



Psychiatric Morbidity among Subjects with Vesicovaginal Fistula in Abakaliki, South East Nigeria

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Authors' contributions

This work was carried out in collaboration between all the authors. Authors DNN, MNI and RU designed the study and wrote the protocol. Author DNN managed the literature searches, analyses of data and wrote the first draft of the manuscript with assistance from authors MNI and RU. All authors read and approved the final manuscript.

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ABSTRACT

Background: Vesicovaginal fistula (VVF) imposes enormous challenges on those affected. Subjects may have difficulties in coping and as a result may manifest specific mental disorders.

Objective: This study determined the psychiatric morbidity and socio-demographic correlates in subjects with VVF.

Materials and Methods: One hundred consecutive subjects with VVF were recruited from the National Obstetric Fistula Centre, Abakaliki Nigeria. A socio-demographic and clinical history questionnaire was used to assess the socio-demographic characteristics of subjects. The General Health Questionnaire version-28 (GHQ-28) was used to screen for psychiatric morbidity with a cut-off point of ≥ 5 indicating psychiatric caseness. All subjects with a score of 5 or more on GHQ-28 were interviewed using the Present State Examination (PSE) component of Schedule for Clinical Assessment in Neuropsychiatry (SCAN).

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Results: The prevalence of psychiatric morbidity among subjects with VVF was 48%. Specific psychiatric disorders identified were major depression- 37%, generalised anxiety disorder- 4%, dysthymia- 5%, somatoform disorder- 1% and social phobia- 1%.

Conclusion: Psychiatric morbidity may co-occur with vesicovaginal fistula. This may hinder complete recovery even after fistula repair. Early detection and treatment of the psychiatric disorders are advocated. It is recommended that health personnel working in such settings be trained to identify subjects with mental health problems and make appropriate referrals.

Keywords: Fistula; morbidity; psychiatric; socio-demographic; vesicovaginal.

1. INTRODUCTION

Pregnancy and child birth are fulfilling experiences in the life of women and families. Unfortunately, it can also be a time of risk of morbidity and death [1]. Most of the unfavourable outcomes of pregnancy and childbirth occur in developing countries [2] and vesicovaginal fistula (VVF) is one of such. The primary causes of VVF in Nigeria include prolonged obstructed labour and female genital mutilation [3]. A study that reviewed the causes, complications, and outcome of vesicovaginal fistula in Nigeria reported that it is a preventable calamity and public health issue of concern. The annual obstetric fistula incidence is estimated at 2.11 per 1000 births. It was also reported to be more prevalent in northern Nigeria than southern Nigeria. Pregnancy outcome was dismal in most cases related to delivery with still birth rate of 87% - 91.7%. Stigmatization, divorce and social exclusion were common complications [4].

VVF leaves a devastating effect on a woman's personal hygiene, self-esteem, interpersonal relationships and environment thereby disrupting the woman's health [5].

Mental health consequences have been reported in women with VVF. Psychiatric morbidity has been reported in studies carried out on VVF subjects in Nigeria. Abdullahi [6] conducted a cross-sectional study employing both quantitative and qualitative approaches. That study determined the prevalence of psychiatric morbidity among VVF subjects in Sokoto, North west Nigeria using the Composite International Diagnostic Interview (CIDI). Prevalence rate of 40.2% was reported. Depressive disorder was the most prevalent disorder (35.8%), followed by generalized anxiety disorder (3.4%) and social phobia (1.0%). The study used a structured instrument to identify psychopathology.

Also, Igwe [7] in Maiduguri, North east Nigeria reported that 94% of his participants with VVF had mental distress. Although formal psychiatric

disorders were not evaluated, the domain on depression had the highest mean score. The study used General Health Questionnaire-28 (GHQ-28) to screen for mental distress and 94% screened positive with a score of ≥ 5 indicating caseness. Similarly, Goh et al. [8] conducted a prospective observational study to screen women in Dhaka Medical College Hospital, Bangladesh (December 2003 to June 2004) and Addis Ababa Fistula Hospital, Ethiopia (June to July 2004) with fistula for mental health dysfunction. Sixty eight women with fistula were screened using GHQ-28 and it was reported that 66 women were at risk of developing mental health dysfunction compared with only 9 women out of 28 women who were used as control.

