IMPACT OF INFERTILITY-RELATED STRESS AND FAMILY AND SOCIAL SUPPORT ON MARITAL SATISFACTION OF INFERTILE INDIVIDUALS

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Abstract

Although infertility is a medical problem, however, the phenomenon is widely researched. With each passing day, infertile individuals undergo various personal and social challenges. Particularly, family pressure to carry on the progeny creates an unmounted pressure which ultimately affects their marital union. These factors altogether create an unprecedented scenario for their marital life. Considering this, the present research aimed to assess how family and social support could help in reducing the mounting infertility-related stress. Infertile individuals were approached at their offices, homes, as well as at infertility centres in Rawalpindi, Islamabad, and Attock using snowball and purposive sampling techniques. The participants were invited to complete a set of questionnaires including Fertility Problem Inventory, ENRICH Marital Satisfaction Scale, and Multidimensional Scale of Perceived Social Support. Hypotheses testing revealed non-significant association of family and social support with both infertility-related stress and marital satisfaction. However, family support (subscale) had positive association with infertility-related stress and negative association with marital

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satisfaction. Similarly, marital union of married individuals was negatively affected by stress due to infertility. However, infertility-related stress accounted for 7% variance in marital satisfaction. The study further found non-significant moderating role of family and social support between infertility-related stress and marital satisfaction. These results provided a baseline for future studies in Pakistan, in exploration of indigenous protective factors against marital dissatisfaction among infertile individuals. The present study further highlighted the importance and appropriateness of family support for childless individual. From the current study, the conclusion can be drawn that the family members (specifically in collectivistic cultures) should be consciously careful regarding their involvement in the intimate affairs (such as infertility) of the married individuals which otherwise could have detrimental effects instead of positive impacts on infertile individuals.

Key Words*: Infertility, Stress, Marital Satisfaction, Family Support, Social Support.*

Introduction

Infertility refers to a medical condition characterized by an individual's inability to conceive a child despite of regular unprotected sexual intercourse for 12 months (Fallahzadeh et al., 2019; Sajjad et al., 2020). It can be primary or secondary; primary infertility is defined as the failure of first conception after 12 months whereas secondary infertility refers to the inability to conceive a second child after successfully bringing first pregnancy to term (Benksim et al., 2018; Naz & Batool, 2017). Infertility is considered as a lifelong hazard effecting 186 million individuals and 48 million couples globally (WHO, 2020). Accordingly, the global prevalence of primary and secondary infertility has been estimated as 1-8 % and 35 % respectively (Saif et al., 2021). In 2007, the rates of infertility in developed countries were estimated 3.5 % to 16.7 %, while in developing countries these rates ranged from 6.9 % to 9.3 % (Liang et al., 2021). With reference to Pakistan, 22% estimated couples are suffering from infertility (Ahmed et al., 2020) with 4% primary and 18% secondary

infertility. The situation is aversive for low-middle-income countries with limited resources and treatment choices for the married individuals. In addition to the obvious lack of facilities, married individuals further face familial and societal pressure to bear progeny, ultimately affecting the married life of individuals. Keeping this in mind, the present research aimed to understand the impact of infertility-related stress, and family and social support on marital satisfaction of married individuals.

Infertility is a physical menace that has its psychological repercussions, including depression, anxiety (Rooney & Domar, 2018), low self-esteem, shame, guilt, loneliness and self-blame (McLeod, 2008). Other than these apparent factors, married individuals with infertility face family and, social pressure along with religious and cultural norms (Peyvandi, 2011; Sajjad et al., 2020) to have offspring. Procreation is believed as a religious duty by majority of Muslims (Qamar, 2018) and children signify the social security for ill, aged, or unemployed parents as a source of financial stability (Li et al., 2018; Qamar, 2018). In Pakistan, lack of old age welfare at the governmental level exerts psychological stress to have their own flesh and blood to look after them in the vulnerable age. These considerable expectations exert pressure on both gender (Matsubayashi et al., 2001). However, in Pakistan, women face the brunt of infertility significantly higher than men (Ehsan et al., 2018; Khan et al., 2019; Sajjad et al., 2020; Ullah et al., 2021). As they are commonly perceived to be responsible regardless of the fact that infertility lies in their partner (Ehsan et al., 2018; Ismail & Moussa, 2017; Qadir et al., 2013; Rasool & Zhang, 2020). Therefore, infertile women face numerous challenges for instance, they are forced to go back to their parents' house, threatened with divorce and polygamy of their partner by in-laws (Ali et al., 2011). The blame does not stop on humiliation and threats, they are further degraded in the society as bad omens and symbols of bad luck and hence get excluded form family functions (Ali et al., 2011). The present research aims to highlight that men also face stigmatization in case of their infertility. For instance, they too face humiliation and society question mark their manhood which hinders them to get treatment for their infertility related issues (Mustafa et al.,

