

Factors Affecting Infertility-Related Stress & Marital Satisfaction of Infertile Individuals

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ABSTRACT

Aim of the Study: The present study was carried out on infertile individuals with either primary or secondary infertility to investigate the effect of demographic variables (gender, employment status, and level of education) on the presented concerns.

Method: The sample ($N = 150$) for the present study included infertile men ($n = 55$) and women ($n = 95$) with either primary or secondary infertility. The data was collected using convenient and purposive sampling techniques from infertility centres, hospitals, and general offices. Multidimensional Scale of Perceived Social Support (MSPSS), Fertility Problem Inventory (FPI), and ENRICH Marital Satisfaction (EMS) Scale was used to record the responses of the participants. G*Power software was used to collect the sample size for statistical analysis including Independent Sample t -Test and ANOVA to investigate group differences and group comparisons respectively across study variables.

Results: Group differences yielded non-significant gender differences across all study variables. Similarly, non-significant differences were observed among employed and unemployed infertile individuals. However, group comparisons across education indicated that individuals with intermediate education (12th grade) had received higher support from their significant others as compared to individuals with higher degrees.

Conclusion: The study concludes non-significant demographic related differences (gender, employment status and education) in the cultural context of Pakistan. These findings contribute to the indigenous literature as they are quite contradictory to the existing literature. However, the findings could further be examined in association with indigenous socio-psychological variables. Moreover, these findings will pave way for awareness and education to the masses about the sufferings of infertile men along with women.

Keywords: Infertility-related Stress, Marital Satisfaction, Family and Social Support, Gender, Employment Status, Education Level.

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Introduction

Pakistan is a pro-natal collectivistic society where pro-childbearing practices are highly regarded and valued. The procreation is believed to be an ultimate purpose and goal of marriage in the society as children serve as a source of perpetuation of lineage to preserve name of the family and heritage (Sami & Ali, 2012). Similarly, children are recognised as a potential source of social security in later life. Like other collectivistic societies, the old age homes are not much prevalent in Pakistan because the idea of living in old age homes is seemed as depreciating and dishonouring. For that reason, people seek financial as well as social security in the form of childbearing and rearing practices. In such circumstances, the pressure of bearing progeny leads infertile individuals to experience grave psychological, social, as well as familial repercussions (Bhatti & Jaffery, 2012; Qadir et al., 2005).

Infertility is a major reproductive health issue which is known to be a major life stressor, reportedly affecting 80 million couples and 146 million individuals globally (World Health Organization [WHO], 2023). The inability to conceive through regular unprotected sexual intercourse during the time period of 12 months or more is entitled as infertility (Carson & Kallen, 2021). In view of the importance devoted to childbearing, infertility brings unfavourable circumstances and attitudes towards married individuals from society (Donkor & Sandall, 2007). Therefore, infertility is termed as a silent struggle leading towards feelings of stress, anxiety, depression, isolation, and low self-esteem (Rooney & Domar, 2018). The psychological symptoms prevalence due to fertility-related issues was reported about 25 % - 60 % in infertile individuals which was significantly greater than the fertile ones (Rubin et al., 2022). Moreover, infertility-related stress deteriorates the self-esteem of an infertile individual and yields feelings of shame, guilt, sadness, and anxiety which negatively affect their personal and marital wellbeing (Hassan et al., 2015). It can be concluded that stress associated with infertility affects an infertile individual's marital stability and contentment in addition to its mental toll. Thus, making it a significant crisis in a marital relationship (Swift, 2020; Taguibao & Bance, 2022).

Marital satisfaction refers to the subjective evaluation of an individual's marital relationship including level of happiness and degree of satisfaction towards the spouse (Chiş, 2022; Shakerian, 2010; Zaheri et al., 2016). A steady marital nexus is based on various factors including children, considered as a strengthening force in a marital relationship. Infertility weakens the marital union and declines marital satisfaction as it subjects the married infertile individual to substantial stress (Mumtaz et al., 2013).

Additionally, in Pakistani society variety of indigenous factors catalyse the impact of infertility on marital satisfaction. More prevalent factors include polygamy mainly for reproduction purposes, social and family pressure, stigma associated with infertility to both genders (Naseer et al., 2021), and domestic abuse particularly if cause of infertility lies in women (Bhatti & Jaffery, 2012; Qadir et al., 2005). All these unfavourable circumstances make the individual vulnerable and do not let the couple nourish their spousal relationship. Hence, infertility-related stress invariably serves as a landmark in declined marital satisfaction of married individuals. Furthermore, reproduction regulates social and cultural behaviours in society and plays a significant role in constructing families and communities through marriage in Pakistan (Mumtaz et al., 2013). In case of failure to do so, the family creates significant pressure on the infertile individual to opt for every possible treatment ranging from painful and invasive medical procedures to go to the faith and traditional healers (Hassan et al., 2020). It is imperative to note that treating infertility through traditional means for instance amulets, unusual and unsanitary procedures, and herbal remedies mixed with strange elements is very common in Pakistani society (Hassan et al., 2015). On the other hand, a supportive family and society act as significant means of enhancing the self-esteem of infertile individuals. This support counterbalances the aversive impacts of stress due to infertility on the psychological wellbeing along with the relational domains of an infertile individual (Verhaak et al., 2005). Moreover, Pakistani society largely encompasses joint family systems where married couples live with an extended family under one roof. Family members including in-laws extend support to the bereaved infertile individual which enhances their courage to deal with stressing experience of infertility. This conducive family and social environment exert positive impact on physical (Zeinab et al., 2015) and

psychological health (Hamzehgardeshi et al., 2019), as well as bring out positive consequences of infertility treatment among women (Paul et al., 2010). Therefore, it can be inferred that social and familial support provide a buffering role against the negative impact of stress due to fertility issues on marital satisfaction. To conclude, support enhance marital satisfaction of individuals with fertility problems (Iordachescu et al., 2021).

