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Adversities of Being an Infertile Woman in Ogbomoso - A Semi Urban Town in Nigeria

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Abstract

Background: Infertility is a global reproductive issue for both sexes often neglected and not discussed in public.

Aim: To assess the psychosocial and sexual problems associated with female infertilityin Ogbomoso,Oyo State Nigeria.

Methods: This was a cross-sectional study among consented infertile women attendingthe teaching, general and private hospitals in Ogbomoso. The instrument of the survey was a pre-tested structured, questionnaire. Analysis of data was by computer using SPSS version 20.

Results: One hundred and eighty-nine respondents were interviewed. The mean age of the respondents was 35.0 ± 5.5 years. Almost half (46%) of the participants had tertiary education and 27% of them were professionals. Statistically significant correlation exists between the age group (p=0.001), the educational status (p=0.023) and the duration of infertility. Among the respondents, 64.02% assumed cause of infertility was act of God, 21.2% biological factors, 11.6% and 3.2% indicated punishment for past sins and witchcraft respectively. Among the respondents, 57.7% and 54.5% were found to have anxiety and depression respectively.

The prevalence of sexual function disorders among the study participants was 80.4%, 84.7%, 86.3%, 77.2%, 64% and 61.4% for desire, arousal, lubrication, orgasm, satisfaction and painful penetration respectively while 59.8% were found to have female sexual dysfunction.

Conclusion: Apart from being infertile, women were vulnerable to psychological distress and sexual dysfunction which could worsen their overall health condition. The high rate of anxiety and depression recorded in this study confirmed the high premium placed on childbearing and the burden associated with failure to meet this expectation.

Keywords: Infertile women; Psychosocial and sexual problems; Ogbomoso

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Introduction

Infertility or childlessness is a global reproductive issue for both sexes often neglected and not discussed in public. It is generally believed that more than 70 million couples suffer from infertility worldwide [1]. In sub-Saharan African, the prevalence differs widely from 9% in the Gambia, 21.2% in North western Ethiopia, between 20% to 30% in Nigeria [2-4]. The prevalence of infertility in Nigeria is clearly higher than what obtains in the developed world as over 60% of gynecological clinic consultations are infertility related [5]. The belief in supernatural causes of infertility in Africa is widespread and consist of heterogeneous reasons such as witchcraft, dissatisfaction of ancestor, sorcery from unfriendly neighbors and punishment for previous infidelity and other past mistake [6].

There are diverge findings on the contribution of various sexes to couple infertility. An increasing body of social science and biomedical evidence suggest that nearly 40% to 50% infertility is attributable to problems suffered by men [6]. The underlying cause of infertility may be a male factor in 40% cases, 40% female factor and 20% combination of both male and female factor [7].

Another study state that male directly responsible in about 30% to 40%, the female in about 40% to 55% both are responsible in 10% cases, the remaining 10% unexplained [5]. However, in Nigeria, the male factor is responsible for 34% of cases, female factor 35% while the remaining 30% abnormalities would be identifiable in both the male and female partner [8]. In spite of these

Table 1: Crosstabulation of the selected socio-demographic status of the respondents and duration of infertility.

Demographic character	Duration of Infertility			P value
	1-5 years	6-10 years	> 10 years	
	N (%)	N (%)	N (%)	
Age group				
20-24	4 (4.1)	-	-	
25-29	28 (28.6)	-	1 (2.8)	
30-34	31 (31.6)	20 (36.4)	3 (8.3)	
35-39	21 (21.4)	22 (40.0)	12 (33.3)	0.001*
40-44	12 (12.2)	12 (21.8)	14 (28.9)	
45-49	2 (2.0)	1 (1.8)	6 (16.7)	
Educational status				
No formal education	3 (3.1)	1 (1.8)	3 (8.3)	
Primary	17 (17.3)	14 (25.5)	10 (27.8)	0.023*
Secondary	28 (28.6)	15 (27.3)	11 (30.6)	
Tertiary	50 (51.0)	25 (45.5)	12 (33.3)	
Occupation				
Professional	22 (22.4)	19 (34.5)	10 (27.8)	
Skilled	21 (21.4)	7 (12.7)	6 (16.7)	
Unskilled	25 (25.5)	21 (38.2)	13 (36.1)	0.09
Students	10 (10.2)	-	-	
Housewife	20 (20.4)	8 (14.5)	7 (19.4)	
Total	**98**	**55**	**36**	

*Statistically significance

statistics, women still endure the worst of the blame for infertility; the leading male Obstetrician and Gynecologists are quick to attribute couple infertility to female factors and can therefore be blamed for the belief that is widely held [9].

