



Relationship beliefs, attachment styles and depression among infertile women

Tanzeela Mobeen^{*}, Saima Dawood

Centre for Clinical Psychology, University of the Punjab, Lahore, Punjab, Pakistan

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ABSTRACT

The stigma of infertility in Pakistan has been conceded as a stressful clinical condition, significantly affecting women's over all wellbeing and spousal relationships. The present study aimed to investigate the connection between relationship beliefs, attachment styles and depression among infertile women. Ex post facto research design was employed. A total sample of 80 infertile women (40 primary and 40 secondary infertility) with age range of 25–45 years participated in the study through purposive sampling from two infertility centers of Lahore city. Data was collected using demographic information form, relationship belief inventory (RBI), attachment style questionnaire (ASQ) and depression scale of symptom checklist-revised (SCL-R). Result indicates that beliefs of disagreement is destructive (DID), mindreading is expected (MIE) and anxious attachment style were positively correlated with depression. Mindreading is expected' and anxious attachment' style emerged as the predictors of depression. However, no significant differences were found between both groups of primary and secondary infertile women. Considering, the dysfunctional relationship beliefs and negative attachment style with spouse as significant correlate and predictor of depression in infertile women. It is suggested to devise intervention focused on alleviating psychological issues related to infertility.

Introduction

Infertility is a public reproductive health problem and is common as well as stigmatized element of Asian countries. Globally, one out of five males and in Pakistan, 21.9% of the male population suffers from infertility issue [20]. In South Asia, about 4–10% of couples are affected by infertility, which appears to be a conservative figure suggesting those seeking treatment rather than those unable to conceive [24]. The reported female infertility rate in Pakistan is about 22% in which 4% have primary infertility and 18% are experiencing secondary infertility. When investigating infertility in the Pakistani perspective it is imperative to consider the explanation as per interpretation of Islamic laws and cultural customs. A married woman is allowed to try for a child while living with her husband for two or more years after marriage and not using any contraceptives. Infertility is considered not only a biological issue but also a social stigma in our society as cultural attitudes, norms and perceived religious mottos may connect infertility with failure on a personal, interpersonal, or social level. Moreover, in developing Asian countries, infertility has been thought as an act of God, punishment of past sins and most importantly consequence of witchcraft [14].

World Health organization describes infertility as couple's inability to attain pregnancy after regular sexual intercourse for one year without use of birth controls. Primary infertility is classified as inability to conceive within one year of exposure to pregnancy whereas secondary infertility refers to failure to conceive following a previous pregnancy [23]. Infertility is considered an international issue and has an effect at the individual, familial, marital, and social levels across cultures. Around 50 million couples experience infertility world widely [9]. Moreover, one-fifth of married couples experience infertility in Pakistan [2]. Studies suggested gynecological hitches causes' primary and secondary infertility and serves as a reason of decline in matrimonial and social relationships [21]. Similarly, infertility supplemented to the feeling of social isolation and withdrawal [19].

Importance of children in marital relationship

The significance of having offspring has always been considered as a major sociocultural worth and infertility could direct to potential negative effect on marital relations. Generally, it is considered a crucial factor in relationship quality of partners. Dysfunctional relationship is

^{*} Corresponding author.

E-mail addresses: tanzeelamobeen@gmail.com (T. Mobeen), saimadawoodkhan.cpy@pu.edu.pk (S. Dawood).

considered one of the most prevailing issues described by unsatisfied couples and psychological issues can crop up if spouses don't express or fulfill their requirements. Navid et al. [13] pointed out negative relationship between dysfunctional relationship belief, marital satisfaction and positive emotions towards spouse. Zanjani et al. [27] investigated relationship beliefs and marital burnout among fertile & infertile couples which revealed that infertile couples had negative relationship beliefs, inflexibility of the spouse, and higher psychological and marital burnout as compared to fertile couples. Faria et al. [6] explored infertility effects on relationship of spouses which indicated that men had supportive attitude while women reported unhealthy negative feelings about being infertile.

