



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1401451>Available online at: <http://www.iajps.com>

Research Article

**A CASE CONTROL RESEARCH TO ASSESS THE  
ASSOCIATION OF FEMALES' INFERTILITY DISORDERS  
WITH THE PREVALENT PSYCHOLOGICAL DISORDERS**<sup>1</sup>Dr. Rizwan Munir, <sup>2</sup>Dr. Mukhtar Liaqat, <sup>2</sup>Dr. Saher Riaz<sup>1</sup>B.H.U 110/7R District Sahiwal<sup>2</sup>SIMS/Services Hospital Lahore**Abstract:**

**Objective:** To identify stress, anxiety and depression prevalence in the females with complications associated to infertility.

**Methods:** Our case control research was completed at Allied Hospital, Faisalabad (August, 2016 to May, 2017). After Ethical Committee approval 100 females having infertility disorders and complications and were seeking medical care were included in the research. As controls, random recruitment of one hundred fertile females who were with the infertile cases was carried out. An exclusion criterion was; the women diagnosed with psychological problems and were having male factor infertility. Females were asked for informed and written willingness. With regard to data collection about infertility psychological impact, scale of Depression and Anxiety was used. Comparison of the results obtained from both was done. For the sake of results analysis, utilisation of an independent sample t-test was ensured.

**Results:** Results have indicated that the presence of stress, anxiety and depression was observed in the infertility affected women in control group i.e. p less than 0.05. These scores were not affected by educational level. In the same way, findings remained the same while infertile women's occupations were utilised for the sake of stratified analysis.

**Conclusion:** Stress, anxiety and depression are rampant psychological issues in women who are affected with infertility. Medical professionals associated with such cases should offer guidance and counselling in the course of treatment for such infertile women.

**Key Words:** Stress, Anxiety, Depression, Mental Health, Infertility.

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Please cite this article in press Rizwan Munir et al., A Case Control Research to Assess the Association of Females' Infertility Disorders with the Prevalent Psychological Disorders., Indo Am. J. P. Sci, 2018; 05(08).

**INTRODUCTION:**

Children are blessings of god which are ultimate cherished dreams for married couples. However, inability to bear them in spite of having unprotected and regular intercourse for the period of one year is termed as infertility. Based on the familial and cultural values, infertility prevalence has variations across the globe [1]. There are about ten percent couples who remained a childless for unknown reasons [2]. It is a general phenomenon to get developed psychological problems in such infertile couples. It is estimated that thirty to eighty percent cases are reported in connection with mental issues in earlier conducted studies. They may have various associated reasons such as infertility duration and the number of attempts made to cure such issues [3 – 5]. The effect of infertility may result into interpersonal relationships deterioration, stress, anxiety, depression and inferiority complex [6, 7]. Women are mostly prone to the criticism hurled at them for not having given birth to a child. Such societies are a major source of development for such issues amongst the females in particular. Additionally, unemployment and educational level of life partner are other contributing factors too [1, 6, 8, 9]. In the Muslims societies, men get the excuse of remarrying when they think their life partner is infertile i.e. female. This again puts a tremendous pressure on poor females who are the receiving ends of such distressing burden [10]. In Pakistani societal context, having children is of poignant significance for married couples. Females are desperately in uncomfortable position owing to the societal and familial expectations. Men are forced to contract second marriage which amounts to mental problems for females generally.

**METHODS:**

Our case control research was completed at Allied Hospital, Faisalabad (August, 2016 to May, 2017). After Ethical Committee approval 100 females having infertility disorders and complications and were seeking medical care were included in the

