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## Determinants of psychological distress and Associated Factors among infertile women attending a fertility clinic in Nigeria

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### Abstract

**Background:** Understanding the various psychosocial and marital factors contributing to the distress found to associate with infertility, is important in alleviating the burden of infertility among infertile women (IW). **Objectives:** To determine the prevalence, burden and predictors of psychological distress among women living with infertility.

**Methods:** This study comprises of 156 women attending fertility clinics, as case and 155 fertile healthcare workers as control. A semi-structured questionnaire was designed to record sociodemographic and other clinical variables, while 28-item General Health Questionnaire was used to assess for psychological distress among the respondents.

**Results:** The mean ages of infertile women (IW) and the control group were 34.9±6.21 and 33.75±5.65, respectively. Psychological distress was significantly more prevalent among IW (31.4%) compared to the control group (9.7%) ( $p<0.05$ ). Several psychosocial factors were significantly associated with psychological distress among IW ( $p<0.05$ ): Marital age, couples living apart, the husband's occupation, being in a previous marriage, the husband having at least one child with another woman, and a poor understanding of the cause of infertility.

Significant marital stressors ( $p<0.05$ ) linked to psychological distress: stress in marital and sexual relationships, impaired quality of the spousal relationship, strained relationships with others inside and outside the family, low self-esteem, poor confidence, difficulty controlling emotions, feelings of defectiveness and reduced competence, and changes in social and family networks or interactions. Women experiencing these stressors were also more likely to report abuse or hostility within the last month compared to the control group. Logistic regression analysis identified the following predictors of psychological distress ( $p<0.05$ ): Married after 30 years, the husband having a child outside home, polygamous marriage, poor knowledge of the cause of infertility, and previous infertility treatment.

**Conclusion:** Integrating mental health screening and care into the routine management of infertile women in infertility clinics is essential.

**Keywords:** Prevalence, psychological distress, psychosocial factors, predictors, infertility

### Introduction

Infertility is a major public health concern, affecting roughly 10% of couples worldwide, particularly in developing countries<sup>[1, 2]</sup>. Fertility refers to the ability to conceive and reproduce off spring while infertility is defined as the inability and failure to achieve pregnancy after at least 12 months of regular unprotected sexual intercourse<sup>[3]</sup>. Among women Infertility is considered one of the most critical reproductive health challenges, accounting for 60-70% of gynecological consultation in tertiary health institutions<sup>[2]</sup>. For many women, the burden of infertility has made life extremely difficult, as they struggle with unmet expectations of marital life and face social stigma or ostracism for not fulfilling societal norms of womanhood<sup>[2]</sup>.

According to the World Health Organization (WHO) infertility affects approximately 25% of married women aged 18-44 in developing countries<sup>[1]</sup>. In Nigeria, the prevalence ranges from 20-30%<sup>[4]</sup>. Infertility is a source of both physical and psychological stress for both men and women<sup>[5]</sup>. The causes of infertility vary, with factors such as azoospermia in men, ovulatory dysfunction, and tubal-peritoneal diseases in women<sup>[6]</sup>. Psychological distress, including symptoms of anxiety and depression, tends to be more pronounced in infertile women (IW) compared to their male counterparts<sup>[5]</sup>.

Studies show that a significant proportion (37.5-52.7%) of IW experience psychological distress, much higher than the general population [7].

Women living with infertility often face personal, interpersonal, social and religious challenges [8]. In developing countries, these challenges are exacerbated by psychosocial issues such as stigma, deprivation and neglect, violence, marital discords and mental health problems [9, 10]. Infertile women may also suffer from physical and emotional abuse, abandonment, economic deprivation and social ostracism [11]. The negative sociocultural perception that women are primarily responsible for infertility further amplifies the burden, especially when they seek treatment. This not only undermines their reproductive health and rights but also intensifies their emotional distress [9].

The resultant presence of psychological distress among infertile women has shown to negatively affect the treatment outcome [12, 13], further deteriorating their physical and mental well-being when compared with their fertile counterparts [14, 15].

Studies have identified some psychosocial factors contributing to psychological distress in fertile women, including occupational status, educational level, duration of the marriage and support from the spouse [2].

This study aims to assess the prevalence, psychosocial and marital factors, as well as predictors of psychological distress among infertile women (IW) compared to a control group. This study will further bring to the fore the need for psychological treatment for IW with burden of infertility.