In addition to the above-discussed variables, number of demographic factors including gender, level of education, and employment status (Casu & Gremigni, 2016), marital satisfaction (Samadaee-Gelekholaee et al., 2012), and presence or absence of family and social support (Avila, 2015; Zeinab et al., 2015) greatly influence infertility experience. Literature (Naz & Batool, 2017) highlighted that women tend to experience notable strain of infertility and are also at the verge of marked crisis in their lives. It has been demonstrated that more than two-third of women (67.7 %) in Pakistan reported marital conflicts due to their inability to conceive and particularly if they failed to give live birth to heirs (Ali et al., 2011). Among these cultural consequences faced by women other notable stressors are threat of divorce (20 %), infertile women being compelled to return back to their parents' home (26 %), and husband remarrying (38 %) along with physical and verbal abuse by in laws and husband (Ali et al., 2011). Consequently, infertility becomes threat for the prescribed societal status of women in Pakistan (Ali et al., 2022; Sami et al., 2012).

Considerably less attention has been given to the stress experienced by infertile men. However, it was reported that men are more likely to internalize their emotions and tend to conceal the emotional challenges and losses (Paul et al., 2010). Similar trends can be seen in Pakistan; a predominantly male-dominant society, where manhood corresponds with fatherhood (Arumand et al., 2017). It has been observed that if husband is diagnosed with infertility, the family usually overshadows the information and avoids the topic to not embarrass the husband as male infertility is a taboo topic, and male infertility is appraised as male weakness and emasculation (Bhatti & Jaffery, 2012; Fisher & Hmmarberg, 2012; Mumtaz et al., 2013; Sami et al., 2012). Literature (Fisher & Hmmarberg, 2012; Schick et al., 2016) emphasized that infertile men often oppose the idea of getting treatment (for their infertility) to prevent questions about their reproductive problems, and hence lose the possible and legitimate opportunity to achieve fatherhood. These circumstances add up and cultivate considerable stress resulting in negative outcomes on their marital satisfaction because similar to their female counterparts, they possess the desire to achieve parenthood (Fisher & Hmmarberg, 2012).

Along with gender-specific experiences of infertility, employment status is another factor that plays a significant role in influencing stress brought on by infertility, satisfaction within a marital relationship, and family and social support among infertile individuals. Employment status acts as a safeguard in stress against infertility and enhances marital contentment since it brings forth sense of independency and enhances self-esteem. The sense of not being dependent on spouse elevates the self-confidence and contributes to marital satisfaction (Zhang & Tao, 2021). Similarly, being employed provide the freedom to meet the infertility treatment expenses which are usually expensive and such freedom brings the satisfaction and courage (Berger et al., 2013). On the contrary, treatment expenses of the unemployed individual, particularly women, are the responsibility of partner. This financial dependence adds up to the stress especially if the presumed individual belongs to a lower socioeconomic position and only a breadwinner of the family (Mosalanekjad et al., 2013). Additionally, unemployment halts the opportunity to seek treatment due to limited resources and it contributes to the already existing agony resulted from infertility affecting the marital nexus (Berger et al., 2013).

Education is another factor that influence infertility, stress caused by it, marital satisfaction, and familial and societal support. It serves as a safeguard against anxiety and stress particularly among married women and elevate their self-esteem and self-confidence (Khalid, 2015). Education instils awareness about causes, risks, and possible treatments of fertility problems and enables the infertile individual to handle it in a more realistic and appropriate way. Thus, awareness about causes and possible solutions of infertility aid in reducing stress and strengthening the marital nexus. Educated infertile individuals could

initiate the discussion about available treatment options with their spouse. Such discussions have been proven pertinent in building, nourishing, and elevating marital satisfaction (Dogar et al., 2008). Moreover, infertile women with postgraduate degrees exhibited higher marital satisfaction than graduates (Khalid, 2015). Similarly, higher mental health issues were observed in less educated individuals (Kayabaşı & Sözbir, 2022). Educated infertile individuals due to their awareness and social resources, combat unpleasant stressors more effectively and efficiently (Carson & Kallen, 2021; Li et al., 2018). Therefore, it is imperative to examine tabooed topics such as stress caused by infertility and support from family and society following marital satisfaction and the influence of demographic factors in propagating or impeding these variables.

Considering all the above-mentioned factors, it is imperative to examine the grave effects of demographics on the said variables particularly in the indigenous context. Therefore, the present research hypothesized that there will be non-significant gender differences for stress related to infertility and marital satisfaction. As mentioned earlier, limited studies have examined infertility related stress among men in the Pakistani culture. However, just like females, they do fear for their progeny and old age assurances which equally affects their marital relationship. However, in the patriarchal society, Pakistani infertile males are supported and encouraged. Male infertility is a tabooed topic, and it is generally considered that infertility is only female issue and male can remarry. This unconditional support from the family and society (although encouraging) could be detrimental to the marital union. The study hypothesized that employed individuals will experience significantly less infertility-related stress, higher familial and social support and marital satisfaction than unemployed ones. Lastly, educated individuals will have significantly lower infertility-related stress and higher marital satisfaction and family and social support.

Method

Sample and Design

Both infertile men ($n = 55$) and women ($n = 95$) suffering from either primary or secondary infertility with an age range 18-40 years ($M = 29.19$, $SD = 5.59$) voluntarily participated in the study. Married individuals from different hospitals, infertility centres, and offices were taken using snowball and purposive sampling techniques. Individuals above 40 years and below 18 years of age were not included in the study. Total sample size was calculated using G*Power software for the present study with an effect size $p = .30$, and at probability $\alpha = .05$, and 95 % CI was 134.

