

Relationships Between Marital Stress, Depressive Symptoms, Psychache and Infertility Among Couples in Fertility Treatment, in Port Harcourt Nigeria.

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Abstract

The effects of Psychache, depressive symptoms and marital stress are notable in the life of infertile couples. Therefore, the study examined the relationship between marital stress, depressive symptoms, psychache and infertility among couples undergoing fertility treatment in Port Harcourt, Rivers State, Nigeria. One hundred and forty four (144) participants were drawn, using convenience sampling. The Symptoms Distress Checklist, Marital Stress Inventory and Psychache Scale were instruments used for data collection. The sample comprised 93.8% females and 6.2% males, with age range of 18 to 50 years, mean age of 1.97 and standard deviation of .14. Survey design and correlational design, using Pearson Product Moment Correlation Coefficient statistics were used for data analysis. Significance was accepted at $P < .05$. The study revealed a significant relationship between marital stress and infertility at ($M = 2.00$, $Std.D = .029, .019, .013$, $F = .000$, $df = 4, 1$, $Sig = .000$ $P < .05$). The study also revealed that depressive symptoms had a positive relationship with infertility at ($M = 1.78, 2.00$, $Std.D = .035, .019$, $F = 13.488$, $df = 1, 1$, $Sig = .000$ $P < .05$). The finding of the result also showed a positive relationship between psychache and infertility at ($M = 2.00, 1.78$, $Std.D = .029, .035$, $F = .000, 13.488$, $df = 4, 1$, $Sig = .000$ $P < .05$). It was recommended among others, that developing effective psychache intervention programmes for diverse infertility issues will help couples adjust better.

Key words: Infertility, Marital stress, Depressive symptoms, Psychache

Introduction

Infertility affects an estimated 10-15% of reproductive age couples worldwide (Deshpande & Gupta, 2019). Infertility in females may be categorized as primary, concerning females who have never been pregnant, and secondary, concerning females who have previously been pregnant (Vander & Wyns, 2018).

Culturally, developed and developing countries hold different attitudes regarding infertility. In developing countries, infertility may be linked to an act of God, punishment for sins of the past, prolonged use of contraceptives, and the result of witchcraft which is causing childlessness, whereas people in developed countries view infertility as caused by biological and other related factors like excessive alcoholism, lack of cooperation between the man and the woman during sexual intercourse (Patel et al., 2016). Cultural standards notwithstanding, infertility is viewed as an enormous problem by couples everywhere.

Worldwide, more than 70 million couples suffer from infertility (Agostini et al., 2011). In sub-Saharan Africa, the prevalence differs widely from 9% in the Gambia, 21.2% in north-western Ethiopia, 11.8% among women and 15.8% among men in Ghana and between 20 and 30% in Nigeria (National Collaboration Centre for Women and Children Health (NCCWCH), 2012). In Nigeria, the prevalence of infertility has been studied in demographic surveys, epidemiological surveys and through clinical observation (Okonofua, 2010). The Nigeria demographic and health survey for the period 2006-2010 reported a prevalence rate of primary infertility of 22.7% in 15-49years old women and 7.1% in 25-49years old men (Okonofua, 2010).

Consequently, individuals who are thought to be infertile are generally relegated to an inferior status, and stigmatized with many labels. As a result, childlessness has varied consequences through its effects in the society and on life style of individuals. Though in some cases, the childless life style enhances life satisfaction for some individuals, yet it is diminishing for others for whom parenthood is a personal goal (Aysel & Gul, 2015).

Essentially, Graham (2015) noted that parenthood is one of the major transitions in adult life for both men and women. The stress of the non fulfillment of a wish for a child has been associated with psychological problems such as marital stress, depressive symptoms, psychache and fertility. It has been reported that infertility triggers depressive symptoms, cause marital stress, psychache, and unfulfilled dreams in women (Casu & Gremigni, 2016).

World Health Organisation, (WHO) (1987) as cited in Tabong & Adongo, (2013) defined infertility as failure to conceive after one year of regular unprotected sexual intercourse

in the absence of known reproductive pathology. Considering that some couples who are not infertile may not be able to conceive within the first year of unprotected sex, World Health Organization (WHO) therefore recommends the epidemiological definition of infertility, which is the inability to conceive within two years of exposure to pregnancy (WHO, 1987 in Tabong & Adongo, 2013).

Furthermore, Cherlon (2019) believed that marital stress is relatively low in the beginning and the end of marriages, and relatively high in the middle of marriages. Research has shown that marital stress is an important aspect in couples with fertility challenges (Nickerson et al., 2013). Oboegbulem (2015) had defined marital stress as a feeling which occurs when an individual's marriage makes demands beyond an individual's capacity to handle such a situation physically or emotionally.

