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The Silent Suffering: Psychological and Social Impact on Pakistani Women Facing Male-Factor Infertility

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ABSTRACT

Objective: To evaluate the psychological burden of male factor infertility on Pakistani women and their lived experience of stigma, family pressure, marital issues and coping strategies.

Methodology: This cross-sectional convergent mixed method study was done from January to June 2024 **at the** Department of Obstetrics and Gynaecology, Bahawalpur Victoria Hospital, Bahawalpur, Pakistan. Through purposive sampling 120 female (20-45 years) subjects were selected whose husbands had a clinically diagnosed condition of male infertility. Sociodemographic questions were asked and quantitative data were collected by means of the Depression, Anxiety and Stress Scale-21 (DASS-21) and the Infertility Stigma Scale (ISS). The twenty respondents were selected for in-depth semi-structured interviews in a purposive sampling. Descriptive statistics, independent-samples t tests, and one-way analysis of variance were used for quantitative data analysis, and for qualitative, the thematic analysis was used.

Results: The 120 participants had moderate-to-extremely severe depressive symptoms 75.8% of the time, moderate-to-extremely severe anxiety 79.2% of the time, and moderate-to-extremely severe stress 55.0% of the time. Social experiences involved, were: blame for not being able to conceive, even though the male factor was known (80.8%), refusal by in-laws to accept the husband's diagnosis (54.2%), threats of the husband's remarriage (36.7%) and domestic/emotional abuse (29.2%). The mean depression score and mean stress score was higher in the case of the women of joint families as compared to the nuclear families (p=0.021 and p=0.006 respectively). Housewives had higher anxiety scores than employed women (p=0.047). Four themes from the qualitative analysis emerged, guilt by association, fear of disclosure, social isolation, and desire for autonomy.

Conclusion: For women with male factor infertility, the psychological burden and social stigma can be significant, even though they are not to blame for the cause of the infertility. This burden can be exacerbated by gendered expectations, family structure, and fear of disclosure. Including gender sensitive counselling, psychological support and public awareness for male infertility in fertility services can decrease the stigma and be a step towards shared reproductive responsibility.

Keywords: Male-factor infertility, Infertility stigma, Psychological distress, Women, Pakistan, DASS-21, Reproductive health.

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[1,2]Conception; Literature research; manuscript design and drafting; [3,4]Critical analysis and manuscript review; [3,4]Data analysis; Manuscript Editing.

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Introduction

Infertility has significant psychological, emotional, and socioeconomic impacts, especially on women in societies where motherhood is linked to women's social status and marriage.[1,2]In addition to the biological effects, infertility can have a significant

psychological, emotional, and social impact, particularly on women in societies where motherhood is associated with the social identity and marital status of women.[3,4]

Infertility is a condition affecting both men and women, however the social consequences of being infertile are often gendered.[5,7] Pakistani data also showed that women with complaint of infertility may be depressed and anxious irrespective of the medical cause, as well as feel helpless, tired and unable to cope with the stress of infertility[8,9] In recent times, the data from Pakistan also revealed depression and psychiatric morbidity in women with complaint of infertility.[10,11]

Sociocultural norms and expectations around marriage, motherhood and family formation compound this burden. The social stigma and psychological suffering that may be experienced by women with a male-factor infertility may be especially marked where there is a lack of awareness and understanding of the causes of infertility within the family, resulting in women being blamed for a condition outside their control.[12-14]

The contribution of male to the total burden of infertility is significant and is not given due attention, possibly because of the attitude of the society towards its disclosure and treatment. Recent studies highlight that the problem of infertility must be considered a problem of both partners and that the psychological consequences depend on the meaning people assign to the condition, the strategies they use to cope with it, and the support they receive in their social environment.[17,18] Psychological issues are affected by the meaning people give to their infertility, their coping mechanisms, and the social support they have available to them.[19,20]

These factors, in Pakistan, could have a significant impact as family expectations, social norms, finances, and relationships can influence reproductive choices and access to health services. The recent study conducted in Islamabad also revealed that emotional distress, stigma and limited support are some of the many factors that influence healthcare-seeking among infertile couples.[21] Evidence from around the world also corroborates the significant prevalence of depression, anxiety and stress amongst women facing infertility.[22]