In dealing with uncontrolled event of infertility, contribution of attachment styles among couples experiencing infertility may influence the wellbeing of infertile women. In previous studies, secure attachment style was found as a moderator of psychological wellbeing and partner's avoidant and anxious attachments had significant correlation with stress related to infertility and relationship concerns [3]. Another study highlighted relationship between coping, attachment styles and infertility-specific distress and results evinces that insecure attachment and emotion-focused coping style significantly related to infertility-specific distress [4]. Refahi [17] explained the mediating role of demographic features with attachment styles and marital conflict and analysis showed that secure attachment style has negative effect whereas, avoidant/ambivalent attachment style had a positive effect on marital conflict.

Infertile couples put their efforts to get appropriate treatment for their infertility and they face uncertainty and stress because of economic, psychological and physical impacts of the treatment. Moreover, procedures and prolonged treatment span of infertility creates emotionally stressful situation for couples resulting in depression & anxiety and increased level of anxiety or depression may result in a lower pregnancy rate. Shahraki et al. [18] reported higher depression and sexual problems and lower quality of life in primary infertile Iranian couples. Study carried out on comparison of depression between primary and secondary infertile couples found that women had statistically higher depression scores than male partners and women with primary infertility had mild depression [26]. A cross sectional study highlighted that both primary and secondary infertile women experience mild level of anxiety and depression and demographics of age, marital duration and duration of infertility were positively correlated with depression and anxiety [1]. A qualitative study conducted by Zorlu & Erbas [28] with the infertile women, explored themes of sorrow, guilt feelings, childlessness stigmatization, loss of feeling of motherhood, psychological stress, perceived social pressure, social isolation, lack of sexual drive, feeling of sexual failure and financial loss.

Infertility in Pakistani cultural context

In Pakistani cultures, motherhood is directly related with womanhood, believing it women's problem which causes unexpected life crisis resulting in social disturbances and personal anguish. Although some studies have been carried out addressing psychological issues of infertile women but the literature still remains very scarce. Hassan and colleagues [8] highlighted findings of study carried out in Baluchistan which explored that infertile women are stigmatized due to male-controlled mindset and rigid cultural standard which contributed to the feelings of loss, bring isolation for these childless women and negatively influence their social relationships.

Moreover, infertility hovers the extended family hopes and hampers the enhancement of spousal relationships [11]. Empirical studies found that the experience of being an infertile woman fetches unpleasant consequences which includes domestic violence, separation and remarriage of husband and kids are believed to be a binding force between husband and wife's relationship. In this prospect, individual or marital adjustment issues directly or indirectly considered addition to

growing gestational failure and specifically probing into psychological profile of infertile women about spousal relationship beliefs, attachment styles and depression contributed to the unexplained psychological distress and added some indigenous literature and awareness related to infertility.

This study was intended to minimize the cultural gap of infertility related issues in Pakistani women who face totally different cultural dynamics as compared to west. Relationships belief of women are supposed to be the key factors in predicting psychological health of women in Pakistani culture due to various social and familial strains on women which are tried to cover in this study.

Method

Research design

Ex post facto research design was employed to measure Relationship Beliefs, Attachment styles and degree of depression among infertile women. The study took almost 6 months in order to collect data from infertility centers and then conceptualization of results.

Sample

A total sample of 80 infertile women (40 = primary & 40 = secondary) were recruited from outpatient clinics of Combined Military Hospital and Chohan Reproduction & Assisted Fertility Treatment Center (CRAFT) of Lahore city.

Sampling technique

Sample was selected by using non-probability purposive sampling technique.

Inclusion criteria

- Women undergoing infertility treatment for at least more than two years.
- Primary and secondary infertile women of 25–45 years.
- Couples should be living together.
- Infertility diagnosed by qualified professionals

Exclusion criteria

- Previous exposure with any psychotherapeutic treatment.
- History of any psychiatric illness and any other medical condition
- Women experiencing infertility due to their spouse's problem.

Instruments

DDPC approval

Complete study proposal was presented in front of Doctoral Programme Coordination Committee (DPCC) of University of the Punjab. The proposal included mode of sampling, questionnaires and data collection points across the city. Main study was started after taking approval from DDPC-PU.

Informed consent

Participants undergoing treatment in two infertility centers of Lahore city were approached. Written informed consents were taken from each willing participant containing information regarding nature, purpose, procedure, duration and right to withdraw from study and were assured confidentiality of their data.