## Methodology

### Study Design and procedure

The study is a cross-sectional study involving 156 cases of IW and 155 as control. It was conducted at Ekiti State University Teaching Hospital (EKSUTH), Ado-Ekiti, Ekiti State, Nigeria, a tertiary healthcare facility serving Ekiti state and neighboring regions. The respondents in both groups were recruited consecutively after providing informed consent.

The inclusion criteria for the case group: currently married women aged 18-50 years, a gynecologist-confirmed diagnosis of infertility and consent to participate in the study. The control group comprised 155 fertile, married women from the community, aged 18-50 years, who were not breastfeeding and consented to participate.

### Study instruments

- The sociodemographic questionnaire: specifically designed by the authors for this study to identify potential stressful factors among respondents.
- GHQ-28: It was administered to assess psychological distress. This screening tool is designed to identify psychological distress in primary care, general practice or community settings. It has been widely used for research

purposes in Nigeria [16]. In this study, respondents with a GHQ-28 score of 5 or above were classified as experiencing probable psychological distress. This cutoff was established in a previous study [17].

### Data Analysis

Data were analyzed using the IBM-Statistical Package for Social Sciences (IBM-SPSS) software version 23. The results were presented in frequency tables and relationships examined using Chi-square test or Fischer's exact test as appropriate. Binary logistic regression was employed to identify predictors of psychological distress. A P-value less than 0.05 was considered statistically significant.

### Results

Three hundred and eleven women took part in this study. This comprised 156 IW attending a fertility clinic, while 155 were the control group.

### Socio-demographic characteristics of the respondents

Table 1 shows the socio-demographic distributions of respondents. About half of IW (45%) and the control groups (47%) were in the executive occupation cadre, while less than half (43%) of IW were in the lowest occupation cadre, against 51% (just more than half) of the control group. These differences were not statistically significant ( $p$ -value=0.077). While IW had mean age of 34.96 ( $\pm$ 6.21), the mean age of the control was 33.75 ( $\pm$ 5.65) years. This difference in the mean ages was also not statistically significant ( $t = 1.783$ ,  $P=0.076$ ). Both groups were well educated, having acquired tertiary education, 71.8% of IW against 81.3% of the control group. The difference in the educational levels between the two groups was not significant ( $p > 0.05$ ). Over 90% of the subjects in each group were married and living with their husbands with no significant statistical difference between the groups ( $p > 0.05$ ). Similarly, there were no statistically significant differences between the two groups as regards tribe, religion, place of residence (urban-rural) and average monthly income ( $p$ -values  $> 0.05$ ).

However, a higher proportion of IW (21%) had been in previous marriages compared to the control (6.5%). Similarly, more of the husbands of IW (21%) had children from other women compared to the control group (2%). These differences were statistically significant ( $p$ -values  $< 0.001$ ). In the same vein, 6% of the IW gave their inability to conceive as the reason for their husbands having children from other women none of such reason was reported among the control. These differences were statistically significant ( $P=0.019$ ). The results also showed that more of IW (13.5%) were in polygamous marriage compared with control (5%), this difference was statistically significant ( $P=0.012$ ).

**Table 1:** Socio-demographic characteristics of the respondents

Variable	IW N=156 (%)	Control N=155 (%)	DF	$\chi^2$	P-Value
<b>Age (in years)</b>					
21-30	46(29.5)	48(31.0)	2	0.843	0.656
31-40	83(53.2)	86(55.5)			
41-50	27(17.3)	21(13.5)			
Mean $\pm$ SD	34.96 $\pm$ 6.21	33.75 $\pm$ 5.65		1.783 <sup>t</sup>	0.076
Range	21-50	21-50			
<b>Educational status</b>					
No school	6(3.8)	2(1.3)	3	5.034 <sup>F</sup>	0.165
Primary	11(7.1)	10(6.5)			