According to Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (2013) depression otherwise known as major depressive disorder or clinical depression, is a common and serious mood disorder. Those who suffer from depression experience persistent feelings of sadness and hopelessness and loss of interest in activities they once enjoyed. Aside from the emotional problems caused by depression, individuals can also present with a physical symptom such as chronic pain or digestive issues (Blasco, 2020).

The problems of depression, stress, and anxiety significantly affect infertile people and a meta-analysis by Fallahzadeh et al. (2019) showed that depression scores in women who are infertile were significantly higher than scores for fertile couples. Since biblical times, hypotheses have been raised about the relationship between depression, anxiety, and infertility. It is known that infertility may cause stress and even depression, but what remains unclear is whether depression, stress and anxiety affect fertility (Rooney & Domar, 2018).

Agreeably, research by De-Berardis et al. (2014) had found that 25% to 60% of infertile couples report psychiatric symptoms and that their levels of depressive symptoms, marital stress and psychache are significantly higher than in fertile controls. Furthermore,

infertility may lead to psychache, physical, emotional and financial burden, marital stress, poor self-esteem, suicidal ideation, hopelessness, lack of satisfaction with sexual performance and reduced frequency of sexual intercourse (Andrews et al., 2011; Ulbrich et al., 2018). In Africa, women with fertility problems may be despised, neglected and abused by the husband and in-laws (Dyer et al., 2015). Their exclusion from some important social events has been noted in some parts of Nigeria (Mi et al., 2012; Gerrits, 2017).

In essence, according to a done with women experiencing recurrent miscarriages, as many as 45% showed anxiety and 37% had depressive symptoms, and these results were significantly higher than what was found in women with low risk of miscarriage (Gao et. Al., 2019). Although major depression alone was not found to be associated with poorer results in female non-in vitro fertilization (IVF) fertility treatments, it lowered the chances of male partners to achieve conception (Evans-Hoeker et. Al., 2018).

Basically, Oboegbulem (2015) had defined marital stress as a feeling which occurs when an individual's marriage makes demands beyond an individual's capacity to handle such a situation physically or emotionally. In the same vein, Cherlon (2019) believed that marital stress is relatively low in the beginning and the end of marriages, and relatively high in the middle of marriages.

Essentially, some empirical studies were reviewed in relation to the study variables. Zimbardo (2018) found that marital stress can have a big effect on fertility. This is because marital stress can decrease a couple's plan to have a child which is highly valued (Klock, 2018). Stress hormones affect the hypothalamo-pituitary-gonadal (HPG) axis (Zimbardo, 2018). In couples under stress, the reproductive hormone (prolactin), when pathologically produced have capacity to induce hypogonadism which is oestrogen deficiency in women and testosterone deficiency in men (Zimbardo, 2018). These hormones (oestrogen and testosterone) stimulate fertility and their deficiency has been implicated in infertility. Hyperprolactinaemia induced male-hypogonadism has been implicated in decreased libido and impotency (sexual dysfunction), and thus affecting male fertility. In women, hyperprolactinaemia cause the hypothalamus to stop the secretion of gonadotrophin releasing hormone (GnRH), which in turn will affect the release of both the luteinizing

hormone (LH) and follicle-stimulating hormone (FSH), which are responsible for stimulating ovulation. (Meaney & O'Keane, 2012; Rao et al., 2014).

Marital stress and infertility

Ikeako et al., (2015) examined relationship between marital adjustment, marital stress and depression among 150 infertile working and non-working couples, equally distributed and who belong to middle and high socio-economic status. Findings revealed a remarkable outcome among marital adjustment, depression and marital stress. The result equally proved that working infertile couples meet more challenges in their marriage compared to their non-working counterpart.

Depressive symptoms and infertility

Fatemeh et al., (2020) conducted a survey study on the relationship between anxiety, depression and duration or cause of infertility, in Vali-e-Asr Reproductive Health Research Center, Tehran, Iran. 370 female patients with different infertility issues participated, and data gathered by Beck Depression Inventory (BDI) and Cattle questionnaires for surveying anxiety and depression due to the duration of infertility were used for the study. This was studied in relation to patients' age, educational level, socio-economic status and job (patients and their husbands). The findings revealed that the age range was 17 to 45 years and duration and cause of infertility was 1–20 years. The survey also revealed that 151 women (40.8%) had depression and 321 women (86.8%) had anxiety. Depression had a significant relation with cause of infertility, duration of infertility, educational level, and job of women. Furthermore, anxiety had a significant relationship with duration of infertility and educational level, but not with cause of infertility, or job. Findings also showed that anxiety and depression were most common after 4–6 years of infertility and especially severe depression could be found in those who had infertility for 7–9 years.