Although infertility is recognized as a biopsychosocial disorder and a growing number of studies are looking at the experience of infertile women, few studies have specifically focused on the experiences of Pakistani women whose infertility is attributed to their husbands. Hence the present study was conducted to investigate psychological and social effects of male factor infertility on women who are experiencing childlessness in Islamabad and Rawalpindi with a specific focus on women's experience of depression, anxiety, stress, stigma, social isolation, pressure and autonomy and support from the family. Awareness of these experiences might help inform a gender-sensitive, couple-centered approach to the treatment of infertility, while improving the incorporation of psychological support into reproductive health care in Pakistan.

Methodology

A cross-sectional convergent mixed method study was carried out from January to June 2025 in the women whose husbands had clinically diagnosed male factor infertility. The participants were selected in the Gynecology and Obstetrics Department of Bahawalpur Victoria Hospital, Bahawalpur, Pakistan, where women often attend with their husbands or for follow-up visits regarding reproductive issues. The settings were chosen to represent women who are feeling the psychological and social impact of their partner's male factor infertility.

The women were eligible for the study if their husbands had a clinically established diagnosis of infertility. Women aged 20-45 years with husbands who were clinically diagnosed with male factor infertility were included. Male-factor infertility encompassed the clinically diagnosed conditions

that affect the male partner's reproductive capacity such as azoospermia, oligospermia, asthenozoospermia, teratozoospermia and other medically documented male reproductive conditions that contribute to infertility. In the study, women were included irrespective of whether they had biological children or not, because the study was designed to investigate the psychological and social impact on women due to their husband's male factor infertility. Participants had to be willing to participate, and have provided written informed consent.

Women were not included if the husband's infertility diagnosis was not clinically confirmed, or if the cause of reproductive difficulty was unknown. Women with no evidence of male factor infertility were also excluded. Those who failed to provide enough information to evaluate the primary psychological and social outcomes or who were unwilling to consent to the assessment were not included in the analysis.

The quantitative part was determined using the following formula for the sample size of the single population proportion:

Due to lack of a reliable estimate of prevalence of psychological distress among Pakistani women with male factor infertility, a conservative estimate of 50% ($p = 0.50$) was considered as this would give the maximum sample size. Using $z = 1.96$, the 95% confidence interval, and $d = 0.09$, the margin of error, the sample size calculated was:

$n = (1.96)^2 \times 0.50 \times (1 - 0.50) / (0.09)^2 = 118.6$

So, the number of sample size was increased to 120 participants. This was felt to be sufficient to help estimate the main outcomes of the primary study and to allow comparison of psychological scores for the main demographic variables.

Qualified women were recruited from the selected study area using purposive sampling, a non-probability sampling method. The target population was identified by their clinical records and/or their treating health care provider and women were approached and invited to participate until the desired sample population of 120 women was achieved.

The qualitative part was selected using purposive sampling with 20 women from the quantitative sample with maximum variation sampling. Participants were chosen to provide a range of ages, educational, socioeconomic, family structure, and experience of infertility. Such a way allowed the study to cover a wide spectrum of opinions and detailed descriptions of the psychological and psychosocial impact of male factor infertility.

A structured questionnaire, comprising two standardized questionnaires – Depression, Anxiety and Stress Scale – 21 (DASS-21) and Infertility Stigma Scale (ISS) was used for quantitative data collection. DASS-21 is a 21 self-report item tool created by Lovibond and Lovibond to assess depression, anxiety and stress symptoms. It is made up of three sub scales comprising of 7 items for each psychological domain. The instrument has been shown to have good reliability and validity, and is commonly used to evaluate psychological distress among clinical and community-based samples. Each subscale was scored using the method recommended by the scoring method and higher scores reflect severity of symptoms. Here, the reference for the DASS-21 and the version used in this study should be cited.

