Nigerian Medical Journal
Vol. 52 Issue 2
April - June 2011

ORIGINAL ARTICLE

Pattern of mental illness among women attending an infertility clinic in Southern Nigeria

J.O Omoaregba[1], O. Morakinyo[2], O.B. James[3], A.O. Lawani[4]

ABSTRACT

Background: Female infertility is highly co-morbid with mental illness. In Nigeria, very few studies have been conducted to determine the pattern of mental illness among women with infertility. We aimed to determine the pattern of mental illness in a sample of women with female infertility as well as its associated correlates. **Patients and Methods**: A cross sectional two-stage survey of women (n=100) attending an infertility clinic was conducted in a teaching hospital in Nigeria. A 30-item GHQ (General Health Questionnaire) was used to screen the respondents for psychiatric morbidity. GHQ positive cases were subsequently interviewed using the Present State Examination (PSE-9) to diagnose types of mental ill-health. **Results**: Depression (n=21) was the commonest psychiatric disorder among the women. Generalised anxiety disorder (n=9) and adjustment disorder (n=3) were also common. **Conclusion**: Mental disorders were fairly common among women with infertility. Physicians should screen for this co-morbid disorder in women presenting with infertility problems.

Key words: Infertility, mental illness, women, developing country

INTRODUCTION

A tenth of persons in their reproductive age (16-48 years) are infertile[1]. Though female factors are implicated in a third of cases with couple infertility [2], some cultures believe women are solely responsible[3]. There is a high prevalence of mental illness among women who are unable to bear children. Depression and anxiety disorders are commonly reported[4]. Infertility can be a stressful experience in life. The psychological symptoms that infertile women experience are similar to those experienced by patients with other medical disorders like cancer, hypertension and other cardiac diseases experience [5]. Emotional stress can directly affect fertility by altering hypothalamic-pituitary pathways or by causing tubal spasms. Stress can also indirectly alter fertility by contributing to vaginismus, dyspareunia, and frigidity. Equally important to the concept that emotional stress can affect fertility, is the concept that infertility can result in emotional stress, thus initiating a vicious cycle [6]. In addition, stigma and the fear of failure during fertility treatment have been theorised to account for the high co-morbidity rate between infertility and mental illness.

In Nigeria, women are often threatened with divorce or may suffer discrimination and abuse if they are unable to bear children [3]. Researches on the psychological aspects of infertility in this environment are few. Most studies employ screening instruments or scales of symptom severity to determine psychiatric morbidity[7]. One study employing a diagnostic instrument was limited by its small sample size [8]. More research on this subject area is needed. Determining the prevalence and pattern of mental illness in this population subgroup would assist clinicians in incorporating treatment for these problems in fertility programmes. Furthermore, the detection and management of psychiatric co-morbidity may improve treatment outcomes and improve patient's quality of life. We aimed to screen for psychiatric morbidity and determine the pattern of mental illness among women attending an infertility clinic at a tertiary hospital facility in south-south region of Nigeria.

Federal Psychiatric Hospital, Uselu, Benin City, Edo State
[2]Department of Mental Health, University of Benin, Benin City, Edo State

Corresponding Author: Dr J.O Omoaregba Federal Psychiatric Hospital, P.M.B 1108, Benin City, Edo State, Nigeria
Tel: 08023345948 E-mail address jomoaregba@yahoo.com

