Level of Anxiety Among Women Undergoing Infertility Treatment Attending Selected Infertility Clinics in Coimbatore

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***Abstract*—Background: Infertility is a common reproductive health concern and may be accompanied by substantial psychological distress. Women undergoing infertility treatment may experience anxiety related to uncertainty about treatment outcomes, repeated procedures, financial burden, and social expectations. Objective: To assess the level of anxiety among women undergoing infertility treatment attending selected infertility clinics in Coimbatore and to determine its association with selected demographic and clinical variables. Methods: A quantitative descriptive cross-sectional design was adopted. Sixty women undergoing infertility treatment were selected by non-probability convenience sampling. Data were collected using a structured socio-demographic and clinical questionnaire and the Generalized Anxiety Disorder-7 (GAD-7) scale. Descriptive statistics were used to summarize the data, and the Chi-square test was proposed for testing associations between anxiety category and selected variables. Results: Among the 60 participants, 45 (75.0%) had primary infertility and 36 (60.0%) had infertility for three years or longer. Based on the reported GAD-7 categorization, 25 (41.7%) had severe anxiety, 15 (25.0%) had moderate anxiety, 15 (25.0%) had mild anxiety, and 5 (8.3%) had minimal anxiety. The reported mean GAD-7 score was 13.2 ± 4.6; this value requires verification against the original individual scores. Conclusion: Anxiety symptoms were common among the women included in this study. Routine assessment of psychological well-being and timely counselling may strengthen comprehensive infertility care. Because the individual raw data were not available for this revision, inferential findings and the reported mean and standard deviation should be verified before submission.**

***Index Terms*—Anxiety; Infertility; Infertility treatment; GAD-7; Women; Psychological well-being; Reproductive health.**

I. INTRODUCTION

Infertility is a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular, unprotected sexual intercourse. Current World Health Organization estimates indicate that approximately one in six people of reproductive age experience infertility during their lifetime. Infertility may be due to male, female, combined, or unexplained factors and may require medical or assisted reproductive treatment.

The infertility treatment journey can involve repeated investigations, medication, procedures, uncertainty regarding treatment outcomes, and substantial financial costs. These experiences may contribute to anxiety and other forms of psychological distress. Recent evidence indicates that women experiencing infertility have a substantial burden of mental health problems, including anxiety and depression. Therefore, psychological assessment should form part of holistic infertility care.

In this context, the present study was undertaken to assess anxiety among women undergoing infertility treatment at selected infertility clinics in Coimbatore and to examine its association with selected demographic and clinical variables.

II. BACKGROUND OF THE STUDY

Infertility affects individuals and couples across different settings and has consequences beyond reproductive health. The WHO reports a global lifetime prevalence of infertility of approximately one in six people of reproductive age. Fertility care includes prevention, diagnosis, and treatment, while

access to appropriate and affordable care remains an important challenge.

For women undergoing infertility treatment, the emotional burden may be influenced by treatment duration, repeated treatment attempts, financial concerns, uncertainty, social expectations, and perceived pressure to achieve motherhood. Evidence from systematic reviews indicates that women with infertility experience higher levels of anxiety, depression, stress, and other psychological difficulties than would be expected from reproductive health concerns alone.

Assessment using brief validated instruments can help identify women who may require additional psychological support. The GAD-7 is a seven-item self-report measure of anxiety symptoms, with total scores ranging from 0 to 21. Its use has been described in infertility research. The present study therefore used the GAD-7 to describe anxiety symptom severity among women receiving infertility treatment.

III. NEED FOR THE STUDY

Infertility treatment may place considerable psychological demands on women. Anxiety can affect emotional well-being and quality of life and may complicate the experience of repeated treatment and uncertainty. Although infertility services increasingly focus on diagnosis and treatment, psychological needs may receive less systematic attention. Assessing anxiety among women attending infertility clinics can help nurses and other healthcare professionals identify women who may benefit from counselling, referral, education, and psychosocial support. Local evidence from infertility clinics in Coimbatore may also assist in strengthening patient-centred and holistic infertility care.