The Infertility Stigma Scale (ISS) was used to measure the social stigma and perceived psychosocial impacts of infertility. The scale measures experiences and perceptions of social devaluation, blame, concealment and internalized stigma associated with infertility. It was chosen because it is an important social aspect of the problem of infertility, especially in situations where the woman may be blamed for the recognized cause of the infertility even though it was actually the fault of the male partner. Here, the developer and validation information relevant to the use of the ISS version in this study should be cited.

Besides standardized scales, a short-structured part was employed to gain socio-demographic data, such as age, employment status, parity and family

structure. The responses to the questionnaires were obtained confidentially and when necessary, participants were given clarification on the items in the questionnaire.

Twenty participants were then chosen for in-depth, semi-structured interviews after completing the quantitative questionnaires. The interviews focused on participants' personal experiences of infertility, their emotional reactions to infertility diagnosis, feelings of blame and stigma, marital and family relations, pressures around childbearing, pressure on remarrying or polygamous marriage, experiences of emotional or domestic mistreatment, and coping mechanisms.

Interviews were held in private rooms in the study environments to ensure confidentiality and comfort of the respondents.

The data obtained were quantitative and were processed by entering and cleaning data with Statistical Package for the Social Sciences (SPSS) version 26. Socio-demographic characteristics and psychological outcomes were summarized using descriptive statistics such as frequencies, percentages, means and standard deviations.

The scores for depression, anxiety and stress were analyzed individually on the DASS-21. Participants were classified based on the recommended severity classifications of normal, mild, moderate, severe, and extremely severe. Frequencies and percentages were used to summarize the social experiences participants reported, such as feeling blame for their infertility, hiding their husband's diagnosis, threats of a husband's second marriage, or domestic/emotional abuse.

Independent-samples t tests were used to compare the mean scores of depressions, anxiety and stress among women in joint and nuclear families. Analysis of variance (ANOVA) was used to analyze data when two or more demographic groups were compared. The p value was significant at the two-sided level of <0.05. Thematic analysis approach was used for qualitative analysis. Transcripts were read multiple times to familiarize themselves with the data, then meaningful portions of text were coded. These were then categorized and further refined to themes and subthemes that represented psychological and social experiences of women with male factor infertility. Results in both quantitative and qualitative terms were then later merged in the interpretation of the data to find commonalities and to explain the psychological and social implications in context.

Ethical approval was taken from Quaid-e- Azam Medical College, Bahawalpur (NO.29/DME/QAMC Bahawalpur) on 13-02-2025

Results

Theme-1 Guilt by Association: Key issues that came through were women's internalization of blame, even when it became known that infertility was the result of their husbands' condition. Several chose to protect their husbands' manhood and good name by quietly carrying the social blame to themselves.

"I know it's not my fault, but if I tell them that it was him who went down there, his family will never forgive me. They could feel free to disrespect him, and I can't have that."

It's a gendered expectation of protecting your husband's honor, even if it means that women are hurting themselves.

Theme-2 Fear of Disclosure: Some participants mentioned that they were very frightened to tell the real reason for infertility to in-laws or to extended family. The repercussions could range from disharmony, threat of second marriage, to social boycott.

"I can't tell my mother-in-law. Asks me to please go to the doctor. If I say it's her son, she'll get the whole family on my back."

It's a story that demonstrates the way that silence has become, for many families where male infertility is an object of shame or disgrace, a means of survival.

Theme-3 Social Isolation: One of the most frequent experiences reported by participants was self-

exclusion from family, marriage, and other social events because of the stigma and criticism. The stigma or dishonor of being looked down upon by the rest of society as "barren" led to a situation of social rejection, especially by the family, that could be both voluntary or forced.

"I just gave up on going to my cousin's baby shower – everybody looks and mutters – I am the problem; it is easier to stay home."

This isolation can heighten emotional issues and the availability of social support networks.

Theme-4 Desire for Autonomy: A number of women accepted to their traditional role, and others experienced a burgeoning sense of independence, particularly women in industrial professionals. However, they were often faced with the barriers of culture and family multicausality that limited their opportunities for action.