2019). These circumstances do not only add up to the psychological stress but also effect various domains of life of both married men and women including their intimate relationships particularly marital satisfaction (Ehsan et al., 2018; Khan et al., 2019).

Marital satisfaction is one's subjective evaluation of his/her marital relationship (Zaheri et al., 2016; Zainah et al., 2016). In simple words, it is the degree of satisfaction (Ziaee et al., 2014) and level of happiness an individual has towards his / her spouse (Shakerian, 2010). It is further believed to be a crucial component for a steady marital relationship and children are regarded as a binding and enhancing force of this union (Thomas et al., 2017). On the contrary, the relationship satisfaction declines if one or both partners fail to conceive a child. In such cases, love making which initially has intimacy, warmth, and used to be sexually and physically pleasurable becomes dreaded chore and a tiring activity (Nyarko & Amu, 2015). Keeping in mind the importance of children in the individual's life; be its one's personal desire to achieve parenthood or the pressure form family and society, it impacts the couples/individuals significantly (Berger et al., 2013). However, it can be restored and enhanced with immense support and consideration from family and society (Zeinab et al., 2015). As in general, family and social support is an important aspect of relieving stress and elevating relationship satisfaction (Qadir et al., 2013).

Family and social support refers to the strong and reliable network of related family members and friends which a person can turn to in times of need (Chu et al., 2021). Support from these sources play a significant role in uplifting an individual and minimizing the effect of stressors in the time of crisis (Schwarzer & Knoll, 2007). With reference to the infertility-related stress, literature (Chu et al., 2021) posited a significant association of the support provided by the family and friends in minimizing the infertility-related stress. Moreover, the culture of joint family system (where grandparents, parents, and siblings of the couple live under same roof) prevails mostly in the Asian countries. Hence, people are closely related to each other and are aware of possibly everything a person goes through in his life. Therefore, infertility becomes known to everyone in

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family including extended family members. Consequently, the relatives exert the unnecessary pressure on infertile individual regarding bearing progeny. On the other hand, the same indigenous family system could be a source of substantial support to the infertile individuals. Thereby, reducing the infertility-related stress and enhancing their marital satisfaction (Iordachescu et al., 2021). In addition to that, buffering hypothesis explains the importance of social support system along the similar lines. This theory posits that social support works as a buffering element in stressful events thus helps to manage the detrimental effects of such events. Moreover, this theory focuses on enhancing the psychological well-being as well as physical health of an individual by moderating effect of social support. Therefore, this theory best explains the model of the present research.

With reference to the literature mentioned earlier, the indigenous factors as well as the lack of indigenous literature on the protective role of family and social support motivated this research. Moreover, the impact of infertility on psychological well-being and marital satisfaction of men is significantly overlooked in indigenous literature. Therefore, the present research included male infertile individuals along with females. Additionally, the current study aimed to examine the association between infertility-related stress, family and social support, and marital satisfaction among both genders in Pakistan.

Method

The study hypothesized the negative association between infertility-related stress and marital satisfaction as well as family and social support. Moreover, family and social support will moderate the association between infertility-related stress and marital satisfaction.

