Tukur et al., (2005) which revealed prevalence among primipara women. The result is also at variance with other studies that reveal that prevalence was among multiparous women (Sil et al. 2016 & Wright, Agenachew and Ballard 2016). Outcome of management of VVF in this study revealed that VVF repair was successful and dry. The most successful repair was in 2017. This is in tandem with previous studies that recorded successful repair (Adler et al. 2017; Junior, Junior and Laurencio 2018; Egziabher, Ngoga & Katera 2015). This is however supported by Stamakos, Sargedi Stasinou & Kontzoglou et al. 2014; Katera 2015; Sunday-Adeoye, et al., 2016) respectively. The study is also at variance with the work of Heller (2017) that reported that a majority of women who underwent surgery had unsuccessful outcome.

## CONCLUSION AND RECOMMENDATIONS

The study revealed a rise and fall prevalence of VVF with low prevalence in 2014 and high in 2017 at the centre. It affects age group 24-34 years. Primiparous women were reported to have higher cases of VVF

and a majority of the women had successful outcome of repair. It was recommended that sensitization on some measure of prevention, improvement in status of women and access to prompt medical services should be emphasized.

## REFERENCES

- Adler, A.J., Ronsmans, C., Calvert, C., & Fillipi, V. (2013). Estimating the prevalence of obstetric fistula: A systematic review and meta-analysis. *BMC Pregnancy and Childbirth*. 13:246.
- Bodnev-Adler, B., Hanzal, E., Pablik, E., Koelbi, H., Bodner, K. (2017). Management of vesicovaginal fistulas (VVF) in women following benign gynaecologic surgery: A systematic review and meta-analysis. *PLOS ONE* 12(2) 1-11. <https://doi.org/10.1371/journal.pone.0171554>
- Akintunde, O.F., Olusegun, O.B., Ijarotimi, A.O., Bakare, B., Funmito, F., & Adebajo, B.A. (2017). The Burden of Vesico-Vaginal Fistula in Ile-Ife, South Western Nigeria. doi:10.224125/sanamed. SANAMED 12(2) 79-85
- Delamou, A., Delvaux, T. & Beavogui, A.A., Toure, A. Kolie, D. et al (2016). Factors associated with the failure of obstetric fistula repair in Guinea: Implications for practice. *BMC Reproductive Health*. 13:135.
- Egziabher, T.G., Ngoga, E. Karenzi, Ben & Kateera, F. (2015). Obstetric fistula management and predictors of successful closure among women attending a public tertiary hospital in Rwanda: A retrospective review of records. *BMC Research Notes* 8:774.
- Heller, A. (2017). Demographic profile and treatment outcomes of 100 women with obstetric fistula in Niger. *Proceedings in Obstetric and Gynecology*. 7(2)1: 1-15.
- Junior, R.A., Junior, L.C. & Lourenco, L.L. (2018). Vesicouterine fistula (Youssef syndrome): Case report and literature review. *Rev. Bras Ginecol Obstet*. 40(9) 563-569.
- Kumar, S., Vasta, R., Bharti, J., Roy, K.K., Sharma, J.B., Singh, N., Meena, J., & Singhal, S. (2017) Urinary fistula- A continuing problem with changing trends. *Journal of Turkish-German Gynecological Association*. 18(1): 15-19.
- Majinge, P., Siebenkotten-Branca, V., & Daffeh, B. (2017). Aetiology of Vesico-vaginal fistula (VVF) -Observation in patients managed at Comprehensive Community-based Rehabilitation in Tanzania Hospital, Dares Salaam, Tanzania. *Open Journal of Obstetrics and Gynecology*, 7(6), 649-677.
- Mohamed, A.A., Ilesanmi, A.O., & Dairo, M.D., (2018). The experience of women with obstetric fistula following corrective surgery: A qualitative study in Benadir and Mudug Regions, Somalia. *Obstetric and Gynaecology International*. Vol. 2018: 1-10 <https://doi.org/10.1155/2018/5250843>.

- Nigeria Demographic and Health Survey (2008) Situation of obstetric fistula in Nigeria.
- Nwanguma, M.(2017). Vesicular Vaginal Fistula Pandemic: Retrieved Pharmatimes.com.ng
- Oshonwoh, F.E., Nwankwo, G., & Ekiyor C.P. (2014). Traditional birth attendants and women's health practices: A Case Study of Patani in Southern Nigeria. *Journal of public health and epidemiology* 6(8):252-261.
- Rajaian, S., Pragatheeswarane, M., Panda, A. (2019) Vesicovaginal fistula: Review and recent trends. *Indian Journal of Urology IJU: Journal of the Urology Society of India.* 35(4): 250-258.
- Sih, A., Kopp, D.M., Tang J.U., Rosenberg, N.E., Chipungu, E., Harfouche, M., Moyo, M., Mwale M, & Wilkinson, J (2016). Association between parity and fistula location in women with obstetric fistula: An international journal of obstetrics and Gynaecology/ 123 , (5): 831-836. <https://doi.org/10.1111/1471-0528.13901>.
- Stamatakis, M., Sargedhi, C. Stasinou T. & Kontzoglou, K. (2014). Vesico vaginal fistula: Diagnosis and management. *Indian Journal of Surgery.* 76(2) 131-136.
- Sunday-Adeoye, I., Daniyan, B., Ekwedigwe, K., Dantani, D., Uguru, S. (2016). A review of the management of vesico-vaginal fistula with co-existing bladder calculi in South-East Nigeria. *Gynecology & Obstetrics.* 6(5): 1-3.
- Swain, D., Parida, S.P, Jena, S.K., Das, M. Das, H. & Das, H. (2020). Prevalence and risk factors of obstetric fistula: Implementation of a need-based preventive action plan in a South-Eastern rural community of India. *BMC Women's Health.* 20(40) 1-10.
- Tukur I., Ijaiya, M.A, S.U. T.T., Chan, C.K., Muhammed-Baba, T.A. & Karuthan, C. (2015). Analysis of 137 obstetric fistula cases seen at three fistula centres in North West Nigeria. *East Africa Medical Journal.* 92(8) 408-413.
- Ugochi O.G., Iwuala, C., Nwofo, C.R., Ibe S., Udujih O.G. & Udujih H.I. (2019). Trend analysis of vesico-vagina fistula among attendee's in fistula center's in Kano, Nigeria. *Journal of Advances in Medicine and Medical Research.* 31(9) 1-10.
- Wright, J., Ayenachew, F., & Ballard, K.D. (2016). The changing face of obstetric fistula surgery in Ethiopia. *International Journal of Women's Health.* 8(1) 243-248.