Instruments

Fertility Problem Inventory (FPI; Newton et al., 1999): It is a self-administered 46-items questionnaire used to evaluate infertility-related stress in total 5 domains on Likert scale of 6 (Strongly Agree to Strongly Disagree; 1 to 6). The stress associated with infertility was assessed in relation to the five domains consisting of social concern (consisting of 10-items and Cronbach's $\alpha = .88$), sexual concern (including 8-items and Cronbach's $\alpha = .77$), relationship concern (with 10-items, and Cronbach's $\alpha = .84$), rejection of childfree lifestyle (comprising of 8-items with Cronbach's $\alpha = .80$) and need for parenthood (total 10-items and Cronbach's $\alpha = .84$). FPI has a total score (global stress) ranging from 46-276 where lower scores indicated less stress and whereas higher scores represent greater stress following infertility (Newton et al., 1999).

ENRICH Marital Satisfaction (EMS) Scale (Fowers & Olson, 1993): EMS is a 15 items scale used to measure marital satisfaction. The items of this scale are scored on Strongly Disagree = 1 to Strongly Agree = 5 on a 5-point Likert scale. The overall rating of EMS is calculated by summing all the raw scores and converting them into percentile scores using EMS scores, through the equation: $PCT - [(40 \times PCT) (ID \times .01)]$. The Cronbach's alpha reliability for EMS was calculated as Cronbach's $\alpha = .86$ and test re-test alpha reliability = .86 over time (Fowers & Olson, 1993).

Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988): This scale consists of 12-items with three subscales i.e., friends (4-items), family (4-items) as well as significant others (4-items). The participants responded on a 6-point Likert type scale (1 = very strongly disagree to 6 = very strongly agree). The mean score is obtained by adding all the item responses and dividing them by 12 with potential scores ranging from 12 to 48. The scale exhibited good to excellent internal consistency along with test-retest reliability with Cronbach's $\alpha = .92$ to $\alpha = .94$ in clinical whereas $\alpha = .81$ to $\alpha = .98$ in non-clinical sample (Zimet et al., 1988).

Procedure

Ethical approval was provided by the Riphah International University, Islamabad. The permission for data collection was taken from infertility centres (e.g., The Mother and Child Hospital, Pakistan Institute of Medical Sciences), hospitals, and participants using consent forms. These infertility centres were chosen as per convenience, and after they provided access for data collection, participants were briefed about their voluntary participation as well as the study's objective before data collection. The sample ($N = 150$) was requested to complete a series of questionnaires (details mentioned earlier in instrument section) and self-constructed demographic sheet. The privacy and anonymity of participants responses were assured, and they were assured that they can withdraw their participation any stage of the study.

Data Analysis

The collected data were analysed using SPSS-21 for hypotheses testing. The statistical procedures for the analysis of the data included the Independent Sample t -Test and ANOVA to investigate the group differences and group comparisons respectively across the demographics of the sample.

Results

The descriptive analysis indicated that mean age of the sample was 29 years ($SD = 5.95$) and most of them (63.3%) were women as compared to men (36.7%). Most participants were graduates (36.0%) followed by undergraduates (26.7%), postgraduates (15.3%), and equal level of secondary, matric, and intermediate graduates (7.3%). Lastly, higher number of the participants were employed (56%) as compared to unemployed (44.0%). Moreover, psychometric analysis of the collected data demonstrated normal distribution with range-bound skewness and kurtosis (less than 2) (Brown, 2015). Additionally, the reliabilities for all the scales and subscales were exhibited within moderate, acceptable to very good range ($\alpha = .63$ to $.93$) for the present sample (Taber, 2017). The independent sample t -test was carried out across gender and employment status of the respondents and the findings are presented in the tables below (see Table 1 and Table 2).

Table 1: Group Differences for Males ($n = 55$) & Females ($n = 95$) across all Study Variables

Scale	Males	Females	$t_{(148)}$	p	CI 95%	
	$M (SD)$	$M (SD)$			LL	UL
FSS	5.01 (1.61)	5.10 (1.33)	.39	.70	-.68	.49
So	5.08 (1.73)	5.44 (1.50)	1.46	.17	.90	.27
FS	3.15 (.82)	3.26 (.87)	.82	.42	-.41	.27
FrS	4.89 (1.79)	4.66 (1.72)	.86	.45	-.36	.81
GS	154.07 (27.18)	157.58 (22.64)	.84	.40	-11.67	4.66
SC	35.29 (8.81)	36.29 (8.78)	.61	.54	-3.82	2.02
SeC	26.00 (7.39)	28.00 (6.79)	1.68	.10	-4.35	.35
RC	32.15 (9.33)	33.55 (9.15)	.90	.37	-4.59	1.79

RCL	33.03 (10.22)	31.37 (10.50)	.94	.35	-1.81	5.15
NP	27.60 (9.66)	28.47 (10.18)	.52	.61	-4.21	2.47
MS	-79.46 (96.20)	-91.15 (93.68)	.73	.47	-19.98	43.36

Note. FSS = Family and Social Support; So = Significant others; FS = Family Support; FrS = Friends Support; GS = Global Stress; SC = Social Concern; SeC = Sexual Concern; RC = Relationship Concern; RCL = Rejection of Childfree Lifestyle; NP = Need for Parenthood; MS = Marital Satisfaction.

The above findings implied non-significant gender differences across all study variables. The findings implied that both infertile men and women experience equal level of stress, family and social support, as well as have satisfaction of their marital relationship.

