



## Depression, Anxiety and Stress among Female Infertility Women

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### ABSTRACT

Infertility is a distressing state which can have impact on marital life of couple. Infertility very often associated with depression, anxiety and stress and can affect outcome of treatment. Prospective cross sectional study was conducted from April 2018 to June 2018 at Saveetha medical college and hospital obstetrics & Gynaec Department. Aim of the study was to assess how many infertile women have depression anxiety and stress (DAS) and to give appropriate Counseling to them. After ethical clearance and written informed consent participants were interviewed with validated Depression, anxiety, stress scale (DASS-21) structured questions and data collected were analysed to measure the emotional states of depression, anxiety and stress. Infertility women with comorbid conditions and on anti-depressant and anti-anxiety drugs were excluded. 53.3% of the women included were between 20-30 years and 46.7% were between 31-40years. 5% infertile women were had no anxiety, 2% had mild anxiety, 14% had moderate anxiety, 5% had severe anxiety, 74% had extremely severe anxiety. Anxiety has negative correlation with age and positive correlation with duration of Infertility. When education is low anxiety level is severe and when employed anxiety is less. 11% of them no stress, 11% had mild stress, 15.5% had moderate stress, 33% had severe stress, 28.8% had extreme stress. Women with long duration of infertility had severe stress and when they are young they had less stress. In the study all of them had depression varying from mild to very severe. Mild depression in 10%, moderate depression in 17%, severe depression in 22%, very severe in 51%. In the study higher level stress was associated with no formal education, advanced age, long duration of infertility. Depression, stress and anxiety are seen among Infertility women. Before offering infertility treatment psychological counseling should be given to improve the treatment outcome.

**Keywords:** Psychological counseling, Stress, depression, Anxiety, Infertility.

### INTRODUCTION

Infertility is defined as not achieving pregnancy in spite of unprotected intercourse. Infertility is classified as primary when pregnancy has not occurred previously and secondary when pregnancy has occurred already, but does not occur after wards<sup>1</sup>.

Prevalence of anxiety and stress among infertility patients varies all over the world, largely depending upon the cultural and familial values.<sup>2</sup> It is estimated that about 10% of the couples suffer from infertility, due to one or the other reason and in many of these couples cause remains unidentified.<sup>3</sup>

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.<sup>4-5</sup> Psychological impact of infertility may range from inferiority complex and stress to interpersonal relationships to major depression and anxiety.<sup>6,7</sup>

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.<sup>2,7-9</sup> This study was designed to assess the magnitude of depression, anxiety and stress among infertile females

### MATERIALS AND METHODS

Prospective cross sectional study was conducted from April 2018 to June 2018 at Saveetha medical college and hospital obstetrics & Gynaec Department after getting ethical clearance. Aim of the study was to assess how many infertile women have depression anxiety and stress (DAS) and to give appropriate Counseling to them. After written informed consent, participants were interviewed with validated Depression, anxiety, stress scale (DASS-21) structured questions and data collected were analysed to measure the emotional states of depression, anxiety and stress. Forty five infertility women, attending infertility clinic were included in the study. Infertile Women with comorbid conditions and infertile women who were on anti-depressant and anti-anxiety drugs were excluded. In the study 43 women were primary infertility and 2 of them had secondary infertility.



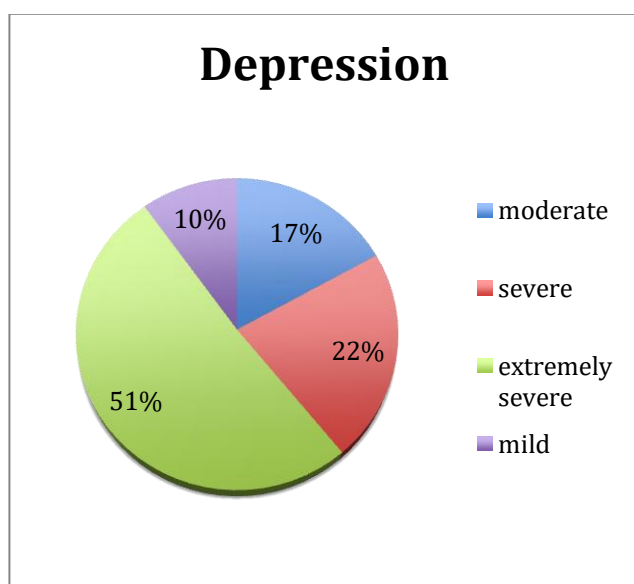
**RESULTS**

**Socio-demographic characteristics of the study population**

Age-years	Percentage %
20-25	15.4
26-30	37.9
31-35	29.5
36-40	12.8
>40	4.4

Most of the subjects included in the study were between 20-30 years of age (53.3%) and 31-40 years being the second most common age group (46.7%).

