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RESEARCH ARTICLE

CLINICAL AND DEMOGRAPHIC CORRELATES OF SEXUAL DYSFUNCTION AMONG MALE OUT-PATIENTS ATTENDING A TERTIARY HOSPITAL IN NIGERIA

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ABSTRACT

Background: Sexual dysfunction is a frightening experience for many men and is therefore of a huge public health concern. This cross-sectional study aims to determine the clinical and demographic correlates of sexual dysfunction among male outpatients attending a tertiary hospital in Nigeria.

Methods: One hundred and forty one male patients who attended the general outpatient clinic during the study period were interviewed. A questionnaire containing clinco-socio-demographic variables, the international Index of Erectile Function (IIEF) questionnaire and the General Health Questionnaire (GHQ, version 12) were administered to the subjects.

Results: The prevalence of sexual dysfunction was found to be 48.9%. Erectile dysfunction was the commonest form of sexual dysfunction. The mean age of the subjects was 38.9 years and a greater proportion of the subjects (33.2%) became ill when they were between 26-35 years of age.

Age group was found to be significantly associated with desire dysfunction ($X^2 = 9.504$, df = 1, p<0.05), marital status with desire dysfunction ($x^2 = 13.09$, df = 3, p<0.05) and intercourse dysfunction ($X^2 = 9.706$, df = 1, p<0.05). Employment status was significantly associated with intercourse dysfunction ($x^2 = 0.932$, df = 1, p<0.05) and overall dysfunction ($x^2 = 1.867$, df = 3, p<0.05).

The IIEF scores were inversely correlated to the GHQ scores.

Conclusion: Sexual dysfunction is a huge unmet need of huge public health importance. It is a silent marker for psychological difficulties and disorders. The need for a greater focus by clinicians in identifying and addressing this challenge is imperative.

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INTRODUCTION

Sexual dysfunction encompasses disorders of any phase of the human sexual response cycle (Kaplan and Sadock, 2003). This often age-related, distressing and embarrassing condition is an important cause of marital discord with its attendant myriad of consequences (Omisanjo et al., 2014). Traditionally regarded as a disease of middle aged men, the disorder is also common among young men with prevalence rates of 52% and 22.1% reported for the aforementioned age categories respectively (Feldman et al., 1994; Heruti et al., 2004). Commonly experienced sexual dysfunction reported among males include among others, poor penile erection, ejaculatory and orgasmic disturbance (Segraves, 1989; Gitlin, 1994). Despite the high rate of sexual dysfunction reported in literature, (Shaeer et al., 2003; Prins et al., 2002), complaints about sexual dysfunction remain largely unexplored or ignored by clinicians or merely attracted

*Corresponding author: Chukwujekwu Chidozie Donald, Department of Neuropsychiatry, University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State, Nigeria only vague reassurances which has ultimately led to poor quality of life (Oyekanmi *et al.*, 2012; Aviv *et al.*, 2004; Gopalakrishnan *et al.*, 2006). According to Oyelade *et al*, "Erectile dysfunction is an important public health problem that deserves increased support for basic science and applied research. Embarrassment of patients and reluctance of both patients and health care providers to discuss sexual matters candidly contribute to under diagnosis" (Oyelade *et al.*, 2016). The knowledge of the rates of occurrence of sexual dysfunction, their risk factors and correlates is crucial in assessing the risk, treatment planning and prevention programmes in sexual medicine (Aisudionoe-Shadrack, 2012).

Inspite of studies done elsewhere, there is paucity of reports on the correlates of sexual dysfunction in the Niger Delta region of Nigeria. This is the reason for this study. It is our expectation that results from this study will help heath care providers address the burden of this largely unmet need in our society. This will have far reaching effects on family health in the long run.

METHODS

Study, Design and Setting

This descriptive cross-sectional study was carried out among male out-patients who attended the general out-patient department (GOPD) of the Madonna University Teaching Hospital over a six month period (January - June 2016). The GOPD is the primary care department of the hospital. Patients are seen first here (except for emergence cases) and the clinic is open five days every week (from Monday to Friday) for consultations. From the GOPD, depending on the severity of a patient's condition, he/she may be referred to any of the other departments for specialist care. Every other male patient aged at least 18 years who attended the GOPD within the study period was included in the study; except for persons who were mentally retarded, or had a medical condition in which there was significant cognitive impairment, such that meaningful discussion between the patient and the researcher was not possible.

