

## Evaluation of the Psychological Status of Infertile Women

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### ABSTRACT

**Background:** The birth of progeny is one of the most satisfying events. The infertility is one of the major concerns of the modern world. Although there are variable physical causes of infertility but the psychological stress is considered as one of the main causes of infertility.

**Objective:** The fertility problem inventory was used to evaluate the psychological status of the infertile women. The relationship between psychological problems and characteristics of infertility was also assessed.

**Study design:** It is a prospective and questionnaire-based study conducted for the duration of one year on the women attended the gynecology and obstetrician department of Allama Iqbal Memorial Teaching Hospital Sialkot. The study was conducted from June 2021 to May 2022.

**Material and Methods:** A two-month prospective, quantitative, descriptive, questionnaire-based study was conducted on women undergoing infertility therapy with the approval of the institution's ethical committee. The stress level were analyzed by Fertility Problem Inventory Questionnaire. Excel and Microsoft was used for tabulation of data. The collected data was stratified by statistical analysis. The SPSS was used for the analysis. For the categorical variables the t-test was performed.

**Results:** The average age of the twenty three patients included in the study was 30 years. The severe level of infertility-related stress was observed in the almost 75% of the included patients. The other 25% were suffering from the moderate level of stress.

**Conclusion:** The serious psychological morbidity was observed in approximately two-third of the participants. Psychological evaluation of the patients taking infertility therapy could be a consideration.

**Keywords:** Psychological problems and infertility therapy.

### INTRODUCTION

The birth of progeny is one of the most satisfying event. The infertility is one of the major concern of the modern world and the cases of infertility have raised in the recent years. There are variable physical causes of infertility. According to different studies the psychological stress is also considered as one of the main cause of infertility<sup>1-2</sup>. The millions of the people suffer from the infertility around the globe. The prevalence of the infertility vary among different regions. The one in every five couple is effected by the infertility prevalence. There are a number of people suffering from infertility in Pakistan too. Infertility is a couple entity. But it is attributed to the female population in almost 40% of the reported cases. The psychological health is closely linked to the physical health. There are two links/relationship defined by the researcher in the literature<sup>3-4</sup>. The first one is that psychological illness can lead to infertility. While according to second one the infertility can cause psychological illness. Infertility can be caused by factors such as social status, stress, and rapid weight changes, which affect the Gonadotropin-releasing hormone levels that ultimately leads to infertility. Additionally, the impacts of new hormones such as Ghrelin are also being studied. The Fertility Problem Inventory has the high levels of validity and reliability<sup>5-6</sup>. From the examination of the questionnaire data the patient's current degree of stress was inferred. The study aim to evaluate the psychological traits and its correlation with infertility in women using the Fertility Problem Inventory. The 15% of the childbearing population is infertile the failure to achieve a pregnancy after one year or more of regular, unprotected intercourse, or the inability to carry a pregnancy to term at any moment<sup>7-8</sup>. According to the researchers the two main types of infertility are biological and functional infertility. According to the early studies conducted on the infertility, the emotional or personality instability can leads to infertility. In the past decade, there has been a shift in this unidirectional concept, and most recent studies find few or no significant differences in psychological characteristics between patients with biological and functional infertility. The emerging evidence suggests that psychological distress may be the most important cause of functional infertility. Recent studies support the idea that psychological instability may cause functional infertility. Most research focuses on psychological differences between

biological and functional infertility. Few studies have compared organic infertility diagnoses. This study examines the impact of several infertility-related issues on women's self-esteem and the concurrent occurrence of sadness. The secondary purpose of the study was to identify correlation between infertility-related traits and psychological issues<sup>9-10</sup>.

### MATERIAL AND METHODS

It is a quantitative and questionnaire-based study conducted for the duration of one year on the women attended the gynecology and obstetrician department of Allama Iqbal Memorial Teaching Hospital Sialkot. The study was conducted from June 2021 to May 2022. The ethical and review board committee of the hospital approved the study. This two-month prospective study was conducted on women undergoing infertility therapy with the approval of the institution's ethical committee. According to the inclusion criteria all the women of age range between 21-45 years were included. The marriage duration was greater than one year in all of the cases. The patients diagnosed with psychiatric disease were excluded. The Fertility Problem Inventory was localized, translated, and validated. Fertility Problem Inventory was administered. The patients who willingly signed the written consent were selected. The questionnaire's analysis reveals the patient's stress level. Participants rated it from 1 to 6. No questions were repeated. Before the treatment, the patient was relaxed. To minimize the confounding effects it was ensured that patients had no surgical procedure and had a good sleep duration before filling the questionnaire. The demographic features of each patients such as age, education, occupation, religion, family type, past partnerships and fertility attempts were documented. The FPI ratings (1 to 6) were used to compare mild/moderate/moderately severe and severe stress (1/2/3/4). Chi-square was performed for categorical variables and student's t-test was performed for continuous variables. The stress levels were analyzed by Fertility Problem Inventory Questionnaire. Excel and Microsoft was used for tabulation of data. The collected data was stratified by statistical analysis. The SPSS was used for the analysis. For the categorical variables the t-test was performed.

**RESULTS**

A two-month descriptive and questionnaire-based study was done on women undergoing infertility therapy with the approval of the institution's ethical committee. The FPI was localized, translated, and validated. FPI was administered. The 23 patients met the study's inclusion criteria. Nine other infertile patients were identified during the research period, but they were too young or unwilling to participate. The average age was 30 years and most of the participants were of the age range between 32-35 years. Most patients (63%) had primary school education, while other 6% were illiterate. The 30% had secondary or higher education. The average age of the twenty three patients included in the study was 30 years.