Secondary	27(17.3)	17(11.0)			
Tertiary	112(71.8)	126(81.3)			
<b>Tribe</b>					
Yoruba	142(91.0)	144(92.9)	1	0.371	0.543
Others	14(9.0)	11(7.1)			
<b>Religion</b>					
Christianity	152(97.4)	145(93.5)	1	2.733	0.098
Islam	4(2.6)	10(6.5)			
<b>Place of residence</b>					
Urban	133(85.3)	131(84.5)	1	0.033	0.855
Rural	23(14.7)	24(15.5)			
<b>Couple living status</b>					
Staying together	144(92.3)	148(95.5)	1	1.367	0.242
Not staying together	12(7.7)	7(4.5)			
<b>Occupational status</b>					
Executive positions	70(44.9)	73(47.1)	2	5.109	0.077
Intermediate positions	19(12.2)	31(20)			
Lower positions	67 (42.9)	51(32.9)			
<b>Average monthly income (naira)</b>					
≤ 30000	36(23.1)	31(20.0)	1	0.435	0.509
> 30000	120(76.9)	124(80.0)			
<b>Ever been married before</b>					
Yes	32(20.5)	10(6.5)	1	13.160	<0.001*
No	124 (79.5)	145 (93.5)			
<b>Enjoy support from husband</b>					
Yes	129(82.7)	125(80.6)	1	0.218	0.641
No	27(17.3)	30(19.4)			
<b>Husband with child from another woman</b>					
Yes	33(21.2)	3(1.9)	1	28.055	<0.001*
No	123(78.8)	152(98.1)			
<b>Type of marriage</b>	N=156	N=155			
Monogamy	135(86.5)	147(94.8)	1	6.335	0.012*
Polygamy	21(13.5)	8(5.2)			

### IW: Infertile Women

$\chi^2$ : Chi square test; F: Fisher's exact test; \*:  $p$  value <0.05; t: Independent samples T-test

### 2. Psychological distress among the respondents.

Table 2 shows that 31% of IW experienced psychological distress compared to only 10% of the control, this difference was statistically significant ( $p=0.001$ )

**Table 2: Psychological distress among the respondents**

Variable	IW N=156	Control N=155	DF	$\chi^2$	P-Value
<b>Psychological distress</b>					
Yes	49(31.4)	15(9.7)	1	22.468	0.001*
No	107(68.6)	140(90.3)			

$\chi^2$ : Chi square test; F: Fisher's exact test; \*:  $p$ -value <0.05; IW: Infertile Women

### 3. Psychosocial factors and psychological distress among IW

Table 3 shows the relationship between marital and clinical characteristics of IW and psychological distress. A significantly higher proportion almost double, 44% of IW whose spouses were in lower occupation status experienced psychological distress compared to that of their colleagues (approximately 24%) whose spouses were high-ranking civil servants and professionals ( $p$ -value =0.002) in the same vein, IW who married at older age (> 30 years) were more twice more likely to experience psychological distress compared to their colleagues who married at younger age ( $\leq 2.5$  years) ( $t=2.408$ ,  $P=0.01$ ). Also IW who had psychological distress had significantly higher mean age ( $p$  value=0.017). In addition, IW who were previously ( $\chi^2=4.469$ ,  $P=0.035^*$ ), had a husband with a child from another

woman ( $\chi^2=4.469$ ,  $P=0.035$ ), or in a polygamous marriage ( $\chi^2=10.474$ ,  $P=0.001$ ) were significantly more likely to experience psychological distress. A greater proportion of IW who believed their infertility was the will of God, experienced psychological distress compared to those who did not have such belief; same for those who had sought for infertility treatment previously elsewhere compared to their corresponding counterparts. These differences were statistically significant, ( $p$ -value = 0.004 and 0.001 respectively). Also, a significantly higher proportion of IW who had previously gone for traditional treatment (58%) had psychological distress compared to that (35%) of those who had not ( $P=0.049$ ).

Other relationships between marital variables and psychological distress are as in Table 5.