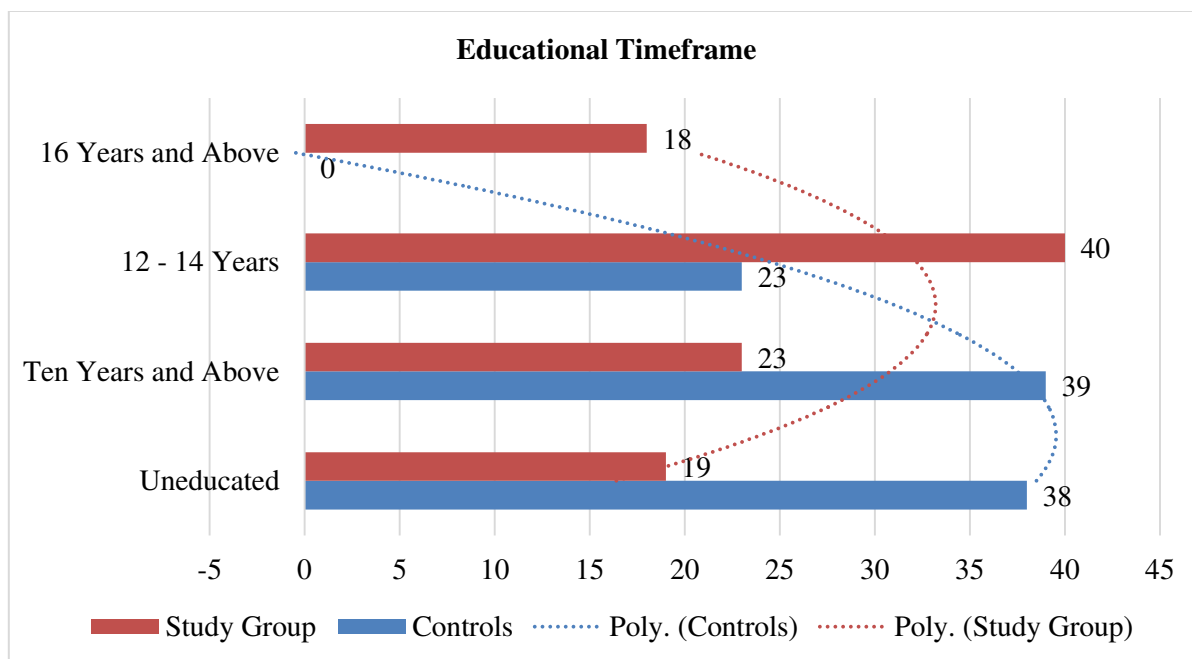
research. As controls, random recruitment of one hundred fertile females who were with the infertile cases was carried out. An exclusion criterion was; the women diagnosed with psychological problems and were having male factor infertility. Females were asked for their willingness to be a part of the research. Attainment of Socio-demographic information such as occupation, family pressure presence or absence, age, educational level of the respective subjects was executed. With regard to data collection about infertility psychological impact, scale of Depression and Anxiety was used. Negative emotional state of stress, anxiety and depression was calculated through the said scale. On every item of scale, the scores ranged from zero (suggesting no symptomatology) to three (suggesting severe level of symptomatology). Calculation of the total obtained scores in relation to every negative emotional state was executed individually [11]. The under mentioned classification was used to record the DASS scoring. For the sake of results analysis, utilisation of an independent sample t-test and Chi square test was ensured.

**RESULTS:**

The ages of the majority of the cases (63.5 percent) in this research were twenty to thirty years. The second frequent age (31.5 percent) was from thirty to forty years. The educated cases had high frequency in both study and control groups. Thirty-nine percent and twenty-three percent were possessing ten or less than ten years of qualification. Twenty-three percent and forty percent were noted with twelve to fourteen years' qualification. Control and study groups were having 38 and 19 cases of illiteracy respectively. Eighteen subjects were recorded to have sixteen or more than sixteen years of qualifications. Housewives have higher percentage (seventy-one percent and eighty percent). Employed subjects stood at 2nd position (twenty-one percent and eighteen percent). The least common percentage was recorded in case of self employed cases (eight percent and two percent).

**Table – I:** Level of education in two groups

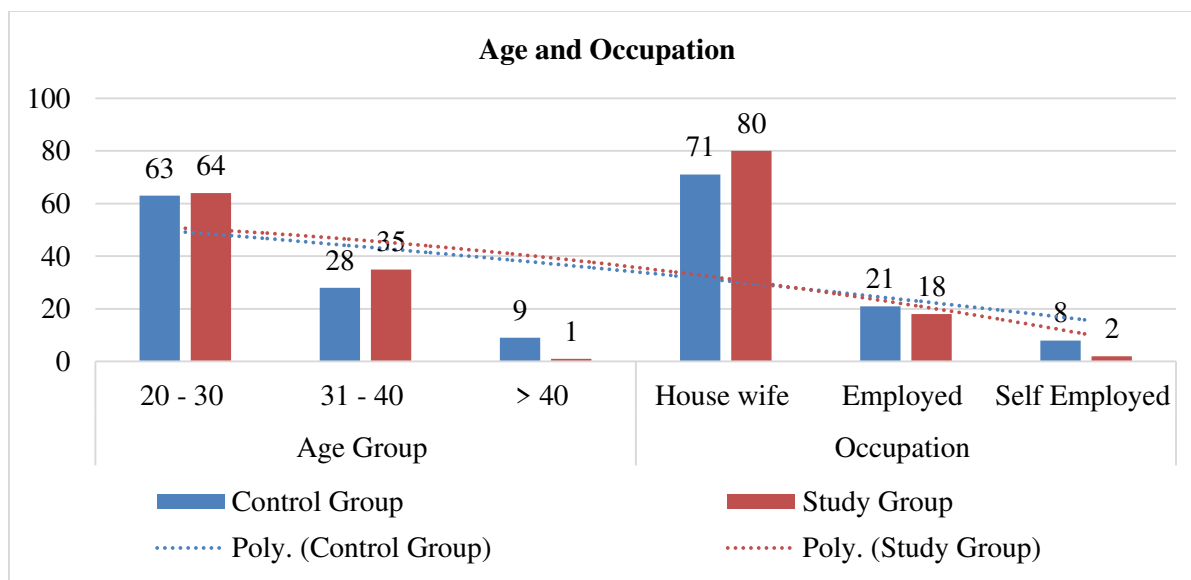
<b>Educational Timeframe</b>	<b>Controls</b>	<b>Study Group</b>
<b>Uneducated</b>	38	19
<b>Ten Years and Above</b>	39	23
<b>12 - 14 Years</b>	23	40
<b>16 Years and Above</b>	0	18