Table 1: The demographic features of the participants

Age range	No. of participants	Percentage
20-25 years	7	30%
26-31 years	4	17%
32-37 years	8	35%
>38 years	4	18%

The 30% of the patients were in the group having the age range between 20-25 years, the 17% were in the group with the age range 26-31 years. The 35% were in the age group 32-37 years and only 18% were greater than 38 years.

Table 2: The time duration of attempt to conceive

Duration	No.	Percentage
1-5 years	15	65%
6-10 years	5	22%
11-15 years	2	8%
>16 years	1	5%

The 65% of the participants were trying to conceive from the last 1-5 years, while 22% were trying from 6-10 years. The only 8% were attempting to conceive from last 11-15 years.

Table 3: Scoring scale of fertile problem Inventory

Stress severity scale	Mild stress/1	Moderate stress/2	Moderately severe stress/3	Severe stress/4	Composite
Social concerns	0	10	13	0	23
Sexual concern	0	4	18	1	23
Relationship concern	0	4	17	2	23
Rejection of child free lifestyle	0	3	19	1	23
Parenthood need	3	17	3	0	23
Composite	0	6	17	0	23

The 75% of 23 patients had moderate stress, and 25% had moderately severe stress. No mild-stress patients was observed. Social stress and need for parenthood were of less concern in the patients while the sexual relationships, and rejection of child free life-style were highly contributing to increase the stress levels of the patients. Most responders (96.87%) were unemployed. Most patients (89) lived in rural areas.

Table 4: Demographic parameters and correlation with stress level

Parameter	Mil/Moderate stress	Moderately severe/ severe stress	p-value
Age	30 +/-3	28.2 +/-4.38	0.08
Education-graduate	23%	13%	0.59
Joint family	60%	76%	0.22
Urban	89%	60%	0.22
Marriage duration(>8 years)	60%	49%	0.70
Duration of attempt to conceive	38%	55%	0.69
Medical problems	12%	25%	0.67

Out of the 23 the (69%) had a joint family. Primary infertility was prevalent in 94%. The 9 patients (28%) in the research were making their first infertility-related hospital visit. Seven individuals (22.34%) had hypothyroidism, diabetes, etc. Four (13%) of their partners experienced medical issues. No patients smoked or drink. The influence of numerous factors on scores was studied.

**DISCUSSION**

This study was carried out to evaluate psychological status of women suffering from infertility. The study included 23 patients who visited tertiary care unit for treatment. The average age of patients was 30 years. The marriage duration was greater than one year in all of the cases. The patients diagnosed with psychiatric disease were excluded. The Fertility Problem Inventory was localized, translated, and validated. Fertility Problem Inventory was administered. It was observed that approximately two-third of the infertile women suffered from psychological stress. They had many more emotional problems as compared to their husbands during their treatment. As per our study most of the women tried to conceive for five years and then they started various sort of treatments to cure infertility. There were only five percent women who tried to conceive even after 16 years. Our results were consistent with previous studies where 8 percent women tried to conceive for more than 15 years. As per our studies most of the women suffered from moderate level of stress. As motherhood is strongly associated with marriage so it's very difficult for women to live a childless life<sup>11-12</sup>. As per studies there is a difference between psychological status of infertile women in developed and in developing countries. As in developed countries there is acceptance when it comes to infertility as compared to developing countries where societal pressure and traditional interpretation makes it difficult for women to accept it.

As per studies psychological wellbeing of women is clearly effected after being diagnosed with infertility. As women have to invest more in having a child and most of the time treatment revolves around women more than men so women experience psychological issues like depression and anxiety more often<sup>13-14</sup>. Studies have shown that infertile women need greater degree of support and love from their spouse, as they experience mood swings, anxiety and depression. Women considered infertility directly as their fault which makes them question their self-esteem after they are diagnosed as infertile. As per studies the stress level increase with the duration of treatment in case of infertile women, the thought that treatment is not playing any positive role adds to the stress level, as many patients can't afford treatment so they are unable to continue it for too long. As per our study, the factors like social, sexual and relationship concerns play a role in creating issues like anxiety, depression and psychological stress<sup>15-16</sup>. Moreover, with the passage of time the need of parenthood adds to the anxiety of the patient. As per our study the infertile women who lives in joint families suffers more from moderate level of stress as compared to women who lives separately<sup>17</sup>. According to a study carried out to evaluate stress level in infertile women it was found that the majority of the women who participated in the study got adjusted with their unsuccessful treatment, but there were one third women<sup>18-20</sup> that reported about signs of stress and anxiety. As per studies it was found that partner's support, love and positive social response plays a very important role in psychological wellbeing of infertile women. Another study showed that the role of infertility on marital relationship depends on many social factors and societal interpretations. Settings where the sole purpose of marriage is to produce and raise children, infertility creates a huge negative effect on the wellbeing of women<sup>21-22</sup>.

**CONCLUSION**

The serious psychological morbidity was observed in approximately two-third of the participants. Psychological evaluation of the patients taking infertility therapy could be a consideration. The mild stress was not observed in any case.

Infertility-related stress is independent of demographics features and infertility type. Infertile women should be screened for latent stress using the FPI. Further research is needed to determine whether improved psychological health can also improve the reproductive outcomes.

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