Makanjuola (2020) studied depressive symptoms among infertile couples in General hospital in Ilorin, Kwara state, Nigeria. The participants were 100 infertile couples undergoing treatment in the Gynecology unit. Results from the study revealed 75% of the infertile couples had depressive symptoms.

Psychache and infertility

Oluwole & Ojo (2017) examined a comparative study of psychache and depression among fertile and infertile women in a South-Western Nigerian City. The major aim of the study was evaluating psychache and depression in a group of infertile women; compare the prevalence of psychache and depression among this group with prevalence among a control group of fertile women, and to identify demographic characteristics associated with psychache and depression in infertile women. One hundred (n=100) infertile women and one hundred and three (n=103) fertile women as controls were recruited for the study. Results revealed that prevalence of psychache and depression among infertile women was 32 percent compared with 10.7 percent among the controls. Among the infertile women that were depressed there was a significant association between depression and psychache.

METHOD

Participants

The participants were 144 obstetrics and gynaecology out patients (infertile couples) who were receiving treatment at the University Of Port-Harcourt Teaching Hospital at the time of the research. For the period of one month in which the data was collected, the targeted participants are estimated to be $36 \times 4 = 144$. About 93.8% (141) of the participants were females while 6.2% (3) were males with age range of 18 to 50 years, mean age of 1.97 and standard deviation of .14. The educational levels of the participants used for the study include: primary school 32.1%, secondary education 45.9% and tertiary education 22.0%. Purposive sampling technique was applied in the selection of the participants.

Instruments

The instruments used in this study were: Symptoms Distress Checklist, Marital Stress Inventory (MSI) and Psychache Scale (PAS).

Symptom Distress Checklist 90 (SCL-90): The symptoms distress checklist 90 (SCL-90) was developed by Derogatis, Lippmann and Covi, (1977). It was validated in Nigerian by Omoluabi (1997). The symptoms distress checklist 90 (SCL-90) was designed to assess 10

primary categories of symptoms associated with distress. The 10 categories are somatization, obsessive compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism and neuroticism E.g. 'Feeling hopeless about the future'. The scale is scored directly on 5-point likert format. Twelve (12) items for measuring depression symptoms were extracted. Derogatis et al., (1977) reported alpha coefficient of 0.77 to 0.90 and one-week test retest of 0.78 to 0.90 for anxiety.

Marital Stress Inventory (MSI): The marital stress inventory (MSI) was developed by Peter Omoluabi, (1994). It assesses causes of stress among couples and to evaluate their stress reaction. The fifty (50) item inventory is a list of issues that cause disaffection in marriage. E.g Insufficient money for house keeping.

The scale is scored directly on 5-point likert format. Omoluabi (1994) reported Cronbach alpha coefficient of .92, Spearman-Brown split half coefficient of .92, Gutman Split-half coefficient of .92, Beta coefficient of .96, and concurrent validity of .32.

Psychache Scale (PAS): The psychache scale (PAS) was developed by Holden, Metha, Cunningham and Mcleod (2001) and was validated in Nigerian population by Omoluabi (2004). It is a 13-item inventory designed to assess psychache. E.g. 'I seem to ache inside'. The scale is scored directly on 5-point likert format. Holden et al., (2001) reported Cronbach alpha coefficient of .92.

Procedure

Ethical approval was obtained from Research and Ethics Committee of University of Port-Harcourt Teaching Hospital to carry out the study. When approval was granted, the researcher obtained permission from the Head, Department of Obstetrics and Gynaecological clinic of University of Port-Harcourt Teaching Hospital, Rivers State. One research assistant was trained on the purpose of the study and how to collect data from the participants. The purpose of the study was explained to the participants and they were assured that information provided will be treated confidentially and no identifying information was required. One hundred and forty four (144) questionnaires were distributed and administered to the infertile participants who met the inclusion criteria through purposive sampling as they attend the clinic. All the questionnaires were found

usable as some who could not fill the questionnaires were verbally interviewed based on the instrument items

Design and Statistics

The study was a survey study that adopted a correlational design. Consequently, Pearson Product Moment Correlation Coefficient Statistics was used for data analysis.

RESULT

Table 1: Summary of Correlation between Marital stress and infertility among infertile couples Pearson Product Moment Correlation Coefficient Statistics

Source	Mean	Std.D	r	Sig	N
MS	5.8525	2.85277	.807	.000	144
Infertility	4.316	1.33127	+1		

MS = Marital Stress Inventory, Sig = .000 Correlation is significant at the 0.01 level (2 tailed).

