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Depression and Anxiety Among Women Attending Infertility Clinic in Chennai

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Abstract

Background:
Infertility is not only a medical problem; rather, it is a severe life crisis that can lead to psychological morbidity such as anxiety and depression. The majority of literatures about mental and reproductive health has focused only on obstetric and child care. This study focusses on mental health problems in women with infertility
Methodology:
This cross sectional study is conducted among 95 participants in Fertility centre Chennai in 2024-25. The participants were recruited by convenience sampling. The standard scales and semi structured questionnaire used to collect data. The data were analyzed using Epi info 7.
Results:
22.1%had only anxiety, 18.95% had only depression and 12 participants had both anxiety and depression. Overall, 51(53.68%) participants were suffering from atleast one- depression or anxiety. The risk factors identified were unemployment, financial burden, emotional strain, low family and spousal support, high social stigma, poor sleep and low self esteem.
Conclusion:
The infertile women are at a substantial risk of psychological morbidity, with psychosocial factors playing a critical role. Our findings, supported by multiple international studies, emphasize the need for holistic infertility care that includes mental health assessment and targeted psychosocial interventions

Keywords: Infertility, depression, anxiety, determinants

Introduction:

A global health crisis that has profound emotional, social, and psychological repercussions, in particular for women, infertility is a source of concern for the entire world. Infertility is defined by the World Health Organisation (WHO) as the inability to conceive after a period of twelve months or more for which the individual has engaged in regular sexual activity without protection[1]. Infertility is a condition that affects roughly 10–15% of couples around the world [2]. There are numerous cultures, particularly in poor nations, that consider motherhood to be a defining characteristic of womanhood. In these societies, the inability to conceive is frequently associated with a significant amount of social stigma. It is for this reason that infertility is not only a medical problem; rather, it is a severe life crisis that can lead to psychological morbidity such as anxiety and depression.

Depression and anxiety are among the most common mental health disorders that are identified in women who are receiving examination and therapy for infertility.[3] There are a number of factors that contribute to this psychological suffering, including the fact that the outcomes of treatment are unpredictable, the financial and physical load of therapy, the social pressure to bear children, and the repeated experiences of failure and loss. A additional factor that adds to increased emotional strain and psychological tiredness is the cyclical nature of optimism and disappointment that is inherent in assisted reproductive technologies (ART).[3,4]

When it comes to the psychological reaction to infertility, the cultural and societal surroundings have a significant influence in influencing the response. The woman is frequently held accountable for childlessness in many traditional and patriarchal communities, regardless of the underlying medical explanation[4]. This is the case wherever there is a lack of children. It is possible for blame and stigma to result in marital problems, social isolation, and a decline in self-esteem, all of which can increase a person's susceptibility to experiencing symptoms of depression and anxiety. Furthermore, women who come from lower socioeconomic backgrounds have additional problems, such as limited access to fertility services and a lack of psychiatric counselling, which further exacerbates the emotional discomfort they experience.[4,5] According to the findings of a meta-analysis conducted by Chen et al., roughly 45% of women who were having treatment for infertility displayed clinically significant symptoms of anxiety or depression.[5]

Within the context of infertility therapy, it is consequently vital to address the mental health requirements of women in order to provide holistic treatment.[6] This study aims to find the prevalence of anxiety and depression among women attending infertility clinic and its determinants in Chennai.

Methodology:

This is a cross-sectional study conducted among women who are undergoing infertility treatment in fertility center in Chennai between 2024 January to 2025 September. Women with ages 18 and above, with primary or secondary infertility are included in this study. The women who were diagnosed with psychiatric condition and on treatment for the same before start of study were excluded from the study.

The sample size was calculated by using formula $n=Z^2pq/d^2$ with Z is alpha value at 95% confidence interval which is 1.96, p is prevalence of anxiety or depression to be 45% [5], d with absolute precision of 10%. The sample size is calculated to be 91 and rounded off to 95.