It has been reported that a significant number of women with VVF who had mental health problems recovered soon after surgical repair. Browning, Fentahun & Goh [9] in a prospective interventional study that assessed the impact of surgical treatment on the mental health of women with obstetric fistula at the Barhirdar Hamlin fistula centre, Barhirdar, Northern Ethiopia, screened 51 women with fistula for mental health issues before and 2 weeks after surgery using the GHQ-28. Prior to surgery, all women had signs of mental health dysfunction, but two weeks after fistula surgery, only 36% still had signs of mental distress. At the time of discharge with the same questionnaire administered, only 18 of the 51 women screened positive for mental health distress. Though the authors concluded that the differences in the prevalence of screen-positive women before surgery, after surgery and at time of discharge were significant, they did not determine the psychiatric morbidity and no specific psychopathologies were identified. Any chronic ill-health may cause emotional distress and lead to mental dysfunction.

Zeleke et al. [10] in a cross sectional study among women with obstetric fistula, and pelvic organ prolapse in North west Ethiopia using

Beck's Depression Inventory, reported that 37 women among the 306 women interviewed had obstetric fistula. Among the women that had obstetric fistula, 97% had symptoms of depression. Depression was significantly associated with age of 50 years or older, marital status, history of divorce and self perception of severe problems.

A cross-sectional study that determined the prevalence of depression among fistula patients attending an obstetric fistula surgical camp in Kenya using the Patient Health Questionnaire version 9, reported that 70 women were interviewed. Two (2.9%) women and 12(17.1%) reported a history of psychiatric illness and suicidal ideations respectively. Depression was present in 51(72.9%) subjects, with 18(25.7%) meeting criteria for severe depression. Depression was significantly associated with women older than 20 years of age, unemployment, lack of social support following fistula and living with fistula for over 3 months [11]. VVF has also been described as a traumatic event and can predispose to Post Traumatic Stress disorder [12].

Several mental health consequences have been reported among subjects with VVF, yet there is paucity of information regarding this in South east Nigeria. Therefore, this study determined the prevalence of psychiatric morbidity and association with the socio-demographic characteristics of subjects with VVF in Abakaliki, South east Nigeria.

1.1 Hypotheses of the Study

It was hypothesised that there will be no significant difference in the prevalence of psychiatric morbidity among subjects with VVF and the general population. It was also hypothesised that there will be no significant differences in the socio-demographic variables among subjects with VVF that have psychiatric morbidity and those subjects with VVF that are screened negative for psychiatric disorders.

1.2 Study Design and Setting

This was a descriptive cross-sectional study carried out at the National Obstetric Fistula Centre, Abakaliki, Ebonyi State Nigeria. The centre was established in 2008 for the purposes of treatment and rehabilitation of obstetric fistula patients in the south eastern part of Nigeria and the reduction of the incidence of the disease

through public health campaigns. It is the only centre dedicated to the management of subjects with VVF in south-eastern Nigeria. The centre has two wards: the pre- and post-operative wards with a total bed capacity of 90. It runs a daily out-patient clinic which takes care of repaired cases that come for routine check up as well as new subjects with VVF. Following the assessment of new subjects, they are booked for repair on a later date. Treatment of VVF is provided free of charge to all subjects admitted into the Centre.

1.3 Participants

Participants were subjects diagnosed of VVF by consultant gynaecologists usually with the history of urine leaking through the vagina and clinical confirmation. The subjects must have had VVF for over three months. Subjects who had any other form of fistula like recto-vaginal fistula were excluded.

1.4 Ethical Considerations

Approval for the study was obtained from the Ethical Committee of the National Obstetric Fistula Centre, Abakaliki, Ebonyi State Nigeria. All subjects gave informed consent before recruitment into the study.

1.5 Instruments of Study

1.5.1 Socio-demographic and clinical history questionnaire

This was designed to obtain the socio-demographic characteristics and clinical information of subjects. These included age, marital status, parity, place and mode of delivery, age at onset of fistula, fistula duration, ethnicity, level of education, occupation and obstetric outcome (whether live birth or still birth).