PATIENTS AND METHODS

The study was conducted at the Infertility Clinic of the University of Benin Teaching Hospital (UBTH), Benin City, Nigeria. This clinic is a referral centre and provides in addition to other gynaecological services, in-vitro fertilisation treatment to a population of approximately 10 million people spanning Edo and four other neighbouring states. The study protocol was reviewed and approved by the Ethical Review Board of the UBTH, Benin City, Nigeria. Socio-demographic questionnaire was use of the capture variables like age, marital, educational and employment status. Clinical details like duration and type of infertility were also recorded. A 30 item General Health Questionnaire (GHQ-30)[9] was self administered and used to screen for psychiatric morbidity. The GHQ-30 has been validated for use in hospital populations in Nigeria [10]. Caseness on the GHQ was determined with a score =5. Finally, Present State Examination, (PSE-9[11], an interviewer administered by one of the authors, was used to diagnose the type of mental illness in GHQ positive cases. The PSE-9 has also been used extensively in Nigeria[8]. Women, aged between 18 and 49 years, attending the Infertility Clinic of the UBTH were consecutively recruited between the months of April and May, 2008. The nature and purpose of the study was explained to the respondents and written informed consent obtained before the questionnaire was administered. The socio-demographic questionnaire and the 30 item GHQ were administered in the first stage. Women who had a GHQ-30 score of =5 were then interviewed in the second stage, using the PSE-9 to diagnose the type of mental illness.

The data collected was analysed using the SPSS version 11.0 software. Data were analysed using descriptive statistics. A comparison of categorical variables was done using the chi-square test, while relationships between continuous variables were conducted using Pearson correlation. Statistical significance was set at $p < 0.05$.

RESULTS

A total of 108 women who satisfied the study inclusion criteria were approached during the study period. Eight women declined to participate, thus one hundred women were interviewed. The women were aged between 23 and 47 years, with the mean age (SD) being 35.8 (5.9) years. Most of the respondents were Christians (91%), and of the Benin ethnic group (39%). Most had received formal education up to the tertiary level (61%) and were currently employed (64%). A majority of the women were currently married (94%), two were co-habiting, one was divorced and one single. Among the women who were currently married, the mean duration (SD) of marriage was 8.4 (5.9) years.

TABLE 1: Socio-demographic characteristics of respondents

Variables	Variables (N=100)	(%)
1. Age class (years):		
21 – 30	24	24.2
31 – 40	50	50.4
>41	25	25.3
Mean (SD)	35.7	5.9
2. Religion:		
Christianity	91	91
Islam	5	5
ATR*	4	4
3. Ethnic group:		
Benin	39	39
Ishan	22	22
Yoruba	5	5
Ibo	11	11
Others	21	21
4. Employment status:		
Employed	64	64
Unemployed	34	34
5. Marital status:		
Never married	2	2
Married	95	95
Separated	2	2
Cohabiting	1	1
6. Educational status:		
Primary	9	9
Secondary	30	30
Tertiary	61	61
7. Type of marriage:		
Monogamous	72	72
Polygamous	24	24
8. Marriage duration (years):		
<5	36	37
6 – 10	31	32.1
11 – 15	16	16.4
16 – 20	12	12.3
>20	2	2.2

*ATR: African traditional religion

Most (72%) were in a monogamous marriage setting. Twenty seven women were receiving treatment for primary infertility. Less than half

(49%) had been trying to achieve a pregnancy within the last five years. A full illustration of their socio-demographic characteristics is shown in Table 1.

Forty one women had probable psychiatric morbidity as with a GHQ score of 5 and above. The pattern of mental illnesses diagnosed with the PSE-9 among the women with probable psychiatric morbidity, include; depression (n=21), generalised anxiety disorder (n=9), and adjustment disorder (n=3). Eight of the 41 women with psychiatric morbidity on the GHQ, had no diagnosable mental disorder on the PSE-9. When the socio-demographic characteristics of the women with psychiatric morbidity were compared to those without psychiatric morbidity, differences obtained did not attain statistical significance (Table 2).

TABLE 2: Comparison of socio-demographic variables among women with infertility with and without psychiatric morbidity