IV. PROBLEM STATEMENT

A study to assess the level of anxiety among women undergoing infertility treatment attending selected infertility clinics in Coimbatore.

V. OBJECTIVES

General Objective

To assess the level of anxiety among women undergoing infertility treatment attending selected infertility clinics in Coimbatore using the Generalized Anxiety Disorder-7 (GAD-7) scale.

Specific Objectives

1. To assess the level of anxiety among women undergoing infertility treatment using the GAD-7 scale.
2. To determine the association between anxiety level and selected socio-demographic variables such as age, education, occupation, family type, income, and duration of marriage.
3. To determine the association between anxiety level and selected clinical variables such as type and duration of infertility, duration of treatment, previous treatment attempts, and type of infertility treatment.

HYPOTHESES

H_0: There is no statistically significant association between the level of anxiety and the selected socio-demographic and clinical variables among women undergoing infertility treatment.

H_1: There is a statistically significant association between the level of anxiety and at least one selected socio-demographic or clinical variable among women undergoing infertility treatment.

VI. METHODOLOGY

Research Design: A quantitative descriptive cross-sectional research design was adopted.

Setting: The study was conducted among women undergoing infertility treatment at selected infertility clinics in Coimbatore.

Population: The study population comprised women undergoing infertility treatment.

Sample and Sample Size: A total of 60 eligible women were included in the study.

Sampling Technique: Non-probability convenience sampling was used.

Eligibility: Women aged 20–45 years who were undergoing infertility treatment, could understand Tamil or English, and were willing to participate were eligible. Women with a previously diagnosed psychiatric illness receiving psychiatric treatment, severe medical conditions that could interfere with participation, inability to complete the questionnaire because of communication or cognitive difficulties, or unwillingness to provide informed consent were excluded. The embryo-transfer exclusion criterion

should be retained only if it was part of the approved study protocol.

Ethical Considerations: Ethical approval from the Institutional Ethics Committee, permission from the selected infertility clinics, and written informed consent from participants were reported as obtained before data collection. Confidentiality and anonymity were maintained.

DATA COLLECTION TOOL

Section A: A structured questionnaire was used to collect socio-demographic and clinical information, including variables relevant to the study objectives.

Section B: The Generalized Anxiety Disorder-7 (GAD-7) scale was used to assess anxiety symptoms. The instrument contains seven items, each scored from 0 to 3, giving a total score from 0 to 21. For descriptive interpretation, scores of 0–4, 5–9, 10–14, and 15–21 were classified as minimal, mild, moderate, and severe anxiety, respectively.

Important reporting note: The GAD-7 is a measure of anxiety symptom severity and should not be used alone to diagnose generalized anxiety disorder.

DATA COLLECTION PROCEDURE

After obtaining the required ethical approval and institutional permissions, eligible participants were approached at the selected clinics. The purpose of the study was explained and written informed consent was obtained. Participants completed the socio-demographic and clinical questionnaire and the GAD-7 scale in a private setting. Completed forms were checked for completeness, coded, and handled confidentially.

STATISTICAL ANALYSIS

Data were entered and analysed using SPSS version 26.0. Frequency and percentage were used to describe categorical variables. Mean and standard deviation were used to summarize the GAD-7 score when appropriate. The Chi-square test was planned to examine associations between categorized anxiety level and selected socio-demographic and clinical variables. A p-value <0.05 was considered statistically significant. The final inferential results must be calculated from the original dataset before submission.

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VII. RESULTS

The results below reproduce the numerical findings reported in the supplied manuscript. They should be treated as provisional until verified against the original dataset.

Table 1. Distribution of participants according to selected demographic and clinical characteristics (N=60).

