

Association of Anxiety and Depression with Infertility

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ABSTRACT

Introduction: Infertility is failure to get pregnant after twelve months or more of recurrent sexual contact without utilizing protected techniques. However, it is not a dangerous disease but a social issue affecting the person, his family as well as society. It is a stressful and unpleasant incident in married couples' life and could cause psychological disorder, for example, depression and anxiety among both females and males.

Objective: To know the association of anxiety and depression among infertile couples.

Material and Methods: It was cross-sectional study (correlational) in which 140 couples actively trying for conception for 3 years visiting Hameed Latif Hospital Lahore were included. Non-probability purposive sampling technique was used. Informed consent was obtained from all the participants. Two proformas (HAM-A and HAM-D) to gauge anxiety and depression were given to each participant.

Results: Among 140 couples, mean age was 31.6 ± 3.0 years. The mean age of female participants was 30.1 ± 2.8 and the mean age of male participants was 33.1 ± 2.4 . Most (73.2%) of the participants were graduate or above. The overall mean score of anxiety measured by HAM-A questionnaire was 13.1 ± 10.1 with range from 0 to 42. The mean score of anxiety of male participants was 10.3 ± 9.4 and for female participants was 15.9 ± 10.1 . The overall mean score of depression measured by HAM-D questionnaire was 12.2 ± 7.7 with range from 1 to 39. The mean score of depression of male participants was 10.1 ± 7.7 and for female participants was 14.4 ± 7.7 .

Conclusion: Study concluded that anxiety and depression was prevalent among infertile couples but females were more affected than males.

Key words: Anxiety, Depression, Infertility

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INTRODUCTION

Desire to have children is an inborn wish of all human beings. Fertility is one of the innate gifts while having children is a significant aspect of married life. A female after baby's birth feel herself to be socially and psychologically complete and pleased, however, she undergoes pronounced feelings of incompetence, despair and defectiveness if unable to conceive [1,2].

Due to infertility, couples feel that they cannot become mother or father and also have feelings of loss about

productivity as well as genetic continuity [3,4]. Infertility affects all aspects of life i.e. emotional, economical and psychological [5,6]. Among couples, several psychological reactions take place who are facing infertility issues, including sadness, anger, self-esteem, jealousy towards those who have kids, anxiety, and, eventually, depression. Numerous researches have been carried out to investigate the psychological problems faced by sterile couples, and the incidence of depression among these couples affects 34 to 54 percent of wives while 23 to 32 percent of husbands [7].

WHO identified infertility like a social disease [8]. Infertility prevalence differs worldwide, mainly depending on familial and cultural values [9,10]. Its prevalence is 10-15% [11], affecting about 1 out of 4 couples in developing

countries while 1 out of 8 in developed countries [12]. Almost above 80 million individuals are affected from sterility [8,13].

Sterility can begin from male, female, or both. Among infertility cases, 40 percent can be related to female, 40 percent to male, 10 percent to both individuals, and 10 percent to unidentified reasons. Several researches have demonstrated that females with infertility seem to suffer additional stress regarding their situation than do sterile males.

The reason is that, in various cultures, barrenness is considered a significant failure on female part to accomplish her task as a female [14].

The rates of depression are related to various stress levels in males and females caused by numerous reasons, like women's childbearing age, female hormonal imbalances.

Mostly the infertile couples undergo monthly constant stress when the fertilization does not take place. The association between infertility and stress generates a cycle which jointly strengthens this impact [7].

Effects of treatment on couples have been documented but the effect of infertility itself has not been addressed so far; thus current study is carried out to know the association of anxiety and depression with infertility.

MATERIAL AND METHODS

It was cross-sectional study (correlational) in which 140 couples actively trying for conception for 3 years visiting Hameed Latif Hospital Lahore were included. Non-

probability purposive sampling technique was used. Informed consent was obtained from all the participants.

Two proformas (HAM-A and HAM-D) to gauge anxiety and depression were given to each participant.

Hamilton Anxiety Rating Scale (HAM-A) has 14 parameters with a range of responses from 0 (not present) to 4 (very severe) and scores from 0 to 56.

Hamilton Depression Rating Scale (HAM-D) consists of 17 items. 9 items are scored on a 5-point scale, ranging from 0 (not present) to 4 (severe). 8 are scored from 0-2. And total score ranges from 0 to 52.

The data was entered and analyzed using SPSS 20. The numeric data was presented in the form of Mean ± SD. The qualitative data was presented in the form of frequency and percentages.

Spearman's/Pearson correlation test was applied to determine the correlation of anxiety and depression with infertility. A p-value of less than or equal to 0.05 was considered as significant.