Variables	Psychiatric morbidity present	Psychiatric morbidity absent	Statistics
1. Religion:			
Christianity	54(91.5)	37(90.3)	X^2=2.827
Islam	4(6.7)	1(2.4)	df=2
ATR	1(1.6)	3(7.3)	p=0.243
2. Ethnicity			
Benin	19(32.2)	20(50)	X^2=10.029
Ishan	16(27.1)	6(15)	df=4
Yoruba	2(3.3)	3(7.5)	p=0.348
Ibo	6(10.1)	5(12.5)	
Others	16(27.1)	6(15)	
3. Level of education:			
Primary	6(10.1)	3(7.3)	X^2=2.347
Secondary	16(27.2)	14(34.5)	df=2
Tertiary	37(62.7)	24(58.5)	p=0.672
4. Currently employed:			X^2=0.440
Yes	37(62.7)	27(69.2)	df=1
No	22(37.3)	12(30.7)	p=0.507
5. Job satisfaction:			X^2=0.578
Yes	30(81.1)	24(85.7)	df=1
No	7(18.9)	4(14.3)	p=0.749
6. Marital status:			
Never married	1(1.6)	1(1.4)	X^2=0.154
Married	56(94.9)	39(95.1)	df=2
Separated	2(3.3)	-	p=0.926
Cohabiting		1(1.4)	
7. Marriage type:			X^2=0.014
Monogamy	43 (75.4)	29 (74.4)	df=1
Polygamy	14 (24.6)	10 (25.6)	p=0.905

The mean GHQ score for those with primary infertility was 5.77 (SD 29.9) compared with the secondary infertility group with mean of 5.53 (SD 47.25). This difference in means did not attain statistical significance. (t= 0.04, df=167.3, p = 0.966). Twelve of the women with primary infertility were "probable GHQ cases" compared with thirty five of those with secondary infertility. This difference was statistically significant (χ^2=14.713, df=1 p=0.0001There was a negative, though weak correlation between the age of the respondents and their GHQ scores (r=-0.025, p=0.80). A longer duration of marriage was positively, though weakly correlated with higher GHQ scores (r=0.068, p=0.50). There was a significant and positive correlation between a longer duration of trying to achieve pregnancy and higher GHQ scores (r=0.216, p=0.03).

DISCUSSION

The prevalence (41%) of probable psychiatric morbidity found in this study is comparable to rates of 29.7% and 45% reported in previous studies conducted in this environment[7,8] and in Western cultures[12]. Psychiatric morbidity may precede, be coincident with, or result, as a reaction to a diagnosis of infertility. Twenty eight percent (28%) of the women in this study were found to be more in a polygamous marriage setting. A possible explanation being that because of the importance attached to fertility in our culture, husbands of women who are deemed infertile are encouraged to marry other wives or to have children by other women[13]. Grief and possibly depression may follow the "loss" of companionship and understanding from the spouse particularly when such extramarital arrangements have resulted in successful child-bearing; the consequence of which is breakdown in marital contracts and role[14]. As a result of these pressures, infertile women may become involved in extramarital affairs in other to achieve pregnancy especially when they are convinced that their husband is responsible for their inability to have children. They are also exposed to HIV and other sexually transmitted infections[3,15].

The significant finding of a positive correlation between duration of trying to achieve pregnancy and GHQ scores may be explained by the expected reduction in possibility of achieving conception as one grows older. This may also reflect a loss of confidence in orthodox treatment, especially since the success

rates are low. Furthermore, treatments are expensive with many not being able to afford more than one treatment cycle. Some may resort to spiritual therapists who apparently seem less expensive and make more extravagant claims of success. Some concerns have been expressed about the cost and difficulty of providing infertility treatment in the developing world [16]. In Nigeria for instance one cycle of in-vitro-fertilisation is estimated to cost between $2,000 -$2,700 but the minimum wage in Nigeria is typically no more than $720/year [18]. In addition, this study has identified that the majority of these women lack support from their partners and may even suffer various forms of abuses from husband, husband relatives and neighbours. . In fact, the husband support was a constant predictor of psychiatric morbidity (depression and anxiety) among infertile women in Ile-Ife[7]. Having a supportive partner provides social support which is regarded as an important buffer against ill health. Support is an important factor in response to stress, and the importance of a supportive environment in healing has been long recognised [18]. This lack of support for women leaves them vulnerable to a wide range of stressful events which ranges from domestic violence to political violence.

