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PSYCHOLOGICAL DISTRESS, SOCIAL SUPPORT, AND QUALITY OF LIFE IN INFERTILE WOMEN OF PAKISTAN

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Abstract
Aims: The purpose of this study was to examine the association between psychological distress, social support, and quality of life (QOL) among Pakistani infertile women.
Methods: Participants in the study included 200 women, ages 22 to 40 years (*M=37.26 SD=4.54*), who had been diagnosed with primary infertility. Psychological distress, social support, and QOL of infertile women were measured by the Psychological Distress Scale, Multidimensional Scale of Perceived Social Support, and WHO Quality of Life- BREF Scale respectively. The Pearson correlation coefficient was utilized to ascertain the interaction between the variables. To evaluate the mediating effect of social support on psychological distress and quality of life, a mediation analysis was also carried out.
Results: Findings indicated that psychological distress was found to be negatively correlated with perceived social support and QOL. Whereas perceived social support was significantly positively linked with QOL. The association between psychological distress and QOL was partially mediated by perceived social support.
Conclusions: In women with primary infertility, psychological distress was negatively connected with QOL, and perceived social support was found partial mediator between these interactions. To improve the QOL of Pakistani infertile women, the current study highlighted the urgent need to develop treatment plans to decrease distress and fortify social support.

Key Words: Psychological distress Social Support Quality of Life Infertility Pakistan

Introduction

Infertility, a disorder of male or female reproductive system, is the incapacity to conceive after a minimum of twelve months of continuous, unrestrained sexual activity (Zurlo et al., 2020). It affects thousands of people who are of reproductive age, having an effect not only on the infertile individuals but also on their families and communities (Toftager et al., 2018). Globally, estimates place the number of people living with infertility at 186 million, or 48 million couples (Inhorn & Patrizio, 2015). The majority of individuals have infertility with a known cause, whereas the remainder cannot identify one. About 20%–40% of occurrences of infertility include male partners, while 40–55% percent involve female partners (Hasan et al., 2023). One may experience primary or secondary infertility. Primary infertility is with no history of pregnancy and if a prior pregnancy is known to have occurred, irrespective of the outcome of that pregnancy, it is described as secondary (Malina et al., 2016).

Both male and female infertility can be caused by a variety of reasons. Infertility in women is most commonly caused by ovarian, tubal, uterine, cervical, or unexplained factors. One of the reasons for ovarian cysts is polycystic ovarian syndrome (PCOS), which has become much more common in the last few years. Male infertility can result from aberrant production of sperm, issues with sperm ejaculation, motility of sperm disorders, or insufficient sperm counts (Mustafa et al., 2019).

It has been shown that infertility causes distress in infertile couples, regardless of the underlying reason for infertility (Simionescu et al., 2021). Infertility and psychological distress have a convoluted relationship. Early research indicated that those who are infertile experience higher levels of distress and are more likely than healthier spouses to experience mental health issues. Conversely, it has been found that a high amount of psychological distress makes conception more difficult (Drosdzol & Skrzypulec, 2008). Being told you are infertile can be extremely frightening for a couple, even though it is not a fatal illness. Both partners may experience financial hardship, emotional strain, and psychological distress as a result of infertility (Boivin et al., 2007). Feelings such as rage, resentment, sadness, worry, and a loss of self-worth and confidence can affect couples. In addition, the distress is often increased by the financial burden of infertility treatment (Sharma et al., 2022). In many countries, women are mostly held responsible for not getting pregnant, even though infertility impacts men and

women equally. This can lead to psychological issues, prejudice, social rejection, and abandonment of the woman (Satheesan & Satyaranayana, 2018).

Since having children is seen as essential in Pakistan like in other Asian countries, social pressure to have children may exacerbate the current stress (Qadir et al., 2015). Moreover, it could be detrimental to an individual's relationship with their spouse, friends, and family. That may result in decreased social support from others like spouses, friends, and family (Chu & Guo, 2021). Social support is considered one of the most important protective variables for a person experiencing stress. By making people feel like they belong to one or more groups, it serves as a mental purifier that helps people overcome mental stress (Crockett et al., 2007). Research from the past has confirmed the link between social support and managing life's challenges (Uchino, 2006; Decker, 2007). In general, social support is crucial for assisting people in leading lives of wellness and adjusting to life's challenges (Casale & Wild, 2013).