**Figure 1:** Distribution of Depression among infertile women



In the study all of them had depression varying from mild to very severe .As the age increases depression degree increases. Women age between 21-25 years had 4% mild depression, 5% had moderate depression, 2% had severe depression and 4% had very severe depression. In women age 26-30 years had mild depression 3%, moderate depression 4% severe depression in 3% very severe depression in 4%. In women aged 31-35 years between had mild depression in2% moderate depression in 3%, severe depression in 4%.very severe depression in 9%. In women aged 36-40years mild depression in 1% moderate depression in 3% severe depression 5%.very severe depression in 11%.In women aged above 40years .no one had mild depression, moderate depression in 2%, and severe depression in 8%, very severe depression in 22%.

Duration of infertility had impact on women’s depression. When women had infertility for 2- 4 years had mild depression in 5%, moderate depression in 6% severe depression in 3% and very severe depression in 2%. When women had infertility for 5-7years had mild

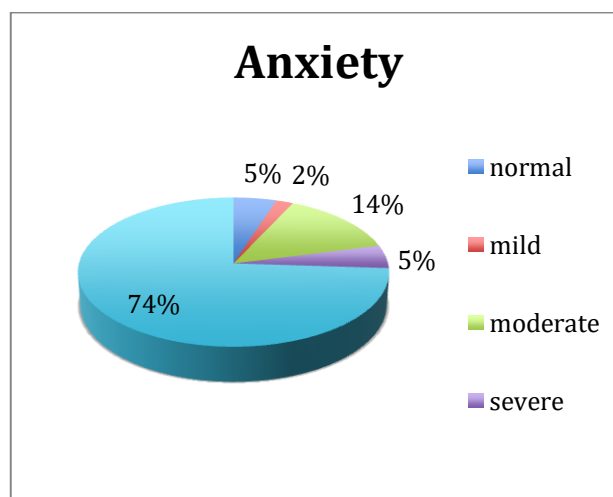
depression in 4%, moderate depression in 7%, severe depression in 6% and very severe depression in 7%.

When women had infertility for 8-10 years had 1% mild depression, moderate depression in 4% severe depression in 4% and very severe depression in 18%. When women had infertility for more than 10 years, none of them had mild depression or moderate depression, severe depression in 9% and very severe depression in 24%.

Education has negative correlation. When education is less depression is more. Women with no formal education 5% of them had mild depression, 8% had moderate depression 12% had severe depression and 18% had very severe depression. When women had high school education 4% of them had mild depression, 7% had moderate depression 8% had severe depression and 16%. When had university graduation 1% of them had mild depression 2% had moderate depression 2% had severe depression and 7%.

When women were employed depression is less. When women are unemployed 1% of them had mild depression, 8% had moderate depression 11% had severe depression and 27% had very severe depression. When women were self-employed 3% of them had mild depression, 6% had moderate depression 6% had severe depression and 17% had very severe depression. When women were employed 6% of them had mild depression, 3% had moderate depression 5% had severe depression and 7% had very severe depression.

**Figure 2:** Distribution of Anxiety among infertile women



Anxiety has negative correlation with age .women between 20-25 years three percentage of them were not anxious, 2% moderate anxiety,2%very severe anxiety in women between 26-30 years 2% of were not anxious,2% had moderate anxiety ,6% had very severe anxiety, among women between 31-35 years 4%had moderate anxiety, 2% had severe anxiety,28 had very severe anxiety, In women between 36-40 years 5% had moderate anxiety, 3% had severe anxiety,35% had very severe anxiety and among women over 40years all of them had very severe anxiety 3%.