Sample and Design

For the present research, infertile individuals ($N = 150$) were approached using snowball and purposive sampling techniques from hospitals, infertility centres, and offices by the researcher for this correlational study during August 2021 to February 2022. Both male ($n = 55$) and female ($n = 95$) with either primary or secondary infertility with an

age range of 18-40 years (*M* = 29.19, *SD* = 5.59) participated in the study. Various cultural challenges restricted the sample size as discussions about this issue with someone out of the family are discouraged in the Pakistani culture. Individuals belonging to joint family system were hesitant to provide information due to influence of their in-laws. Secondly, male infertile individuals were extremely cautious and concerned about their fertility problem and were not ready to provide any assistance. In addition to these cultural challenges, large number of private sector infertility centres and hospital were uncooperative and denied the request to approach the infertile individuals in their practice settings (with the exception of few hospitals). Lastly, the pandemic restrictions in the country added up to the already existing challenges.

Keeping in mind, the above-mentioned challenges, g power indicated minimum sample size of 134 with medium effect size at probability (α) of .05.

Instruments

Fertility Problem Inventory (FPI; Newton et al., 1999)

Fertility Problem Inventory (FPI) a 46-items questionnaire consisting of 6-point Likert scale (1 = Strongly Agree to 6 = Strongly Disagree) was used to measure infertility-related stress in five domains. These five domains include social concern (with 10-items and α = .88), sexual concern (8-items and α = .77), relationship concern (10-items, and α = .84), rejection of childfree lifestyle (8-items with α = .80) and need for parenthood (10-items and α = .84). The composite score (global stress and α = .93) ranged from 46 to 276 where higher score represents higher level of stress due to infertility and vice versa.

ENRICH Marital Satisfaction (EMS) Scale (EMS; Fowers & Olson, 1993)

This scale measures marital satisfaction marital satisfaction (10-items) and idealistic distortion (5-items). Idealistic distortion measures marital conventionalization and correct the unrealistically positive description of one's marriage. Item responses of EMS are scored on a 5-

point Likert scale (Strongly Disagree to Strongly Agree). Raw scores of both marital satisfaction and idealistic distortion scales were converted into percentile scores to adjust unrealistically positive evaluations of marriage according to the scoring manual of EMS. The formula (EMS scores = PCT-[(.40 x PCT) (ID x .01) given in scoring manual of EMS was used to calculate the composite score. EMS has .73 concurrent validity with other marital satisfaction scales and Chronbach's α = .86 with test re-test α = .86 over time (Fowers & Olson, 1993).

Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988)

The MSPSS is a 12-items scale which measures the adequacy of perceived family and social support from friends (4-items) family (4-items) and significant others (4-items). The responses were reported on a 6-point Likert type scale (1 = very strongly disagree to 6 = very strongly agree). Overall mean score for MSPSS was calculated by summing across all the items and dividing them by 12 where possible score range lies between 12-48. MSPSS exhibits good to excellent internal consistency and test-retest reliability with Chronbach's α = .81 - .98 in non-clinical whereas .92 - .94 in clinical sample.

Procedure

Ethical approval was taken prior to conducting the research from Riphah International University. The permission for data collection was granted by authorities of infertility centres (e.g., MCH, PIMS), hospitals and participant themselves via consent form. Participants were briefed about their voluntarily participation and purpose of the study and were assured about their anonymity and privacy. The data collected was analysed on SPSS 21 to test the hypotheses of the study.

Results

In the present research, respondents had mean age of 29 years (*M* = 29.9, *SD* = 5.95). The majority of participants were females (63.3 %), belonged to joint family system (66.7%), were married for 5 years (58 %)

and most of the participants were from city (67.3%). Additionally, primary (77.3 %) infertility with female factor (45.3 %) prevailed higher among female (77.9 %) participants as compared to male primary infertility (76.4 %). Furthermore, majority of the participants (72.7 %) reported that they were currently trying to conceive. Additionally, the scales of the study provided good to satisfactory reliabilities (α = .63 - .93) along with normal distribution of data. The association between variables of the study are reported in Table 1.

