

Comparative Study of Emotional Distress in Male and Female Partners with Infertility

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ABSTRACT

Introduction- Reproductive failure or involuntary childlessness is a significant loss for both men and women worldwide. Infertility diagnosis can greatly impact the emotional functioning of the couples dealing with the problem. Most of studies focus on psychological problems of female with infertility, neglecting emotional needs of male partners. So we undertook this study with the aim to analysis the magnitude of depression, anxiety and stress among male partner of infertile couple and compare them with their female counterparts.

Methodology- This cross-sectional descriptive study is based on the interview of the couples diagnosed with infertility coming for treatment in infertility clinic of Institute of Medical sciences, BHU, Varanasi. Fifty infertile couples (50 male & 50 female partners) underwent a detailed psychiatric evaluation by a consultant psychiatrist after written informed consent. Hamilton Depression rating scale (HAM-D) (HDRS) was used to assess Depressive symptoms and Hamilton Anxiety Rating scale (HAM-A) was used to asses anxiety symptoms. Perceived Stress scale (PSS) was used to assess the perception of stress. The statistical analyses were conducted using Statistical package for the social sciences (SPSS version 23) software. The statistical significance was defined at $P < 0.01$.

Results- Majority of female partners, 42 % & 28% had moderate & mild depression respectively. 14 % females had severe depression whereas 56 % male partners had mild depression, 12% had moderate depression and only 4% had severe depression. Mean HAM-D score (14.5 ± 4.0) in female partners was significantly higher than male partners

(10.2 ± 3.7 , $P < .001$). Majority of female partners, 76 % had moderate anxiety & 16% had mild anxiety respectively only 8 % females had severe anxiety, whereas 32 % male partners had moderate anxiety, 66% had mild anxiety and only 2% had severe anxiety. Mean HAM-A score (19.9 ± 3.4) in female partners was significantly higher than male partners (16.3 ± 4.5 , $P < .001$). Majority of couples suffered from moderate stress (72% male & 74% female), 8% male and 22% female had severe stress. Mean PSS score (20.7 ± 3.6) in female partners was significantly higher than male partners (16.6 ± 5.7 , $P < .001$). Overall Female partners suffered higher emotional stress as compared to their male counterparts.

Conclusion- Problem of infertility for couples is more than a medical diagnosis, associated emotional distress is damaging for both female as well as male partner. The need of the present hour is to use bio-psycho-social interventions for men and women undergoing infertility crisis as well as family focused interventions for the couple, to help them holistically deal with the effects of infertility

Keywords- Infertility, Emotional distress, psychiatric comorbidity, HAM-D, HAM-A, PSS

INTRODUCTION

Reproductive failure or involuntary childlessness is a significant loss for both men and women worldwide. Infertility diagnosis can greatly impact the emotional wellbeing of the couples dealing with the problem. Medical treatment of infertility is associated with number of stressors. These may include stress related to their sexual

functioning, stress related to their endurance and quality of their relationships and related to their social and family networks. World Health Organization (WHO) defines infertility clinically as “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”¹. The inability to have children affects men and women across the globe². Available data indicate that over 50 million couples worldwide experience infertility³. In India the district level household survey-3, found 8 % women have an infertility problem of which 6% women have primary infertility & 2% have secondary infertility⁴.

Marriage is an important institution of human society. It lays down foundation for family. Family is incomplete without offspring's. Fertility is highly valued in every culture and the wish to have a child is one of the most basic of all human motivations. For women, pregnancy and motherhood are necessary events that are highly emphasized in Indian culture. According to Hindu belief, an offspring is necessary for salvation of his ancestors. In many cases the desire to have an heir for the family motives the person to get married. Motherhood provides respect and power to women in family and society. A woman is considered as complete only when she becomes a mother, as a mother a woman feels she feel accomplished. Moreover by having children she feels more secure in her marriage because children bond the spousal relationship and also her bond with other family members. In such case if couples come to know about their infertility, it can lead to distress and depression, as well as discrimination and ostracism.^{5,6} Infertility is not always women's problem. Both women and men may have problems that result in infertility. Almost one-third of infertility problems are due to women, another one third of cases are caused by men and the other one-third of cases is caused by a combination of both women and men problems or by unknown reasons. However,

irrespective of which couple is infertile, infertility is a serious psychological trauma and a terrible emotional distress for infertile couples⁷.