Demographic information form

Consenting participants were evaluated by using demographic information form which included age of participants, years of education, occupation, family's socioeconomic status, age at the time of marriage, duration of marriage, treatment period of infertility, type of infertility history of abortion/miscarriage (if any) and family history of infertility. Additional information about spouse included, age of spouse, educational status, occupation and physical illness (if any).

Relationship Belief Inventory (RBI)

Relationship belief inventory [5] is a 40-item self-reported questionnaire divided into five subscales: Disagreement is destructive; Partners cannot change; Mindreading is expected; Sexual perfectionism and Sexes are different. Each of belief is assessed with eight items on 0–5 likert scale with total score range of 0–200 and high scores indicates poor relationship belief. The Cronbach alpha coefficients for five dimensions are (.81,.75,.76,.72, &.72) respectively. The inventory was translated in Urdu to use it with Pakistani population having 0.72 Cronbach alpha coefficients.

Attachment Style Questionnaire (ASQ)

Attachment Style Questionnaire (ASQ) [7] is a 40-item self-report questionnaire which assesses adult attachment based on two-dimensional framework of Bartholomew and Horowitz (1991). The items are divided into five subscale and three dimensions: Confidence in Self and Others (8 items) reflecting secure attachment; Discomfort with Closeness (10 items) and Relationships as Secondary (7 items) reflecting avoidant attachment; and Need for Approval (7 items) and Preoccupation with Relationships (8 items) reflecting anxious attachment. The ASQ has 6-point Likert type response format ranging from 1 (strongly disagree) to 6 (strongly agree). The psychometric properties of ASQ are reported to be adequate ranged from .60 to .76. In present research, Urdu translated version was used (Kausar & Zafar, 2013) with Cronbach alpha coefficient of 0.84.

Depression scale of Symptom Checklist-Revised (SCL-R)

Depression scale of Symptom Checklist-Revised (SCL-R); [16] used to assess the degree of depression in infertile women. It's an indigenous tool comprising of 24 items to be rated on 0–4 point Likert scale where 0 = never, 1 = seldom, 2 = moderate, 3 = frequent. The Cronbach alpha reliability of the depression scale with Beck Depression Inventory is 0.73 [16] and in present study Cronbach alpha coefficient for depression scale was 0.81.

Results

Final sample of eighty infertile women participated in the study which included (8.8%) illiterate, (15%) secondary school, (20%) collage, (27.5%) undergraduates and (28.8%) with postgraduate level education. Among them (55%) were housewives while (25%) were working women and regarding family income about half (52.5%) were in low socio-economic category. Half (50%) of the women were with primary and (50%) were with secondary infertility, (3.8%) experienced still birth, (2.5%) had history of repeated miscarriage, (10%) had abortion and (83.8%) didn't report any issue, (7.5%) had family history of infertility and about (5%) women's husband were suffering from physical illness. The mean age of participants was 31.5 (SD= 4.36), whereas mean age of husband was 43.5 (SD= 5.5), participant's mean age at the time of marriage was 22.5 (SD=3.58), mean duration of marriage was of 8.7 (SD= 4.47), duration of conception was 5.57 (SD=3.65) and mean duration of treatment for conception was 4.7 (SD= 3.61).

Pearson product moment coefficient correlation result revealed that demographic variables of duration of marriage had positive relationship with duration of conception ($p < .01$). It implied that those with longer duration of marriage were more likely to put effort to conceive. Disagreement is destructive (DID) and Mindreading is expected (MIE) subscales of relationship belief inventory positively correlated ($r = .30$, $p < .01$ and $r = .48$, $p < .01$) with depression. In dimensions of attachment styles, secure attachment was negatively associated ($r = -.25$, $p < .05$), whereas anxious attachment positively correlated ($r = .53$, $p < .01$) with depression. Inter correlation matrix for demographic characteristics, relationship beliefs, attachment style and depression for infertile women presented in Table 1.

In hierarchical multiple regression analysis relationship beliefs were found to be statistically significant $F(7, 72) = 4.27$, $p < .001$ and accounted for 27% of variance for depression and mindreading is expected was significant predictor of depression. Attachment styles were also significant predictor $F(10, 69) = 5.26$, $p < .001$ with 13% of variance accounted for depression and anxious attachment was found to be significant predictor. The predictive value of demographic variables (duration of marriage and trying to conceive) for depression is statistically not significant $F(2, 77) = .775$, $p > .001$.