Researchers of infertility-related articles have determined a variety of psychosocial characteristics, including traits of personality, cognition, resilience, perception of control, and social support, that are either protective or risk factors for infertility related distress (Lansakara et al., 2011). Infertile Women's negative feelings and low quality of life are linked to a lack of social support, especially from spouses (Ni et al., 2019). Furthermore, it is believed that a person's quality of life is profoundly affected by their social support system. When asked to rate the probable factors of quality of life, it was found that patients frequently ranked support as the most important factor followed by mental health, material well-being, and autonomy (Xie et al., 2023).

There are two ways that social assistance affects life quality. It fosters an optimistic view of oneself, acceptance of oneself, and the perception that one is loved and appreciated by loved ones as well as others. Studies have indicated that receiving social support can lower stress levels and improve an individual's quality of life while they are facing difficult circumstances (Fong et al., 2021). Numerous studies concluded that social support and QOL have a substantial positive correlation (Savari et al., 2023; Marsack, 2021). On the other hand, Mondesir et al. (2018) demonstrated the mediation function of social support on distress and QOL. This conclusion can be explained by the fact that some families fail to give emotional and mental support to their women especially those who have been diagnosed with infertility, which greatly lowers the QOL of these infertile women. Additional exploration is required to define the strength of these connections and the most effective approaches to employ social support to assist infertile women in overcoming distress and enhancing their quality of life. Taking into account existing gaps in the available research the current study intends to explore the effects of stress linked to infertility and social support on quality of life among Pakistani women sample who have been diagnosed with infertility.

Methods and Materials

Participants and Procedure

Two hospitals in the Pakistani city of Faisalabad were selected to collect data. We chose 200 women who had been diagnosed with primary infertility through a convenient sampling technique. Aged 22 and up, every woman in the research had been married for no less than a year and the period of expectation of pregnancy was ($M=3.56$ $SD=2.01$). Whereas M=2.35 SD=1.10 was the average number of years they had been diagnosed with infertility. We got permission from hospital authorities before data collection. To obtain their consent, participants were made aware of the purpose and nature of our study and were guaranteed the privacy of their data.

In addition, participants had the option to leave at any time during the data-collecting process if they were uncomfortable. Regarding the study's inclusion and exclusion criteria, married women who had been diagnosed with primary infertility were all eligible to take part. The study did not include any women with identified psychiatric or physical disorders (apart from infertility). Additionally, women over forty were not allowed (Table 1 contains basic demographic information about the participants.

Measures

The following measures were used in the present study.

Psychological distress

Psychological distress in women with the diagnosis of infertility was measured by the Kessler Psychological Distress Scale (Slade et al., 2011). This is a short test consisting of 10 items which can be measured on a 5-point Likert scale and it showed good reliability (Cronbach's $\alpha = 0.88$).

Social support

To check the perceived social support of infertile women which they received from their family, friends, or other important figures in their life, we used The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988). This measure comprised twelve items that were rated on a 7-point Likert-type scale. This variable's Cronbach's alpha coefficient was 0.90.

Quality of Life

QOL of infertile women was measured by the WHO-QOL- BREF scale (Vahedi, 2010).

This is a small measure having a total of 26 items that are used to evaluate the perception of the overall health of an individual (such as physical and psychological health, social relations, and environment related QOL). This measure gives a global image of QOL and provides total insight into the health of an individual. The measure showed good reliability (Cronbach's $\alpha = 0.88$).