Male and female subjects of infertile couples are affected by infertility but in different ways. Men are usually expected to be strong and act as an earner in the houses and they are responsible for protecting the family from any kind of risk. Men generally feel more ashamed to communicate their emotional distress since they have been conditioned to suppress their emotions⁸. Burden of psychological problems were higher in female partner of infertile couples than male partner according to various studies^{9,10,11}. Male suffer from severe psychological problems when infertility is attributed to male factor¹². In an attempt to assess the prevalence of psychiatric morbidity (pre-existing or newly emergent) in couples attending a fertile clinic, Guerra et al., (1998) concluded that 61.1% of women and 21% of men had a psychiatric disorder¹³. Depression could be one of the major psychological problems associated with infertility, their treatment procedure and their unpredictable results¹⁴. Many times men worry about their inability to contribute to their genetic line and by not producing they are letting down the family. These concerns can lead to erectile dysfunction causing further complication related to infertility.¹⁵ Studies also show that sperm quality diminishes when men are faced with emotional distress and after a year or two of infertility; men are eight times more likely to have a low sperm count¹⁶. Various studies had been done nationally and internationally among female partner of infertile couples associated with psychological morbidity, but very few studies have been done among male partner. As the psychological problems among male and female partner are different, we planned this study with the aim to analysis the magnitude of depression, anxiety and stress among male partner of infertile couple and compare them with their female counterparts.

METHODOLOGY

This cross-sectional descriptive study is based on the interview of the couples diagnosed with infertility coming for treatment in infertility clinic of Institute of Medical sciences, BHU, Varanasi. Fifty infertile couples (50 male & 50 female partners) underwent a detailed psychiatric evaluation by a consultant psychiatrist after written informed consent. Hamilton Depression rating scale (HAM-D) (HDRS) was used to assess Depressive symptoms and Hamilton Anxiety Rating scale (HAM-A) was used to assess anxiety symptoms. Perceived Stress scale (PSS) was used to assess the perception of stress.

Hamilton Depression rating scale (HDRS) – also known as HAM-D is a most widely used clinical administered scale for assessment of depression. The original version contains 17 items pertaining to symptoms of depression experienced over the last week. A Score of 0-7 is generally accepted to be within the normal range, while a score of 20 or higher indicate clinical Depression. Score 8-13 indicate mild, 14-18 indicate moderate, 19-22 indicate severe more than 23 indicate very severe Depression¹⁷.

Hamilton Anxiety Rating scale (HAM-A) - The HAM-A is one of the first scales developed to assess symptoms of anxiety disorder and most widely used in both clinical and research setting. The scale consists of 14 items pertaining to psychological and physical complaints related to anxiety. Each items is scored on a scale of 0 (not present)-4 (severe), with a total score ranging from 0-56. Total score less than 17 indicates mild, 18-24 indicates moderate and 25-30 indicates severe anxiety¹⁸.

Perceived Stress scale (PSS)- PSS is the most widely used scale to measure perception of stress. It is measure of the degree to which situation in one's life are appraised as stressful. It has 10 items scored on scale 0 (Never)- 4 (most often). Total Score Ranges from 0-40 with higher scores indicating higher perceived stress. Total

score ranging from 0-13 would be considered low stress, 14-26 moderate stress, 27-40 high perceived stress¹⁹.

The statistical analyses were conducted using Statistical package for the social sciences (SPSS version 23) software. The statistical significance was defined at P <0.01.

RESULTS

In this study we included fifty couples with infertility coming to infertility unit for treatment in Institute of medical sciences, Banaras Hindu University, Varanasi. Mean age of male partner was 34.9 Years (SD±3.8) which was significantly higher than female partner mean age 31.3 years (SD±3.4). Mean duration of marriage was 6.1 years (SD± 2.8). Mean duration after diagnosis of infertility was 1.4 years (SD± .7). 43 couples had female factors responsible for infertility whereas 7 couples had male factors responsible for infertility. Most of our participants were from middle Socioeconomic status (64%) or upper middle socioeconomic status (26%), residing in Urban region (77%). Majority of couples (66%) were from nuclear family. 50 % of female partners and 80% of male partners were at least graduate.

