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Anxiety and Depression among Infertile Women: A Cross-Sectional Survey

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Abstract	Original Research Article

Background of the study: Infertility is a global health issue, and it is estimated that around 48 million couples and 186 million individuals are affected worldwide [1]. Infertility has an impact on women's overall wellbeing including their mental, emotional, sexual, and spiritual health, and anxiety and depression is prevalent in this women [2]. Women are the pioneers of nation. Indian culture attaches great importance to women, comprising half of world's population. According to a report of secretary general of United Nations, women constitute 50% of human resources, the greatest human resource next only to man having great potentiality [3]. Women are the key to sustainable development and quality of life in the family. The varieties of role the women assume in the family are those of wife, leader, administrator, manager of family income and last but not the least important the mother [4]. ***Material and methods:*** The research approach adopted for this study was quantitative research approach and the design used was descriptive research design. The convenience sampling technique was used to select 60 subjects. The tool used for data collection was and Generalized anxiety scale and Depression scale. Paper pencil technique was used for data collection and data obtained were analyzed using both descriptive and inferential statistics. ***Results:*** Majority of infertile women (63.3%) were belong to 25-35 years of age , (32%) were belongs to >35 years of age , (5%) were belong to < 25 years of age , Majority of infertile women (60%) were belongs to Hindu religion ,(38.3%) were Muslim ,(2%) were Christian , Majority of infertile women (52%) were belongs to up to 10th educational status , (40%) were uneducated,(8.3%) were PUC or Higher studies or Diploma, Majority of infertile women (35%) were belongs to Agriculture , (27%) were housewife ,(27%) were Cooley, (11.6%) were Employed, Majority of infertile women (43%) were with income 9000-12000, (27%) were belongs to 6000-9000,(25%) were belong to more than 12000 and above ,(5%) were belongs to 6000 , Majority of infertile women was(58%) were married at 19-30 yrs age,(42%) were belongs to below 18 yrs, Majority of infertile women was(87%)were belongs to 0, (13%) were belongs to 1, Majority of infertile women was (70%) were without the history of miscarriage ,(30%) were with history of miscarriage, Majority of infertile women (47%) were got menarche 13-14 yrs, (28%) were belongs to 15-16 yrs,(25%) were 11-12 yrs , Majority of infertile women (58%) were educated up to 10th standard (18%) were belongs up to PUC or High school, (15%) were belongs to uneducated,(8%) were belongs to Degree, Majority of infertile women (65%) Families were were belongs to Joint family,(35%)families were Nuclear, Majority of infertile women (53%) were from Rural area, (46%) were from Urban area, Most of the infertile women's married duration (45%) were below 5 year,(42%) were belongs to 5-10 years , (13%) were 10 year and above, Majority of infertile women's spouse(62%) were belongs to age 30-40 years,(22%) were belongs to 20-30 years, (17 %)were belongs to 40-50 years, Most of the infertile women's spouses (77%) were without any history of bad habits,(22%) were belongs with bad habits, Majority of infertile women (87%) were with history of irregular menstrual cycle,(13%) were without irregular menstrual cycle ,Majority of infertile women(70%)were self-treatment,(17%)were with spouse treatment,(13%) were took treatment for both, Most of the infertile women (87%) were with family support ,(13%) were without family support ,Majority of infertile women(33%) were took infertility clinic information from health educator, (25%) were with self-source,(22%) were family & peer group ,(20%) were with social media. In the present study, the Chi square test was done to find out association between Anxiety and Depression among infertile women and percentage distribution variables of respondents; Chi square test was done to find out association between anxiety and depression of infertile women and selected socio demographic variables and its finding reveals that there is no significant association between anxiety and depression of infertile women's and selected socio

demographic variables such as age, sex, marital status, religion, occupation, no of children, income, educational status...etc. ***Conclusion***: A researcher may help the government to plan health care projects based on their reliable information about the current health problems in the community. Planning, budgeting, and implementation of health care project with respect to needs of the people can be better carried out based on the needs. Further studies are required to examine the anxiety and depression among post-menopausal women's who are experiencing symptoms, so that we correlate with generalized anxiety and depression score of post-menopausal women's of effective teaching materials, focusing on interest, quality and cost effectiveness.