**Table 3: Psychosocial factors and psychological distress among IW**

Variable	Psychological distress		Total N=156	DF	$\chi^2$	P-Value
	Yes N=49(%)	No N=107(%)				
<b>Husband's occupation</b>						
Executive positions	23(23.7)	74(76.3)	97	2	7.057	0.029*
Intermediate positions	8(44.4)	10(55.6)	18			
Lower positions	18(43.9)	23(56.1)	41			
<b>Age at marriage (years)</b>						
≤ 25	8(26.7)	22(73.3)	30	3	12.282	0.002*
26-30	24(24.7)	73(75.3)	97			
> 30	17(58.6)	12(41.4)	29			
Mean±SD	29.39±5.07	27.79±3.16			2.408 <sup>t</sup>	0.017*
Range	15-42	21-37				
<b>Have been in marriage before</b>						
Yes	15(46.9)	17(53.1)	32	1	4.469	0.035*
No	34(27.4)	90(72.6)	124			
<b>Enjoy support from your husband</b>						
Yes	42(32.6)	87(67.4)	129	1	0.456	0.649
No	7(25.9)	20(74.1)	27			
<b>Couple living status</b>						
Staying together	41(28.5)	103(71.5)	144	1	<b>0.010*</b>	0.010*
Not staying together	8(66.7)	4(33.3)	12			
<b>Occupation</b>						
Executive positions	15(19.5)	62(80.5)	77	2	<b>0.003*</b>	0.003*
Intermediate positions	5(41.7)	7(58.3)	12			
Lower position	29(43.3)	38(56.7)	67			
<b>Income</b>						
≤ 70000	7(19.4)	29(80.6)	36	1	0.078	0.078
> 70000	42(35.0)	78(65.0)	120			
<b>Husband with a child from another woman</b>						
Yes	17(51.5)	16(48.5)	33	1	7.852	0.005*
No	32(26.0)	91(74.0)	123			
<b>Reasons why husband has a child from another woman</b>						
Before marriage	16(53.3)	14(46.7)	30	1	2.666 <sup>F</sup>	0.352
During marriage	1(100.0)	0(0.0)	1			
Due to inability to conceive	0(0.0)	2(100.0)	2			
<b>Type of marriage</b>						
Monogamous	36(26.7)	99(73.3)	135	1	10.474	0.001*
Polygamous	13(61.9)	8(38.1)	21			
<b>Perceived causes of infertility **</b>						
<i>Gods will</i>						
Yes	9 (69.2)	4 (30.8)	13	1	9.416 <sup>F</sup>	0.004*
No	40 (28.0)	103 (72.0)	143			
<b>Previously gone for treatment</b>						
Yes	36(44.4)	45(55.6)	81	1	13.286	0.001*
No	13(17.3)	62(82.7)	75			
<b>Places went for treatment (N=81)**</b>						
<b>Hospital</b>						
Yes	36 (46.2)	42 (53.8)	78	1	2.492 <sup>F</sup>	0.250
No	0 (0.0)	3 (100.0)	3			
<b>Traditional</b>						
Yes	19 (57.6)	14 (42.4)	33	1	3.889	0.049*
No	17 (35.4)	31 (64.6)	48			

\*\*: Multiple responses allowed

 $\chi^2$ : Chi square test; F: Fisher's exact test; \*: p-value < 0.05; IW: Infertile**4 Marital factors associated with Psychological stress factors among respondents**

As shown in the Table 4, IW were more likely to experience more associated stress factors such as stress on marital and sexual relationship, impaired quality of relationship between husband and wife, impaired quality of relationship with others within and outside the family compared with the control group. These differences were statistically significant (p-values < 0.05). IW were also more likely to have low self-esteem, poor confidence, problem in controlling emotions, feeling of

defectiveness and reduced competence, change in social and family network/interaction were more likely to have experienced any form of abuse or hostility in the last one month before interview compared to the control group. These findings were statistically significant. However, as far as the specific forms of abuse suffered are concerned, there was no significant difference between the two groups, (p-values >0.05). Similarly, there were no statistically significant differences, in terms of supports from immediate family and source of abuse or hostility, between the two groups (p-values >0.05).