Table 2: *Group Differences for Employed (n = 84) & Unemployed (n = 66) Married Individual's across all Study Variables*

Variables	Employed	Unemployed	$t_{(148)}$	p	CI 95%	
	$M (SD)$	$M (SD)$			LL	UL
FSS	4.89 (1.58)	5.28 (1.19)	1.63	.09	-.84	.08
So	5.09 (1.69)	5.60 (1.41)	1.99	.05	-1.03	-.003
FS	3.33 (.76)	3.08 (.94)	1.81	.07	-.02	.52
FrS	4.81 (1.78)	4.67 (1.70)	.49	.63	-.43	.71
GS	155.09 (21.94)	157.82 (27.26)	.68	.49	-10.66	5.21
SC	35.90 (8.45)	35.80 (9.08)	.07	.94	-2.74	2.94
SeC	26.42 (6.61)	28.35 (7.51)	1.67	.09	-4.21	.35
RC	32.38 (9.05)	33.86 (9.42)	.97	.33	-4.58	1.51
RCL	33.02 (9.79)	30.65 (11.04)	1.39	.17	-.99	5.74
NP	27.36 (10.02)	29.15 (9.89)	1.09	.28	-5.02	1.56
MS	-89.34 (89.09)	-83.71 (101.49)	.36	.72	-36.42	25.27

Note. FSS = Family and Social Support; So = Significant others; FS = Family Support; FrS = Friends Support; GS = Global Stress; SC = Social Concern; SeC = Sexual Concern; RC = Relationship Concern; RCL = Rejection of Childfree Lifestyle; NP = Need for Parenthood; MS = Marital Satisfaction.

Table 2 illustrated non-significant differences across the measuring variables except support from significant others indicating that unemployed individuals exhibited higher support from their significant others than the employed ones.

Moreover, One-way ANOVA was administered to analyse the effect of education level on all the study variables (see Table 3).

Table 3: *Group Comparison of Education Level; Intermediate (n = 32), Graduate (n = 70), & Postgraduate (n = 48) across all Scales and their Subscales of the Study Variables*

Scale	Inter-mediate	Graduate	Post-graduate	F	$i-j$	Mean Diff.	SE	95% CI	
	$M (SD)$	$M (SD)$	$M (SD)$					LL	UL
1 FSS	5.52 (1.59)	5.01 (1.33)	4.85 (1.51)	2.24	Inter > Graduate	.51	.31	-.09	1.11
					Inter > Postgraduate*	.67*	.33	.03	1.31
					Graduate > Postgraduate	.26	.37	-.37	.69

2	So	6.01 (1.64)	5.19 (1.43)	5.03 (1.78)	4.18**	Inter > Graduate*	.82*	.33	.16	1.48
						Inter > Postgraduate*	.98*	.46	.27	1.68
						Graduate > Postgraduate	.26	.29	-.42	.74
3	FS	3.48 (.72)	3.08 (.87)	3.26 (.97)	2.66	Inter > Graduate*	.42*	.28	.05	.76
						Inter > Postgraduate	.23	.19	-.15	.61
						Graduate < Postgraduate	-.18	.26	-.49	.13
4	FrS	4.66 (1.82)	4.86 (1.70)	4.64 (1.77)	.27	Inter < Graduate	-.21	.37	-.94	.54
						Inter > Postgraduate	.02	.40	-.77	.81
						Graduate > Postgraduate	.22	.33	-.43	.87
5	GS	162.53 (22.57)	153.10 (20.38)	156.79 (29.93)	1.67	Inter > Graduate	9.43	5.28	-.80	19.66
						Inter > Postgraduate	5.74	5.55	-5.20	16.68
						Graduate < Postgraduate	-3.69	4.55	-12.6	5.30
6	SC	38.34 (7.54)	34.31 (7.70)	36.46 (10.38)	2.57	Inter > Graduate*	4.03*	1.84	.40	7.66
						Inter > Postgraduate	1.88	1.96	-2.00	5.77
						Graduate < Postgraduate	-2.14	1.62	-5.34	1.05
7	SeC	27.47 (6.85)	27.17 (7.24)	27.27 (7.18)	.02	Inter > Graduate	.30	1.51	-2.70	3.30
						Inter > Postgraduate	.20	1.62	-3.01	3.41
						Graduate < Postgraduate	-.09	1.33	-2.73	2.53
8	RC	34.06 (9.70)	32.11 (8.44)	33.69 (10.05)	.77	Inter > Graduate	1.95	1.97	-1.95	5.84
						Inter > Postgraduate	.37	2.12	-3.79	4.54
						Graduate < Postgraduate	-1.57	1.73	-4.99	1.85
9	RCL	33.91 (11.02)	31.44 (9.85)	31.48 (10.82)	.70	Inter > Graduate	2.46	2.22	-1.93	6.86
						Inter > Postgraduate	2.43	2.48	-2.27	7.13
						Graduate < Postgraduate	-.04	1.95	-3.89	3.82
10	NP	28.75 (11.26)	28.06 (9.19)	27.90 (10.55)	.18	Inter > Graduate	.69	2.14	-3.54	4.92
						Inter > Postgraduate	.85	2.39	-3.67	5.38
						Graduate > Postgraduate	.16	1.98	-3.55	3.88
11	MS	103.50 (84.72)	73.84 (97.97)	94.78 (94.64)	1.33	Inter < Graduate	-29.66	20.11	-69.41	10.08
						Inter < Postgraduate	-8.72	21.51	-51.22	33.79
						Graduate > Postgraduate	20.95	17.66	13.96	55.85

Note. FSS = Family and Social Support; So = Significant others; FS = Family Support; FrS = Friends Support; GS = Global Stress; SC = Social Concern; SeC = Sexual Concern; RC = Relationship Concern; RCL = Rejection of Childfree Lifestyle; NP = Need for Parenthood; MS = Marital Satisfaction.

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

Table 3 demonstrated only significant differences in support from significant other (subscale of family and social support) for individuals with intermediate levels of education (12th grade) as compared to the rest of the education group (graduate and post-graduate).

Discussions

Infertility is a biological phenomenon caused by a malfunction of the reproductive system which also has psychological manifestations for instance, stress, anxiety, depression, and low self-esteem. Along with psychological repercussions, interpersonal and familial relationships often suffer a lot because of infertility. However, these negative impacts of infertility can be counterbalanced if family and society stand with infertile individuals and extend their support. Besides family and society, gender, education, and employment status undeniably facilitate or stagnate the positive and negative impacts of infertility respectively. The present study aimed to explore how these factors affect marital satisfaction, family and social support, and stress associated to infertility. The analysis validated some of the findings of previous studies along with few novel and interesting results.