Around 6 to 7 new patients with infertility attend this fertility clinic every month. By convenience sampling, participants were recruited until the desired sample size is achieved. The informed consent was obtained before start of study. The semi structured questionnaire and Hamilton anxiety and depression scale was to used to find depression and anxiety among participants. The risk factors studied are sociodemographic risk factors- age, education level, working or not, socio economic status as per modified Kuppusamy scale, Infertility and treatment factors- Type of infertility, infertility period, ART Treatment taken, Emotional burden by Likert scale and financial constraints, Interpersonal factors- Spousal support and family support (Multidimensional perceived social support scale), social stigma by infertility stigma scale, self esteem (Rosenberg self esteem scale) and sleep quality by Pittsburg sleep quality index.

The data were analyzed using Epi info 7. The descriptive data were given in proportions and mean. The chi square test and t test were used to compare proportions and mean. $P<0.05$ is considered significant.

Results:

Figure 1: Prevalence of anxiety or depression

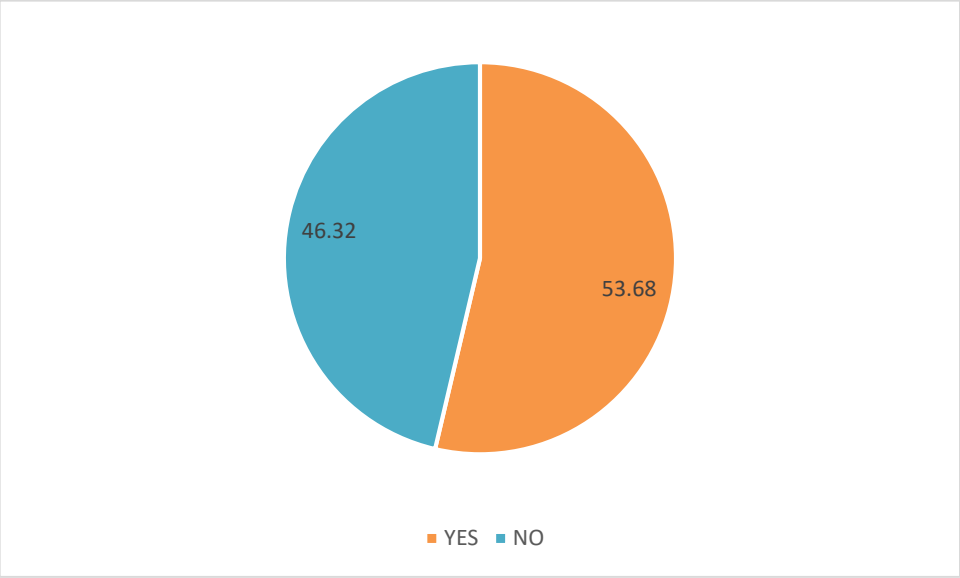
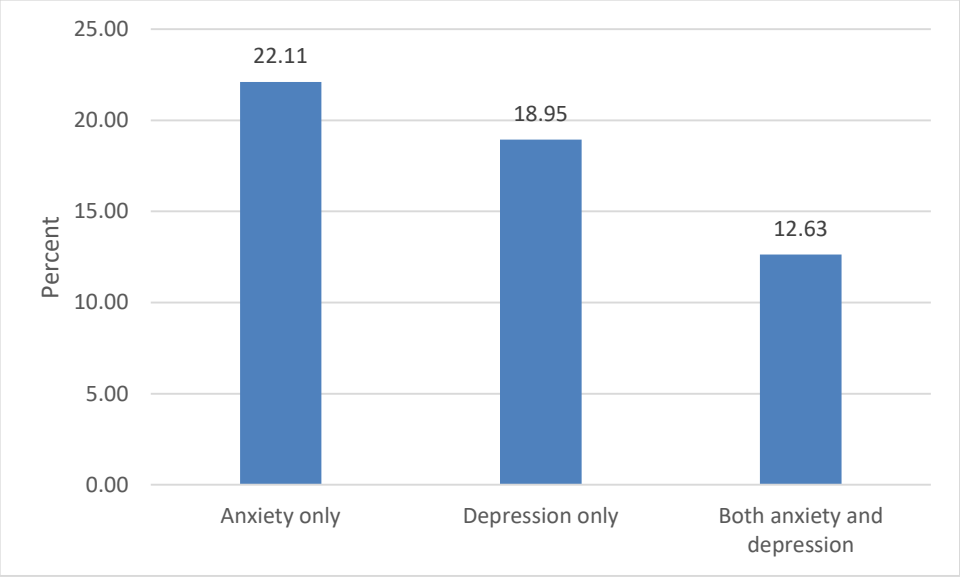