**Table 4:** Marital factors associated with Psychological stress factors among respondents

Variable	IW N=156 (%)	Control N=155 (%)	DF	$\chi^2$	P-Value
<b>Stress on marital and sexual relationship</b>					
Yes	50(32.1)	18(11.6)	1	119.011	<0.001*
No	106(67.9)	137(88.4)			
<b>Impaired quality of relationship between husband and wife</b>					
Yes	55(35.3)	28(18.1)	1	11.745	0.001*
No	101(64.7)	127(81.9)			
<b>Impaired quality of relationship with others within and outside the family</b>					
Yes	48(30.8)	17(11.0)	1	18.440	<0.001*
No	108(69.2)	138(89.0)			
<b>Problems with being confident</b>					
Yes	40(25.6)	23(14.8)	1	5.616	0.018*
No	116(74.4)	132(85.2)			
<b>Problem in controlling emotions</b>					
Yes	59(37.8)	40(25.8)	1	5.172	0.023*
No	97(62.2)	115(74.2)			
<b>Feeling of defectiveness and reduced competence</b>					
Yes	51(32.7)	19(12.3)	1	18.613	<0.001*
No	105(67.3)	136(87.7)			
<b>Change in social and family network/interaction</b>					
Yes	51(32.7)	21(13.5)	1	16.016	<0.001*
No	105(67.3)	134(86.5)			
<b>Any form of social stigma</b>					
Yes	38(24.4)	9(5.8)	1	20.860	<0.001*
No	118(75.6)	146(94.2)			
<b>Loss of self esteem</b>					
Yes	44(28.2)	15(9.7)	1	17.362	<0.001*
No	112(71.8)	140(90.3)			
<b>Being deprived of involvement in community activities</b>					
Yes	42(26.9)	10(6.5)	1	23.400	<0.001*
No	114(73.1)	145(93.5)			
<b>Suffers abuse</b>					
Yes	42(26.9)	5(3.2)	1	34.034	<0.001*
No	114(73.1)	150(96.8)			
<b>Specific forms of abuse suffered (N=47)</b>					
Verbal	12(28.6)	4(80.0)	2	4.111 <sup>F</sup>	0.112
Physical	9(21.4)	0(0.0)			
Both	21(50.0)	1(20.0)			
<b>Enjoy support from immediate family</b>	N=156	N=155			
Yes	70(44.9)	83(53.5)	1	2.342	0.126
No	86(55.1)	72(46.5)			
<b>Experience of any form of abuse or hostility in the last one month</b>	N=156	N=155			
Yes	39(25.0)	9(5.8)	1	21.945	<0.001*
No	117(75.0)	146(94.2)			
<b>Source of abuse or hostility</b>	N=39	N=9			
Husband	18(46.2)	5(55.6)	3	5.208 <sup>F</sup>	0.106
Other wives	6(15.4)	1(11.1)			
Siblings	4(10.3)	3(33.3)			
Husbands relatives	11(28.2)	0(0.0)			
<b>Job satisfaction (those that were employed)</b>	N=139	N=155			
Yes	104(74.8)	69(44.5)	1	27.788	<0.001*
No	35(25.2)	86(55.5)			

$\chi^2$ : Chi square test; F: Fisher's exact test; \*: p-value <0.05; IW: Infertile Women.

### Predictors of psychological distress

Table 5 shows the predictors of psychological distress among IW from binary logistic regression. As shown in the table, age at marriage, type of marriage, perceived cause of infertility and having ever gone for treatment by IW were independently associated with psychological distress. The odd of IW who got married at ages above (>) 30 developing psychological distress was 7 times that of those who got married at ages less than or equal to 25 years (DF=1, OR: 7.265; 95% CI: 2.083-15.341; p value: 0.002). Also, the odd of IW who were in monogamous marriage developing psychological distress was 5 times lesser

compared to those who were in polygamous marriage, (DF=1, OR: 0.200; 95% CI: 0.052-0.772; p value: 0.020). Similarly, IW who perceived the cause of infertility as the will of God were 4 times more likely to develop psychological distress compared to those who did not share such belief (DF=1, OR: 4.202; 95% CI: 2.078-13.452; p-value: 0.007). Also, IW who had gone for treatment previously were about 3 times more likely to develop psychological distress compared to those who had not (DF=1, OR: 2.955; 95% CI: 1.154-7.571; p value: 0.024).