In the African culture, infertility is socially constructed in many communities that is, men and women are meant to be parents and that women are especially socialized to become mother [10]. The true meaning of marriage is only fulfilled if the couple conceives and bears children; children are held as sources of pride, strength and economic fortune for the family and man's wealth and strength, the insurance for their parents in old age [11]. The most important aspect of bearing children is an assurance of family continuity [12]. Infertility therefore entails a loss of something even though previously inexistent is thought to be tangible and therefore impacts negatively on a woman's mental and social wellbeing [13]. Among infertile couples, wives experienced more emotional disturbance than the husbands. There is a gender difference in emotional reaction to infertility. Infertile women suffer social pressure from their relatives, in-laws, friends and even colleagues at work [14].

Infertility constitutes a crisis in affected Africa family. The family attendant emotional, psychological, cultural and social burdens drain the woman of self-belief and esteem. The unsolicited and often inpatient societal demand and expectations place on such woman unimaginable pressure and tension. They may become isolated and neglected consequent upon the attendant social stigmatization [15]. The typical reactions include; shock, grief, depression, anger, and frustration, as well as loss of self-esteem, self-confidence and a sense of control over one's destiny [16]. Women dealing with infertility may avoid social interaction with friends who are pregnant and

Table 2: Psychological effects of infertility on the respondents.

Psychological effects	Frequency (n)	Percentage (%)
Husband responsibility		
Yes	121	69
No	68	31
Friends support		
Satisfied	122	64.5
Neither	16	8.5
Dissatisfied	51	27
Feeling loss		
Always	20	10.6
Often	123	65.1
Never	46	24.3
Social isolation		
Always	5	2.7
Often	94	49.7
Never	90	47.6
Social pressure		
Much	38	20.1
Little	41	21.7
Not at all	96	47.6
Inferiority complex		
Much	38	20.1
Little	35	18.5
Not at all	116	61.4

Table 3: Assessment of sexual functions of the study population.

Sexual Domain	Status	
	No Case of Disorder n (%)	Case of Disorder n (%)
Desire	37(19.6)	152(80.4)
Arousal	29(15.3)	160(84.7)
Lubrication	26(13.7)	163(86.3)
Orgasm	43(22.8)	146(77.2)
Satisfaction	68(36.0)	121(64.0)
Painful penetration	73(38.6)	116(61.4)
Female Sexual Dysfunction	**76(40.2%)**	**113(59.8%)**

families who have children [17]. An American study on infertile women who filled out a standard psychological questionnaire before undergoing a stress reduction program concluded that women with infertility felt as anxious or depressed as those diagnosed with cancer, hypertension or recovering from a heart attack [18]. Furthermore, feeling a psychological distance or withdrawal from one's partner is often observed in infertile couples. More than that, infertile couple may also experience a lack of sexual satisfaction such as arousal and orgasm. This could result in avoidance of sex altogether or having sex for the sole purpose of reproduction [19].

Literacy rate is low in this environment and medical knowledge is abysmal. Diseases and disease processes are interpreted diversely to suit the different fora and situation. Many notions exist as to the cause of infertility. Taken generally, the female is held responsible for

virtually all cases of infertility. The men folk are held as above board consequent upon this, the woman is humiliated, isolated and abused. They go to varying length visiting orthodox medical practitioners, herbalists and spiritualists in search of needed reprieve and solution. This study therefore aimed at assessing the psychological, social and sexual crises suffered by the women on account of their fertility challenge. Very little has been documented about the adversity of the infertile women in this environment and this necessitated the need for this study.