Table 01
Correlation between the Scales and Subscales of the Study (N = 150)

Models	Variables	1	2	3	4	5	6	7	8	9	10
1	**Family and Social Support**	-	-	-	-	-	-	-	-	-	-
2	Significant Others	.88**	-	-	-	-	-	-	-	-	-
3	Family Support	.16	.14	-	-	-	-	-	-	-	-
4	Friends Support	.82**	.54**	.00	-	-	-	-	-	-	-
5	**Global Stress**	.01	.02	.20*	-.02	-	-	-	-	-	-
6	Social Concern	.02	.04	.22**	.02	.72**	-	-	-	-	-

		1	2	3	4	5	6	7	8	9	10
7	Sexual Concern	-.08	.01	.13*	-.02	.75**	.42**	-	-	-	-
8	Relationship Concern	-.16	-.03	.16	-.16	.88**	.47**	.62**	-	-	-
9	Rejection of Child free Lifestyle	-.04	-.01	-.11	-.04	.17	-.08	.17*	.25**	-	-
10	Need for Parenthood	.10	.06	.27*	.19	.50**	.26	.48*	.38**	.52**	-
11	**Marital Satisfaction**	-.08	-.13	-.71**	-.04	-.37**	-.26**	-.26	-.23**	.13	-.24**

*p < .05. **p < .001.

Results indicated non-significant association of perceived family and social support with all the variables of the study. However, one of its subscales (family support) had significant and positive association with infertility-related stress and significant negative association with marital satisfaction. Similarly, marital satisfaction and infertility-related stress (global stress) were negatively associated.

Based on these observations, linear regression analysis predicted significant variance attributed to the marital satisfaction through infertility-related stress and family support (subscale of family and social support).

Table 02

Linear Regression Analysis of Family Support, Global Stress, Social Concern, Sexual Concern, Relation Concern, and Need for Parenthood predicting Marital Satisfaction (*N = 150*)

Models	IV	Marital Satisfaction				
		β	B	SE	R^2	F
1	Constant Family Support	-.71	165.78 -78.43	21.53 6.57	.50	147.11**
2	Constant Global Stress	-.37	73.73 -1.03*	48.58 .31	.07	11.19**
3	Constant Social Concern	-.26	14.53 -2.83*	31.77 .86	.17	10.89**
4	Constant Sexual Concern	-.26	-29.57 -2.11*	30.67 1.19	.03	3.76*
5	Constant Relationship Concern	-.23	-8.51 -2.37*	28.11 .82	.15	8.37**
6	Constant Need for Parenthood	-.24	-22.68 -2.28*	22.68 .86	.16	9.10**

*p < .05. **p < .01.

In Table 2, Model 1 explained that family support negatively predicted marital satisfaction with 5% variance taken for this association. Similarly, global stress negatively predicted marital satisfaction with 7% variance.

Further, to test the moderation hypotheses, moderation analysis using PROCESS macro by Andrew F. Hayes (2013) was carried out to examine the buffering effect of family and social support considering the three conditions of Baron and Kenny (1986). As Table 1 indicated that only family support had significant correlations with infertility-related stress and marital satisfaction, therefore, family support was taken as the sole moderator of this study.

Table 03

Moderating Effect of Family Support on Infertility-related Stress and Marital Satisfaction (N = 150)

Variables	Marital Satisfaction			
			CI 95%	
	B	*SE*	*LL*	*UL*
1				
Constant	-85.54	5.44	-96.3	-74.78
Global Stress	-.60	.23	-1.17	-.14
Family Support	.76.74**	6.52	-89.63	-63.86
Global Stress* Family Support	-.33	.20	-.72	.18
R^2	.52			
F	53.41**			
2				
Constant	-84.89	5.50	-95.76	-74.02
Social Concern	-1.34	.64	-2.60	-.18
Family Support	-78.42**	6.68	-91.63	-65.21
Social Concern*Family Support	-1.25	.69	-2.62	.12
R^2	.52			
F	53.04**			
3				
Constant	-.92	.89	-2.38	.63
Sexual Concern	-77.48**	6.53	-90.38	-64.69
Family Support	-.60	.91	-2.41	1.20
Sexual Concern* Family Support	.50	.41	-1.08	.60
R^2	49.54**			
F	-86.94			
4				
Constant	-1.18	5.51	-97.83	-76.04
Need for Parenthood	-76.17***	.66	-2.28	-.19
Family Support	.05	6.51	-88.93	-63.20
Need for Parenthood*Family Support	.51	.66	-1.26	1.36
R^2	51.40***			
F	4.74			