Statistical analysis

Version 24 of SPSS was used to analyze the data. We used basic statistics analysis like means, standard deviations, and percentages to characterize the distribution of the demographic of the study population. To examine the links between the study variables and the effects of independent variable groups on QOL scores, Pearson correlation coefficient analysis was employed. Additionally, a Model-4 mediation analysis was performed on PROCESS to evaluate the mediation function of perceived social support in the association between reported psychological distress and QOL

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Results

Table. 1 *Demographic Characteristics of study variables (N = 200)*

Variables	Groups	*f(%)*	*M(SD)*
Age			37.26 (4.54)
Education			8.45 (2.41)
Family size			7.08 (1.49)
Employment	Working	104 (52)	
	Non-working	96 (48)	
	Total	200(100)	
Residence	Urban	116 (58)	
	Rural	184 (42)	
	Total	200 (100)	
Family structure	Joint family	47(23.5)	
	Nuclear family	153 (76.5)	
	Total	200 (100)	

Important demographic data are shown in the table above.

The women's mean age was 37.2 years (*SD = 4.54*), their education level was 8.45 (*SD = 2.41*), and their family size was 7.08 (*SD = 1.49*). According to the results, in terms of employment, 48% of women were housewives and 52% of women were working. In Faisalabad, women made up 58% of those living in urban regions, 42% in rural areas, 23.5% in joint families, and 76.5 percent in nuclear families.

Table 2 *Reliability coefficients for study measures (N = 200)*

Measures	*Items*	*Reliability*
PS	10	.88
PSS	12	.90
QOL	26	.88

Note: PS= Psychological distress, PSS= perceived social support, QOL= quality of life

Table 2 shows the internal consistency of the measures that were used in the present study. Psychological distress, perceived social support and quality of life scales showed *a*= .88, *a*= .90, and *a*= .88 respectively.

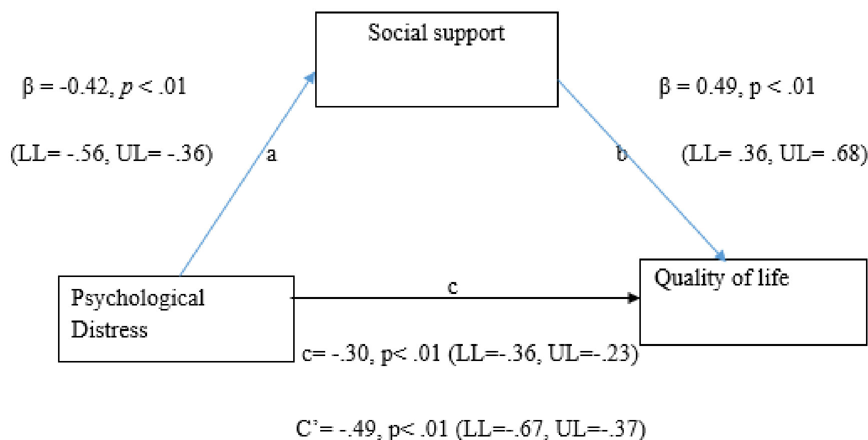
Table 3 *Correlation coefficient of measures (N=200)*

Measures	1	2	3	4	5	6	7
Psychological distress	1						
Perceived social support	− .42**	1					
Physical QOL	− .39**	.47*	1				
Psychological QOL	− .50**	.48**	.43*	1			
Social QOL	− .41**	.36*	.41**	.51*	1		
Environmental QOL	− .41**	.41**	.41*	.45*	.43*	1	
QOL Total score	− .49**	.49**	.41**	.41**	.42**	.39**	1

*Note= *p < .05, **p < .01, (QOL= quality of life).*

Table 3 displays the inter correlation between Psychological distress, social support, and QOL of infertile women. The findings demonstrated a significant negative correlation between infertile women's reported distress, perceived social support, and QOL. Whereas social support was discovered to have a substantial positive correlation with every aspect of life quality, including the social, psychological, physical, and environmental aspects. However high correlation was seen between perceived distress and psychological QOL (− 0.50**) and perceived social support and psychological quality of life (0.49**).

Figure: 1 *Mediation function of social support between distress and QOL among infertile women N=200*



PROCESS was used to perform a mediation analysis to examine the potential mediated effect of social support between distress and QOL, and calculated the 95% confidence interval. Figure 1 indicated the direct effect of perceived distress, and QOL of women with infertility (C'= -.49, $p < .01$). After the introduction of perceived social support as a mediator, the connection between perceived distress and quality of life remained significant (c= -.30, $p<.001$), indicating that in this relationship, perceived social support served as a partial mediator.