The t-test showed statistically no significant differences between both groups of primary and secondary infertile women on relationship belief, attachment style and depression. Relevant means, SDs and t-test scores are presented in Table 3.

Discussion

The current study highlighted important psychological variables which contributes in development of depression among infertile women. The association between depression, attachment styles, relational beliefs and infertility has empirical evidences. Although it's difficult to express the experience of infertility when it hampers almost every aspect of women's life carrying guilt, dissatisfaction, and understanding problems with husband and the larger society as well. However, to gain better understanding of this link, the present study endeavored to explore the effects of infertility on overall wellbeing, attachment and relationship beliefs about husband.

The findings of present study revealed that relationship beliefs subscales, disagreement is destructive (DID) and mindreading is expected (MIE) were positively associated with depression which is inconsistent with previous literature which pointed out negative relationship between dysfunctional relationship belief, marital satisfaction and positive emotions towards spouse [13]. This disparity can be attributed to culture specific schemas, in Pakistani culture female partners avoid conflict concerning different issues considering it a big hazard to steady romantic relationship and holding of differences to themselves might result in dysfunctional beliefs and nonproductive behavior. Furthermore, believing in that partners must know needs and expectations of his partner without their open explanation results in disappointment and conflict.

Secure attachment had a negative relationship with depression which implied that those who had confidence or feels security in relationship were less likely to feel depressed and results are in line with the existing studies. Podder et al. [15] highlighted that confident/ secure attachment tends to have warm relationships and convey trust to their partners and serve as important factor of psychological wellbeing in infertile women. In present study, anxious attachment had a positive relationship with depression that can be described as women's preoccupation to become pregnant becomes habit which leads them to have a negative attachment in relationship and were more likely to be depressed and findings are consistent with study which described anxious attachment is characterized by a strong need for closeness with others along with a fear of rejection [12].

The findings concerning contribution of Relationship beliefs and attachment styles to depression provided partial confirmation. Only

Table 1
Inter Correlation Matrix for Demographic Characteristics, Relationship Beliefs, Attachment Style and Depression for Primary and Secondary Infertile Women. (N = 80).

Variables	1	2	3	4	5	6	7	8	9	10	11	M	SD
1. Duration of marriage	1	.88**	-.07	-.20	.11	.08	-.17	-.02	.02	-.11	-.13	8.87	4.47
2. Trying to conceive	.88**	1	-.05	-.25*	.05	.07	-.06	.04	.01	-.16	-.13	5.57	3.65
3. DID	-.07	-.05	1	.31**	.24*	.00	-.00	.12	-.04	.15	.30**	19.70	8.43
4. MIE	-.20	-.25*	.31**	1	.02	.05	-.09	-.13	.18	.54**	.48**	27.48	6.36
5. PCC	.11	.05	.24*	.02	1	-.17	.10	.05	-.03	.02	.10	17.08	8.23
6. SP	.08	.07	.00	.05	-.17	1	-.03	.04	.27*	.09	.15	15.40	8.02
7. SAD	-.17	-.06	-.00	-.09	.10	-.03	1	-.13	.03	.13	.01	20.88	7.82
8. Secure Attachment	-.02	.04	.12	-.13	.05	.04	-.13	1	-.35**	-.43**	-.25*	32.82	7.98
9. Avoidant Attachment	.02	.01	-.04	.18	-.03	.27*	.03	-.35**	1	.39**	.10	64.98	10.37
10. Anxious Attachment	-.11	-.16	.15	.54**	.02	.09	.13	-.43**	.39**	1	.53**	48.90	11.44
11. Depression	-.13	-.13	.30**	.48**	.10	.15	.01	-.25*	.10	.53**	1	32.06	9.53

Note: *p < .05, **p < .01, ***p < .001; DID=Disagreement is destructive; MIE=Mindreading is expected; PCC=Partners cannot change; SP=Sexual perfectionism; SAD=Sexes are different.

Table 2
Hierarchical Multiple Regression shows Relationship Belief and Attachment Style as Predictors of Depression (N = 80).