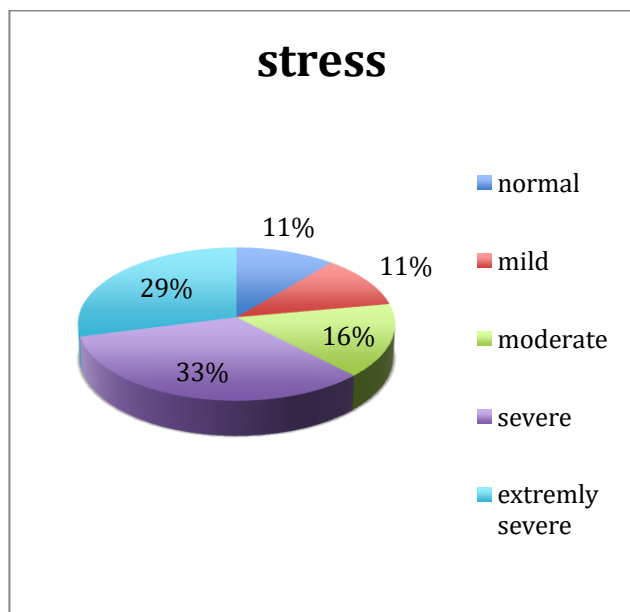
As the duration of infertility is prolonged women become more anxious. When duration of infertility was between 2-4 years 5% women were not anxious, 2% were mildly anxious, 4% of them were moderately anxious and 6% were very severely anxious. When duration of infertility was between 5-7 years 6% of them were moderately anxious, 2% of them severely anxious, 18% very severely anxious. When duration of infertility was between 8-10 years 4% had moderate anxiety, 3% had severe anxiety, 22% had very severe anxiety.

When duration of infertility was more than 10 years they had very severe anxiety. Out of 76% very severe anxiety 28% from women who had infertility more than 10 years.

When education is low anxiety level is severe. When women had no formal education 2% had moderate anxiety, 4% had severe anxiety and 38% had very severe anxiety. Women who had high school education 5% had moderate anxiety, 1% had severe anxiety and 27% had very severe anxiety. When women had university education 5% had no anxiety, 2% had mild anxiety, and 7% had moderate anxiety, 11% very severe anxiety.

When women are employed anxiety is less. In the study when women had no formal education 3% of them had moderate anxiety and 42% had very severe anxiety. When women were self-employed 6% had moderate anxiety 2% had severe anxiety and 25% had very severe anxiety. When women were graduates 5% had no anxiety, 2% had mild anxiety, 5% had moderate anxiety 3% had severe anxiety and 7% had very severe anxiety.

**Figure 3:** Distribution of stress among infertile women



Stress has negative correlation with age. In the age group between 20-25 years 4% had no stress, 2% had mild stress, 4% had moderate stress, 4% severe stress and 3% had very severe stress, women between 26-30 years 5% had no stress, 4% had mild stress, 8% had moderate stress, 5% had severe stress, 7% had very severe stress, women between 31-35 years 2% had no stress 5% had

mild stress, 2% had moderate stress, 10% had severe stress and 16% had very severe stress. Women between 36-40 years, moderate stress were seen in 2%, severe stress in 14%, very severe in 16%. When women were more than 40 years all of them had very severe stress-3%

Duration of infertility has impact on women's stress. When women had infertility for 2-4 years stress was nil in 8%, mild stress in 6%, moderate stress in 2%, severe stress in 2%, none of them had very severe form of stress. When they are infertile for 5-7 years 3% had no stress, 2% had mild, 4% had moderate stress, 3% had severe and 4% very severe stress. When they are infertile for 8-10 years 2% had mild stress 4% had moderate stress, 12% had severe stress and 11% had very severe stress. Women with infertility more than 10 years had moderate stress in 6%, severe stress in 16% and very severe stress in 14%.

Higher level stress was associated with no formal education. When they did not have formal education 4% of them had moderate stress, 12% had severe stress and 15% had very severe stress. Women with high school education had no stress in 3%, mild stress in 7%, moderate stress 8%, severe stress in 15% and very severe in 9%. Women with university degree had no stress in 8% mild stress in 4%, moderate stress in 4%, severe stress in 6% and very severe stress in 5%.

In employed women 9% had no stress 2% had mild form, among self-employed 2% had no stress 8% had mild, 5% had moderate 9% had severe 8% had very severe, unemployed had much impact. 1% had mild 11% had moderate, 24% had severe and 21% had very severe stress.