Figure 2: Prevalence of anxiety, depression and both



In our study, 22.1%,21 participants had only anxiety, 18.95%,n=18 had only depression and 12 participants had both anxiety and depression. Overall, 51(53.68%) participants were suffering from atleast one mental health condition studied as in figure 1 and figure 2.

Table 1: Distribution as per severity of anxiety and depression (N=95)

Severity	Anxiety n,%	Depression n,%
Mild	12, 12.63	10, 10.53
Moderate	16, 16.83	13, 13.68
Severe	3, 3.16	4, 4.21
Very severe	2, 2.11	3, 3.16

In table , the result shows that majority were of mild or moderate degree severity of depression or anxiety in our study

Table 2: Socio demographic risk factors

Risk factors	Depression or anxiety present (N-51) n,%	Depression or anxiety not present(N-44) n,%	P value
Age (mean+/-s.d)	30.39+/-4.53	31.37+/-6.32	0.993
Education • **Graduate or Post graduate** • **High school or diploma**	 40, 78.4% 11, 21.6%	 35, 79.5% 9, 20.5%	0.999
Occupation • **Working** • **Not working**	 20, 39.2% 31, 60.8%	 33, 75% 11, 25%	0.001
Socio economic status • **Upper** • **Middle** • **Lower**	 10, 19.6% 38, 74.5% 3, 5.9%	 12, 27.3% 30, 68.2% 2, 4.5%	0.664

In our study as per Table 2, participants who were not working was found to be significant risk factor of depression or anxiety.

Table 3: Infertility and treatment factors

Risk factors	Depression or anxiety present (N-51) n,%	Depression or anxiety not present(N-44) n,%	P value
Type of infertility • **Primary** • **Secondary**	 41, 80.4% 10, 19.6%	 38, 86.% 6, 13.6%	0.48
ART treatment taken in past • **Yes**	 35, 68.6% 16, 31.4%	 26, 59.1% 18, 40.9%	0.33

• **No**			
Infertility period • **1-3 year** • **>3 year**	 19, 37.3% 32, 62.7%	 17, 38.6% 27, 61.4%	 0.87
Financial constraint • **Yes** • **No**	 47, 92.2% 4, 7.8%	 28, 63.6% 16, 36.4%	 0.001
Emotional burden (mean with s.d)	4.13+/-0.63	2.51+/-1.02	0.001

The presence of financial constraint is significant risk factor and also presence of emotional burden due to treatment is significantly associated with depression and anxiety in Table 3. This emotional burden risk factor is calculated using Likert scale, higher the score higher is the burden.

Table 4: Inter personal factors

Risk factors	**Depression or anxiety present (N-51) n,%**	**Depression or anxiety not present(N-44) n,%**	**P value**
Spouse support • **Low** • **Moderate** • **High**	 30, 58.8% 12, 23.5% 9, 17.6%	 8, 18.2% 14, 31.8% 22, 50%	 0.001
Family support • **Low** • **Moderate** • **High**	 29, 56.9% 15, 29.4% 7, 13.7%	 9, 20.5% 12, 27.3% 23, 52.3%	 0.001
Sleep quality • **Poor** • **Good**	 35, 68.6% 16, 31.4%	 15, 34.1% 29, 65.9%	 <0.001
Self esteem • **Low** • **High**	 34, 66.7% 17,33.3%	 18, 40.9% 26, 59.1%	0.008
Social stigma • **Low** • **Moderate** • **High**	 8, 15.7% 10, 19.6% 33, 64.7%	 22, 50% 16, 36.4% 6, 13.6%	 <0.001