Materials and Methods

This study was cross-sectional descriptive study. The participants in this study comprised of consented new and old patients with infertility who attended the Gynecological Clinic of Ladoke Akintola University of Technology Teaching Hospital (LTH), Ogbomoso, 3 selected General hospitals in the 5 Local Government and 5 private hospitals (1 from each Local Government) that were randomly selected between June 2013 and December 2013. This study employed a random sampling technique to select the respondents. The sample size was determined using previous study done that had depressive disorders in female infertility at 14% [20]. The sample size calculated was185 however total of 189 respondents were recruited for this study. Four respondents volunteered (who initially were not included in the study) participated in the study.

A structured questionnaire was employed for collection of data and it comprised of four sections. The questionnaire was pre-tested in one of the General Hospitals that was not part of the study with 12 patients with infertility. Ambiguous questions were thereafter restructured or removed.

Section 1 - Consisted of the socio-demographic characteristics of the respondents and fertility history.

Section 2 - This assessed previous management in respondents, male partner involvement in the spouse's fertility challenge and the impacts on the general woman's health.

Section 3 - Assessed the anxiety and depression status of the respondents using validated Hospital Anxiety and Depression Scale (HADS) [21]. This is made up of 14-item scale that generates ordinal data. Seven of the items relate to anxiety (Q1, 2, 4, 7, 8, 11 and 14) and 7 relate to depression (Q3, 5, 6, 9, 10, 12 and 13). Each item on the questionnaire is scored from 0-3 summation of score in each category was used for grading. Score 0-7= Nocase, 8-10= Borderline and 11^{+} =case.

Section 4 - Assessed the female sexual function by using the brief multi-dimensional Female Sexual Functioning Index (FSFI) [22]. It consists of 19 questions covering 6 domains of sexual function; Desire-(2 questions), Arousal and Lubrication (4 questions each), Orgasm, Satisfaction and Pain (3 questions each). Response to each question relates to previous month and is scored either from 0 (No sexual activity) or from 1 (indicative of dysfunction) to 5 (suggestive of normal sexual activity). Individual domain score was obtained by adding the scores of the individual question that comprise the domain and multiplying the sum by the domain factor provided in the FSFI for each domain. The full-scale score was obtained by adding the 6-domain score. The minimal score possible was 2 and maximum was 36. The cut off score to demarcate sexual dysfunction was 26.55, as obtained from a validation study and accordingly score less than 4.28, 5.08, 5.45, 5.05, 5.04 and 5.51 on desire, arousal, lubrication, orgasm, satisfaction and pain domain respectively were used to classify participant with such dysfunction reliably as used in other related study by Rohina [22].

Data collection was carried out using pre-tested structured questionnaire described above. Trained Nurses, 2 in each of the General Hospitals and Private Hospitals selected were recruited to assist with the administration of the questionnaire in their respective hospital. However, some final year Medical students assisted in the LTH. Informed consent was obtained after detailed explanation of the purpose of study was made to the respondents. Privacy in the process of the data collection was ensured in view of social stigmatization associated with infertility in our environment.

Study protocol was reviewed and approved by the ethics and research committee of the LTH and clearance obtained from the Heads of the other hospitals used. The raw data from the field was screened for inconsistencies and duly edited making appropriate adjustments where necessary. Analysis of data was by computer using SPSS (statistical package for social sciences) SPSS version 20. Descriptive statistics were used to summarize the data and further assessment was done using Chi square for significant testing. The variables were considered statistically significant if p-value was less than 0.05.

Results

One hundred and eighty-nine respondents were interviewed for this study. The mean age of the respondents was 35.0 ± 5.5 years. Participants with tertiary level of education were 46%. On the occupational status of the respondents, 27% of the respondents were professionals and 18% were skilled workers.Statistically significant correlation exists between the age group, the educational status and the duration of infertility (Table 1).

Almost 1/3 (28.1%) of the participants had primary infertility while the rest 71.9% presented with secondary infertility. On the distribution of the duration of infertility, the proportion of respondents whose duration of infertility ranged between 1 and 5 years was 51.9% and the rest indicated that their infertility duration was 6 years and above. Among the respondents, a significant proportion of the participants 64.0% indicated that the assumed cause of infertility was act of God, 21.2% stated that it was due to biological factors, 11.6% and 3.2% indicated punishment for past sins and witchcraft respectively as the assumed cause of the infertility.