Table 1 Distribution of depression, anxiety & stress

	Male N (%)	Female N (%)
HAM-D score		
No Depression	14 (28%)	2 (4%)
Mild Depression	28 (56%)	19 (28%)
Moderate Depression	6 (12%)	21 (42%)
Severe Depression	2 (4%)	7 (14%)
Very Severe Depression	0 (0%)	1 (2%)
HAM-A Score		
Mild Anxiety	33(66%)	8 (16%)
Moderate Anxiety	16(32%)	38 (76)%
Severe Anxiety	1 (2%)	4 (8%)
PSS Score		
Low Stress	10 (20%)	2 (4%)
Moderate Stress	36 (72%)	37 (74%)
High Stress	4 (8%)	11 (22%)

Table 2 HAM-D, HAM-A, PSS score

	N	Mean	SD	t	P-Value
HAM-D					
Male	50	10.2	4.1	-5.1	.001*
Female	50	14.5	4.0		
HAM-A					
Male	50	16.3	4.5	-4.41	.001*
Female	50	19.9	3.4		
PSS					
Male	50	16.6	5.7	-4.02	.001*
Female	50	20.7	3.6		

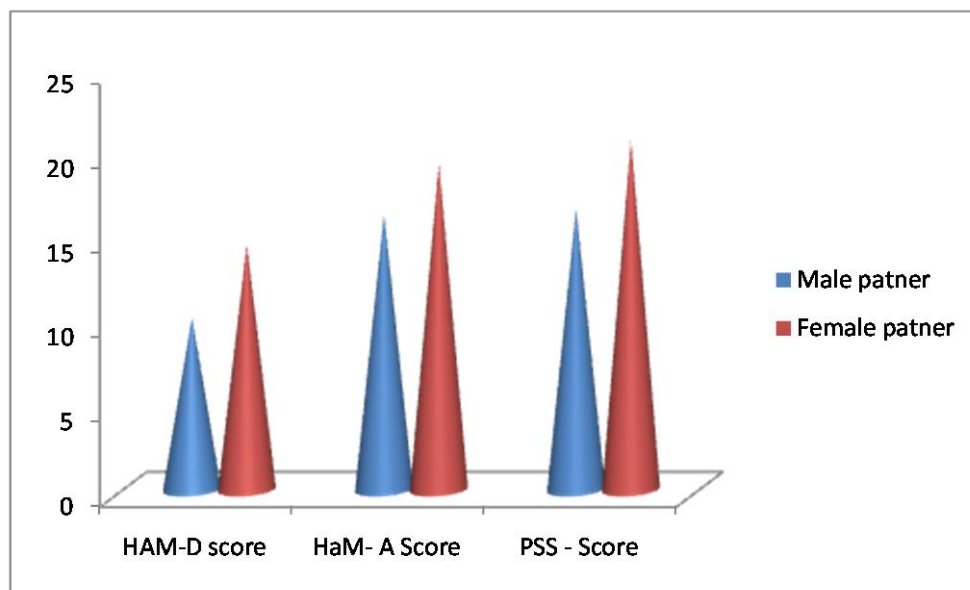


Figure 1- Comparison of Emotional distress in male and female partners.

Table-3 Association of level of emotional distress in couples with their demographic variables

	HAM-D Mean (SD)	HAM-A Mean(SD)	PSS Mean(SD)
Family type	11.6 (±4.3)	17.7(±4.01)	17.9 (±4.7)
Nuclear	13.6 (±4.9)	18.9(±4.9)	20.0(±5.8)
Joint	P=0.2	P=0.05	P=0.65
Residence	11.4(±4.34)	17.2(±4.3)	17.8(±4.8)
Rural	15.5(±4.3)	21.4(±2.7)	21.4(±4.3)
Urban	P=.001*	P=.001*	P=.004*