Group differences demonstrated non-significant gender differences across all study variables. Similar findings were reported in Thailand (Sreshtaputra et al., 2008). Both Thailand and Pakistan are collectivistic societies where family structure and values are highly regarded and children are considered as a source to preserve the family structure by binding the family together (Lodhi et al., 2021). Moreover, Pakistan is a pro-natal society where childbearing is considered an unwritten obligation and parenthood is regarded as a milestone in a couple's married life (Hassan et al., 2015; Sultan & Tahir, 2011). In such circumstances, if any of the partner fails to fulfil this obligation, his / her capabilities are questioned, and the person is viewed as flawed/ incomplete by society. To an extent, both genders are questioned and

bombarded with societal pressure however, there are differences in the forms of pressures and stressors and not the levels of stress for both genders. For instance, infertility yields repercussions for women in the form of polygamy, divorce, domestic abuse, and invasive treatments, etc., whereas men experience stress because their masculinity and manhood are questioned (Naz & Batool, 2017).

However, literature reported gender differences with respect to infertility-related stress, marital satisfaction, and family and social support among infertile men and women (Cserepes et al., 2013; Galhardo et al., 2013; Slade et al., 2007; Ying et al., 2015). These studies presented that women tend to experience greater infertility-related stress, reduced satisfaction in marriage, and receive minimal support from family and society than men. Women are believed to be solely responsible for infertility and face diverse consequences including emotional, physical, and verbal torture. Furthermore, women at times lie about their husbands being impotent or infertile to save them from societal stigma and taboo (Eagle et al., 2019). Additionally, there's difference between coping among both genders, women are more vocal about their fertility problem and hence, are able to seek support from people around them (Young et al., 2020). On the contrary, men avoid disclosing about their infertility to not get stigmatized and ultimately fail to get support system (Pinzon & Rotoli, 2022).

Moreover, the findings presented non-significant gender differences across marital satisfaction and family and social support. Ahmadi Forooshanay et al. (2014) and Li et al. (2018) reported similar findings for marital satisfaction across Iranian and Taiwanese sample. The findings projected non-significant gender differences across marital satisfaction of infertile married individuals. It is imperative to understand that if both male and female experience similar extent of stress due to fertility problem then their marital satisfaction would be affected equally. Similarly, Sultan and Tahir (2011) attributed non-significant differences to enhanced intimacy in the marital relationship while going through infertility crisis. This closeness improved communication between partners which may lead to marital satisfaction. Furthermore, non-significant gender differences for family and social support were also highlighted by Slade et al. (2007). It implied that society treats both genders facing fertility problems in similar ways and spare none of them. However, Mumtaz et al. (2013) rejected this notion and concluded that men with fertility issues enjoy more support from the family as compared to their female counterparts as women face harsher consequences of infertility such as abuse, social exclusion etc. whereas men only face minor taunting.

Moreover, group differences across employment status projected that employed individuals tend to get support from significant others (family and social support) and the results were in contrast with the previous studies (Mahadeen et al., 2020). Employed individuals with higher education levels are thought to be more vocal with respect to their fertility problems. They tend to share their sufferings with significant others and get their support. Furthermore, being employed they are able to pay for medical expenses of fertility treatment on their own provides them a sense of satisfaction about not being a burden on their spouse (Berger et al., 2013). This independence paves the way to more nurturing marital relationship as none of the spouse feels strain to meet demands of their partner (Zhang & Tao, 2021). Lastly, financial security in a lower-middle income country like Pakistan weighs highly because of prevailing mind-set that if an individual is earning and contributing to the family's finances, then he/ she is independent and allowed to take life decisions as little as opting a medical treatment/ procedure (Naseer et al., 2021). In this context, such an individual receives support from the significant others.

On the contrary, rest of the variables including infertility-related stress and its subscales, family and social support excluding significant other, and marital satisfaction and its subscales exhibited non-significant differences across employed and unemployed infertile individuals as confirmed by the earlier studies as well (Casu & Gremigni, 2015; Klock, 2011). Infertility is a known crisis and affects almost every individual greatly leaving them to fight with stress, unsatisfied, and tainted marital relationship. In such circumstances, no matter whether an individual earns or not, not being able to conceive despite of all resources and treatments takes a toll on every aspect of life of an infertile individual. Similar is the case in indigenous culture where either individual is earning or not, is vulnerable to stress and deteriorating

marital relationship due to various other confounding factors for instance, pressure and negative remarks, taunting and sarcastic questions from family, peers, friends, and social circle at large (Bhatti & Jaffery, 2012; Qadir et al., 2013).

Lastly, group comparisons across levels of education also yielded that individual with an intermediate level of education received significantly higher support from significant others as compared to other variables. These are interesting findings in the current sample as there was no evidence of any previous study exploring the effect of education level on family/ social support. However, various studies have discussed the effect of the level of education on infertility-related stress and marital satisfaction. For instance, Zurlo and colleagues (2018) emphasized that education is an important variable for the fact that it is related to a better understanding of infertility, its causes, treatment procedures, and negative impacts including stress, anxiety, and depression etc. Moreover, being educated helps to deal with infertility more effectively because an educated individual possesses the ability to search for more solution-based approaches to infertility issues (Hasanpoor-Azghady et al., 2019). Moreover, education enables a better perception of infertility issue and conveys and discuss its reasons, effects, and possible treatments to partners, family, and friends (Sohbati et al., 2021).

Conclusion

Findings indicated non-significant gender, employment, and education related difference across all study variables. However, results across employment and education highlighted that unemployed individual's with only high school qualification (12th grade) received highest support from their significant others.