Instruments

The instruments administered to the participants include:

- A questionnaire drawn up by the researchers containing socio-demographic and clinical variables.
- A general Health Questionnaire (Version 12) developed by Goldberg and Williams to screen for psychiatric morbidity; it has Cronbach alpha coefficient of 0.82 0.86 (Makanjuola *et al.*, 2014). It is a 12 item questionnaire which has been used by previous researchers in Nigeria (Makanjuola *et al.*, 2014; Bawo *et al.*, 2011).
- The International Index of Erectile Function (IIEF) questionnaire, a 15-question questionnaire developed by an international panel of experts is a multidimensional, self administered instrument that has been found useful in the clinical assessment of erectile dysfunction and treatment outcomes in clinical trials (Rosen Riley *et al.*, 1997).

The questions were rated on a Likert scale of 1-5 with 0 indicating no sexual activity or no attempt. The IIEF contains 5 domains: Erectile dysfunction (Question 1-5, 15), Orgasmic function (Q9, 10) Sexual Desire dysfunction (Q 11, 12), Intercourse dissatisfaction (Q6-8), and Overall dissatisfaction (Q13-14). Each of these domains focuses on a particular dimension of sexual function. The total IIEF scores range from 0-30 and higher score corresponds to better sexual functioning. Usually, responses to these questions are based on the respondent's experience over the past 4 weeks. This instrument has been validated for use in Nigeria and it has a reliability coefficient (Cronbach's alpha) of 0.921 (Mosaku and Ukpong, 2009). All the questionnaires were translated to Ibo (the predominant language in the locality of this study) through a back-translation method.

Procedure

Consecutive male outpatients aged between 18-60yrs who attended the GOPD within the study period and who met the inclusion criteria were studied. The participants must also be married and/or have a regular sexual partner. The three aforementioned questionnaires were administered to each willing participant. Five trained research assistants (resident doctors in psychiatry) provided assistance to the respondents in completing the questionnaire where necessary. Approval of

the research ethical committee of Madonna University Hospital, Elele, Rivers State, Nigeria was obtained to carry out the study. It is important to note that the study complied with the declaration of Helsinki protocol and informed verbal consent was obtained from the participants after a detailed explanation of the study.

Data analysis

The data was analyzed using the statistical Package for Social Sciences (SPSS), version 15 at 5% level of significance and 95% confidence interval. Chi-square (X²) test was used to test for significance among categorical variables. The student t-test was used for continuous variables. Logistic regression analysis was carried out for variables that were found to be significantly associated with any form of sexual dysfunction (independent variables). The outcome, presence or absence of sexual dysfunction was the dependent variable.

RESULTS

The cohort consists of 147 male out-patients.

Table 1. Demographic, clinical and medication related characteristics of the respondents

Variable	Frequency	(%)	
Age (YRS)			
18-29	14	9.9	
30-39	84	59.6	
4049	21	14.9 12.1	
50-60	17		
Above 60 YRS	5	3.5	
Mean (SD) Y	EARS =38.9(8.3)		
Education			
No formal education	7	5.0	
Primary	40	28.4	
Secondary	59	41.8	
Tertiary	35	24.8	
Marital Status			
Single	50	35.5	
Married	83	58.9	
Separate/divorced	5	3.5	
Widowed	3	2.1	
Employment Status			
Employed	61	43.3	
Unemployed	80	56.7	

Variable	Frequency	(%)
Religion	136	96.6
Christian	4	2.8
Muslim	1	.7
Tradition worshippers		
Age at onset of Illness (YRS)		
<15	35	24.8
15-25	33	23.4
26-35	47	33.2
>35	26	18.4
MEAN (SD) YEAR	RS; =25.6 \pm 6.8	
History of psychiatric illness		
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MEAN (SD) YEA	RS; =25.6 \pm 6.8	
History of psychiatric illness		
Positive psychiatric illness		
Negative psychiatric illness	23	16.3
	118	83.7
Exposure to medication		
Neuroleptics	25	17.7
Antihypertensive	37	26.2
Other medication	79	56.0
Duration of illness (YRS)		
<2	71	50.4
2-5	36	25.5
5-10	28	19.9
>10	6	4.3
MEAN = 3.5	+ 1.8 YRS	