**Table 5:** Predictors of psychological distress

Variable	B	DF	OR	95% CI		P-Value
				Lower	Upper	
<b>Educational status</b>						
No school	2.477	1	11.907	5.992	14.939	0.051
Primary	-0.606	1	0.546	0.101	2.955	0.482
Secondary	0.155	1	1.168	0.305	4.469	0.821
Tertiary <sup>REF</sup>			1			
<b>Current marital status</b>						
Staying together	-1.681	1	0.186	0.011	3.057	0.239
Not staying together <sup>REF</sup>			1			
<b>Occupation</b>						
A <sup>REF</sup>			1			
B	-0.765	1	0.466	0.112	1.931	0.292
C	-0.488	1	0.614	0.138	2.732	0.522
D	0.538	1	1.712	0.608	4.824	0.309
E	-2.184	1	0.113	0.013	1.005	0.051
<b>Husband's occupation</b>						
A <sup>REF</sup>			1			
B	0.325	1	1.383	0.405	4.723	0.605
C	0.841	1	2.319	0.499	10.777	0.283
D	-0.060	1	0.941	0.116	7.661	0.955
E	0.303	1	1.355	0.186	17.148	0.815
<b>Age at marriage (years)</b>						
≤ 25 <sup>REF</sup>			1			
26-30	0.584	1	1.794	0.556	5.789	0.328
> 30	1.983	1	7.265	2.083	15.341	0.002*
<b>Ever been married before</b>						
Yes	0.093	1	1.098	0.240	5.031	0.904
No <sup>REF</sup>			1			
<b>Husband with child from another woman</b>						
Yes	0.327	1	1.386	0.346	5.555	0.645
No <sup>REF</sup>			1			
<b>Type of marriage</b>						
Monogamy	<b>-1.610</b>	1	0.200	0.052	0.772	0.020*
Polygamy <sup>REF</sup>			1			
<b>Perceived cause of infertility</b>						
God's will						
Yes	2.653	1	4.202	2.078	13.452	0.007*
No <sup>REF</sup>			1			
<b>Ever gone for treatment</b>						
Yes	1.084	1	2.955	1.154	7.571	0.024*
No <sup>REF</sup>			1			
<b>Places gone for treatment</b>						
Traditional healers						
Yes	-0.341	1	0.711	0.220	2.297	0.569
No <sup>REF</sup>			1			

B: Coefficient of Binary Logistic Regression; OR: Odds ratio; 95% CI: 95% Confidence Interval; \*: DF= 1, p-value <0.05; IW: Infertile Women

## Discussion

This study investigated the prevalence of psychological distress among IW seeking treatment at a fertility clinic. The respondents were relatively young with a mean age of 34.96±6.21 years, consistent with findings from a previous similar study (2), this is unsurprising, as age is a critical factors influencing women's desire to fulfill societal expectations of motherhood. Most IW aim to conceive as early as possible to avoid the onset of menopausal symptoms.

This study found a higher prevalence of psychological distress among IW when compared with control (31.4% and 10% respectively, as shown in Table 3). These values were lower than those reported in earlier studies, potentially reflecting improvements in healthcare delivery over the years, likely driven by increased awareness and better access to healthcare [2, 18, 19].

This study also found that higher proportion of IW who had been in previous marriage(s), had spouses with children from

other women or were in polygamous marriages experienced greater psychological distress compared to the control group. These factors likely contribute to the burden of infertility and may potentially worsen infertility treatment outcomes for IW (Tables 1, 2, 4 and 5). In case the husband of IW seek to resolve the infertility by having child from other women or pursuing divorce to marry another woman, this dynamics has been shown to exacerbate psychological distress among IW, particularly in polygamous relationships [20].

Additionally, factors identified in this study that contribute to psychological distress among IW included the spouse's poor employment status, delayed marriage, couples living separately. Lack of understanding regarding the causes of infertility and previous unsuccessful treatments were other factors. Psychological distress was more prevalent among women who married after the age of 30 years, suggesting that late-marriage may increase susceptibility to psychological distress among IW. This finding is consistent with reports from other studies [7].

Similarly, in the mixed study method by Hess *et al.*, it was observed that women who got married at older age experienced psychological distress due to various worries associated with infertility challenges [21]. In contrast, the prevalence of psychological distress was lower among IW who lived with their husbands, a finding consistent with reports from comparative studies on IW [22, 23]. This can be attributed to the emotional support, sense of belonging, security and confidence often associated with cohabitation with their spouse.

Additionally, gainful employment has been reported as a buffer against psychological distress and a motivator for seeking infertility treatment [2]. Conversely, poor financial and employment status may limit the ability to afford treatment costs [24]. A study by Orji *et al.*, found that marital stress significantly contributed to psychological distress among IW [25]. Likewise, poor knowledge and a lack of understanding about the possible causes of infertility as contributors to psychological distress among IW, for example, the belief that infertility is a form of divine punishment for past sins could trigger psychological distress while also influencing treatment-seeking behavior [11]. This distress could manifest as depression or anxiety.