In this study as per Table 4, psychosocial factors were strongly associated with depression and anxiety among infertile women. Low spouse support (58.8%) and low family support (56.9%) were more common

in women with psychological morbidity, whereas high support was predominant in those without. Poor sleep quality affected 68.6% of depressed/anxious participants compared to 34.1% of non-depressed women. Similarly, low self-esteem (66.7%) and high perceived social stigma (64.7%) were significantly higher in the affected group. These findings indicate that inadequate emotional support, disturbed sleep, low self-worth, and societal pressures substantially contribute to depression and anxiety in infertility, highlighting the need for targeted psychosocial intervention.

Discussion:

In our study, 53.7% of infertile women encountered at least one mental health disorder, with 22.1% reporting alone anxiety, 18.95% only depression, and 12 individuals displaying both conditions. These results align with prior research. Zhang et al. indicated that 23.2% of infertile women in China suffered from anxiety, whereas 17% experienced depression [7]. Gao et al. similarly reported a 66.06% incidence of anxiety and a 40.3% prevalence of depression among 330 infertile women [8]. Our study found that mild and moderate severity levels were the most prevalent, consistent with Liu et al., who indicated that the majority of anxiety and depression cases among infertile women were mild [9].

Our research indicated that non-employment, financial limitations, and emotional strain were substantial risk factors, supporting the conclusions of Bagade et al., who emphasised the influence of socioeconomic factors on the mental health of infertile women [10]. These findings underscore the significance of social and economic variables in psychological morbidity among women experiencing infertility.

Psychosocial factors had a significant correlation with sadness and anxiety in our research. Low spousal support (58.8%) and low familial support (56.9%) were more common among women with psychological morbidity, whereas strong support was prominent in those without such conditions. Subpar sleep quality impacted 68.6% of individuals with depression or anxiety, in contrast to 34.1% of non-depressed women. Likewise, poor self-esteem (66.7%) and elevated perceived social stigma (64.7%) were markedly more prevalent in the affected group. These findings align with Braverman et al., who highlighted the significance of psychosocial factors, such as spouse and family support, in the mental health of infertile women [11]. Moreover, Al-Asadi et al. discovered that depression in infertile women was substantially associated with initial infertility, the length of infertility, and insufficient social support[12].

Moutzouroulia et al. corroborate our findings, indicating in their literature review that women experiencing infertility frequently encounter stigma, diminished self-esteem, and fractured social interactions, which substantially exacerbate anxiety and sadness [13]. The significant frequency of psychological morbidity among infertile women identified in our study aligns with Kiani et al., who indicated that 52–63% of infertile women in low- and middle-income countries encounter mental health challenges [14]. These studies jointly illustrate that psychosocial and demographic factors substantially affect mental health outcomes in women receiving infertility treatment.

Our findings indicate that psychosocial therapies focussing on spousal and familial support, stress management, sleep hygiene, self-esteem enhancement, and stigma reduction may be essential in alleviating melancholy and anxiety in infertile women. Mental health condition screening should be incorporated into standard infertility care to identify persons at high risk, especially those who are unemployed, under financial difficulty, or enduring substantial emotional distress. Timely management

might avert the escalation of mild and moderate psychological disorders into more severe manifestations, therefore enhancing overall quality of life and possibly improving reproductive results.

Our study has limitations like small sample size and single centric study

Conclusion:

In conclusion, infertile women face a significant risk of psychiatric illness, with psychosocial factors being pivotal. Our research, corroborated by other worldwide studies, underscores the necessity for comprehensive infertility care that incorporates mental health evaluations and specific psychosocial interventions.

Conflict of Interest

Authors declare no conflict of interest

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Authors' Biography

Dr. Priyadharshini Dharmalingam has been in the public health field for more than 12 years and working as Assistant professor for past 4 years. Dr. Divya Prakash is one of the leading fertility consultants in the Chennai and has been in this field for past 8 years.

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