I want to work and do therapy, but my husband says it's not necessary, and his family says I should pay more. This theme brings out conflict between the desires of the individual and demands of the society, especially when it comes to women trying to have some control in the face of the stress of infertility.

Table I: Socio-demographic Characteristics of Participants (n = 120)

Variable	Category	Frequency n (%)
Age (years)	Mean ± SD	–
Employment Status	Housewives	104 (87.0)
	Employed	16 (13.0)
Parity	No children	84(70.0)
	At least one child	36(30.0)
Family Structure	Joint family	78(65.0)
	Nuclear family	42(35.0)

Table I presents the demographic background of the 120 women that comprised the sample. The average age of the respondents was 32.4±5.1 years explaining the clustering of the participants in early and mid-thirties age bracket. Most of the women were housewives (87%) and 13% worked out of home, suggesting a mainly home-based population. A great number (70%) had no children -this is in accordance with the inclusion criterion of infertility. In terms of family setup 65% were living in an extended family system which is a collective social pattern in Pakistan and might have added to the social and familial pressures because of infertility.

Table II: Psychological and social impact among participants

Psychological Impact Based on DASS-21 scores (n = 120)		
Psychological Domain	**Severity Level**	**Frequency n(%)**
Depression	Normal	18 (15.0)
	Mild	11 (9.2)
	Moderate	32 (26.7)
	Severe	27 (22.5)
	Extremely Severe	32 (26.6)
Anxiety	Normal	9 (7.5)
	Mild	16 (13.3)
	Moderate	33 (27.5)
	Severe	29 (24.2)
	Extremely Severe	33 (27.5)
Stress	Normal	24 (20.0)
	Mild	30 (25.0)
	Moderate	28 (23.3)
	Severe	20 (16.7)
	Extremely Severe	18 (15.0)
Social Impact among Participants (n = 120)		
Social Experience		**Frequency n(%)**
Blamed for infertility despite male-factor		97 (80.8)
Concealed husband's diagnosis from in-laws		65 (54.2)
Faced threats of husband's second marriage		44 (36.7)
Experienced domestic or emotional abuse		35 (29.2)

Table II shows the prevalence of psychological distress in these participants as assessed with the DASS-21. 75.8% of women had moderate to extremely severe depression, and therefore reported pervasive depressive symptoms. Levels of anxiety were also considerable, with 79.2% of

women having moderate-to-extremely severe anxiety. Stress was also high, 55% of participants had moderate or higher levels of stress. However, only 20%–24% of respondents in each area were within the normal range, indicating a high psychological burden from male-factor infertility. It is also social problems in women with their partner's male infertility. Notwithstanding the male diagnosis, 80.8% of women experienced self-blame for infertility. Over half (54.2%) had the sense that the male finding should be kept from in-laws, evidencing social shame and gendered culpability. 36.7% of women also said that they also faced threats from their husbands to remarry again and who married again and faced 29.2% physical/emotional violence as well, indicating the extent of social discrimination, emotional trauma women face in these situations.

Table III: Comparison of Psychological Scores by Family Structure and Employment Status (n = 120)

Psychological Measure	Comparison Variable	Group	Mean ± SD	p-value
Depression	Family Structure	Joint (n=78)	18.2 ± 6.5	0.021*
		Nuclear (n=42)	15.1 ± 5.9	
Anxiety	Family Structure	Joint (n=78)	19.9 ± 6.2	0.050
		Nuclear (n=42)	17.4 ± 5.8	
Stress	Family Structure	Joint (n=78)	20.3 ± 5.7	0.006*
		Nuclear (n=42)	16.5 ± 6.1	
Depression	Employment Status	Housewives (n=104)	17.6 ± 6.4	0.131
		Employed (n=16)	15.2 ± 6.1	
Anxiety	Employment Status	Housewives (n=104)	19.5 ± 6.0	0.047*
		Employed (n=16)	16.8 ± 5.2	
Stress	Employment Status	Housewives (n=104)	19.7 ± 6.3	0.063
		Employed (n=16)	17.1 ± 5.4	