Implications and Recommendations

This study will be a significant addition to indigenous literature and would provide a baseline for future studies. These findings will help in understanding the influence of stress related to infertility and its drastic consequences on both genders. Moreover, the results will be substantial in terms of validation of the sufferings infertility brings, particularly to the men as their feelings and emotions in such circumstances are generally ignored. Furthermore, the present study will be an important contribution to making it possible to discuss the taboo topics such as infertility in Pakistani orthodox society. Such discussions will pave the way to a better understanding of all the aspects related to the fertility problem and create awareness among the masses. Based on this study, it is recommended to investigate the influence of various other demographic factors including socioeconomic status, area of residence, age, and family system etc. Lastly, it is also recommended to infertility centres and hospitals to allow and facilitate future research on infertility and associated factors.

Limitations of the Study

Along with its implications, the present study also had a few limitations. First, the study was carried out during Covid-19 pandemic, therefore, various fertility centres refused to give permission of data collection which limited the sample size. This could have affected the generalizability of the results. Lastly, data was collected majorly from three cities in the country, so the variations across lifestyles with reference to financial status could have been overlooked. Future studies could be more inclusive in terms of socioeconomic status of the participants.

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None.


Conflict of Interest


Authors declared no conflict of interest.


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References

- Ahmadi F. S. H., Yazdkhasti, F., Safari H. S., & Nasr Esfahani, M. H. (2014). Infertile individuals' marital relationship status, happiness, and mental health: a causal model. *International Journal of Fertility and Sterility*, 8(3), 315–324.
- Ali, P. A., McGarry, J., & Maqsood, A. (2022). Spousal role expectations and marital conflict: perspectives of men and women. *Journal of Interpersonal Violence*, 37(9–10), NP7082–NP7108. <https://doi.org/10.1177/0886260520966667>.
- Ali, T., Asad, N., Mogren, I., & Krantz, G. (2011). Intimate partner violence in urban Pakistan: prevalence, frequency, and risk factors. *International Journal of Women's Health*, 3, 105-115. <https://doi.org/10.2147/ijwh.s17016>.
- Armuaud, G., Dhejne, C., Olofsson, J. I., & Rodriguez-Wallberg, K. A. (2017). Transgender men's experiences of fertility preservation: a qualitative study. *Human Reproduction*, 32(2), 383-390. <https://doi.org/10.1093/humrep/dew323>.
- Avila, B. E. (2016). *Importance of motherhood and/or social stigma of infertility: What's driving infertility-related outcomes?* [Doctoral dissertation, Michigan State University]. MSU Libraries Digital Repository. <https://doi.org/doi:10.25335/M58390>.
- Berger, R., Paul, M., & Henshaw, L. (2013). women's experience of infertility: a multi-systemic perspective. *Journal of International Women's Studies*, 14(1), Article 4.
- Bhatti, F., & Jeffery, R. (2012). Girls' schooling and transition to marriage and motherhood: exploring the pathways to young women's reproductive agency in Pakistan. *Comparative Education*, 48(2), 149-166. <https://doi.org/10.1080/03050068.2011.608894>.
- Brown, T. A. (2015). *Confirmatory Factor Analysis for Applied Research*. Guilford publications.
- Carson, S. A., & Kallen, A. N. (2021). Diagnosis and management of infertility: a review. *Journal of American Medical Association*, 326(1), 65–76. <https://doi.org/10.1001/jama.2021.4788>.
- Carson, S. A., & Kallen, A. N. (2021). Diagnosis and management of infertility: a review. *Journal of American Medical Association*, 326(1), 65–76. <https://doi.org/10.1001/jama.2021.4788>.

- Casu, G., & Gremigni, P. (2016). Screening for infertility-related stress at the time of initial infertility consultation: Psychometric properties of a brief measure. *Journal of Advanced Nursing*, 72(3), 693–706. <https://doi.org/10.1111/jan.12830>.
- Chiş, R., Ignat, S., Rad, D., & Macsinga, I. (2022). The mediation role of an individual's and couple's psychological factors, including parenting in the prediction of relational and marital satisfaction. *International Journal of Environmental Research and Public Health*, 19(17), Article 11011. <https://doi.org/10.3390/ijerph191711011>.
- Cserepes, R. E., Kollár, J., Sápy, T., Wischmann, T., & Bugán, A. (2013). Effects of gender roles, child wish motives, subjective well-being, and marital adjustment on infertility-related stress: a preliminary study with a Hungarian sample of involuntary childless men and women. *Archives of Gynecology and Obstetrics*, 288(4), 925–932. <https://doi.org/10.1007/s00404-013-2835-7>
- Dogar, I., Parveen, B., Kousar, S., Musharraf, S., Masood, A., & Afzal, S. (2008). Psychosocial adjustment of educated and uneducated infertile females of Pakistan. *Annals of Punjab Medical College*, 2(2), 108–112.
- Donkor, E. S., & Sandall, J. (2007). The impact of perceived stigma and mediating social factors on infertility-related stress among women seeking infertility treatment in Southern Ghana. *Social Science & Medicine*, 65(8), 1683–1694. <https://doi.org/10.1016/j.socscimed.2007.06.003>.
- Eagle, D. E., Hybels, C. F., & Proeschold-Bell, R. J. (2019). Perceived social support, received social support, and depression among clergy. *Journal of Social and Personal Relationships*, 36(7), 2055–2073. <https://doi.org/10.1177/0265407518776134>.
- Fisher, J. R. W., & Hammarberg, K. (2012). Psychological and social aspects of infertility in men: an overview of the evidence and implications for psychologically informed clinical care and future research. *Asian Journal of Andrology*, 14(1), 121–129. <https://doi.org/10.1038/aja.2011.72>.
- Fowers, B. J., & Olson, D. H. (1993). ENRICH Marital Satisfaction Scale: A brief research and clinical tool. *Journal of Family Psychology*, 7(2), 176–185. <https://doi.org/10.1037/0893-3200.7.2.176>
- Galhardo, A., Cunha, M., Pinto-Gouveia, J., & Matos, M. (2013). The mediator role of emotion regulation processes on infertility-related stress. *Journal of Clinical Psychology in Medical Settings*, 20, 497–507. <https://doi.org/10.1007/s10880-013-9370-3>.
- Hamzehgardeshi, Z., Yazdani, F., Elyasi, F., Moosazadeh, M., Peyvandi, S., Gelekholaee, K. S., & Shahidi, M. (2019). The efficacy of group counselling on perceived stress among infertile women undergoing in vitro fertilization treatment: An RCT. *International Journal of Reproductive BioMedicine*, 17(1), 57–66. <http://doi.org/10.18502/ijrm.v17i1.3821>.
- Hasanpoor-Azghady, S. B., Simbar, M., Vedadhir, A. A., Azin, S. A., & Amiri-Farahani, L. (2019). The social construction of infertility among Iranian infertile women: a qualitative study. *Journal of Reproduction & Infertility*, 20(3), 178–190.
- Hassan, S. U. N., Khurshid, E., & Batool, S. (2015). Psychological distress experienced by women with primary infertility in Pakistan: role of psycho-social and cultural factors. *NUST Journal of Social Sciences and Humanities*, 1(1), 56–72. <https://doi.org/10.51732/njssh.v1i1.3>.
- Hassan, S. U. N., Siddiqui, S., & Friedman, B. D. (2020). Health status and quality of life of women seeking infertility treatments in Baluchistan, Pakistan. *The British Journal of Social Work*, 50(5), 1401–1418. <https://doi.org/10.1093/bjsw/bcz130>.
- Iordachescu, D. A., Gica, C., Vladislav, E. O., Panaitescu, A. M., Peltecu, G., Furtuna, M. E., & Gica, N. (2021). Emotional disorders, marital adaptation and the moderating role of social support for