1.5.2 General health questionnaire version - 28 (GHQ-28)

This is a 28-item screening instrument that identifies 2 main classes of problems- inability to carry out one's normal healthy functions and the appearance of new phenomenon of the distressing nature [13]. It was designed to cover four identifiable areas of distress: depression, anxiety, social impairment and hypochondriasis. Although it was not intended to detect severe illnesses like schizophrenia or psychotic depression, however repeated experiences with

the GHQ scale has shown that it can be used to screen for the presence of these disorders. Scores of 5 and above are used to categorize patients into psychiatric morbidity or caseness [14].

1.5.3 Present state examination-10 (PSE-10)

This is a structured diagnostic interview schedule that has been incorporated into the Schedules for Clinical Assessment in Neuropsychiatry (SCAN). PSE 10 has two parts. Part I covers somatoform, dissociative, anxiety, depressive and bipolar disorders, and problems associated with eating, alcohol and other substance use. Part II covers psychotic and cognitive disorders and observed abnormalities of speech, affect and behaviour. All the items concerning a particular syndrome are grouped together and the ratings summed up to give a score [15].

1.6 Procedure

The predominant language spoken in the study area is Igbo. The GHQ-28 and the PSE-10 were translated from English to Igbo language for ease of administration to subjects who were not literate. The translation and back translation of the instruments were done by the authors and a graduate Igbo language teacher. The recruitment of subjects took place at the National Obstetric Fistula Centre, Abakaliki. The study lasted for 11 months. Consecutive attendees to the Fistula Centre who met the inclusion criteria were recruited into the study until 100 subjects were interviewed. It took an average of one hour to interview each subject. A two-stage interview was done. Subjects diagnosed as having VVF were initially identified. After confirming that a subject met the inclusion criteria, informed consent was obtained. Information about the participants such as age, sex, religious affiliation, marital status, ethnic group, occupation, age of onset of VVF, duration of illness and etc were obtained using the Socio-demographic and clinical history questionnaire by the authors. Then the authors proceeded to administer the GHQ-28 to each subject. Those that scored 5 and above on the GHQ scale were administered the second stage diagnostic interview questionnaire—the PSE-10 by the authors who were adequately trained to administer the instruments.

1.7 Analysis

The results were analyzed using the Statistical Package for Social Sciences version 20 (SPSS-

20). Simple descriptive statistics using tables and figures were used. Categorical variables and the association between socio-demographic variables and psychiatric morbidity among the subjects were compared with chi-square (χ^2) test. P-value of < 0.05 was used for statistical significance.

2. RESULTS

2.1 Socio-demographic Characteristics

The mean age of the subjects was 36.36 ± 10.9 years. Seventy one (71%) subjects were married while 8(8%) were single. Nine percent (9%) of the subjects were separated, 5(5%) were divorced and 7(7%) were widowed. Sixty three (63%) subjects were in polygamous marriages while 37(37%) in monogamous marriages. Subjects with no formal education were 54(54%) compared to those without formal education who were 46 (46%). Eighty one (81%) subjects were employed while 19(19%) were unemployed. Among those employed, majority 64(64%) were subsistence farmers/unskilled workers. Craft related/semi-skilled/clerks were 12(12%) and 5(5%) were skilled workers. Table 1 shows the socio-demographic characteristics of the subjects with VVF.

2.2 Prevalence of Psychiatric Disorders among the Subjects

Forty eight percent of the subjects had mental disorders identified with the PSE. Specific psychiatric disorders identified were major depression- 37%, generalised anxiety disorder- 4%, dysthymia- 5%, somatoform disorder- 1% and social phobia- 1%.

2.3 Association between Psychiatric Morbidity and Socio-demographic Variables of Subjects with VVF

Following the interview conducted with the PSE, the subjects were categorized into two groups: those with psychiatric morbidity and those without psychiatric morbidity. Socio-demographic profiles were compared. Being younger or older did not significantly increase the likelihood of having a psychiatric disorder ($\chi^2 = 0.33$, $p = 0.56$). Similarly, being married or unmarried did not increase the likelihood of having a psychiatric disorder ($\chi^2 = 2.54$, $p = 0.11$). Not having a job or being employed equally did not significantly predict the likelihood of having a psychiatric disorder ($\chi^2 = 2.54$, $p = 0.11$).