	Desire dysfunction	Erectile dysfunction	Orgasmic dysfunction	Intercourse dysfunction	Overall dysfunction
Age	$X^2=9.504$, df=1, p<0.05	X ² =.817, df=4, p>0.05	X ² =9.057, df=4, p>0.05	X ² =9.158, df=4, p>0.05	$X^2=8.854$, df=4, p>0.05
Education	$X^2=3.449$, df=4, p>0.05	$X^2=7.30$, df=4, p>0.05	$X^2=7.05$, df=4, p>0.05	$X^2=5.20$, df=4, p>0.05	$X^2=4.29$, df=4, p>0.05
Marital	$X^2=13.092$, df=3, p<0.05	$X^2=2.531$, df=3, p>0.05	$X^2=12.032$, df=3, p<0.05	$X^2=9.716$, df=3, p<0.05	$X^2=2.617$, df=3, p>0.05
Employment	$X^2=3.413$, df=1, p>0.05	$X^2=0.001$, df=1, p>0.05	$X^2=4.722$, df=1, p<0.05	$X^2=8.975$, df=1, p<0.05	$X^2=2.156$, df=1, p>0.05
Religion	$X^2=2.283$, df=2, p>0.05	$X^2=2.510$, df=2, p>0.05	$X^2=2.938$, df=2, p>0.05	$X^2=1.955$, df=2, p>0.05	$X^2=1.726$, df=2, p>0.05
Age at onset of illness	$X^2=6.751$, df=3, p>0.05	$X^2=3.652$, df=3, p>0.05	$X^2=1.875$, df=3, p>0.05	$X^2=3.548$, df=3, p>0.05	$X^2=2.378$, df=3, p>0.05
Exposure to medication	$X^2=6.652$, df=2, p<0.05	$X^2=0.331$, df=2, p>0.05	$X^2=3.450$, df=2, p>0.05	$X^2=2.118$, df=2, p>0.05	$X^2=4.706$, df=2, p>0.05
Duration illness	$X^2=4.374$ df=3 p>0.05	$X^2=0.932$ df=3 p<0.05	$X^2=2.327$ df=2 p>0.05	$X^2=7.565$ df=3 p>0.05	$X^2=1.867$ df=3 p<0.05

Table 2. Association between specific sexual dysfunction and socio-demographic and illness related variables

Table 3. Mean, standard deviation and range of IIEF and GHQ scores

	N	Minimum score	Maximum score	Mean	Standard deviation
IIEF score	141	0	70	43.94	21.727
GHQ score	141	0	12	1.93	3.08

Table 4. Pearson's correlation between IIEF and GHQ scores

	Q10_ILEF_Score	Q11_GHQ_Score
Q10_IIEF_Score Pearson Correlation	1	123
Sig. (2-tailed)		.146
N	141	141
Q11_GHQ_Score Pearson Correlation	123	1
Sig. (2-tailed)	.146	
N	141	141

Six were excluded from the analysis because they didn't complete the study. The data presented in this paper is that of the 141 subjects who completed the study. This paper, "Clinical and demographic correlates of sexual dysfunction among male outpatients attending a tertiary hospital in Nigeria" is part of that larger study. The biggest proportion of the respondents belonged to the age bracket 30-39 yrs (59.6%), had secondary education (41.8%), were married (58.9%) and unemployed (56.7%). Most of the subjects were Christians (96.5%) (see Table 1). The greatest proportion of the subjects were aged 26-25yrs at the onset of their illness 47(33.2%); 118 (83.7%) had no previous history of psychiatric illness, 79(56.0%) had been exposed to other medications other than neuroleptics and antihypertensives. 71(50.4%) had suffered their present illness for less than 2 years. At least one form of sexual dysfunction was found in 69 (48.9%) of the subjects. Even though some patients presented with more than one form of sexual dysfunction, erectile dysfunction was the commonest form 67 (48%) identified among the study cohort. The demographic and clinical variables associated with one or more forms of sexual dysfunction comprise: age group (desire dysfunction $X^2 = 9.504$, df= 1, p<0.05); marital status (desire dysfunction, $X^2 = 13.09$, df = 3, p<0.05, orgasmic dysfunction, $X^2 = 13.09$ 12.03, df = 3, p<0.05, intercourse dysfunction $X^2 = 9.706$, df = 3, p<0.05); Employment