Variable	Category	n (%)
Age (years)	22–30	34 (56.7%)
	31–40	26 (43.3%)
Type of infertility	Primary	45 (75.0%)
	Secondary	15 (25.0%)
Duration of infertility	<3 years	24 (40.0%)
	≥3 years	36 (60.0%)
Previous treatment attempts	None	19 (31.7%)
	1–2	26 (43.3%)
	>2	15 (25.0%)
Current treatment	Ovulation induction	12 (20.0%)
	IUI	20 (33.3%)
	IVF	28 (46.7%)

More than half of the participants were aged 22–30 years (56.7%). Primary infertility was reported by 75.0% of the participants, while 60.0% had experienced infertility for three years or longer. Regarding previous treatment attempts, 43.3% had undergone one to two attempts. IVF was the most frequently reported current treatment (46.7%), followed by IUI (33.3%) and ovulation induction (20.0%).

Table 2. Distribution of participants according to anxiety level based on GAD-7 (N=60).

GAD-7 score	Anxiety level	n (%)
0–4	Minimal	5 (8.3%)
5–9	Mild	15 (25.0%)
10–14	Moderate	15 (25.0%)
15–21	Severe	25 (41.7%)
Total		60 (100.0%)

Of the 60 participants, 25 (41.7%) were classified as having severe anxiety, 15 (25.0%) as moderate, 15

(25.0%) as mild, and 5 (8.3%) as minimal anxiety. Thus, severe anxiety was the largest reported category.

VIII. DISCUSSION

The present study found that anxiety symptoms were common among women undergoing infertility treatment, with severe anxiety being the largest reported GAD-7 category. This finding is consistent with the broader literature indicating a substantial psychological burden among women experiencing infertility. A recent systematic review reported anxiety, depression, stress, and other mental health difficulties among women with infertility, supporting the importance of psychological assessment as part of comprehensive care.

The emotional burden associated with infertility may be influenced by uncertainty regarding treatment success, repeated procedures, treatment expenses, social expectations, and duration of the infertility experience. Recent evidence also suggests that treatment-related and social factors can contribute to anxiety among women receiving infertility care.

The present study also reported that most participants had primary infertility and that a substantial proportion had experienced infertility for three years or longer. However, because the association statistics were not provided, the present manuscript should not claim that duration of infertility, type of treatment, or any other specific variable was statistically associated with anxiety until the original data are analysed.

The findings highlight a potential role for nurses in early identification of psychological distress, therapeutic communication, counselling, education, referral, and coordination with mental health professionals. Psychological interventions have also been shown in systematic reviews to have potential benefits for anxiety and well-being among women experiencing infertility; therefore, psychosocial support may be considered an important component of fertility care.

IX. LIMITATIONS

1. The study used convenience sampling, which limits generalizability beyond the selected infertility clinics.
2. The cross-sectional design provides a snapshot of anxiety at one point in the treatment journey and cannot establish causal relationships.
3. Anxiety was assessed using a self-report instrument and may therefore be influenced by reporting or response bias.
4. The study included a relatively small sample of 60 participants.
5. The final association findings and the reported mean GAD-7 score require verification against the original participant-level data before publication.

X. CONCLUSION

Anxiety symptoms were common among the women undergoing infertility treatment included in this study, with severe anxiety representing the largest reported GAD-7 category. The findings support the importance of incorporating psychological assessment and appropriate counselling into infertility care. Nurses and other healthcare professionals can contribute through early identification of distress, supportive communication, patient education, and timely referral. The reported inferential statistics and mean GAD-7 score should be verified using the original dataset before the manuscript is submitted for publication.

XI. RECOMMENDATIONS

1. Routine screening for anxiety and psychological distress may be considered within infertility services.
2. Nurses should provide supportive counselling and appropriate referral for women with clinically concerning symptoms.
3. Larger studies using probability sampling or multiple infertility centres are recommended to improve generalizability.
4. Longitudinal studies could examine changes in anxiety across different stages of infertility treatment.
5. Future studies may evaluate structured psychological or nursing interventions for reducing anxiety among women undergoing infertility treatment.

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