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Psychosocial characteristics of female infertility in a tertiary health institution in Nigeria

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Abstract

Objectives: Women with infertility experience higher rates of psychological distress compared with their fertile counterparts. In developing countries, socio-cultural factors may aggravate this distress. We aimed to determine the prevalence of psychological distress as well as its associated socio-cultural characteristics among women attending the infertility clinic of a tertiary hospital in Nigeria.

Materials and Methods: Women (n = 100) attending an infertility clinic were consecutively recruited over a two-month period and compared with a similar number of pregnant women attending the antenatal clinic at the same hospital. A semi-structured questionnaire was designed to record socio-demographic and clinical variables. The 30-item General Health Questionnaire was used to screen for psychological distress.

Results: The prevalence of probable psychological distress was significantly higher among the infertile group compared with their fertile counterparts (P<0.001). There were significant differences between the groups in terms of their mean age (P<0.01), employment status (P<0.02), educational status (P<0.01), and duration of marriage (P<0.001). Infertile women who had previously sought help from a traditional or faith-based healer for infertility were more likely to experience probable psychological distress (P<0.017).

Conclusion: Infertile women are more vulnerable to psychological distress and require psychological support. There is a need to incorporate mental health screening and treatment in the routine care of infertile women in Nigeria.

Keywords: Infertility, psychological distress, psychosocial characteristics

Résumé

Fond/objectifs: Femmes avec l'infertilité connaissent des taux plus élevés de détresse de psychologique par rapport à leurs homologues fertiles. Dans les pays en développement, les facteurs socioculturels peuvent aggraver cette détresse. Nous visait à déterminer la prévalence de la détresse psychologique ainsi que ses caractéristiques socioculturelles associés chez les femmes qui fréquentent la clinique d'infertilité de l'hôpital tertiaire de Nigéria.

Méthodes: Femmes (n = 100) fréquentant une clinique d'infertilité ont été successivement recruté sur une période de deux mois et comparées avec un nombre similaire de femmes enceintes qui fréquentent la clinique de soins anténatals à l'hôpital de même. Un questionnaire semi-structurées a été conçu pour l'enregistrements des variables socio-démographiques et cliniques. Le questionnaire sur l'état général 30-point a été utilisée à l'écran de la détresse psychologique.

Résultats: La prévalence de la détresse psychologique probable était significativement plus élevée chez le groupe stériles par rapport à leurs homologues fertiles (P < 0,001). Il y a des différences significatives entre les groupes en fonction de leur âge moyen (P < 0,01), situation d'emploi (P < 0,02), instruction (P < 0,01) et la durée du mariage (P < 0,001). Femmes infertiles qui avaient déjà cherché aide d'un guérisseur traditionnel ou basée sur la foi d'infertilité étaient plus susceptibles de faire l'expérience de la détresse psychologique probable (P < 0,017).

Conclusion: Femmes infertiles sont plus vulnérables à la détresse psychologique et nécessitent soutien psychologique.

Il est nécessaire d'intégrer le dépistage de la santé mentale et de traitement dans la routine des femmes infertiles au Nigéria.

Mots clés: Infertilité, de détresse psychologique, les caractéristiques psychosociales

Introduction

Infertility is a global public health concern and affects approximately a tenth of couples worldwide.[1] In Nigeria, prevalence rates may be higher. A recent study reported that up to a third of women in a rural community were affected.[2] It has been described as the most important reproductive health concern of Nigerian women,[3] and accounts for between 60 and 70% of gynecological consultations in tertiary health institutions.[4]

Female infertility is stigmatized in western as well as non-western cultures.[5-7] The notion of child-bearing being a hallmark of womanhood, the high premium placed on children by extended families as well as difficulties in the procedure for legal or permanent adoption make stigmatizing attitudes experienced by infertile women particularly severe in non-western cultures. Furthermore, aside from the stereotype that infertility is solely considered 'a woman's problem,' they also experience physical and psychological abuse. Earlier reports have documented psychosocial morbidity (marital instability, social ostracism, and economic deprivation) associated with female infertility.[8-11]

Infertility can be a stressful experience that affects several aspects of a woman's life; her religious faith, self esteem, occupation, relationship with her partner, family and friends being notable examples. Common psychological symptoms reported among infertile women include depression, anxiety, and suicidal ideation.[12] These symptoms occur in a similar pattern and magnitude among patients with other medical disorders like cancer.[13]

The literature on the psychological as well as social complications of female infertility in Nigerian women is few. We aimed to conduct this study for the following reasons: first, earlier reports have been limited by small sample sizes;[9,14] second, the country is a kaleidoscope of over 250 ethnic groups which hold slightly differing attitudes on the concept of infertility, and most studies previously conducted have been in the south-western area of the country; third, the rarity of integrating psychosocial interventions within infertility management by gynecologists may stem from the paucity of knowledge of the magnitude of psychological distress and its psychosocial correlates. Thus, this study aimed to determine the prevalence of psychological distress among infertile women in Nigeria, as well as its socio-cultural characteristics.