According to the results obtained, ten percent subjects had severe depression. Forty-nine percent were having moderate to severe depression. Seventy-nine percent infertile subjects were suffering from some level of depression. This percentage was seemingly greater in comparison with control group in which mild depression percentage was only nine percent. None of the case was found to be suffering from severe type of depression. In control group, 3.90 (SD  $\pm$  4.165) was the mean depression score. In study group, the score recorded was 16.14 (SD  $\pm$  8.304). As far as stratified analysis is concerned, in view of years of occupation and education suggested that findings were almost the same in each group. In study group, greater score of depression for all educational levels and occupation subgroups ('P' less than .05).

**Table – II:** Age group and Occupation distribution in two groups

Characteristic		Control Group	Study Group
Age Group	20 - 30	63	64
	31 - 40	28	35
	> 40	9	1
Occupation	House wife	71	80
	Employed	21	18
	Self Employed	8	2



In study group, higher mean anxiety scores were seen i.e. (14.63 SD  $\pm$  8.085) in comparison with the score recorded (3.69 SD  $\pm$  3.240) in control group. Forty-one percent cases were reported to have moderate to severe depression in study group. Severe anxiety was documented in twenty-nine percent. Fifteen percent cases in control group were seen with mild anxiety whereas one percent cases were reported to have moderate anxiety. None of the case was recorded to have either severe or extremely severe anxiety. After stratified analysis, the same results were seen in relation to all educational sub groups and occupation, the study group being bearing the greater scores of anxiety ('P' less than .05).

**Table – III:** Comparison of depression, anxiety and stress scores

DASS	Depression	Anxiety	Stress
Normal	0 to 9	0 to 7	0 to 14
Mild	10 to 13	8 to 9	15 to 18
Moderate	14 to 20	10 to 14	19 to 25
Severe	21 to 27	15 to 19	26 to 33
Extremely Severe	28 Above	20 Above	34 Above

Mean stress score was more than control group respectively (19.72  $\pm$  9.192) and (5.87  $\pm$  4.952). In control group, five percent cases were seen to be affected with mild stress; however, higher stress was not observed in any case. Sixty-nine percent cases in study group were seen with some degree of stress i.e. twenty-nine percent severe stress, fourteen percent with mild stress, five percent with extremely severe stress and twenty-one percent with moderate stress. As per stratified analysis, the similar findings were noted with respect to all occupation and educational level subgroup in which greater scores of stress were observed cases than controls.

### DISCUSSION:

A Pakistani wedded couple cannot expect to be infertile owing to social and familial problems. For some families, bearing children is a much coveted dream. Being childless, such societies allow a

husband to contract second marriage which can wreak havoc with the lives of females. These culture related complications pave ways for the psychological issues in a female without a child. In Ghana, Alhassan A et al. had documented that depression is an issue with sixty-two percent of the childless women. In china, the presence of depression amongst childless females is reported as sixty-nine percent [12]. Our study has found the prevalence of depression as seventy-nine percent which is inconsistent with the above quoted two researches. This prevalence is a bit higher that may have social and cultural traditions permitting a husband to go for multiple marriages.

Additionally, bearing a male child gives a sense of security to a woman in old age. Studies from Gambia and Japan have also indicated the higher prevalence of depression due to infertility [13]. In the study at

hand, it was observed that seventy percent childless women were suffering from altering anxiety. Moderate to severe anxiety was observed in fifty-eight percent of females. Kraaji V et al. Allen HT and Lawson AK et al. had indicated greater degrees of anxiety amongst the subjects who were seeking medical care for infertility [14 – 16]. Three other authors had also observed that stress scores were higher in the childless women who appear to be similar to our study i.e. sixty-nine percent [3, 4, 17]. Alhassan A et al have recorded in his research that psychological complications were rampant in the uneducated females which is inconsistent with our studies.

### CONCLUSION:

By summing up all the facts and figures, it is observed that stress, anxiety and depression are rampant psychological issues in women who are affected with infertility. Medical professionals associated with such cases should offer guidance and counselling in the course of treatment for such infertile women to relieve them in the long run.

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