RESULTS

During study, total 140 couples age ranges between 25 to 35 years were selected. Mean age of respondent's was 31.6 ± 3.0.

The mean age of female respondents was 30.1 ± 2.8 and the mean age of male participants was 33.1 ± 2.4 (Table 1).

Table 1: Mean age of study participants.

Gender	Mean ± SD	Minimum	Maximum
Male	33.1 ± 2.4	25	35
Female	30.1 ± 2.8	25	35
Overall	31.6 ± 3.0	25	35

All of the participants were educated. There were 55(19.6%) participants who had education till matriculation, only 20 (7.1%) participants had intermediate education and 205 (73.2%) participants were graduate or had higher degree (Figure 1).

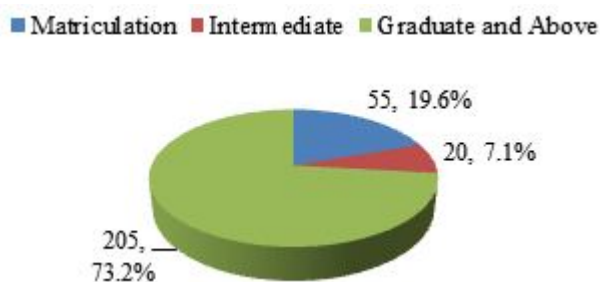


Figure 1: Distribution of participants according to education status.

Hamilton anxiety rating scale (HAM-A)

HAM-A was used to assess anxiety level among couples. It has 14 items with a range of responses from 0 (not present) to 4 (very severe) and scores from 0 to 56. Higher score shows higher anxiety level. The overall mean score of anxiety measured by HAM-A questionnaire was 13.1 ± 10.1 with range from 0 to 42. The mean score of anxiety of male participants was 10.3 ± 9.4 and mean score of anxiety of female respondents was 15.9 ± 10.1. Normality of data was assessed by Shapiro Wilk test. Data were not normal; therefore, Mann Whitney test was applied to compare the median anxiety score between male and female respondents. The outcomes revealed that the female anxiety score was significantly higher as compared to male participants (Table 2 and Figure 2).

Table 2: Mean score and distribution of hamilton anxiety rating scale score.

Anxiety	Mean ± SD	Median (Q1-Q3)	Range	p-value #
HAM-A Score	13.1 ± 10.1	12.0 (5.0-19.0)	0-42	-
Gender wise comparisons				
Male	10.3 ± 9.4	8.0 (2.0-16.0)	0-42	<0.001*
Female	15.9 ± 10.1	16.0 (6.0-23.8)	0-40	
*Significant				
# Mann Whitney test				

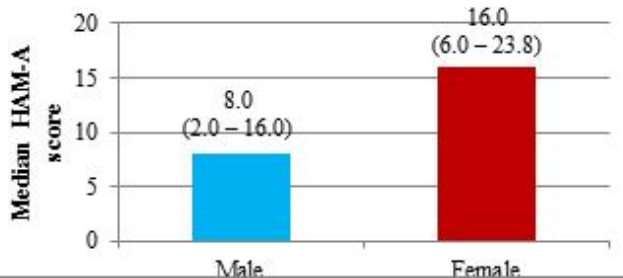


Figure 2: Median HAM-A score of study participants.

Hamilton depression rating (HAM-D) scale

HAM-D Scale was utilized to evaluate depression level among infertile couples. HAM-D consists of 17 items, 9 items are scored on a 5-point scale, ranging from 0 (not

present) to 4 (severe). 8 items are scored from 0-2 and total score ranges from 0 to 52. Higher score indicates higher depression level.

The overall mean score of depression measured by HAM-D questionnaire was 12.2 ± 7.7 with range from 1 to 39. The mean score of depression of male participants was 10.1 ± 7.2 and mean score of anxiety of female respondents was 14.4 ± 7.7. Normality of data was assessed by Shapiro Wilk test. Data were not normal; therefore, Mann Whitney test was applied to compare the median depression score between male and female respondents. The outcomes of study revealed that the female depression score was significantly higher as compared to male participants (Tables 3 to Table 5) (Figure 3).

Table 3: Mean score and distribution of Hamilton depression rating scale score.

Depression	Mean ± SD	Median (Q1-Q3)	Range	p-value#
HAM-D Score	12.2 ± 7.7	11.0 (6.0-18.0)	1-39	-
Gender wise comparisons				
Male	10.1 ± 7.2	8.0 (5.0-15.0)	1-32	<0.001*
Female	14.4 ± 7.7	13.0 (8.3-20.0)	1-39	
*Significant				
# Mann Whitney test				



Figure 3: Median HAM-D score of study participants.