*p < 0.05 indicates statistical significance

Table IV: One-way ANOVA – Psychological Scores by Age Group (n = 120)

Age Group (years)	Depression (Mean ± SD)	Anxiety (Mean ± SD)	Stress (Mean ± SD)
20–29 (n = 40)	18.5 ± 6.2	20.2 ± 5.7	20.5 ± 6.1
30–39 (n = 60)	17.1 ± 6.3	18.6 ± 5.9	19.0 ± 5.8
40–45 (n = 20)	15.3 ± 6.0	17.4 ± 5.5	17.1 ± 6.2

Table III and IV shows the Comparative overview of psychological distress among respondents by age-group. Lowest mental health scores were the reported by the youngest group (20–29 years) for all domains of depression, anxiety and stress; the scores decreased with increasing age. ANOVA revealed a statistically significant difference in the depression scores (p = 0.041) Young women are more depressive, may be exposed to depressive more due to the unreal early marital anticipation or may be related to strong social pressure to bear child early. There was a non-significant trend for anxiety and stress (p = 0.063 and p = 0.055, respectively), both showing the same trend of age, which may reach significance in a larger sample.

Discussion

This study aimed to understand the psychological and social problems of male factor infertility affecting the childlessness in the women of Bahawalpur. Although male infertility was found to be the main medical problem a significant amount of psychological distress was seen, 75.8% of the men experienced depression, 79.2% felt anxious and 55.0% felt stressed. A high prevalence of depression, anxiety, stress and psychological distress among women with infertility has also been shown in recent systematic reviews.[3,4] A considerable public-health burden of this condition has also been shown recently in the global estimates.[1,2]

Importantly, there is a possibility of a difference between the social and biological attribution of infertility, as our findings suggest. Women still suffered blame and stigma despite their husbands being diagnosed with being infertile. Traditional gender norms in Pakistan might lead to such a stigma and may be exacerbated by the perception that if women are not mothers, their social status and identity is linked to their role as a mother.[5,6] The Urdu Social Rank Scale (USRS) created to measure women's social rank in Pakistan's context, also underscores the relevance of social rank and perceived social status in the context of women's experience of infertility.[7]

Themes from our qualitative findings included “guilt by association” and “fear of disclosure” which some women took up to avoid blame and protect marital relationships and the reputation of the family. As one said, “I know it's not my fault, but if I say it's him, his family will never forgive me.” Another said, “I can't tell my mother-in-law. If I say it's her son, she'll have our whole family turn against me.” Irritability and depression have also been noted in Pakistani studies among women who are infertile and a lack of knowledge and misconceptions about infertility as well as heavy social cultural burden over childlessness.[8-10]

Qualitative evidence from Pakistan also suggests that infertility is ‘silent suffering’ as women suffer emotionally, socially and culturally due to the role played by prevailing norms around motherhood.[10,11] The sociocultural context of the situation in Pakistan can also further compound these experiences, as reproductive success is often heavily tied to marital stability and women's social identity, with decisions around reproduction still largely shaped by family and social norms.[12]

Family structure was considered as an important factor in our study. The women in joint families showed about two times depression and stress as compared to the women in nuclear families. This could be due to increased family monitoring, fertility expectations and family involvement in fertility decisions. The qualitative results about the women's experience of helplessness and fatigue during the treatment of infertility also underscore how enduring social and emotional pressures can impact coping.[14] Women in other LMIC countries have also reported similar worries of social pressure, family expectations, and suffering due to infertility.[5,13]

There seemed to be a protective association between employment and anxiety as housewives were more anxious than employed women. Part of the reason for this may be due to greater financial independence and social interaction, as well as autonomy. The present cross sectional design cannot establish a cause and effect, however, the findings indicate that women's socioeconomic conditions, social support and personal resources have an impact on their psychological circumstances when having infertility problems.[6] This indicates the importance of women's autonomy in reproductive health care.