Materials and Methods

Study setting and participants

The study was conducted at the Gynaecology and Ante-Natal clinics of a University Teaching Hospital. The facility is a 500-bed referral health centre. It provides health care services to an estimated 10 million persons across five states of the country. The index group comprised of 100 women attending the infertility clinic, who were consecutively recruited after written informed consent had been obtained. A similar number of women attending the Ante-Natal clinics (ANC) served as an unmatched comparison group.

Measures

1. A socio-demographic questionnaire was designed by the authors to elicit socio-demographic, clinical, and psycho-social variables.
2. 30-item General Health Questionnaire (GHQ-30), a screening instrument designed for the quick identification of psychological distress among respondents in primary care, general practice, or community settings.[15] The GHQ-30 has been extensively used for research purposes in Nigeria.[9,16] An optimum cut-off score of five and above has been identified in an earlier study to indicate the presence of probable psychological distress in Nigerians.[17] A culturally valid factor model analysis of the 30-item version of the GHQ has not been undertaken in this environment.

Ethical clearance

The study protocol was reviewed and approved by the Ethics Committee of the Teaching Hospital.

Procedure

Over the study period (April – June, 2008), women attending the Infertility and ANC were approached. The nature and purpose of the study was explained. Women who gave informed consent were consecutively recruited. The socio-demographic questionnaire and the GHQ-30 were self administered by the index and comparison groups. Among the index group, 107 women were approached but seven declined consent. Among women attending ante-natal care, three of the

103 consecutively recruited women also declined consent.

Data analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS-11). Descriptive statistics were used to summarize the data. Comparison of categorical and continuous variables was done using the Chi square and Student t-test, respectively. Statistical significance was set at 0.05.

Results

The mean age of women in the infertility group was significantly higher compared with women in the ante-natal group ($P<0.01$). Women in the infertility group were more likely to be employed ($P<0.02$), have a longer mean duration of marriage ($P<0.001$), and have longer years of formal education ($P<0.01$). There were no significant differences in terms of religious beliefs ($P<0.07$), marital status ($P<0.05$), or marriage type ($P<0.18$) [Table 1].

The mean (SD) total GHQ-30 score for women in the infertility group was 5.7 (5.1) and was significantly higher than that obtained from women in the antenatal group ($t = 4.65$, $df = 199$, $P<0.001$).

A majority (73%) of the women in the index group had the primary type of infertility. Furthermore, most (64%) reported experiencing some form of abuse (verbal and physical) as a result of their infertility. The commonest sources of abuse were from neighbors (15%), spouse's relatives (14%), and their spouse (10%). The remainder indicated experiencing abuse from a combination of their neighbors, spouse, or relatives. Furthermore, slightly over half (51%) of the women in the infertility group attributed the aetiology of their infertility to spiritual factors, whereas most (57%) had first sought help for infertility from a traditional or faith-based healer. A significantly higher proportion of those who had first sought help from a traditional or faith-based healer reported probable psychological distress compared with those who first sought orthodox care ($P<0.017$). A majority of women in the infertility group (78%) would not consider adoption as an alternative solution to their infertility [Table 2].

On further analysis, though women in the infertility group with probable psychological distress were more likely to be older, unemployed, have lesser years of formal education, report being dissatisfied with their jobs, experience abuse, and have a primary type of infertility, these differences did not attain statistical significance [Table 3].