Table 1. Socio-demographic characteristics of the subjects

Variables	Number (N)	Percent (%)
Age (years)		
Mean age	36.36±10.9	
Age range		
16-25	14	14
26-35	40	40
36-45	27	27
>45	19	19
Marital status		
Married	71	71
Single	8	8
Separated	9	9
Divorced	5	5
Widowed	7	7
Family type		
Monogamous	37	37
Polygamous	63	63
Religion		
Christianity	98	98
Islam	1	1
Traditional	1	1
Educational status		
No formal education	54	54
Formal education	46	46
Employment status		
Unemployed	19	19
Employed	81	81
Occupation		
Skilled	5	5
Semi-skilled	12	12
Unskilled	64	64
Unemployed	19	19
Total	100	100

3. DISCUSSION

3.1 Socio-demographic Characteristics

The mean age of the subjects with VVF was 36.36± 10.9 years. This was similar to the mean age of 34.3 years reported in a study [16]. This study was conducted at the National Obstetric Fistula Centre Abakaliki and assessed the post repair feelings of patients treated at the centre. Previous studies reported that women mostly affected by VVF were teenagers [7,17]. The youngest age of onset in this study was 16 years. Kabir et al. [18] in Kano, Northern Nigeria had reported that the mean age of his participants was 16 years with their ages ranging between 10 and 36 years.

Majority of the subjects with VVF in this study (71%) were married. The study also found that a greater number (63%) were in polygamous marriages. Agwu et al. [16] reported that culture forbids a man from divorcing his wife on account of ill-health in South east Nigeria. This cultural prohibition may prompt the man to marry another wife instead of sending the ill one away.

Furthermore, this section of the South east (Ebonyi State) is an agrarian state. Farming is not mechanised and human efforts are needed in the farms. It has been observed that women and children form a readily and available source of manpower for this work. Most men marry many wives partly for this purpose (Agwu et al. [16]. This may be the reason majority of the participants were in polygamous marriages.

3.2 Psychiatric Morbidity among Subjects

This study revealed that 48(48%) subjects had psychiatric disorders. Abdullahi [6] reported a prevalence rate of 40.2 percent among VVF

Table 2. Association between psychiatric morbidity and socio-demographic variables of subjects with VVF

Variables	Psychiatric morbidity 48 (48%)	No psychiatric morbidity 52 (52%)	Stat (χ^2)	P-value
Age (years)				
<45 (younger)	40 (40)	41 (41)	0.33	0.56
≥45 (older)	8 (8)	11 (11)		
Marital status				
Married	42 (42)	50 (50)	2.54	0.11
Not married	6 (6)	2 (2)		
Employment status				
Employed	42 (42)	50 (50)	2.54	0.11
Unemployed	6 (6)	2 (2)		

