

## **IMPACT OF PSYCHOLOGICAL DISTRESS AND QUALITY OF LIFE ON MARITAL SATISFACTION IN WOMEN WITH INFERTILITY**

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**ABSTRACT:** The present research aimed to explore the effects of psychological distress and quality of life on marital satisfaction in women diagnosed with miscellaneous infertility disorders. A cross-sectional research design was applied from 1<sup>st</sup> January 2022 to 30<sup>th</sup> April 2022 to collect data from the gynecological wards of various hospitals situated in Kharian. The sample size for the infertile women was determined with the help of the Sample Size Calculator, and the purposive sampling technique recruited 385 women diagnosed with infertility problems. Informed consent form along with a demographic sheet, Urdu versions of Depression, Anxiety, Stress Scale (DASS-21, Husain & Gulzar, 2020), World Health Organization's Quality of Life Questionnaire (WHO QOL-BREF, Lodhi, Raza, Montazeri, Nedjat, Yaseri, & Holakouie-Naieni, 2017) and Marital Satisfaction Scale (MSS, Ayub, 2010) were used to assess psychological distress, quality of life, marital satisfaction among women with infertility. Out of 385, five infertile women filled incomplete questionnaires; therefore were eliminated, and the total sample for the data analysis comprised 380 infertile women (Mage=35.38 years, SD=6.19). The study results showed that there is a significant negative correlation between stress ( $r = -0.33, p < 0.05$ ), anxiety ( $r = -0.45, p < 0.05$ ) and depression ( $r = -0.52, p < 0.05$ ) with the perceived marital satisfaction among infertile women. Multiple regression analysis revealed that the presence of high levels of stress ( $B = -0.90, F(3, 376) = 61.68, p < .001$ ), anxiety ( $B = -1.85, F(3, 376) = 61.68, p < .001$ ), and depression ( $B = -2.53, F(3, 376) = 61.68, p < .001$ ) predicted lower levels of the perceived marital satisfaction in infertile women. Further, two aspects of quality of life comprised of psychological and social relationships significantly predicted marital satisfaction in women diagnosed with infertility disorders. Implications in light of the findings of the present research are discussed.

**Key words:** Anxiety, Depression, Infertility, Marital Relationships, Stress, Quality of Life, and Women.

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### **INTRODUCTION**

Worldwide more than 186 million people have infertility (Inhorn, & Patrizio, 2015). The prevalence of infertility in Pakistan has been estimated to be 22% (Ahmed, et al., 2020), highlighting it as a crucial problem to be investigated. Fertility is the ability to set up a medical pregnancy. Infertility is a disorder characterized by the failure to set up a medical being pregnant after three hundred and sixty-five days of regular, unprotected sexual sex or because of an impairment of a person's capability to reproduce, both as a man or woman or with his/her partner (Zegers et al., 2017). The primary infertile woman is a woman who has in no way been identified with a medical being pregnant and meets the standards of being labelled as having infertility. Secondary woman infertility applies to a female not able to set up a medical pregnancy but who has formerly been recognized as pregnant (Boivin, Bunting, Collins, et al.2007). The present study has focused on primary infertility problems in women visiting gynecological wards of hospitals in Kharian.

Infertility in women has been found to have deleterious effects on the perceived quality of life and overall

satisfaction (Kitchen, Aldhouse, Trigg, Palencia, & Mitchell, 2017; Kiesswetter, Marsoner, Luehwink, Fistarol, Mahlknecht, & Duschek, 2020). The World Health Organization explains the quality of life as an assessment of values of a person's understanding of their goals in the context of physical health, psychological health, social relationships, and environmental health (Vahedi, 2010). However, infertility is empirically linked with gender-based differential satisfaction experience in marital relationships. Infertile males are found to have high marital satisfaction compared to infertile females, who also lack marital stability and security (Tao, Coates, & Maycock, 2012). This finding of systematic analysis is based on the collection of research studies conducted in America, Canada, China, Taiwan, Poland, Finland, and England. Thus, signifies gender based prejudiced norms that link stigma of infertility burden with females as compared to males. Therefore, in patriarchal socio-cultural norms of Pakistan, marital satisfaction of infertile females is explored in the present study.