Discussion

The prevalence of probable psychological distress among women with infertility in this study was high, though comparable with prevalence rates from other studies in this environment.[9,10,14] These rates are much higher than that obtained in Western

Table 1: Sociodemographic characteristics of respondents (cases and comparison group)

Variables	Cases [frd (N = 100)	Comparison Group (N = 100)	Statistic
Age class (years)			
≤35	53	90	$\chi^2 = 31.80$, df = 1, $P<0.01$
>35	47	10	
Mean Age (±SD)	35.8 (±5.9)	30.6 (±3.7)	$t = 7.47$, df = 198, $P<0.01$
Religion			
Christianity	91	97	$\chi^2 = 3.19$, df = 1, $P = 0.07$
Islam/ATR	9	3	
Employment Status			
Employed	65	49	$\chi^2 = 5.22$, df = 1, $P = 0.02$
Unemployed	35	51	
Educational Status			
<12	43	2	$\chi^2 = 45.88$, df = 1, $P = 0.01$
>12	57	98	
Marital status			
Married	95	98	$\chi^2 = 1.332$, df = 1, $P = 0.05$
Others	5	2	
Marriage type			
Monogamy	73	81	$\chi^2 = 1.807$, df = 1, $P = 0.179$
Polygamy	27	19	
Marriage duration (years)			
<5	39	76	$\chi^2 = 32.641$, df = 2, $P = 0.001$
6 – 10	31	19	
>11	30	5	

ATR = African Traditional Religion, SD = standard deviation

Table 2: Relationship between psychological distress and socio-cultural variables

Variable	Psychological distress present N = 59 (%)	Psychological distress absent N = 41 (%)	Statistics
Husbands support			
Yes	43 (74.1)	32 (76.2)	$P = 0.655$, $\chi^2 = 0.2$
No	15 (25.9)	9 (21.4)	
Suffered abuse			
Yes	41 (70.7)	23 (54.8)	$P = 0.186$, $\chi^2 = 2.638$
No	16 (27.6)	18 (42.6)	
Belief about cause of infertility			
Medical	26 (44.8)	23 (54.8)	$P = 0.285$, $\chi^2 = 0.885$
Spiritual	30 (51.7)	18 (42.6)	
First sought help			
Orthodox	18 (31)	24 (57.1)	$P = 0.017$, $\chi^2 = 8.157$
Traditional healer	30 (51.7)	11 (26.2)	
Faith healer	11 (19)	6 (14.3)	
Consider adoption			
Yes	12 (20.3)	10 (16.9)	$P = 0.631$, $\chi^2 = 0.231$
No	47 (79.7)	31 (83.1)	

Table 3: Comparison of some socio-demographic and clinical characteristics with presence of probable psychological distress among infertility group

Variables	Psychological distress present N = 59 (%)	Psychological distress absent N = 41 (%)	Statistics
Age class (years)			
<35	28 (47.5)	25 (61)	
>35	31 (52.5)	16 (39)	
Mean (SD)			$P < 0.224$
Religion			
Christianity	54 (91.5)	37 (90.2)	
Islam/ATR	5 (8.5)	4 (9.8)	$P < 0.826$
Education			
<12 years	25 (42.4)	18 (30.5)	
>12 years	34 (57.6)	23 (69.5)	$P < 0.879$
Employment status			
Yes	37 (62.7)	28 (68.3)	
No	22 (37.3)	13 (31.7)	$P < 0.565$
Job satisfaction (n = those employed)			
Yes	30 (81.1)	24 (85.7)	
No	7 (18.9)	4 (14.3)	$P < 0.622$
Marriage type (n = those married)			
Monogamy	43 (75.4)	29 (74.4)	
Polygamy	16 (25.6)	10 (25.6)	$P < 0.904$
Type of infertility			
Primary	43 (72.9)	30 (73.2)	
Secondary	16 (27.1)	11 (26.8)	$P < 0.974$

SD = standard deviation, ATR = African Traditional Religion

cultures.[19] The importance of fertility in the socio-cultural expectations of marriage in Nigeria might account for these high rates. Childlessness in most African cultures is perceived as a visitation of the wrath of the gods or retribution for some wrongs committed in this life or the life before. Awaritefe[20] noted that children are prized in African cultures and constitute an important criterion for measuring marital success or failure. Women may perceive infertility as a source of disempowerment and are likely to have their rights violated even when the aetiology of the problem is not attributable to them.[21] The prevalence of psychological distress reported in this study should be viewed with a bit of caution. The GHQ was originally developed as a screening tool for probable psychological distress in the general population and primary health care settings. It is important to note that not all individuals with a GHQ positive score have psychological distress.

In this study, the mean age of the infertile group was significantly higher than that of their fertile counterparts and mirrors similar findings from South West, Nigeria.[18] There is an increasing trend by women, especially those with a formal education to delay planned child bearing until later in their reproductive years. Omoigui,[14] Ukpong and Orji[10]

also noted that the frequency of planned abortions was significantly higher among the infertile group in their study. The combination of these factors might be associated with lower fecundity.