Variables	Depression	
	ΔR^2	B
Model 1	.020	
Duration of Marriage		-.06
Trying to Conceive		-.08
Model 2	.27***	
DID		.14
MIE		.43***
PCC		.09
SP		.14
SAD		.03
Model 3	.13**	
Secure Attachment		-.18
Avoid Attachment		-.18
Anxious Attachment		.37**
Total R ²	.42	
N	80	

Note. *p < .05; **p < .01; ***p < .001; β = Standardized Co efficient; ΔR^2 = R Square change; R² = R Square; DID= Disagreement is Destructive; MIE= Mind Reading is Expected; PCC= Partner Cannot Change, SP= Sexual Perfectionism; SAD = Sexes are Different.

dysfunctional relationship belief of mindreading is expected significantly predicted depression. Navid et al. [13] findings suggest that dysfunctional relationship belief of mindreading is expected were higher in infertile women as compared to their fertile counterparts. As predicted in previous literature both insecure (anxious and avoidant) attachment styles were positively linked with depression (Donarelli et al., 2012). Further, negative attachment styles of anxiety and avoidance dimension evinces significant relationship with infertility related stress situation [22]. However, in present study only anxious attachment predicted depression in infertile women and women exhibiting this style of attachment, infertility may hyper activate disturbing thoughts about their personal relationships, leading to depressive features.

The analysis revealed no significant difference in both primary and secondary infertile women group regarding relationship beliefs, attachment styles and degree of depression and findings are in

Table 3
Independent Sample t-test showing Primary and Secondary Infertile Women on Relationship Belief, Attachment Style and Depression (N = 80).

Variables	Primary Infertility (n = 40)		Secondary Infertility (n = 40)		t (80)	P	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Relationship Belief	102.60	20.59	98.52	17.08	.963	.33	-4.34	12.49	0.21
Attachment Style	164.20	24.63	161.22	22.21	.567	.57	-7.46	13.41	0.12
Depression	33.72	9.1	30.40	9.71	1.57	.11	-.87	7.52	0.35

Note. M = Mean; SD = Standard Deviation; CI=Confidence Interval; LL = Lower Limit; UL = Upper Limit.

agreement with the available literature. Yassa et al. [25] investigated levels of anxiety and depression among primary and secondary infertility and revealed that there was no significant difference between both groups. It was also found that dysfunctional relationship beliefs and negative attachment styles were higher in infertile women experiencing primary and secondary infertility as compared to their fertile counterparts. Imran & Ramzan [10] findings are unparalleled to the previous researches in Pakistani context which indicates primary infertile women experience more depression than secondary infertile women and present study result showed no significant difference between both groups. The difference highlighted that previous studies were conducted at later stages of infertility treatment. Furthermore, the majority of previous studies solely focused on primary infertility, so very little was known about secondary infertility. Moreover, in Pakistani culture children are considered binding force between spouses and women's inability to become pregnant constantly keeps them under pressure, resulting in depression.

Taking into consideration the role of dysfunctional relational beliefs and negative attachment styles as important part for treatment of infertility related stress specific treatment plans can be devised.

Limitations and implications

Participants were employed from clients of two infertility centers of Lahore that serves population from different sociodemographic characteristics, most of them were from Punjab. For future consideration, studies can be conducted which include women from diverse backgrounds across the country. Despite limitations, outcomes of this study have wider implications. It provides empirical data which enhances the knowledge of psychological factors contributing to infertility related problems.

In Pakistan unfortunately infertility related psychosocial issues have been overlooked and necessity of therapeutic intervention specific to infertility related problems had been undermined. This study highlighted importance of therapeutic assistance to address issues of infertile women related to dysfunctional beliefs and negative attachment with spouse by developing therapeutic intervention protocol.

Study generates awareness to respond to holistic needs of individuals going through infertility related issues for multidisciplinary team of health care professionals including gynecologists, nurses and

psychologists working with infertile women and couples.

Conclusion

As a conclusion, it is of paramount importance to identify the impact of psychological factors contributing to infertility in women and provide psychiatric sustenance during the infertility treatments. With such approaches, we might prevent these women from deserting their treatments due to the psychological hindrances which anticipated to result in possible treatment failure.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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