Majority of female partners, 42 % & 28% had moderate & mild depression respectively. 14 % females had severe depression whereas 56 % male partners had mild depression, 12% had moderate depression and only 4% had severe depression (Table-1). Mean HAM-D score (14.5± 4.0) in female partners was significantly higher than male partners (10.2±3.7, P <.001)(Table-2). Majority of female partners, 76 % had moderate anxiety & 16% had mild anxiety respectively only 8 % females had severe anxiety, whereas 32 % male partners had moderate anxiety, 66% had mild anxiety and only 2% had severe anxiety (Table-1). Mean HAM-A score (19.9± 3.4) in female partners was significantly higher than male partners (16.3±4.5, P <.001) (Table-2). Majority of couples suffered from moderate stress (72% male & 74% female), 8% male and 22% female had severe stress (Table-10). Mean PSS score (20.7± 3.6) in female partners

was significantly higher than male partners (16.6±5.7, P <.001)(Table-2). Overall Female partners suffered higher emotional stress as compared to their male counterparts (figure-1). Emotional stress was higher in couples living in joint families as compared to nuclear families, although result didn't reached significant level. Similarly Couples residing in rural areas reported significantly higher on emotional distress parameter compared to those residing in urban areas (Table-3). Total duration after marriage and duration of treatment where also significantly correlated with Emotional distress parameters. Emotional distress in male partners was significantly higher in couples with male related infertility factors.

DISCUSSION

Infertility is always distressing for the couples. Number of studies has been done on psychological distress and psychiatric comorbidity among female partners, but studies on male partners on limited. In our study we found significant proportion of both male and female partners suffering from depression, anxiety and stress. The magnitude of severe Depression, Anxiety and stress, in male partners was 4%, 2% & 8% respectively while in female

partners it was 16%, 8% & 22% respectively (Table-1). Study done by Nidhi budh et al. from north India have found that 20%, 10%, and 17.5% of male subjects had experienced depression, anxiety and stress respectively using depression, anxiety and stress scale (DASS)²⁰. Patel A, et al.²¹ reported presence of stress in 72% of infertile male which is similar to our study, 80% of male reporting moderate to high stress. In our study Mean HAM-D, HAM-A and PSS were significantly higher in females as compared to males. Our findings are similar to other studies from India which has reported significantly higher level of depression, anxiety, stress in infertile females^{22,23}. Parenthood is one of the major milestones in the life of both men and women. The stress of the non-fulfillment of a wish for a child has been associated with emotion related problems such as irritability, depression, anxiety, marital problems, sexual dysfunction, and social isolation. Couples experience sense of loss, diminished self-esteem and faces stigma in the society due to their infertility. Among infertile couples, in general, women show higher levels of distress than their male partners. Both men and women experience a sense of loss of identity and have profound feelings of incompleteness and incompetence. Stress associated with the inability to have a child is linked to various aspects of marriage and several dimensions of quality of life. The negative effects infertility on quality of life is stronger for females than males²⁴.

Another interesting finding in our study was significant high level of emotional distress in couple belonging to rural regions and living in joint families, our findings are similar to the findings of other studies from India^{22,25}. There is sociocultural difference in rural and urban region. Involvement of society in person's life is higher in rural areas. Although family members were mostly supportive of couples in our study, expectation of family members with couples may be reason for higher emotional stress in couples living in joint

families. Another reason could be high critical comments from family members in joint family. Certain variables were found to be statistically significant in our data like increasing years since marriage and duration of infertility, these were closely related to increasing stress in couple. Significant high emotional distress was seen in male having male factors for infertility like nature of diagnosis, severity of urological condition, severity of abnormalities in semen parameters.

The result of our study highlights the importance of psychological assessment of both male and female partners undergoing treatment for infertility. Depression being the most common comorbidity should be addressed, otherwise it will hamper the management of infertility. In our study we used specialized tool to assess stress, depression and anxiety separately, which give us clear form of emotional distress in infertile couples. The study was conducted in a tertiary hospital and is representative of the flow of patients at this hospital. So the findings from this study cannot be generalized. The sample size of the present study was small and the findings need to be explored further with a larger sample size.

CONCLUSION

Problem of infertility for couples is more than a medical diagnosis, associated emotional distress is damaging for both female as well as male partner. The psychological problems are often neglected and not given their due importance. Ignoring the psychological factors will therefore create huge obstacles in understanding & treating such individuals from a holistic point of view. Men seem to be less vocal about their Emotional problem, yet high proportion of them experience stress, anxiety and depression. The essential predictors of emotional distress in men are increasing years since marriage and duration of infertility, nature of diagnosis. The need of the present hour is to use bio-psycho-social interventions for men and women undergoing infertility crisis

as well as family focused interventions for the couple, to help them holistically deal with the effects of infertility

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Conflict of interest

There is no conflict of interest.

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