Depression was the commonest diagnosis in this study and has been noted to occur commonly in women with infertility[19]. Anxiety disorders seen in this sample may be situational, as research has shown that the high failure rates in assisted reproduction treatment programs induces anxiety in couples with infertility[20]. Furthermore, our finding of a significant correlation between longer duration of infertility and higher GHQ scores, implies that this subgroup of women require psychological support during treatment.

It is important to appreciate the scope of the problem by exploring the inter-relationships between, infertility and psychiatric morbidity as this will assist clinicians and policy makers to formulate strategies, and implement holistic interventions aimed at solving these problems. Such interventions could include the integration of professionally supervised psychological interventions as integral part of the care plan in the management of female infertility

This study has some limitations. First, we did not use a control or comparison group which might have strengthened the results of our study. Secondly, we recruited only women attending an infertility clinic. Fertility treatments are expensive in Nigeria, thus, only women able to pay for care present to this facility. We may have missed other women who either could not access the clinic due to cost or believe that other factors (social, spiritual, or cultural) are responsible for their infertility and thus seek alternative treatments like faith-based healers or herbalists.

In conclusion, women with infertility have a high prevalence of psychiatric morbidity. Depression, anxiety and adjustment disorder constitute a large proportion of this morbidity and should not be ignored by clinicians during patient evaluation and care.

REFERENCES

1. Van Balen F, Verdurmen J, Ketting E Choices and motivations of infertile couples. Patient Educ Couns. 1997; 31: 19-27.
2. Solursh DS, Schorer JW, Solursh LP. "Baby oh Baby"—advances in assisted reproductive technology. Med Law. 1997; 16: 779-88.
3. Okonofua F. Infertility and Women's Reproductive Health in Nigeria. Afr J Reprod Health. 1999; 3: 7-9.
4. Szabo CP. Psychological aspects of infertility S Afr Psych Rev. 2002; 5: 1
5. Domar AD, Zuttermeister PC, Friedman R. The psychological impact of infertility: a comparison with patients with other medical conditions. J Psychosom Obstet Gynaecol. 1993; 14(suppl):45-52.
6. Taymor ML, Brensnic K. Emotional stress and infertility. Infertility 1979; 2:39-47
7. Ukpong DI, Orji EO. Mental Health of Infertile Women in Nigeria. Turkish J Psychiatr. 2006; 17: 259-265
8. Aghanwa HS, Dare FO, Ogunniyi SO. Sociodemographic factors in mental disorders associated with infertility in Nigeria. J Psychosom Res. 1999; 46: 117-23.
9. Goldberg DP, Copper AB, Eastwood MR, Kedwan HB, Shepherd M. A standardized psychiatric interview suitable for use in community surveys. Br J Prev Soc Med. 1970; 24:18-23.
10. Abiodun OA, Adetoro OO, Ogunbode OO. Psychiatric morbidity in a gynaecological clinic in Nigeria. J Psychosom Res. 1992; 36: 485-490.
11. Wing JK, Cooper JE, Sartorius N. The measurement of psychiatric symptoms. Cambridge: Cambridge University Press; 1974.
12. Reading AE, Kerin J. Psychological aspects of providing infertility services. J Reprod Med. 1989; 34: 861-71.
13. Orji EO, Kuti O, Fasuba OB. Impact of infertility on marital llife in Nigeria. Int. J.Gynecol Obstet. 2002; 79: 61-62
14. Omoigui JO. Psychiatric morbidity and female infertility in Benin City, Nigeria; Being Part II

Dissertation for West African College of Physicians (Psychiatry) 1990.
15. Otubu JAM. (1995). Infertility.Trop.J. Obstet Gynecol. 1985; 12: 68-71.
16. Inhorn MC. (1994).Interpreting infertility; medical anthropological perspective. Soc. Sci Med. 1994; 39: 459-461
17. Swartz S. Culture and mental health. A South African view. Cape Town: Oxford Press; 1998.
18. Ellenberg J, Koren Z. Infertility and depression Int J Fertil 1982; 127: 219-23.
19. Golombok S. Psychological functioning in infertility. Hum Reprod. 1992; 7: 208-12.