Keywords: Anxiety and depression among infertile women Generalized anxiety scale and Depression scale, Socio demographic variables.

INTRODUCTION

Infertility is often a silent struggle. Patients who are struggling to conceive report feelings of depression, anxiety, isolation, and loss of control. Depression levels in patients with infertility have been compared with patients who have been diagnosed with cancer. It is estimated that 1 in 8 couples (or 12% of married women) have trouble getting pregnant or sustaining a pregnancy. The main symptom of infertility is not getting pregnant. There may be no other clear symptoms. Some women with infertility may have irregular menstrual periods or no periods. And some men may have some symptoms of hormonal problems, such as changes in hair growth or sexual function. Many couples eventually will conceive — with or without treatment [5].

Having children is one of the most likely wishes any couple can have and being unable to bear one despite having regular and unprotected intercourse for a year, is defined as infertility. Prevalence of infertility varies all over the world, largely depending upon the cultural and familial values. It is estimated that about 10% of the couples suffer from infertility, due to one or the other reason and in many of these couple's cause remains unidentified. It is not uncommon for an infertile couple to develop mental health problems. The estimated prevalence of mental health problems ranges from 30% to 80% as reported in different studies and is linked to the cause and duration of infertility and number of attempts at different treatment options.3-5 Psychological impact of infertility may range from inferiority complex and stress to interpersonal relationships to major depression and anxiety [6].

Females are more likely to suffer from psychological disturbances, especially in societies where females are mostly accused to be the reason for couple's inability to conceive and cultural and social pressures and norms are one of the most important contributing factors in the development of these psychological issues. In addition, education and employment status of the female partner are among the influencing factors [7].

In some societies e.g. Muslim societies, childlessness can especially be very distressing for infertile females because their religion and culture allow men to have more than one wives at the same time and female's inability to conceive gives them a pretty good excuse to remarry. Pregnancy, and bringing a new life into the world, is regarded as a valued role for women all over the world. As a result, women who are struggling to conceive frequently experience feelings of depression, anxiety, isolation, and loss of control. In addition to the feeling of unfulfillment that these women often experience, they are also exposed to domestic violence and other forms of emotional trauma, especially in patriarchal societies [8].

Infertility is described as the inability to conceive after a year of consistent, unprotected sexual activity. The World Health Organization (WHO) identifies infertility as a major healthcare and social problem that leads to mental health issues like depression and anxiety, marital conflict, social isolation, and sexual dysfunction. Compared to their male counterparts, women who are infertile appear to be more sensitive to stress. Couples who are struggling with infertility experience a heavy psychological load that negatively affects their quality of life. Today, depression is already the second cause of DALYs in the age category of 15–44 years. The WHO's depression statistics over the world vary by sex with the prevalence among female being 50% higher among males.4 Therefore, depression in females needs special concern because of severe impacts on quality of life.5 In the other countries, the prevalence of depression is 5–12% for men and 10–25% in infertile women.6 Major depression is 2–3 times as common in women as in men [9].

Many studies have provided evidence that depression is highly prevalent among infertile women. It has been reported that depressive symptoms could be the cause of infertility, its consequence, or both.7 Psychological consequences of infertility may be related to a wide range of factors, including but not limited to the loss of control over one's life, stigmatization and isolation from the fertile world, the lack of empathy from family and friends, the feeling of guilt and the diminished sense of self-worth, the long and uncertain treatment, and the costs of treatment [8]. Women are typically the identified patient seeking help in fertility centers. Regardless of which spouse has the reproductive impairment, it is almost always the women who have to undergo the invasive procedures and the daily monitoring of their menstrual cycles and

experience disruption in their schedules to follow rigid treatment regimens. Therefore, women carry more psychological burden of infertility, even when the infertility cause comes from their husband [10].