Age was also related to psychological distress and older women (aged 20-29 years) were more likely to experience greater depressive symptoms. Younger girls might be under more pressure due to the expectations for early pregnancy and childbearing following marriage. The unfulfilled hopes and expectations can lead to anxiety and depression if conception does not take place. The understanding of and response to the illness and psychological consequences of the illness are also important in the relationship between infertility, coping and psychosocial outcomes,[15] in that coping response appears to be affected by perceptions of the illness and psychosocial adjustment.

The qualitative theme “social isolation” mapped with the quantitative results. One of the participants said she would refuse to attend a baby shower of a cousin because of possible judgment: “When I say, ‘No, I'm not going to the cousin's baby shower,' people look at me and whisper and say, ‘What is the matter with you?’” Withdrawal can temporarily help women cope with distress, but also can limit social support and thus intensify social isolation. In our

review of studies of psychological suffering related to infertility among African women, stigma, social expectations and isolation were also identified as factors which contribute to the psychological suffering.[16]

The theme of "desire for autonomy" also reflected women's desire for psychological support and their willingness to be more involved in decisions regarding their reproductive health, with some women experiencing restrictions from their spouse or family. This is especially significant since there is often a lack of attention to the psychosocial needs in the context of infertility care, with the medical side being emphasized. Counselling and psychosocial care is recommended to be incorporated into fertility services and evidence indicates that psychological interventions can have a beneficial effect on women with infertility.[17]

Healthcare-seeking behavior is also influenced by social and cultural circumstances. Stigma, financial constraints, family pressures, and/or misconceptions regarding infertility can cause a delay or change in treatment decisions for women.[18] From a Pakistani perspective, findings from Mardan has identified gaps in knowledge and perceptions of infertility among couples while a more recent study in Islamabad has shown that decisions to seek health care for infertile couples are influenced by interpersonal, social and contextual factors.[12,19] These findings highlight the importance of making accessible and culturally sensitive services to address both partners available for infertility treatment.

This is especially the case with a male factor of infertility. Infertility can be a problem with either man or woman, however, there is still a strong social bias that lies with the woman. Therefore, the experience of women in our study is typical of that of women globally, in which there is a disconnect between the biological responsibility and the social responsibility of women.[20]

Other cultural perspectives are obtained from the Middle Eastern literature. In terms of Pakistan's context, study on the role of religion and culture in perceptions and decisions about medically assisted reproduction in the Middle East and Europe is relevant in understanding the impact of religious and cultural norms in Middle Eastern societies, which could also be relevant to the Pakistani context.[21] Inhorn also highlighted the importance of patriarchal reproductive norms, family expectations and gender preferences in Middle Eastern societies, which may be relevant to Pakistan as well.[22,23]

The psychosocial consequences identified in our study are in line with the general international literature. The increased depression, anxiety and stress noted in our study is supported by the recent global meta-analytic findings regarding high psychological morbidity among infertile women, as noted above by other authors, and is also consistent with other recent Pakistan studies.[23-25]

In general, male factor infertility can have a significant psychosocial impact on women, although the underlying cause of the infertility is located in the man. This burden needs to be addressed through couple-centered, gender sensitive infertility care which should involve psychological screening, counselling and education on male and female infertility. If the social stigma surrounding a woman's inability to conceive is removed and there is a clear understanding of infertility as a reproductive health problem, the practice of more balanced and equitable fertility care is possible in Pakistan.

Limitations

- The research was conducted in Department of Obstetrics and Gynaecology, Bahawal Victoria Hospital and may not be generalized to women in other provinces or to rural areas of Pakistan.
- Data were based on self-report scales which might have been influenced by response bias or stigmatization that causes underreporting of the incidents of mental health problems.
- Participants were recruited from clinic, rather than routine attenders at primary care or non-attenders, which may mean that there is a selection bias.

Conclusion

In Pakistani society, when they are challenged with male factor infertility, it comparatively becomes a huge psychological burden and social stigma burden on wives, though they themselves are not the culprit in the etiology of infertility. Living in a joint family, younger age and unemployment aggravates this burden. They also underscore the importance of gender-sensitive infertility counselling, psychological support, and public education for de-blaming and sharing reproductive responsibility.

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