A combination or interplay of marital factors identified in this study appears to contribute to the psychological distress experienced by IW compared to the control group (Table 4). These factors include stressful marital and sexual relationships, impaired quality of relationship between spouses, strained relationship with others within and outside the family, lack of confidence, difficulty controlling emotions, feeling of defectiveness and reduced competence, changes in social and family networks or interactions, stigmatization, loss of self-esteem, exclusion from community participation and experiences of abuse or hostility within the past month. Additionally, lack of job satisfaction was also noted as a contributing factor.

Previous research has underscored the negative impact of marital and psychological stressors on the psychological well-being of IW [18, 19], highlighting the importance of comprehensive interventions to address these challenges.

Logistic regression analysis (Table 5) identified four independent predictors of psychological distress among IW: older age at marriage, polygamous marriage, perceived cause of infertility and prior infertility treatment. Women who married after the age of 30 were found to have a nearly sevenfold increased risk of psychological distress compared to those who married earlier ( $\leq 25$  years). This aligns with existing literature, which implicates advanced female age- particularly  $\geq 35$  years in the etiology of infertility [26]. Advanced age heightens concerns about the limited time remaining for conception, leading to increased psychological distress.

Religious and cultural influences also play a significant role in shaping beliefs about infertility, irrespective of educational attainment. Infertile women often live in fear of societal pressures, such as the possibility of their spouse's family urging him to take another wife or divorce her if she fails to conceive. This cultural dynamic is a recognized risk factor for psychological distress among IW [27, 28].

## Conclusion

This study revealed that a significant proportion of IW experience psychological distress, which may negatively affect the success of fertility treatments. The prevalence of psychological distress warrants urgent policy responses to improve the quality of life for IW. Key predictors of psychological distress identified in this study include age at

marriage, type of marriage, perceived cause of infertility, and prior infertility treatment.

To address these challenges, early education for women about infertility could help dispel misconceptions and foster better coping mechanisms, regardless of marital settings, religious beliefs, or treatment approaches. Incorporating psychological interventions in fertility clinics could alleviate psychosocial issues, potentially enhancing treatment outcomes.

## Limitations

This study has several limitations. The use of self-reported measures may introduce recall bias, and the cultural sensitivity surrounding sexuality may have made respondents hesitant to disclose private details. Additionally, this study did not differentiate between stress and co-morbid psychological conditions such as depression, anxiety, or post-traumatic stress disorder. The cross-sectional design also limits the ability to establish causal relationships between identified factors and psychological distress.

## Future Directions

Future research should focus on assessing psychological distress and its patterns in community samples rather than exclusively in infertility clinics, as the latter may introduce sampling bias. This broader approach could provide a more comprehensive understanding of psychological distress among infertile women.

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## References

1. Qadir F, Khalid A. Social support, marital adjustment, and psychological distress among women with primary infertility in Pakistan. *J Women Heal*. 2015;55(4):432-446.
2. Omoaregba J, James B, Lawani A, Morakinyo O, Olotu O. Psychosocial characteristics of female infertility in a tertiary health institution in Nigeria. *Ann Afr Med*. 2011;10(1):19-24.
3. Szkodziak F, Krzyżanowski J, Szkodziak P. Psychological aspects of infertility: A systematic review. *J Int Med Res*. 2020;48(6):1-13.
4. Chimbatata NBW, Malimba C. Infertility in Sub-Saharan Africa: A woman's issue for how long? A qualitative review of literature. *Open J Soc Sci*. 2016;4(8):96-102.
5. Sreshthaputra O, Sreshthaputra RA, Vutyavanich T. Gender differences in infertility-related stress and the relationship between stress and social support in Thai infertile couples. *J Med Assoc Thai*. 2008;91(12):1769-1773.
6. Anwar S, Anwar A. Infertility: A review on causes, treatment, and management. *J Women's Heal Gynecol*. 2016;2(6):3-5.
7. Olarinoye AO. Psychosocial characteristics of infertile women in a Nigerian tertiary hospital. *Trop J Obstet Gynaecol*. 2019;36(2):252-257.
8. Yilmaz T, Yazici S, Benli T. Factors associated with infertility distress of infertile women: A cross-sectional study. *J Psychosom Obstet Gynecol* [Internet].