Women in the infertile group were also more likely to be employed compared with those in the fertile group. A similar trend was observed in Ile-Ife, South West Nigeria.[9,21] Effective fertility treatments are often expensive, with a moderate to low probability of success. Conception is often achieved after several trials, and in Nigeria payments for healthcare services are usually 'out of pocket.' Our findings may reflect the fact that infertile women may feel the need to be employed to keep them from reflecting on their infertility. A possible sampling bias for employed women who are able to afford the high cost of care cannot however be ruled out. Furthermore, the sample of women in the infertile group may not be reflective of the population of infertile women in Nigeria, because most do not have the resources to undertake expensive fertility treatments. Perhaps in this population with added financial constraints, the prevalence of psychological distress might be higher still. There was a higher representation of married women among the ante-natal group compared with the infertility group. Most cultures in Nigeria place a premium on proof of ability to bear children often as a prerequisite for marriage. Okonofua *et al*.[21] reports of a common Yoruba custom that places a high premium on a woman showing evidence of a pregnancy before a marriage ceremony is conducted. It is also considered a good sign or omen if a woman shows evidence of fertility (pregnancy) on her wedding day.

Though statistically not significant, women in the infertility group were more likely to be in polygamous marriage settings compared with the ante-natal group. Aghanwa *et al*.[9] identified polygamy as a differentiating factor among fertile and infertile groups in their study. Spouses of women who are deemed infertile are often encouraged by relatives to marry other women or to have children by other women, in order to sustain a family lineage.

A majority of the respondents in the infertility group reported having suffered one form of abuse or the other as a result of their infertility. The commonest sources of abuse were from neighbors, spouse, or spouse's relatives. Matsubayashi *et al*.[22] noted a similar relationship between the degree of psychological distress and perceived husband support among infertile women in Japan. In fact, not having spousal support was observed to independently predict psychological distress among infertile women in Ile-Ife, Nigeria.[10] A lack of support leaves women with infertility vulnerable to a range of stressful events which may range from domestic conflict to political violence. They also suffer personal grief, frustration, social stigma, ostracism, and economic deprivation.[22] Sadly, the extended family system, though beneficial in other ways, may worsen the problem of infertility. Childlessness which should be a private matter becomes an issue for open enquiry from relatives, friends, and neighbors. The stress placed on the infertile woman can be intense and impinge on her psychological and social well being.

Religion and culture appear to influence the beliefs of women on the aetiology of their infertility despite their educational attainment. In Nigeria, beliefs in supernatural causes of infertility such as witchcraft or the belief that the infertile woman has taken a vow in her earlier life not to bear children are widespread. Omoigui[14] noted that in periods of crises, Western religious beliefs may give way to traditional beliefs. Fido[12] noted that infertile Kuwaiti women attributed their infertility to evil spirits, witchcraft, and God's retribution. These beliefs may account for a majority of the respondents in this study, first seeking help from a traditional or faith-based healer. Unlike in previous studies, there was no significant association between women in the infertility group who lacked spousal support and/or experienced abuse and psychological distress. It is possible that some of the women were cautious in revealing 'sensitive' information about themselves, or have varied interpretations as to what they would consider as spousal support or abuse.

Perhaps, a preferred setting to address the psychosocial problems of female infertility would be infertility treatment programs. Training gynecologists to employ simple screening tools to identify psychological distress as well as obtaining a history of common psychosocial stressors would aid the provision of holistic care. Furthermore, employing a multidisciplinary or consultation-liaison approach with a mental health team would be ideal. Fertility treatment teams who integrate this approach with their standard care are likely to improve the outcomes from their interventions.

This study has some limitations. Employing self report measures is likely to result in recall bias. Issues concerning sexuality are sensitive in our culture and respondents might have been cautious in providing details on items in the questionnaire they consider 'private.' We did not employ the use of another instrument to determine the patterns of psychological distress as well as distinguish respondents who might have been GHQ case positive and did not have psychiatric morbidity. Our inability to use a factor model structure of

the GHQ-30 prevented the determination of the probable patterns (depression, anxiety, post-traumatic stress disorder) of psychological distress. It was also not possible to distinguish between women who only had stress but no probable co-morbid psychopathology. Lastly, the cross-sectional nature of the study design limits interpretation as to the causal relationship between the diagnoses of infertility and psychological distress.

Going forward, future studies are desirable that will assess for psychological distress and its patterns in community samples in this environment rather than in infertility clinics which are prone to sampling bias.

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