There have been numerous studies addressing the prevalence of depression among Vietnamese people [11–14]. However, most of these studies focus on the general population. As infertility may have a substantial psychological impact on women as reported by international literature, it is important to have knowledge about this impact on Vietnamese women and its correlates. We conducted a study at Tu Du Hospital in Ho Chi Minh City, Vietnam, with an aim to estimate the prevalence of depression among infertile female patients and to identify correlates of depression among this patient group [11].

Built in 1937, Tu Du Hospital is one of the leading hospitals specializing in obstetrics, gynecology, and new-borns. More than 200,000 patients are treated at this hospital each year [15]. Pondering over the worry of many infertile couples, the hospital has carried out research and applied reproductive-assistance techniques, especially In Vitro Fertilization (IVF), which has brought happiness to many families. An estimated 40,000 infertile couples visited Tu Du Hospital for consultation and treatment of infertility in 2014 [16] Among those couples, there were failures of assisted reproduction therapy, and the couples with unsuccessful treatment had to return to the hospital many times to repeat the treatment procedures. It can be said that mental well-being played a crucial role in the treatment process, because it influenced the effectiveness of assisted reproduction therapy [12].

Objectives:
1. To assess the level of anxiety among infertile women.
2. To assess the level of depression among infertile women.
3. To find out association between anxiety and depression with their socio demographic variables.

METHODOLOGY
Research approach: qualitative non experimental research.

Research design: A Cross Sectional descriptive study.

Setting of study: Setting infertility clinics of selected hospital of Bagalkot.

Target population: Infertile women attending infertility clinics of selected hospital Bagalkot.

Accessible population: Infertile women attending Infertility clinics of selected hospital Bagalkot.
Sample size: 60 Infertile women.

Development of tool: The final tool was consisting of following two parts:
Part-1: Socio demographic variables: This part consists of 19 items for obtaining personal information like; age, religion, education, occupation, family monthly income, age at marriage, no of children, history of miscarriage/stillbirth, age at menarche, education of spouse, type of family, area of residence, duration of marriage, age of spouse, any bad habits of spouse, history of irregular menstrual cycle, infertility treatment taken for self/spouse/both, family support, source of information.

Part -2: Generalized anxiety scale and Depression scale to assess the level of depression and anxiety among infertile women. The scale consists of 07 items.
- Individual scores on the GAS can range from 0 to 21 with higher scores indicating sever anxiety.
- Scores ranging from 0-4 would be considered minimal anxiety.
- Scores ranging from 5-9 would be considered mild anxiety.
- Scores ranging from 15-21 would be considered sever anxiety.
- Individual scores on the CESD can range from 5 to 7 days' higher scores indicating higher depression.
- Scores ranging from less than 1 day would be considered rarely or none of the time.
- Scores ranging from 1-2 days would be considered some or little of the time.
- Scores ranging from 3-4 days would be considered occasionally or a moderate amount of time.
- Scores ranging from 5-7 days would be considered most or all of the time.

Reliability of tool: Reliability was computed by splint half methods.

Plan for data analysis: The analysis of data was done in accordance with the objectives of the study. The data was analyzed by using descriptive statistics (frequency and percentage distribution SD graphs) and inferential statistics (chi-square). The p value 0.05 for significance was selected for the study.

RESULTS

Table 1: Percentage wise distribution of infertile women's attending OBG OPD clinics according to levels of anxiety.

LEVEL OF ANXIETY			
	Range of scores	**Frequency**	**Percentage**
Normal	0-4	1	1.66%
Mild anxiety	5-9	24	40%
Moderate anxiety	10-14	29	48.33%
Severe	15-21	6	10%
Total		60	100%

Table 2: Association between the prevalence of level of stress scores of pregnancy induced hypertension mothers and their socio-demographic variables.