Marital satisfaction has been associated with infertility related stress, emotional distress, anxiety and depression (Gana, & Jakubowska, 2016; Benazon, Wright, & Sabourin, 1992; Yang, Wongpakaran, Wongpakaran,

Saeng-Anan, Singhapreecha, Jenraumjit, & Peisah, 2022). Similarly, marital satisfaction is directly related to the quality of life of infertile couples (Masoumi, Garousian, Khani, Oliaei, & Shayan, 2016; Samadaee-Gelekholaee, McCarthy, Khalilian, Hamzehgardeshi, Peyvandi, Elyasi, & Shahidi, 2016).

Based on the review of the literature, the hypotheses of the present study are

1. The higher the level of the psychological distress, the lower the level of marital satisfaction in women with infertility.
2. The higher the perceived quality of life, the higher the marital satisfaction in women with infertility.
3. Psychological distress (such as Stress, Anxiety and Depression) will negatively affect marital satisfaction in women with infertility.
4. Domains of quality of life (such as Physical Health, Psychological Health, Social Relationships and Environmental Health) will positively affect marital satisfaction in women with infertility.

## **MATERIALS AND METHODS**

**Study Design:** The cross-sectional study has been used to investigate the relationship between quality of life, marital satisfaction and psychological distress in infertile women.

**Sample:** The sample size of 385 infertile women was determined by Calculator.net (2022). Out of 385 infertile women, 380 filled the questionnaires. The sample of the present study was recruited using a purposive sampling technique and was approached in gynecological wards of Combined Military Hospital, Kharian (n=250, 65.7%) and Al Shifa Hospital, Kharian (n=130, 34.3%). The inclusion criteria were only those women with primary infertility whose minimum marital duration was one year. The exclusion criteria were secondary infertile females with at least one live child.

**Instruments:** In this research, there are Urdu versions of three scales, WHO QOL-BREF, DASS-21 and Marital Satisfaction Scale, with the Authors' permission. The scale of WHO QOL- BREF contains 26-items. There are 4 domains of this scale: physical, psychological, social relationship and environment. The scoring of subscales are; Actual wellbeing: 3, 4, 10, 15, 16, 17, and 18, Psychological: 5, 6, 7, 11, 19, and 26; social connections: 20, 21, and 22; environment: 8, 9, 12, 13, 14, 23, 24, and 25. Cronbach's alpha coefficient was 0.896, and overall validity was 0.52 (Lodhi, Raza, Montazeri, Nedjat, Yaseri, & Holakouie-Naieni, 2017).

DASS-21 contains 21 items. There are 3 subscales for DASS 21, which includes anxiety (item no: 2,4,7,9,15,19,20), stress (item no: 1,6,8,11,12,14,18) and depression (item no: 3,5,10,13,16,17,21 items). The reliability of DASS-21 showed Cronbach's Alpha is 0.91, and convergent validity is greater than 0.7 (Lovibond, and Lovibond, 1995).

MSS contains 33-items. It consists of 11 subscales that can be used to measure marital satisfaction or relationship satisfaction, which include compromise (item-11), husband financial status (item-2,31,06), dual earning (item-9,17), education of partner (item-02), spouse support (item-4,15,27), gender difference (item-10,33), sexual satisfaction (item12,22), mutual understanding (item-8,19), presence of the child (item-5,16,29). The internal consistency of the Marital Satisfaction Scale was 0.696 Cronbach alpha level. The scale had significant positive test-retest reliability ( $r= 0.852$ ), and the convergent validity of the Marital Satisfaction Scale is  $r= 0.611$ ,  $p < 0.01$ , and Spouse Rating Scale ( $r= .569$ ,  $p < .01$ ) (Ayub, 2010).

**Procedure:** The ethical standards of informed consent and confidentiality were kept under consideration throughout the research. Written consent was acquired from the individuals before the administration of the scales. They had been aware of their right to withdraw at any point, and their answers were not marked as right or wrong. The individuals had not been asked to reveal their identities. The authors granted formal documented permission to use the scale for the research purpose. The researcher thanked all the participants personally for their cooperation.

**Statistical Analysis:** The data was entered and analyzed into the Statistical Package for Social Sciences (SPSS-24 version), which used descriptive statistical analysis, Cronbach alpha's reliability coefficients, Pearson product-moment correlation coefficient and multiple regression analysis.