Table 4: Group statistics: Age.

	Age	N	Mean	SD	p-value
HAM-A Score	<=30yrs	118	15.3	10.6	0.002*
	>30 yrs.	162	11.6	9.4	
HAM-D Score	<=30yrs	118	14.2	8	<0.001*
	>30 yrs.	162	10.8	7.3	
*significant results					

Table 5: Group statistics: Gender.

	Gender		N	Mean	SD	p-value	
Male	HAM-A Score	<=30yrs	30	10	11	0.882	
		>30yrs	110	10.4	8.9		
	HAM-D Score	<=30yrs	30	9	7.8		0.372
		>30yrs	110	10.4	7.1		
Female	HAM-A Score	<=30yrs	88	17	10	0.079	
		>30yrs	52	13.9	10.1		
	HAM-D Score	<=30yrs	88	16	7.2		0.001*
		>30yrs	52	11.6	7.7		

*significant results

DISCUSSION

Current study was carried out regarding association of anxiety and depression with infertility at Hameed Latif Hospital Lahore. To acquire appropriate outcomes, 140 couples aged between 25-34 years were enrolled during study and found that mean age of male participants was 33.1 ± 2.4 years and mean age of female respondents was 30.1 ± 2.8 while the overall mean age was 31.6 ± 3.0 years. The findings of our study are almost comparable with a study conducted by Namdar et al. [15] who reported that mean age of males was 33.8 ± 5.8 years while the mean age of the females was 29.4 ± 5.2 years. A similar study undertaken by Marzieh, et al. [16] indicated that participants overall mean age was 31 ± 9.3 years.

Role of education can never be underestimated among infertile couples because education helps them to manage their anxiety and depression in a better way while lack of education is related to severity of anxiety & depression. It is worth-mentioning here that major proportion (73.2%) of participants studied upto graduation or above while 26.8% had matriculation/intermediate certificates. Virtually the results of our study are comparable with a study performed by Abbasi, et al. [17] who asserted that mainstream (66.0%) of participants had Bachelor degrees or above and 34.0% had studied upto intermediate.

Anxiety disorders are more common among world population while anxiety is found much higher among infertile couples especially among females than general population. When anxiety was assessed among respondents according to Hamilton anxiety rating scale score, study revealed that mean anxiety score was 13.1 ± 10.1 while female anxiety (15.9 ± 10.1) score was significantly higher than the male (10.3 ± 9.4) participants. The findings of a study carried out by Khan, et al. [18] also confirmed that females showed more anxiety than the males. The overall mean score was 5.1 ± 3.79 while the female mean score was 5.25 ± 3.42 and the male mean score was 4.99 ± 4.01 . Namdar, et al. [15] reported in their study that 86.6% infertile females in Iran, 83.8% in China, 67% in Spain, 33% in Hong-Kong and 24.9% in France, Netherlands and Belgium showed symptoms of anxiety. A study performed by Yusuf, et al. [10] highlighted that among participants anxiety mean

score was 14.63 ± 8.085 . A study done by Abbasi, et al. [17] indicated that mean anxiety score was 9.72 ± 3.97 . Another study done by Chi, et al. [19] demonstrated that mean anxiety score was 10.7 ± 6.4 . But the results of a recent study carried out by Shahraki, et al. [6] confirmed that among participants mean anxiety score was 31.7 ± 8.4 .

Depression also significantly affects infertile couples and it is more prevalent among infertile females than healthy pregnant females. The findings of our study confirmed that mean depression score was 12.2 ± 7.7 and it was more prevalent among females (14.4 ± 7.7) than males (10.1 ± 7.2) participants. A similar study "the effect of depression on quality of life in infertile couples" carried out by Maroufizadeh et al. [20] also demonstrated that depression was more prevalent among female (6.76 ± 5.78) than male (4.82 ± 5.47) respondents. In a study, Yusuf (2016) reported that mean depression score among infertile participants was 16.14 ± 8.304 . A study conducted by Marzieh, et al. [16] that depression level was higher (15.1) among women than men (10.24). Al-Homaidan, et al. [21] elucidated in their study that mean depression score was 12.23 ± 8.795 while Chi, et al. [19] confirmed in their study that 13.7 ± 8.4 was the mean depression score among participants.

CONCLUSION

Present study evaluated the association of anxiety and depression with infertility. Study concluded that anxiety and depression was prevalent among infertile couples but females were more affected than males.

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