Table 2: Summary of Correlation between depressive symptoms and infertility a

Source	Mean	Std.	r	Sig	N
DS	4.8432	2.74166	.806	.000	144
Infertility	3.415	1.35266	+1		

DS = SCL-90, Sig = .000 Correlation is significant at the 0.01 level (2 tailed).

Table 3: Summary of Correlation between Psychache and infertility among couples

Source	Mean	Std.	r	Sig	N
PS	6.7432	2.7416	.756	.000	144
Infertility	4.321	2.1000	+1		

PS = Psychache Scale, Sig = .000 Correlation is significant at the 0.01 level (2 tailed).

From Table 1 above, the result indicated a positive significant relationship between marital stress and infertility among couples in fertility treatment in Port Harcourt, River State at (Mean = 5.8, 4.3; Std. = 2.8, 1.3; $r = .807$, Sig = .000 $P < .05$). This result revealed that as marital stress is increasing, infertility score also increased strongly at (Mean = 5.8/4.3). Also, the result shows a positive relationship between marital stress and infertility at ($r = .807$; +1) among couples in fertility treatment in Port Harcourt, River State.

From table 2, there is a positive significant relationship between depressive symptoms and infertility among couples in fertility treatment in Port Harcourt, River State at (Mean = 4.8, 3.4; Std. = 2.7, 1.3; $r = .806$, Sig = .000 $P < .05$). This result revealed that as depressive symptoms is increasing, infertility score also increased strongly at (Mean = 4.8/3.4). Also, the result shows a positive relationship between depressive symptoms and infertility at ($r = .806$; +1) among couples in fertility treatment in Port Harcourt, Rivers State.

From table 3, there is a positive significant relationship between Psychache and infertility among couples in fertility treatment in Port Harcourt, River State at (Mean = 6.7, 4.3; Std.D = 2.7, 2.1; $r = .756$, Sig = .000 $P < .05$). This result revealed that as Psychache is increasing, infertility score also increased strongly at (Mean = 6.7/4.3). Also, the result shows a positive relationship between Psychache and infertility at ($r = .756$; +1) among couples in fertility treatment in Port Harcourt, River State.

Discussion And Conclusions

The study investigated marital stress, depressive symptoms, psychache and infertility among infertile couples in University of Port-Harcourt Teaching Hospital, Rivers State.

The result of the Pearson Product Moment Correlation Coefficient Statistics revealed a statistically significant correlation between marital stress and infertility among infertile couples in University of Port-Harcourt Teaching Hospital, Rivers State. This shows that as marital stress increased, infertility equally increased. The findings of this study are in line

with the findings of Ikeako et al., (2015); Ajayi (2013); Adetoro and Ebomoyi (2008) which revealed that couples experience significant feelings of marital stress when they could not conceive and equally found that half of the women and 15% of the men reported that infertility was the most upsetting experience of their lives.

The second result shows that as the mean score of depressive symptoms increased, infertility score equally increased. This implies that infertility may contribute to the development of depressive symptoms among infertile couples. The finding of this study is consistent with the findings of Fatemeh et al., (2020); Makanjuola (2020); Khan and Reza (2018); Oladeji & OlaOlorun (2018); Oluwole & Ojo (2017); Paulina et al., (2017) Ikeako et al., (2015) which revealed significant correlations between depressive symptoms and infertility among infertile couples. According to social exchange theory, depressive symptoms among infertile couples arise as a result of the worth, value and importance they place on having a child. Also, through cultural values placed on the importance of having a child, couples attach so much importance in having children even at the detriment of losing their marriage.

The third result showed a significant relationship between psychache and infertility. This implies that infertility may contribute to the development of psychache among infertile couples. The findings of this result might be due to length of marriage, that is, the years the couples have been married. The finding of this study corroborates with the findings of Oluwole & Ojo (2017); Paulina et al., (2017); Audu et al., (2013) which revealed a positive relationship between psychache and infertility. They noted that in the early stage of infertility, if the couples are not receiving support from spouse or relatives, the chances that the infertile couples will develop psychache will be high and vice versa.

Conclusion

Infertility has remained a challenging problem to couples not only Nigerian couples, but across all population. This study has established that marital stress, depressive symptoms, and psychache have significantly correlated with infertility among infertile couples. This implies that correct treatment of these psychological factors in the treatment and management of infertility, will bring about better adjustment and coping with (if not improve) their psychological state.

RECOMMENDATIONS

1. Further prospective studies comparing gender roles of the infertile couples in contributing to the variables of interest are suggested.
2. Incorporating Psychotherapy alongside fertility treatment is recommended to reduce depressive symptoms and marital stress for more positive treatment outcomes.
3. A longitudinal study is recommended in prospective studies to confirm further the relationship between marital stress, infertility and the psychological distress constructs.

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