## **RESULTS AND DISCUSSION**

In the current study, the demographic characteristics of the infertile females showed 16 (4.2%) were uneducated, 67 (17.6%) had done middle to enrollment, 221 (58.2%) had done intermediate to graduation, and 76 (20%) were master degree holders. Only 12 (3.2%) were diagnosed with physical disorders such as blood pressure or diabetes, and 10 (2.6%) had mental disorders such as Major Depressive Disorder. 248 (65.3%) were housewives, and the rest had occupations such as banker, media marketing, teacher, and police officer. The majority of the married females resided in joint family systems 317 (83.4%) and belonged to urban

areas 322 (84.7) of residence. The major reason for infertility, as reported by the females, was found to be menstrual disorders (n=246, 64.7%), followed by uterine cancers (n= 69, 18.2%), polycystic ovarian syndrome (n=25, 6.6%), fibroids (n=34, 8.9%) and ovarian cancers (n=6, 1.6%).

Table 1 shows a significant negative correlation coefficient of stress ( $r = -0.33$ ,  $p < 0.05$ ), anxiety ( $r = -0.45$ ,  $p < 0.05$ ) and depression ( $r = -0.52$ ,  $p < 0.05$ ) with the perceived marital satisfaction among infertile women. However, dimensions of psychological health ( $r = -0.25$ ,  $p < 0.05$ ) and social relationships ( $r = -0.27$ ,  $p < 0.05$ ) in quality of life have significant positive correlation coefficients with the perceived marital satisfaction in women with infertility problems. Table 2 shows that multiple regression analysis revealed the presence of high levels of stress ( $\beta = -0.90$ ,  $F(3, 376) = 61.68$ ,  $p < .001$ ), anxiety ( $\beta = -1.85$ ,  $F(3, 376) = 61.68$ ,  $p < .001$ ) and depression ( $\beta = -2.53$ ,  $F(3, 376) = 61.68$ ,  $p < .001$ ) predicted lower levels of the perceived marital satisfaction in infertile women. The value of R-square is 0.33 ( $p < .001$ ), which explains 33% variance is due to psychological distress in feelings of satisfaction with their marital relationships with spouses. Table 3 showed that multiple linear regression analysis revealed two aspects of quality of life which comprised psychological health ( $B = 1.73$ ,  $F(4, 375) = 12.54$ ,  $p < .001$ ) and social relationships ( $B = 1.62$ ,  $F(4, 375) = 12.54$ ,  $p < .001$ ) significantly predicted the marital satisfaction in women diagnosed with infertility disorders. The value of R-square is 0.12 ( $p < .001$ ), which explains 12% variance is due to psychological health and social relationships in feelings of satisfaction with their marital relationships with spouses.

### **Discussion.**

Nowadays, infertility is a major problem to be considered in females. Infertility can harm the woman physically as well as psychologically, causing stress in the woman's life. Infertility is one of the problems that affect the quality of life. The present study aims to evaluate these women's psychological distress, quality of life, and marital satisfaction. Table 1 shows Cronbach Alpha's reliability values of the scales calculated in this study. Pallant (2001) states Alpha Cronbach's value above 0.6 is considered an acceptable reliability index. Therefore, the Urdu versions of the scales are found to have good reliabilities. The study's first hypothesis states, "Higher the level of psychological distress, the lower will be the level of marital satisfaction in women with infertility". The findings of table 1 showed confirmation of the first hypothesis of the study. These findings are consistent with the results of the previous research. Kim, Shin, and Yun (2018) found a negative association

between stress and marital satisfaction in 121 infertile couples in Korea. Nevertheless, the study by Heidari and Latifnejad (2010) concluded that the higher the trait anxiety level, the lower the level of marital satisfaction in couples. Similarly, Mohaddesi, Khalkhali, H.Behrozi-lak, Rasouli, Edalat Nemoun, and Ghasemzadeh (2022) inversely correlated the mental health of 186 infertile couples in Iran with their marital satisfaction in research.

The study's second hypothesis states, "Higher the perceived quality of life, the higher the marital satisfaction in women with infertility." The findings of table 1 showed confirmation of the study's second hypothesis. These findings are consistent with the results of the previous research. Previous research explored the relationship between quality of life and marriage satisfaction in infertile couples and found that to be positively correlated (Abedi, Darvari, Nadighara, & Rostami, 2014; Keramat, Masoomi, Mousavi, Poorolajal, Shobeiri, & Hazavhei, 2013).