In term of psychological effects of infertility on respondents, majority of the respondents 64.5% indicated that they were satisfied with their friends' support, 27% were dissatisfied and 8.5% were neither satisfied nor dissatisfied with support from friends. Furthermore, over half (52.4%) of the participants experienced some form of social isolation, 75.7% and 38.6% experienced feeling loss and inferiority complex respectively (Table 2).

Among the respondents, 57.7% were found to have case of anxiety, 37% no case of anxiety and 5.3% border line status while 54.5% had depression case, 39.7% no case of depression and 5.8% borderline status. The prevalence of sexual function disorders among the study participants was 80.4%, 84.7%, 86.3%, 77.2%, 64% and 61.4% for desire, arousal, lubrication, orgasm, satisfaction and painful penetration respectively while 113(59.8%) were found to have female sexual dysfunction (Table 3).

In the same vein, concerning the depression status, statistically

Table 4: Cross-tabulation of women's characteristics and anxiety, depression and Sexual Dysfunction (SD) status.

Variable	Anxiety (n=109)			Depression (n=103)			Sexual Dysfunction (n=113)		
	n (%)	X^2	*p*–value	n (%)	X^2	*p*–value	n (%)	X^2	*p*–value
Age group									
20 – 24	2 (1.8)			1 (1.0)			0 (0)		
25 – 29	16 (14.7)			15 (14.6)			14 (12.4)		
30 – 34	30(27.5)	4.384	0.928	28 (27.2)	6.537	0.768	37 (32.7)	22.49	0.013*
35 – 39	34(31.2)			32 (31.1)			36 (31.9)		
40 – 44	22(20.2)			22 (21.4)			22 (19.5)		
45 – 49	5(4.6)			5 (4.9)			4 (3.5)		
Educational Status									
None	5 (4.6)			5 (4.9)			3 (2.7)		
Primary	29 (26.6)	23.36	0.001*	29 (28.2)	31.84	<0.001	25 (22.1)	10.62	0.101
Secondary	40 (36.7)			39 (37.9)			39 (34.5)		
Tertiary	35 (32.1)			30 (29.1)			46 (40.7)		
Occupational Status									
Professional	19 (17.4)			16 (15.5)			27 (23.9)		
Skilled	12 (11.0)	49.56	<0.001	11 (10.7)	61.7	<0.001	13 (11.5)	26.56	0.001*
Unskilled`	43 (39.4)			42 (40.8)			36 (31.9)		
Student	4 (3.7)			3 (2.9)			6 (5.3)		
Housewife	31 (28.4)			31 (30.1)			31 (27.4)		
Infertility Duration									
1 – 5 years	41 (37.6)	25.25	<0.001	38 (36.9)	24.9	<0.001	48 (42.5)	14.82	0.022*
6 – 10 years	38 (34.9)			38 (36.9)			37 (32.7)		
>10 years	30 (27.5)			27 (26.2)			28 (24.8)		
Infertility type									
Primary	35 (32.1)	2.639	0.267	34 (33.0)	3.425	0.18	34 (30.1)	0.967	0.617
Secondary	74 (67.9)			69 (67.0)			79 (69.9)		
Assumed cause of Infertility									
Witchcraft									
Punishment for sin	5 (4.6)	18.39	0.495	5 (4.9)	17.79	0.398	4 (3.5)	21.47	0.039*
Biological	10 (9.2)			10 (9.7)			9 (8.0)		
Act of God	19 (17.4)			18 (17.5)			24 (21.2)		
	74 (67.9)			69 (67.0)			74 (65.5)		
Spouse Support									
Yes	100(91.7)	0.171	0.918	95 (92.2)	0.446	0.8	12 (10.6)	2.678	<0.001
No	9 (8.3)			8 (7.8)			101 (89.4)		

*statistical significance at p–value <0.05, X2-chi square.

significant correlation exists amidst the educational status, occupational status and their infertility duration of the study participants, but no statistically significant correlation amidst the age and type of infertility of the respondents. More importantly, prevalence of sexual dysfunction was very high among respondents without spousal support as shown in Table 4.