*p < .05. **p < .01

Figure 01

Moderation between global stress (FPI) and marital satisfaction (EMS.T)
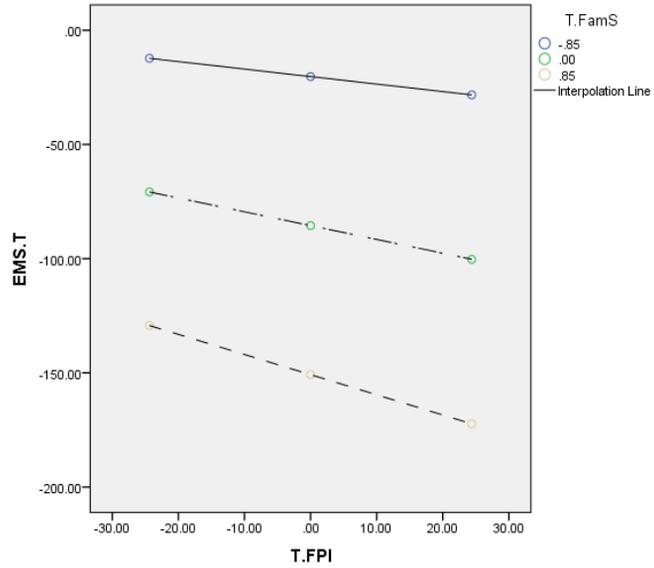
Figure 02

Non-significant moderation between social concern and marital satisfaction (EMS.T)
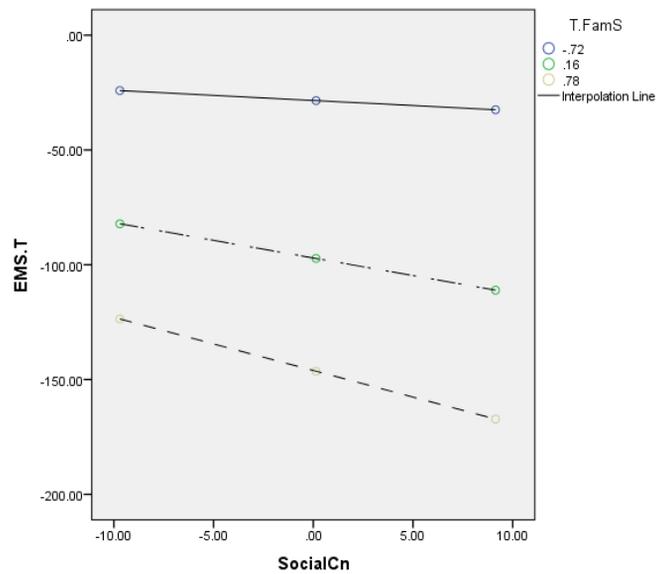
Figure 03

Non-significant moderation between social concern and marital
*satisfaction (EMS.T)*
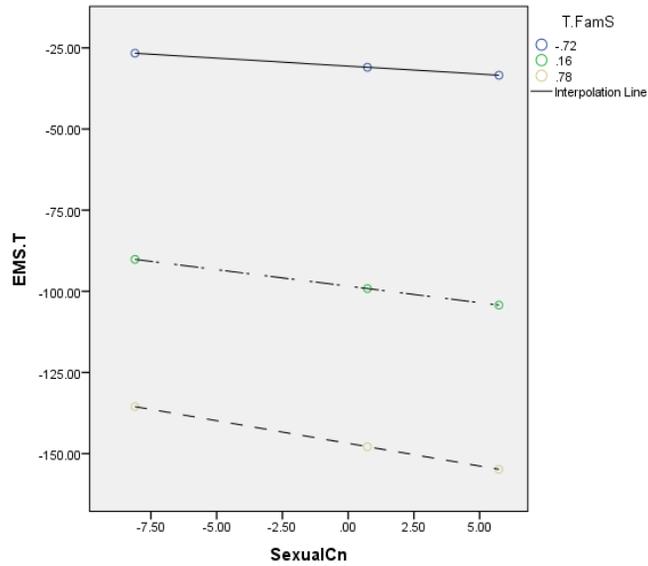
Figure 04