SL. NO	VARIABLES	FREQUENCY	PERCENTAGE
1. AGE			
	<25 Yr	3	5%
	25-35	38	63.3%
	>35	19	32%
2. RELIGION			
	Hindu	36	60%
	Muslim	23	38.3%
	Christian	1	2%
3. EDUCATION			
	Illiterate	24	40%
	Up to 10th	31	52%
	PUC /Higher	5	8.3%
	Graduated	0	0%
4. OCCUPATION			
	Housewife	16	27%
	Cooley	16	27%
	Agriculture	21	35%
	Employed	7	11.6%
	Self employed	0	0%
5. INCOME			
	Below 6000	3	5%
	6000-9000	16	27%
	9000-12000	26	43%
	12000 above	15	25%
6. AGE OF MARRIAGE			
	Below 18 yr	25	42%
	19-30 yr	35	58%
	>30yr	0	0%
7. NO OF CHILDREN			
	0	52	87%
	1	8	13%
	2	0	0%
	3	0	0%
8. HISTORY OF MISCARRIAGE			
	YES	18	30%
	NO	42	70%
9. AGE OF MENARCHE			
	12-13	15	25%
	13-14	28	47%
	14-15	17	28%

10. EDUCATION OF SPOUSE		
Illiterate	9	15%
Up to 10th	35	58%
PUC/High school	11	18%
Graduated	5	8%
11. TYPE OF FAMILY		
Joint	39	65%
Nuclear	21	35%
Extended	0	0%
12. AREA OF RESIDENCE		
Rural	32	53%
Urban	28	46%
13. DURATION OF MARRIAGE		
Below 5 yr	27	45%
5-10 yr	25	42%
10yr & above	8	13%
14. AGE OF SPOUSE		
20-30	13	22%
30-40	37	62%
40-50	10	17%
15. HISTORY OF SPOUSE BAD HABITS		
YES	13	22%
NO	46	77%
16. HISTORY OF IRREGULAR MENSTRUAL CYCLE		
YES	8	13%
NO	52	87%
17. INFERTILITY TREATMENT TAKEN FOR SELF/SPOUSE/BOTH		
Self	42	70%
Spouse	10	17%
Both	8	13%
18. FAMILY SUPPORT		
YES	52	87%
NO	8	13%
19. SOURCE OF INFORMATION		
Self	15	25%
Health educator	20	33%
Family and peer grp	18	22%
Social media	7	20%

Table 3: Percentage wise distribution infertile women's attending OBG OPD clinics according to levels of depression.

LEVEL OF DEPRESSION			
	Range of scores	**Frequency**	**Percentage**
Mild depression	0-30	6	10%
Moderate depression	31-45	19	31.66%
Severe depression	46-60	35	58.34%
Total		60	100%

Table 4: Association between the prevalence of level of depression scores of infertile women and their socio-demographic variables.

Sl. No	Socio demographic variables	Df	Chi square value	Table value	P value
1	Age	1	5.88	2.000	0.01
2	Religion	1	0.23	2.000	0.62
3	Education	1	0.23	2.000	0.62
4	Occupation	1	0.02	2.000	0.87

5	Income	1	0.10	2.000	0.74
6	Marital status	1	0.03	2.000	0.86
7	No of children	1	0.01	2.000	0.89
8	History of miscarriage	1	0.05	2.000	0.80
9	Age at menarche	1	1.06	2.000	0.30
10	Education of spouse	1	0.00	2.000	0.92
11	Type of family	1	2.11	2.000	0.14
12	Area of residence	1	1.40	2.000	0.23
13	Duration of marriage	1	3.50	2.000	0.06
14	Age of spouse	1	0.68	2.000	0.40
15	Spouse any bad habits	1	0.00	2.000	0.95
16	History of any irregular menstrual cycle	1	0.11	2.000	0.73
17	Treatment self or spouse	1	0.67	2.000	0.41
18	Family support	1	0.01	2.000	0.89
19	Source of information	1	0.03	2.000	0.86

DISCUSSION

Report of findings is never sufficient to convey their significance. The meaning that the researcher give to the result plays a rightful and important role in the report. The discussion section is devoted to a thoughtful and insightful analysis of the findings, leading to a discussion of their clinical and theoretical utility.