Discussion

In the context of cultural values and the process of parenthood role socialization, married couples in general, and infertile couple in particular, are under severe social pressures to meet the expectations of performing traditional feminine and masculine roles particular with reference to their ability to produce children. In this study, the mean age of the infertile women was high when compared with previous study and this could be as a result of increasing trend by women especially those with a formal education to delay planned childbearing until later in their reproductive years [23].

Different societies hold different attitudes and beliefs regarding the etiology of infertility [24]. Religion and culture appear to influence the beliefs of women on the etiology of their infertility despite their educational attainment. In Nigeria, beliefs in supernatural causes of infertility or belief that the infertile woman has taken a vow in her "earlier" life not to bear children are widespread [10]. In this study, the assumed cause of infertility among the respondents, 64% attributed the cause to an act of God and 21.2% to biological factor, 3.2% and 11.6% of the women linked their infertility to witchcraft

and punishment for past sins respectively, this corroborated the findings in the work done by Fido which noted that infertile Kuwaiti women attributed their fertility to evil spirits, witchcraft and God's retribution [23].

Furthermore, the prevalence of psychological distress among women with infertility in this study was high and the importance of fertility in the sociocultural expectation of marriage in Yoruba tribe might account for the high rate. This study has shown that infertile women show high degree of anxiety and depression. These findings are in line with the previous study done by Philip Teg which reported that inability to conceive is correlated with social isolation, anxiety and depression [9] and it also corroborates the findings of the work of Michael Craig Miller which showed that infertile women felt as anxious or depressed as those that were diagnosed of chronic diseases [18].

The data of this study were further analyzed to see sociodemographic correlates to psychosocial problems in female infertility and this showed that there is statistically significant correlation between anxiety, and depression status of the infertile women and educational and occupational status so also the duration of infertility. These findings are in agreement with the findings of Fatameh et al. which showed that anxiety and depression have a significant relation with educational level, job of women and duration of infertility [21]. Domer reported that anxiety levels are the highest in the second and third year of infertility and that these levels decrease after 6 years [25] whereas study by Fatameh revealed that anxiety and depression were common after 4-6 years of infertility [21] which was the trend observed in this study. With respect to age effect, this study showed that there is no statistically significant correlation between the age of infertile woman and anxiety and depression status and this was in line with the findings of work of Sultan which showed that women's age of infertile couples was not associated with varying degrees of depression, anxiety and marital satisfaction [17].

The association of infertility and sexual dysfunction is overlapping. Infertility may interact with a woman's sexual expression by causing or exacerbating sexual problems as a consequence of diagnosis, investigation and treatment. Conversely, sexual problems may contribute to infertility. In this study, the most common sexual problem in infertile women was lubrication disorder 86.3% and arousal disorder 84.3%. Pain dysfunction was the least common however, in Audu's study on 97 Nigerian infertile women prevalence of arousal disorder and pain were higher [26]. Jain et al observed pain, desire disorder and orgasmic failure were the most common dysfunction [27].

In a study by Rohina based on total sexual functions score, 55.6% of their participants had female sexual dysfunction. The commonest dysfunction was orgasmic (91.7%), followed by lubrication (89.2%) and female sexual dysfunction was more prevalent in illiterate women and older age group [22] and concluded that illiteracy is an independent risk factor associated with female sexual dysfunction. Similarly, in this study, association between educational status, age of the women and female sexual dysfunction was observed to be significant however, contrary to expectation, more of the women that enjoyed spousal support were found to have anxiety and depressive disorders, although what could be responsible for this observation is still not clear.

Conclusion

This study has shown that beyond the complaint of inability to conceive that brings infertile women to the hospital; this group of women is vulnerable to psychological distress and sexual dysfunction which could worsen their overall health condition. The high rate of anxiety and depression among infertile women recorded in this study could be explained by the high premium placed on childbearing and the burden associated with failure to meet this expectation of reproductive life in Ogbomoso land.

Limitations

1. The cross-sectional nature of the study design limits interpretation as to the causal relationship between the diagnoses of infertility and psychological distress.

2. Issues concerning sexuality are sensitive in Yoruba culture and respondents might have been cautious in providing details on items in the questionnaire they considered "private" though their confidentiality was ensured and participants' privacy were preserved.

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