- 2020;41(4):275-281. Available from: <https://doi.org/10.1080/0167482X.2019.1708318>
9. Mohammed-Durosinlorun A, Adze J, Bature S, Abubakar A, Mohammed C, Taingson M, *et al.* Use and pattern of previous care received by infertile Nigerian women. *J Fertil Res Pract.* 2019;6(14):1-8.
  10. Kalima-Munalula MN, Ahmed Y, Vwalika B. Factors associated with infertility among women attending the gynaecology clinic at University Teaching Hospital, Lusaka, Zambia. *Med J Zambia.* 2017;44(1):41-44.
  11. Okonofua FE, Harris D, Odebiyi A, Kane T, Snow RC. The social meaning of infertility in Southwest Nigeria. *Heal Transit Rev.* 1997;7(3):205-220.
  12. Behboodi-Moghadam Z, Salsali M, Eftekhar-Ardabili H, Vaismoradi M, Ramezanzadeh F. Experiences of infertility through the lens of Iranian infertile women: A qualitative study. *Japan J Nurs Sci.* 2013;10(1):41-46.
  13. Greil A. Infertility and psychological distress: A critical review of the literature. *J Soc Sci Med.* 2018;6(7):1679-1704.
  14. Patel A, Sharma PSVN, Binu VS. Sociocultural determinants of infertility stress in patients undergoing fertility treatments. *J Hum Reprod Sci.* 2018;11(2):172-179.
  15. McQuillan J, Greil AL, White LK, Jacob MC. Frustrated fertility: Infertility and psychological distress among women. *J Marriage Fam.* 2003;65(11):1007-1018.
  16. Aderibigbe YA, Gureje O. The validity of the 28-item General Health Questionnaire in a Nigerian antenatal clinic. *Soc Psychiatry Psychiatr Epidemiol* [Internet]. 1992 Nov;27(6):280-283. Available from: <https://doi.org/10.1007/BF00788899>
  17. Prady SL, Miles JNV, Pickett KE, Fairley L, Bloor K, Gilbody S, *et al.* The psychometric properties of the subscales of the GHQ-28 in a multi-ethnic maternal sample: Results from the Born in Bradford cohort. *BMC Psychiatry.* 2013;13(2):1-14.
  18. Aghanwa HS, Dare FO, Ogunniyi SO. Sociodemographic factors in mental disorders associated with infertility in Nigeria. *J Psychosom Res.* 1999;46(2):117-123.
  19. Upkong D, Orji EO. Mental health of infertile women in Nigeria. *Turk Psikiyat Derg.* 2006;17(4):1-7.
  20. Araoye MO. Epidemiology of infertility: Social problems of the infertile couples. *West Afr J Med.* 2003;22:190-196.
  21. Hess RF, Ross R, Gililand Jr JL. Infertility, psychological distress, and coping strategies among women in Mali, West Africa: A mixed-methods study. *Afr J Reprod Health.* 2018;22(3):60-72.
  22. Ojo O, Oluwole LO, Obadeji A. A comparative study of depression among fertile and infertile women in a south-western Nigerian city. *Med J Zambia.* 2017;44(2):93-99.
  23. Oluwole L, Obadeji A, Dada M. Pains of the bane of infertile women in Southwest Nigeria: A qualitative approach. *Fertil Sci Res.* 2020;7(1):99-104.
  24. Adewunmi AA, Ottun TA, Abiara T, Chukwuma JF, Okorie L. Socio-demographic and clinical characteristics of clients seeking assisted conception at Lagos State University Teaching Hospital, Ikeja, Nigeria. *J Obstet Gynaecol (Lahore)* [Internet]. 2017;37(7):902-905. Available from: <https://doi.org/10.1080/01443615.2017.1309365>
  25. Orji EO, Kuti O, Fasubaa OB. Impact of infertility on marital life in Nigeria. *Int J Gynecol Obstet.* 2002;79(1):61-62.
  26. Peterson BD, Gold L, Feingold T. The experience and influence of infertility: Considerations for couple counselors. *Fam J.* 2007;15(3):251-257.
  27. Tabong PT, Adongo PB. Infertility and childlessness: A qualitative study of the experiences of infertile couples in Northern Ghana. *BMC Pregnancy Childbirth* [Internet]. 2013;13(1):1. Available from: <https://bmcpregnancychildbirth.biomedcentral.com/>
  28. Schmidt L. Social and psychological consequences of infertility and assisted reproduction: What are the research priorities? *Hum Fertil.* 2009;12(1):14-20.

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