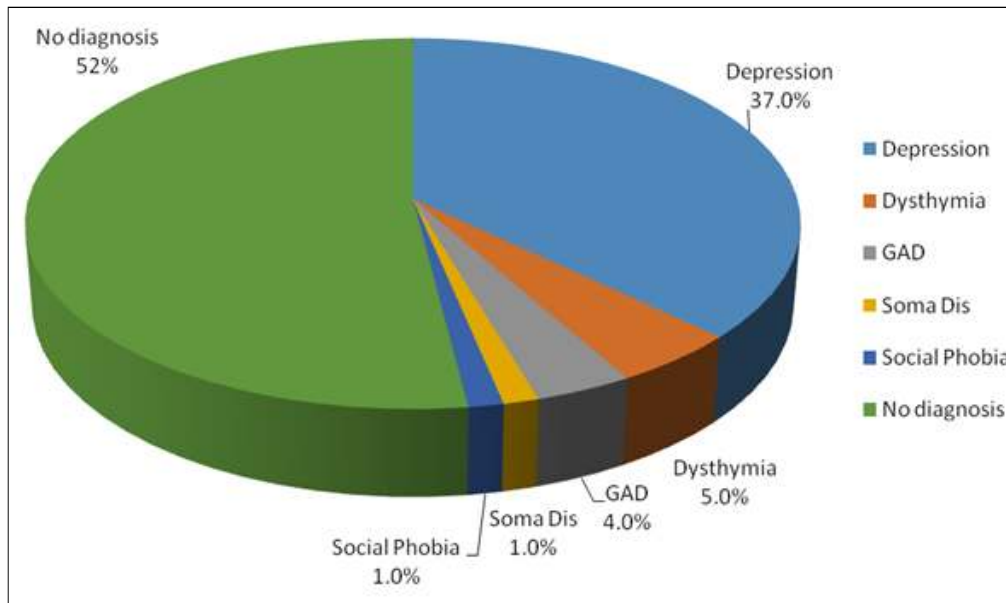


Fig. 1. Pie Chart showing the prevalence of psychiatric disorders

*Soma Dis. = Somatoform Disorder

*GAD. = Generalised Anxiety Disorder

subjects studied in Sokoto, North west Nigeria. The difference of 8.02% in the prevalence rates may be accounted for by the use of SCAN which is a comprehensive, highly validated and sensitive instrument. Furthermore, in this study a two-stage interview was conducted. This made the work more detailed resulting in the identification of all possible psychiatric conditions.

The finding in this study also tallied with that reported among women attending an infertility gynaecology clinic. Makanjuola et al. [19] reported a prevalence rate of 48.8% of psychiatric morbidity among women with infertility attending a gynaecology clinic in Nigeria. Similarly, Abasiubong et al. [20] reported a psychiatric morbidity rate of 47.3% in a study that determined the burden of psychological symptoms in gynaecological conditions among women in Uyo, Nigeria.

Nevertheless, the 48 percent rate of psychiatric morbidity in this study population should be interpreted with caution. It might not be a true representation of the extent of the problem which may be higher among those with VVF in the community. This is because many subjects may not come to the hospital for repair. In addition, the present study is institution based and subjects already had some degree of hope in

their condition as they were hospitalised for repair. The subjects also enjoyed some kind of social support from the health workers with treatment provided free. They had also interacted with other victims and shared their experiences. Contrary to their earlier beliefs, some would have known that they were not alone in their condition. This may have given a ray of hope to some and may have altered the identification of psychiatric morbidity among some subjects. Therefore, considering all variables as above, the rate of psychiatric morbidity may be likely lower or higher than currently identified.

3.3 Specific Psychiatric Disorders

In this study, the psychiatric disorders identified were: major depression (37.0%), dysthymia (5.0%), generalised anxiety disorder (4.0%), somatoform disorder (1.0%) and social phobia (1.0%). Abdullahi [6] reported depression (38.8%), generalised anxiety disorder (3.4%), and social phobia (1.0%) among VVF subjects in a study carried out in Sokoto, Nigeria. Goh et al. [8] estimated that between 23.3% and 38.8% of women with fistula may have major depression. The present study recorded similar prevalence rate. The dominance of depression in the prevalence rate (37.0% out of 48.0%) of this study was not surprising. Majority of the subjects expressed pessimism over their condition.

3.4 Association between Socio-demographic Variables and Psychiatric Morbidity

This study found no significant association between age, marital status and employment with psychiatric morbidity. Abdullahi [6] in a study on the psychiatric morbidity among subjects with VVF, reported that there was a significant association between age and the development of psychiatric morbidity. The mean age of his subjects was 23.17 ± 7.97 years. This differed from the present study with mean age of 36.36 ± 10.9 years. The variation in ages of the subjects in the two studies may account for this difference. Furthermore, the study did not find any significant association between employment status and marital status with psychiatric morbidity. This is similar to the findings of the present study. Although unemployment has been identified to be associated with greater psychosocial stress and more likelihood of developing psychiatric morbidity [21], this study found no association between them.

4. LIMITATIONS OF THE STUDY

This was a cross-sectional and hospital based study. The results cannot be generalised to the entire population. No causal directions can be inferred in a cross-sectional survey of this nature. Despite these caveats, the findings from this study could serve as a baseline data for comparison in future studies especially in South east Nigeria.

5. CONCLUSION

The findings of this study showed that psychiatric morbidity may co-occur with vesicovaginal fistula. This may hinder complete recovery even after fistula repair. Early detection and treatment of the psychiatric disorders are advocated. It is recommended that health personnel working in such settings be trained to identify patients with mental health problems and make appropriate referrals.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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