This chapter deals with the discussion of the anxiety and depression among infertile women. A cross sectional survey conducted at infertility clinics of Bagalkot. The study with appropriate literature review, statistical analysis and findings of the study based on objectives of the study.

The aim of the present study was a total 60 women's, were selected for the study by using Generalized Anxiety and Depression scale.

The sample comprised 60 infertile women's attending OBG OPD at selected hospitals of Bagalkot and the data were collected through Generalized anxiety scale & Depression scale. Result indicates that 10% of respondent had high level of anxiety, 48.3% of respondent had moderate level of anxiety, 40% of respondent had mild level of anxiety,1.6% of respondent had normal level The overall mean level of depression score was found to be 58.3% with severe depression, 31.6% with mild depression and the 10% with mild. As Chi-square test was calculated to assess the association between socio demographic variables and levels of stress and depression among infertile women. There is no significant association found between levels of stress and depression among infertile women with their socio demographic variables such as, Age, Religion, Education, Occupation, Marital status, History of miscarriage, Age at menarche, Duration of marriage, Age of spouse, Bad habits of spouse, History of irregular menstrual cycle, Treatment taken by self or spouse, family support, Source of information regarding health.

- ➤ Majority of infertile women 63.3% were belong to 25-35 years of age, 32% were belongs to >35 years of age, 5% were belong to< 25 years of age.
- ➤ Majority of infertile women 60% were belongs to Hindu religion ,38.3% were Muslim ,2% were Christian.
- ➤ Majority of infertile women 52% were belongs to up to 10th educational status, 40% were uneducated, 8.3% were PUC or Higher studies or Diploma.
- ➤ Majority of infertile women 35% were belongs to Agriculture, 27% were housewife ,27% were Cooley, 11.6% were Employed.
- ➤ Majority of infertile women 43% were with income 9000-12000, 27% were belongs to 6000-9000, 25% were belong to more than 12000 and above ,5% were belongs to 6000.
- ➤ Majority of infertile women was 58% were married at 19-30 yrs. age,42% were belongs to below 18 yrs.
- ➤ Majority of infertile women was 87% were belongs to 0, 13% were belongs to 1.
- ➤ Majority of infertile women was 70% were without the history of miscarriage, 30% were with history of miscarriage.
- ➤ Majority of infertile women 47% were got menarche 13-14 yrs., 28% were belongs to 15-16 yrs., 25% were 11-12 yrs.
- ➤ Majority of infertile women 58% were educated up to 10th standard 18% were belongs up to PUC or High school, 15% were belongs to uneducated,8% were belongs to Degree.
- ➤ Majority of infertile women 65% Families were belonging to Joint family; 35% families were Nuclear.
- ➤ Majority of infertile women 53% were from Rural area, 46% were from Urban area.
- ➤ Most of the infertile women's married duration 45% were below 5 years,42% were belongs to 5-10 years, 13% were 10 years and above.
- ➤ Majority of infertile women's spouse 62% were belongs to age 30-40 years,22% were belongs

to 20-30 years, 17 % were belongs to 40-50 years.

➢ Most of the infertile women's spouses 77% were without any history of bad habits,22% were belongs with bad habits.

➢ Majority of infertile women 87% were with history of irregular menstrual cycle,13% were without irregular menstrual cycle.

➢ Majority of infertile women 70% were self-treatment,17% were with spouse treatment,13% were took treatment for both.

➢ Most of the infertile women 87% were with family support ,13% were without family support.

➢ Majority of infertile women 33% were took infertility clinic information from health educator, 25% were with self-source, 22% were family & peer group ,20% were with social media.

CONCLUSION

The findings of present study indicate that infertile women experienced higher level of anxiety and depression. Hence there is an urgent need to take treatment and Medication yoga, Exercises and Meditation such as creation of comfortable environment to reduce level of anxiety and depression among infertile women.

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