- couples under treatment for infertility. *Ginekologia Polska*, 92(2), 98–104. <https://doi.org/10.5603/GP.a2020.0173>.
- Kayabaşı, Ö., & Yaman Sözbir, Ş. (2022). The relationship between quality of life, perceived stress, marital satisfaction in women conceived through ART. *Journal of Reproductive and Infant Psychology*, 40(2), 108–117. <https://doi.org/10.1080/02646838.2020.1788211>.
- Khalid, M. A. (2015). Perceptions of emotional abuse with respect to depression, anxiety and low self-esteem among Pakistani women from low-income families. *Mediterranean Journal of Social Sciences*, 6(4), 223–228. <http://dx.doi.org/10.5901/mjss.2015.v6n4s2p223>.
- Li, X., Wang, K., Huo, Y., & Zhou, M. (2018). The effect of infertility-related stress on Chinese infertile females' mental health: The moderating role of marital adjustment. *Psychology journal*, 8(2), 232–239. <https://doi.org/10.1002/pchj.255>
- Lodhi, F. S., Rabbani, U., Khan, A. A., Raza, O., Holakouie-Naieni, K., Yaseri, M., Farooq, U., & Montazeri, A. (2021). Factors associated with quality of life among joint and nuclear families: a population-based study. *BMC Public Health*, 21. Article 234. <https://doi.org/10.1186/s12889-021-10265-2>
- Mahadeen, A. I., Hamdan-Mansour, A. M., Habashneh, S. A., & Dardas, L. A. (2020). Sexual satisfaction among infertile couples: Demographics and psychosocial health factors. *Journal of Psychosocial Nursing and Mental Health Services*, 58(9), 40–47. <https://doi.org/10.3928/02793695-20200812-01>.
- Mosalanejad, L., & Khodabakshi Koolee, A. (2013). Looking at infertility treatment through the lens of the meaning of life: the effect of group logotherapy on psychological distress in infertile women. *International Journal of Fertility & Sterility*, 6(4), 224–231.
- Mumtaz, Z., Shahid, U., & Levay, A. (2013). Understanding the impact of gendered roles on the experiences of infertility amongst men and women in Punjab. *Reproductive Health*, 10, Article 3. <https://doi.org/10.1186/1742-4755-10-3>.
- Naseer, S., Farooq, S., & Malik, F. (2021). Causes and consequences of polygamy: An understanding of coping strategies by co-wives in polygamous marriage. *Asean Journal of Psychiatry*, 22(9), 1–10. <https://doi.org/10.54615/2231-7805.47221>.
- Naz, B., & Batool, S. S. (2017). Infertility related issues and challenges: perspectives of patients, spouses, and infertility experts. *Pakistan Journal of Social and Clinical Psychology*, 15(2), 3– 11.
- Newton, C. R., Sherrard, W., & Glavac, I. (1999). The fertility problem inventory: measuring perceived infertility-related stress. *Fertility and Sterility*, 72(1), 54–62. [https://doi.org/10.1016/S0015-0282\(99\)00164-8](https://doi.org/10.1016/S0015-0282(99)00164-8).
- Paul, M. S., Berger, R., Berlow, N., Rovner-Ferguson, H., Figlerski, L., Gardner, S., & Malave, A. F. (2010). Posttraumatic growth and social support in individuals with infertility. *Human Reproduction*, 25(1), 133–141. <https://doi.org/10.1093/humrep/dep367>.
- Pinzon. M., & Rotoli, S. (2022). Possible gender differences in the level of perceived social support in couples who are experiencing issues with infertility, *Cureus* 14(9), Article e29343.
- Qadir, F., Khalid, A., Haqqani, S., & Medhin, G. (2013). The association of marital relationship and perceived social support with mental health of women in Pakistan. *BMC Public Health*, 13, Article 1150. <https://doi.org/10.1186/1471-2458-13-1150>.
- Rooney, K. L., & Domar, A. D. (2018). The relationship between stress and infertility. *Dialogues in Clinical Neuroscience*, 20(1), 41–46. <https://doi.org/10.31887/DCNS.2018.20.1/krooney>