status (intercourse dysfunction $X^2 = 8.975$, df = 1, p<0.05); Exposure to medication other than neuroleptic and antihypertensives (desire dysfunction $x^2 = 6.625$, df = 2, p<0.05) Duration of illness (Erectile dysfunction = $X^2 = 0.932$, df = 3, p<0.05) and overall dissatisfaction – ($X^2 = 1.867$, df = 3, p<0.05) (see Table 2). Table 3 shows that the mean IIEF score of all respondents was 43.94 \pm 21.73 while the mean GHQ score of the study cohort was 1.83 \pm 3.08. Thirty eight persons have GHQ scores of (3) or more. Hence the psychiatric morbidity in the study sample was 27%. Pearson's correlation assessment showed a negative correlation between ILEF scores and GHQ scores (see Table 4).

DISCUSSION

This study examined the clinical and demographic correlates of sexual dysfunction among male out-patients attending a tertiary hospital in Nigeria. The result shows that the prevalence of sexual dysfunction in this study was about 49%. This is in consonance with various studies that have reported conflicting figures ranging from 9-74% depending on study settings and methodology (Grover *et al.*, 2006; William and Slegfred, 2005; Levinson *et al.*, 2003; Hijazi *et al.*, 2002). The largest proportion of the subjects was aged 30-39 yrs with a mean age of 38.9 yrs.

These are young people that belong to the reproductive age group who are at the peak of their sexual process. Therefore problems with their sexual functioning may be a source of significant concern to them especially if they are unaddressed (Oyekanmi et al., 2012). Erectile dysfunction was the commonest form of sexual dysfunction identified in this study. This is in line with earlier reports (Oyelade et al., 2016; Khawaja, 2005). Poor penile erection frustrates both partners and interferes with subjective enjoyment of other stages of sexual intercourse. The impact to this unpalatable experience could be devastating because evidence abounds that adequate sexual functioning is one of the most important indices of quality of life (Abolfoutouh and Al Helali, 2001; Althof, 2012). This study demonstrated a significant relationship between marital status and sexual dysfunction. This is consonance with a study done by Odekanmi et al. (2012), but unlike the aforementioned study that reported a significant relationship between marital status and overall dissatisfaction dimension only, this study revealed that marital status was significantly associated with desire dysfunction; orgasmic dysfunction and intercourse dysfunction types. This is not surprising because an existing sexual inadequacy in a man becomes obvious in a setting of marriage where he is expected to perform sexually regularly and adequately in order to satisfy his partner. Nevertheless, it has been noted that the etiology of sexual dysfunction is multifactorial including both organic and psychological factors (Ludwig and Philips, 2014; Rosen, 2001). Our study also revealed that intercourse dysfunction is significantly associated with employment status. As has been reported by other researchers, socioeconomic factors including a decrease in household income have been significantly associated with the incidence of sexual dysfunction (Oyekanmi et al., 2012; Rosen, 2001). Furthermore, this study showed that exposure to medications other than neuroleptics is significantly associated with desire dysfunction.

This confirms other reports that a wide range of medication not only those used in treating psychological conditions or cardiovascular disorders e.g., antihypertensives have been implicated in the aetiology of sexual dysfunction (Ludwig and Philips, 2014). This study also revealed that duration of illness is associated with erectile dysfunction. This is in consonance with previous studies (Ludwig and Philips, 2014). The psychiatric morbidity in the study sample was 27% while Pearson's correlation demonstrated a negative relationship between IIEF and GHQ scores. This means that the higher the GHQ score, the lesser the IIEF score. This implies that the greater the tendency towards psychiatric morbidity, the more the likelihood for one to have a co-morbid sexual dysfunction. This finding confirms results from other studies (Mittaal *et al.*, 2014; Catalan *et al.*, 1981).

Limitation

The cross-sectional nature of the study did not allow for inference of the direction of causality between sexual dysfunctions and the clinic-socio-demographic variables. The study neither explored the nature of the illness of the subjects nor the details of the medications taken by them.

Conclusion

Sexual dysfunction is a significant unmet burden among the male population in our society. It represents a silent marker for

psychological difficulties and disorders. There is need for clinicians to raise their index of suspicion and explore the association between these two groups of disorders proactively during clinical interviews.

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