Discussion

The present research sought to ascertain the interaction among infertile women's psychological distress, social support, and QOL, in Pakistan. Results demonstrated that psychological distress was found to be significantly negatively correlated with reported QOL of infertile women. These women's mental burdens may be increased by their strong desire to become mothers and the cultural emphasis placed on family responsibilities (Cousineau & Domar, 2007; Lau et al., 2008). Furthermore, the hardship of infertility is marked by a complicated and frequently unpredictable path filled with assessments, failed treatments, and crushed dreams. This unclear direction adds to a condition of increased anxiety and stress, which can result in a persistently high state of distress, so intensifying the emotional burden (Rahimi et al., 2021). Furthermore, married women who are unable to conceive face stigma and blame from their spouses and in-laws in our patriarchal and polygamous developing nation. This causes distress among infertile females, and a high prevalence of distress is significantly linked to a low quality of life (Chi et al., 2016). Present results are in line with those of other research which similarly showed that females diagnosed with infertility had high distress scores (Rooney & Domar, 2018; Ilacqua et al., 2018) which is related to poor quality of life (Namdar et al., 2017).

In connection to infertility, our study also found a strong inverse relationship between psychological distress and social support. A lasting marriage is seen to depend most heavily on reproduction, which is both a natural desire and a basic human need, particularly in South Asian nations (Saif et al., 2021) that being said, women are thought to be in charge of creating the next generation. Her capacity to have the desired number and sex of children is a major factor in determining her stable standing in her husband's household as well as her cultural and social identities (Sami & Ali, 2012). The inability of a woman to procreate, or infertility, poses a danger to her social standing and social support (Iordachescu et al., 2021).

Furthermore according to the results of the current study social support and QOL are significantly positively correlated. These findings are in line with existing literature which indicates that a patient's quality of life is significantly impacted by their social support. Patients battling infertility will fare better during the treatment procedure and get over their inner anguish if they have the full support of their family, friends, the hospital, and spouse (Feeney & Alam, 2003; Maroufizadeh et al., 2018).

As predicted, our findings showed that social support acted as a partial mediator between infertile women's reported perceived psychological distress and quality of life. It might be seen as infertility distress associated with a lack of support, and this low level of social support led to the infertile women's sense of a reduced quality of life (Bhamani et al., 2020). Previous Research has proved that high stress hurts QOL directly and indirectly via a reduction in support (Ke et al., 2019). As a result, efforts to lessen the perceived stress experienced by infertile women should be addressed seriously, as stress has a direct impact on QOL and also has an indirect one through social support. In Pakistani culture as a whole, infertility is a specific societal issue. For all married people, having children is the main source of happiness, hope, and overall well-being. Thus it would cause women the greatest amount of suffering if they were unable to become parents (Wang et al., 2021).

To help women who are infertile to live better lives, it was suggested that interventions include stress management. The provision of structured, culturally appropriate psychological support and mental health services are crucial for infertile women. For instance, setting up activities to promote family communication and providing access to professional psychological therapy channels for infertility patients could make it more beneficial to lowering stress levels. Additionally, creating a suitable kind of social support can be considered a crucial first step in using psychological intervention techniques to raise quality of life. To prevent mental health from deteriorating, social assistance in the form of stress therapy is also necessary.

Limitations and suggestions

Similar to previous research, this study has certain limitations. For example, data was gathered from two Faisalabad centers, which may have an impact on how broadly applicable the findings are. As a result of the cross-sectional design of the study, a causal inference cannot be made. Furthermore, the fact that our study only included clinical samples may have limited the generalizability of our study. Additional research ought to include a community sample in addition to men who experience reproductive problems.

Conclusion

The mental health and quality of life of infertile women in Pakistan are significantly impacted by psychological distress related to infertility. A decrease in social support from family and friends also plays a crucial role in decreasing the quality of life of these women. Governments and/or legislators may start social awareness initiatives, media engagements, and appropriate counseling methods to lessen the burden of poor mental health among infertile women and guarantee a good standard of living.

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