- Rubin, L. E. H., Smith, C. A., Schnyer, R. N., Tahir, P., & Pasch, L. A. (2022). Effect of acupuncture on IVF-related anxiety: a systematic review and meta-analysis. *Reproductive Biomedicine Online*, 45(1), P69–80. <https://doi.org/10.1016/j.rbmo.2022.02.002>.
- Samadaee-Gelehkolaee, K., McCarthy, B. W., Khalilian, A., Hamzehgardeshi, Z., Peyvandi, S., Elyasi, F., & Shahidi, M. (2016). Factors associated with marital satisfaction in infertile couple: a comprehensive literature review. *Global Journal of Health Science*, 8(5), 96–109. <https://doi.org/10.5539/gjhs.v8n5p96>.
- Sami, N., Ali, T. S., Wasim, S., & Saleem, S. (2012). Risk factors for secondary infertility among women in Karachi, Pakistan. *PLOS ONE*, 7(4), Article e35828. <https://doi.org/10.1371/journal.pone.0035828>.
- Schick, M., Rösner, S., Toth, B., Strowitzki, T., & Wischmann, T. (2016). Exploring involuntary childlessness in men—a qualitative study assessing quality of life, role aspects and control beliefs in men’s perception of the fertility treatment process. *Human Fertility*, 19(1), 32-42. <https://doi.org/10.3109/14647273.2016.1154193>.
- Shakerian, A. (2010). Evaluation of the factors influencing marital satisfaction in the students of Islamic Azad University in Sanandaj. *Scientific Journal of Kurdistan University of Medical Sciences*, 14(4), 40–49.
- Slade, P., O’Neill, C., Simpson, A. J., & Lashen, H. (2007). The relationship between perceived stigma, disclosure patterns, support and distress in new attendees at an infertility clinic. *Human Reproduction*, 22(8), 2309–2317. <https://doi.org/10.1093/humrep/dem115>.
- Sohbati, F., Hasanpoor-Azghady, S. B., Jafarabadi, M., Amiri-Farahani, L., & Mohebbi, M. (2021). Psychological well-being of infertile women and its relationship with demographic factors and fertility history: a cross-sectional study. *BMC Women’s Health*, 21, Article 22. <https://doi.org/10.1186/s12905-020-01167-3>.
- Sreshthaputra, O., Sreshthaputra, R., & Vutyavanich, T. (2008). Gender differences in infertility-related stress and the relationship between stress and social support in Thai infertile couples. *Journal of the Medical Association of Thailand*, 91(12), 1769–1773.
- Sultan, S., & Tahir, A. (2011). Psychological consequences of infertility. *Hellenic Journal of Psychology*, 8, 229-247.
- Swift, A., Reis, P., & Swanson, M. (2021). Infertility stress, cortisol, coping, and quality of life in U.S. women who undergo infertility treatments. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 50(3), 275–288. <https://doi.org/10.1016/j.jogn.2020.12.004>.
- Taber, K. S. (2017). The use of Cronbach’s alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48, 1273-1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Taguibao, J. A., & Bance, L. O. (2022). It’s the climb: the reproductive journey and well-being of Filipino women with infertility. *Philippine Social Science Journal*, 5(4), 28-43. <https://doi.org/10.52006/main.v5i4.581>.
- Verhaak, C. M., Smeenk, J. M. J., Van Minnen, A., Kremer, J. A. M., & Kraaijmaat, F. W. (2005). A longitudinal, prospective study on emotional adjustment before, during and after consecutive fertility treatment cycles. *Human Reproduction*, 20(8), 2253-2260. <https://doi.org/10.1093/humrep/dei015>.
- World Health Organization. (2023, April 03). *Infertility*. [www.who.int](https://www.who.int/news-room/fact-sheets/detail/infertility). <https://www.who.int/news-room/fact-sheets/detail/infertility>

- Ying, L. Y., Wu, L. H., & Loke, A. Y. (2015). Gender differences in experiences with and adjustments to infertility: A literature review. *International Journal of Nursing Studies*, 52(10), 1640-1652. <https://doi.org/10.1016/j.ijnurstu.2015.05.004>
- Young, S., Adamo, N., Ásgeirsdóttir, B. B., Branney, P., Beckett, M., Colley, W., Cubin, S., Deeley, Q., Farrag, E., Gudjonsson, G., Hill, P., Hollingdale, J., Kilic, O., Lloyd, T., Mason, P., Paliokosta, E., Perecherla, S., Sedgwick, J., Skirrow, C., Tierney, K., . . . Woodhouse, E. (2020). Females with ADHD: An expert consensus statement taking a lifespan approach providing guidance for the identification and treatment of attention-deficit/hyperactivity disorder in girls and women. *BMC Psychiatry*, 20, Article 404. <https://doi.org/10.1186/s12888-020-02707-9>.
- Zaheri, F., Dolatian, M., Shariati, M., Simbar, M., Ebadi, A., & Azghadi, S. B. (2016). Effective factors in marital satisfaction in perspective of Iranian women and men: A systematic review. *Electronic Physician*, 8(12), 3369–3377. <https://doi.org/10.19082/3369>.
- Zeinab, H., Zohreh, S., & Gelekholaee, K. S. (2015). Lifestyle and outcomes of assisted reproductive techniques: a narrative review. *Global Journal of Health Science*, 7(5), 11–22. <https://doi.org/10.5539/gjhs.v7n5p11>.
- Zhang, H., & Tao, T. (2021). Marital happiness and psychosocial mechanisms in low-income Chinese families. *Illness, Crisis, & Loss*, 29(1), 74–90. <https://doi.org/10.1177/1054137318773083>.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal Of Personality Assessment*, 52(1), 30-41. https://doi.org/10.1207/s15327752jpa5201_2
- Zurlo, M. C., Cattaneo Della Volta, M. F., & Vallone, F. (2018). Predictors of quality of life and psychological health in infertile couples: The moderating role of duration of infertility. *Quality of Life Research*, 27, 945–954. <https://doi.org/10.1007/s11136-017-1781-4>.

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