## DISCUSSION

Among infertile women Psychological impact of may range from inferiority complex and stress to major depression and anxiety. Study by Ramezanzadeh F et al.,<sup>10</sup> showed that depression had a significant relation with infertility. In this study we have compared the level of anxiety, level of stress and level of depression with duration of infertility, educational level, and job of women. Subjects included in the study were between 20-30 years of age (53.3%) and 31-40 years being the second most common age group (46.7%). Which is similar to study conducted by Alhassan A et al.,<sup>2</sup> majority of the subjects 48.0% (48/100) were within 20-30 years age group followed by those in the 31-35 year group (32.0%). Lamia Yusuf<sup>11</sup> in his study reported high prevalence of depression, anxiety and stress among females suffering from infertility ranging from 30-80% and 79% of the patients with infertility had some degree of depression and 49% of the study group subjects had moderate to severe degree of depression and 10% had extremely severe depression. In the study 10% had mild depression 17% had moderate depression, severe depression in 22% and 51% had very severe depression.

In Lamia Yusuf 11 study 41% subjects in study group had moderate to severe anxiety and 29% had extremely severe anxiety and in the study 5% of them did not have anxiety, 2% had mild anxiety, 14% had moderate anxiety, 5% had severe anxiety and 7% had extremely severe anxiety. In Lamia Yusuf study<sup>11</sup> mild stress in 14%, moderate stress in 21%, severe stress in 29% and extremely severe stress in 5%, in the study 11 % did not have stress, mild stress in 11%.

Moderate stress in 15.5%, severe stress in 33% and very severe stress in 28.8%. To find out the underlying cause for depression anxiety and stress in infertile women, variables namely age, education status, employment status, duration of infertility were analysed. We found that depressive; anxiety and stress symptoms were significantly associated with older age group which is similar to Enikő Lakatos et al<sup>12</sup>. The level of depression, anxiety, stress was showing a significant positive correlation the duration of infertility. The level of depression was significantly higher among subjects with low or no formal education and among the unemployed.

### CONCLUSION

Infertile women will have psychological issues varied from inferiority complex to severe depression, anxiety and stress. Hence they require specific psychological interventions to have good outcome when they undergo treatment for infertility.

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### REFERENCES

- Jaiswar SP, Sachan R, Singh RK, Agarwal M., Free radicals in female fertility. *J. Obstet. Gynecol. India*, 56(1), 2006, 64-67.
- Alhassan A, Ziblim A, Muntaka S. A survey on depression among infertile women in Ghana. *BMC Women's Health.*, 14(1), 2014, 42.
- Ogawa M, Takamatsu K, Horiguchi F. Evaluation of factors associated with the anxiety and depression of female infertility patients. *Bio Psycho Soc Med.*, 5(1), 2011, 15.
- Luk BH, Loke AY. The impact of infertility on the psychological well-being, marital relationships, sexual relationships, and quality of life of couples: A systematic review. *J Sex Marital Therapy.*, 41(6), 2015, 610-625.
- Dooley M, Dineen T, Sarma K, Nolan A. The psychological impact of infertility and fertility treatment on the male partner. *Human Fertil.*, 17(3), 2014, 203-209.
- Ramezanzadeh F, Aghssa MM, Abedinia N, Zayeri F, Khanafshar N, Shariat M, et al. A survey of relationship between anxiety, depression and duration of infertility. *BMC Women's Health.*, 4(1), 2004, 9.
- Kucur Suna K, Ilay G, Aysenur A, Kerem Han G, Eda Ulku U, Pasa U, et al. Effects of infertility etiology and depression on female sexual function. *J Sex Marital Therapy.*, 2015, 1-9.
- Al-Homaidan HT. Depression among women with primary infertility attending an infertility clinic in Riyadh, Kingdom of Saudi Arabia: rate, severity, and contributing factors. *Int J Health Sci.*, 5(2), 2011, 108-115.
- Herbert DL, Lucke JC, Dobson AJ. Depression: an emotional obstacle to seeking medical advice for infertility. *Fertil Steril.*, 2010, 94(5), 1817-1821.
- Ramezanzadeh F, Aghssa MM, Abedinia N, Zayeri F, Khanafshar N, Shariat M, Jafarabadi M. A survey of relationship between anxiety, depression and duration of infertility. *BMC Womens Health.*, 4(1), 2004 Nov 6, 9.
- Lamia Yusuf, Depression, anxiety and stress among female patients of infertility; A case control study: *Pak J Med Sci.* 32(6), 2016 Nov-Dec, 1340–1343.
- Enikő Lakatos, Judit F Szigeti, Péter P Ujma, Réka Sexty, and Piroska Balog: Anxiety and depression among infertile women: a cross-sectional survey from Hungary: *BMC Womens Health.*, 17, 2017, 48.

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