The third hypothesis of the study states, "Psychological distress (such as Stress, Anxiety and Depression will negatively affect marital satisfaction in women with infertility." The findings of table 2 showed confirmation of the third hypothesis of the study. These findings are consistent with the results of the previous research. Maroufizadeh, Hosseini, Rahimi Foroushani, Omani-Samani, and Amini (2018a) found depressive disorders to negatively affect marital satisfaction in 141 infertile couples in Iran. The anxiety's influence was negative on infertile couples' marital satisfaction (Maroufizadeh, Hosseini, Rahimi Foroushani, Omani-Samani, & Amini, 2018b). According to Randall and Bodenmann (2017), stress negatively affects relationship satisfaction in infertile couples.

The fourth hypothesis of the study states, "Domains of quality of life (such as Physical Health, Psychological Health, Social Relationships and Environmental Health) will positively affect marital satisfaction in women with infertility". The findings of table 3 showed confirmation of the fourth hypothesis of the study. These findings are consistent with the results of the previous research. Psychological wellbeing has been found to influence marital satisfaction positively in infertile women compared to fertile women (Hatamloye, & Hashemi, 2012). Masoumi, Khani, Kazemi, Kalhori, Ebrahimi, and Roshanaei (2017) found that social relationships influence the marital satisfaction and sexual satisfaction of infertile couples.

**Table 1: Mean, Standard Deviation, Cronbach Alpha's Reliability Coefficient, and Pearson Product Moment Correlation Coefficient in Infertile Women (N=380).**

Variables	M	SD	$\alpha$	2	3	4	5	6	7	8
1. S	8.05	1.759	0.67	.23**	.47**	-.021	.20**	-.16**	.13*	-.33**
2. A	7.96	2.057	0.66		.46**	-.11*	.19**	-.23**	-.11*	-.45**
3. D	7.88	1.935	0.70			-.17**	.09	-.13*	.013	-.52**
4. PH	20.91	2.11	0.73				.26**	.21**	.16**	.06
5. PsyH	18.88	2.10	0.72					-.26**	.34**	.25**
6. SR	10.23	1.52	0.63						.31**	.27**
7. EH	25.09	1.99	0.70							.05
8. MS	54.09	14.39	0.88							

\*p<.01, \*\*p<.05; S= Stress, A=Anxiety, D=depression, PH=Physical Health, PsyH= Psychological Health, SR=Social Relationships, EH=Environmental Health, and MS= Marital Satisfaction.

**Table 2: Multiple Linear Regression Analysis for Psychological Distress on Marital Satisfaction among Infertile Women (N=380)**

Model	B	t	Sig.
Constant	95.970	28.13	.000
Stress	-.899	-2.29	.022
Anxiety	-1.845	-5.51	.000
Depression	-2.530	-6.45	.000

**Table 3: Multiple Linear Regression Analysis for Domains of Quality of Life on Marital Satisfaction among Infertile Women (N=380)**

Model	B	t	Sig.
Constant	46.638	4.255	.000
Physical Health	.538	1.496	.136
Psychological Health	1.728	-4.249	.000
Social Relationship	1.615	2.935	.004
Environment Health	.490	1.186	.236

**Conclusions:** The current study results show that stress, anxiety and depression are negatively correlated with marital satisfaction at a significant level. Further, psychological health and social relationships positively correlate with marital satisfaction. The impact of stress,

anxiety, and depression explains 33% variance in infertile women's marital satisfaction. Whereas 12% variance is explained by psychological health and social relationship effects on their marital associations with the spouses.

Regardless of the positive aspects of the study, there were also some limitations of this study. The results of the present study should be generalized with caution because the sample size is small. It is suggested that a large-scale study comprising cluster sampling techniques to gauge samples from Punjab would yield better generalization. The study's findings implied launching psychotherapeutic-based interventions in gynecological wards of hospitals in Pakistan for the better mental health of women experiencing infertility issues.

#### FUNDING STATEMENT

The authors declare they have no conflicts of interest to report regarding the present study.

#### CONFLICT OF INTEREST

The Authors declare that they have no conflicts of interest to report regarding the present study.

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