Non-significant moderation needs for parenthood and marital satisfaction
*(EMS.T)*
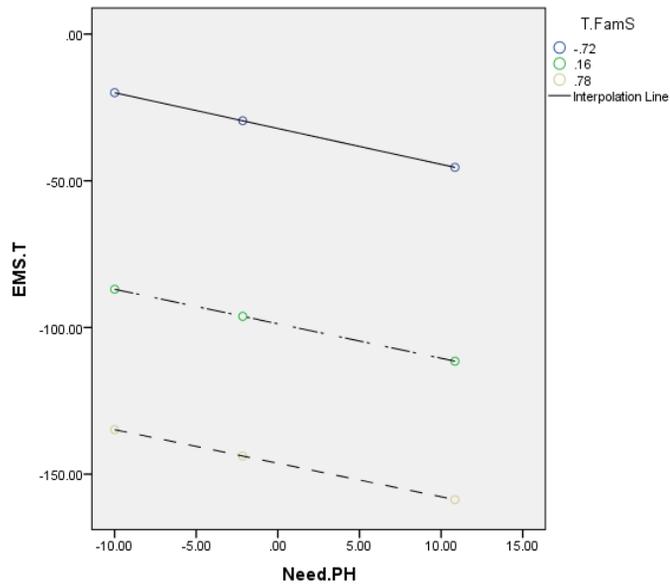
Table 3 demonstrated non-significant moderation between family support, global stress, social concern, sexual concern, and need for parenthood and the mod-graphs further supported the results.

Summary of the Findings

The current study was carried out to mainly explore (a) the association between infertility-related stress and marital satisfaction (b) to understand the role of family and social support as a protective factor against infertility-related stress and marital satisfaction. Results validated the negative impact of infertility-related stress on marital satisfaction of infertile individuals. The moderating role of family and social support between infertility-related stress and marital satisfaction was also investigated and appeared to be non-significant.

Discussions

The results of the present study revealed some findings in line with the literature and some additional associations with reference to the cultural context of Pakistan.

The study highlighted negative association between infertility-related stress and marital satisfaction (Galundia & Sharma, 2018). The marital dissatisfaction due to infertility-related stress can be explained in terms of various indigenous factors (family, social, and peer pressure, potential threat of divorce or fear of second marriage by spouse, stigmatization, and loneliness (Hassan et al., 2021). Cultural values in Pakistani society play a pivotal role in elevating stress due to infertility. For instance, pressure from family and society to opt a conventional role of achieving parenthood and building a clan. Pakistan being a patriarchal society provides prestige to the couple that carry forward the name of the clan through their biological children. Thus, people internalize the need for parenthood to comply with these societal norms and non-fulfilment takes a toll on their marital satisfaction (Galundia & Sharma, 2018). Continuing lineage is regarded as an inevitable achievement in a patrilineal Pakistani society (Qamar, 2018). Thus, infertile individuals opt expensive as well as laborious treatment procedures such as intracytoplasmic sperm injections and in vitro

fertilization (Roupa et al., 2009). The cost of these treatment procedures is unaffordable and inaccessible to most of the Pakistani low-income families which worsens the situation (Muhammad & Begum, 2018; Ullah et al., 2021). These factors foster the social, sexual, and relationship concerns among infertile individuals and results in declined marital satisfaction. Due to childlessness (primary infertility), the sexual relationship becomes just a laborious task as they lose their pleasure due to conflict and pressure of conceiving a child directly impacting their marital satisfaction (Galundia & Sharma, 2021).

Furthermore, perceived family and social support revealed non-significant association with infertility-related stress and marital satisfaction. These findings rejected the hypotheses and were inconsistent with the previous literature as well (Lam et al., 2021). However, one of the subscales (family support) highlighted significant associations i.e., positive with infertility-related stress and negative with marital satisfaction. Despite of significant association, these findings were inconsistent with the previous studies which reported negative association between family support and infertility-related stress (Jamilian et al., 2011), However, these findings were confirmed by a recent study conducted in Vietnam which reported that family support does not act as a protective factor against infertility-related stress. The family support may create a pressure as they always unrealistically expect a positive outcome from the infertility treatment and hence the infertile individual develops stress instead of feeling relieved (Lam et al., 2021; Patel et al., 2018).

Similarly, negative relationship of family support with marital satisfaction is also in contrast with the previous research (Sultan et al., 2018; Wendolowska et al., 2022). The literature suggested that appropriateness of family support is a crucial factor (Sultan et al., 2018) and over involvement of family in the name of support fails to produce the desirable results and similar trend can be observed in Pakistan. Moreover, feelings of shame, guilt, and low self-esteem in infertile individuals could also contribute in marital dissatisfaction.

These correlational findings of family support prompted to investigate its buffering impact on marital satisfaction of stressed infertile individuals. The findings revealed non-significant moderation (see Table 3). However, previous literature suggested family support as a buffering factor in managing stress due to infertility (Iordachescu et al., 2021; Saleem et al., 2019). As provision of support from family makes the infertile individual less susceptible to infertility-related stress and consequently enhances marital satisfaction (Rashidi et al., 2011; Wiweko et al., 2017). However, the present findings could further be explained in terms of collectivistic and patrilineal Pakistani society that privileges childbearing as a landmark in building family and childless individuals are subjected to severe pressure and distress that even provision of family support is not significantly enough to ease their stress. Despite of support from the family, their various concerns (social, sexual relationship, parenthood) add up exponentially. These personal and interpersonal stressors collectively hinder the family support to buffer the association between infertility related stress and marital satisfaction among infertile married individuals.

This non-significant moderating effect is a novel finding in cultural context of Pakistan. To the best of researcher's knowledge, no prior study has yielded these findings. This could be explained in terms of the common perception about positive impact of family and social support on infertility-related stress and marital satisfaction in the Pakistani context. These findings rather stressed that family and social support has a minimum to no role in buffering the marital satisfaction of infertile individuals. Hence, it can provide significant contribution to the indigenous literature and future studies could examine the role of culture specific factors. For instance, male willingness to the treatment, joint family system, comparative analysis of rural and urban residence of the infertile individuals, dyadic infertility and marital satisfaction, and fatalistic beliefs (with reference to religious beliefs and orientation).

To summarise, the present findings highlighted that woman are generally considered as infertile partner and male infertility factor is completely ignored in most cases. In this regard, the insight about male factor infertility (76.4 % in the present data) provides that both male and

female factors contribute in infertility in Pakistan. Furthermore, subjecting to pressure either partner to achieve parenthood deter their psychological wellbeing which ultimately impacts their marital satisfaction. Lastly, present study will contribute to literature as well as will broaden the scope for future research and guide the researchers to explore various other commonly believed protective factors (coping and resilience).

Conclusion

The current study established the negative outcomes of both infertility-related stress and family support on marital satisfaction of infertile individuals in Pakistan. Therefore, it is essential to acknowledge the adverse impacts of infertility-related stress. The findings further established that although family support is an important aspect but the family members (specifically in collectivistic cultures) should be consciously careful regarding their involvement in the intimate affairs (such as infertility) of the married individuals. The inability to do so could drastically impact the lives of married individuals as well as will affect the overall society in the longer run.

Limitations and Suggestions

The present research with all its theoretical and practical implications, is not without its limitations and therefore, have a room for improvement in future studies. The present study was conducted during Covid-19 lockdown and data was collected from only three major cities of Pakistan. This might have affected the generalisability of the findings. Additionally, it is indispensable to acknowledge the varied lifestyles (with reference to finances) across the country, therefore, future studies could be more inclusive regarding socioeconomic background of the participants.

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