

FREQUENCY OF DEPRESSION IN FEMALES PRESENTING TO THE INFERTILITY CLINIC OF A TERTIARY CARE HOSPITAL

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ABSTRACT

Background and Objective: Depression is very common clinical problem among infertile corpus, particularly the females. The present study was designed to determine the frequency of depression in females having infertility (primary or secondary) presenting to infertility clinic of a tertiary care hospital.

Methods: This was a cross sectional analysis. About 400 female patients having infertility presenting to infertility clinic, Gynae unit II, Jinnah Hospital Lahore and fulfilling the selection criteria were approached. Data was collected with the help of a questionnaire WHO-SRQ 20. Depression was labeled as per operational definitions. Data was entered and analyzed using SPSS 17.

Results: The mean age of females was 33.40 ± 6.55 years with minimum and maximum age of 15 and 45 years. The mean SRQ-20 in this study was 9.95 ± 5.28 with minimum and maximum score of 1 and 20. According to operational definition (SRQ-20 score ≥ 10) of depression. Frequency of depression was seen in 213(53.2%) of the females. There was significant association of depression with age and duration of infertility, p -value < 0.05 . When data was stratified over their education status, monthly income, employment status and types of infertility we found no significant association, p -value > 0.05 .

Conclusion: In this study the prevalence of depression in females with infertility was present in 213 out of 400 (53.2%) of the females. The prevalence was significantly higher in early age groups and duration of infertility. In future gynecologists should collaborate with psychiatrist to prevent such psychological disorders of females with infertility.

Keywords: Infertility, primary and secondary infertility, depression, self-reported questionnaire 20.

INTRODUCTION

Infertility is defined as inability to conceive following 12 – 24 months of exposure to pregnancy.¹ Infertility affects 9% of couples of whom 70% suffer from primary infertility, i.e. no previous conception and 30% secondary infertility, i.e. have achieved a previous pregnancy. Worldwide, more than 70 million couples suffer from infertility, the majority being residents of the developing countries.² Prevalence of infertility in Pakistan is 21.9%: primary infertility is 3.9% and secondary infertility is 18.0%.³

The inability to conceive is experienced by individuals and couples as a stressful and often heart-breaking situation and is associated with many psychological problems.⁴ A few studies have shown that a major proportion of infertile females suffer from depression which affects not only their physical and mental health but also quality of life.⁵⁻⁷ A study conducted in USA on prevalence of depression in female of infertile couples shows moderate depression in 19% females and severe depression in 13% females.⁵ Similar results are shown in another study conducted in Denmark which shows severe depressive symptoms in 15% females and 6%

males of infertile couples.⁸ However regional study available in Iran showing increased prevalence of depression in 48% females and 23% males of infertile couples.^{8,9} Another regional study conducted in Saudi Arabia showed depression in 53.8% of infertile women.⁸ However a local study conducted in Pakistan on depression in infertile couples shows major depression in 52.8% and minor depression in 37.7% of infertile women.⁴

Studies have shown that Females in infertility couples reported poor marital adjustments and quality of life. Moreover, it is also associated with psychological problems in male partners as well, like less intercourse satisfaction, perhaps because of psychological pressures to try to conceive or because of forced timing of intercourse around women's ovulatory cycle. The available data on depression in infertile female shows a large variation in the frequency with 15% to 19% in Denmark⁶ and USA⁹ and about 48% to 53.8% in Iran⁷ and Saudi Arabia⁸ and a much more increased prevalence of depression in infertile couples in Pakistan⁴ but only a single local study which is conducted on a smaller sample size is available on this, thus we need to

explore the disease burden of depression in infertile couples. This study will provide information on disease burden of depression in infertile females on a larger sample size and can also help in comparing data with the previous study regarding regional and over the time trends in the disease.

METHODOLOGY

This was a cross sectional analysis. Four hundred female patients having infertility presenting to infertility clinic of Gynae unit II, Jinnah Hospital Lahore and fulfilling the selection criteria were approached between August 2015 to Feb. 2016. Data was collected with the help of a questionnaire WHO-SRQ 20. Depression was labeled as per operational definitions. Data was entered and analyzed using SPSS 17. Sampling technique was Non probability consecutive sample.

Infertile females of reproductive age group i.e. 15-45 years determined by history (as per operational definitions) with either primary or secondary infertility were included. Data was entered and analyzed using SPSS 17. Quantitative variables i.e. age was presented in the form of mean and standard deviation. A qualitative variable i.e. depression was presented in the form of frequency and percentages. Data was stratified for age, educational status, economic status, employment status and duration and type of infertility. Post stratification chi square test was applied. P value \leq 0.05 was taken significant.

Depression was determined in females with infertility using World Health Organization self-reported questionnaire 20 (SRQ 20). It is a 20 item scale for screening of depression especially in developing countries and scored on a scale of 0 to 20. A female patient having score of 10 or more was labeled as having depression.

RESULTS

The mean age of females was 33.40 ± 6.55 years with minimum and maximum age of 15 and 45 years. The mean SRQ-20 in this study was 9.95 ± 5.28 with minimum and maximum score of 1 and 20.

- According to operational definition (SRQ-20 score \geq 10) depression frequency of depression was seen in 213 (53.2%) of the females while the rest of 187 (46.8%) females had no depression (SRQ-20 score $<$ 10) **Table 1.**

Table 1: Frequency Distribution of Depression in Infertility.

		Frequency	Percent
Depression	Yes	213	53.2
	No	187	46.8

		Frequency	Percent
Depression	Yes	213	53.2
	No	187	46.8
	Total	400	100.0

- Among 213 females with depression 154(72.3%) were 15 – 34 years of age and 59(27.7%) were 35 – 45 years of age, there was significant association between age groups and depression **Table 2.**

Table 2: Comparison of Depression and Age Groups (Years).

		Depression		Total
		Yes	No	
Age Groups	15-34	154	61	215
		72.3%	32.6%	53.8%
	35-45	59	126	185
		27.7%	67.4%	46.2%
Total		213	187	400
		100.0%	100.0%	100.0%

p-value $<$ 0.001

- When data was stratified over types of infertility, their education status, monthly income and employment status we found no significant association, p-value $>$ 0.05 **Table 3, 4, 5 and 6.**

Table 3: Comparison of Depression and Types of Infertility.

		Depression		Total
		Yes	No	
Types of infertility	Primary	134	102	236
		62.9%	54.5%	59.0%
	Secondary	79	85	164
		37.1%	45.5%	41.0%
Total		213	187	400
		100.0%	100.0%	100.0%

p-value = 0.090

Table 4: Comparison of Depression and Education Status.

		Depression		Total
		Yes	No	
Education Status	Primary	17	18	35
		8.0%	9.6%	8.8%
	Middle	75	68	143
		35.2%	36.4%	35.8%
	Matric	95	69	164
		44.6%	36.9%	41.0%
	Intermediate and above	26	32	58
		12.2%	17.1%	14.5%
Total		213	187	400
		100.0%	100.0%	100.0%

p-value = 0.329

Table 5: Comparison of Depression and Monthly Income.

		Depression		Total
		Yes	No	
Monthly income	<10000	69	60	129
		32.4%	32.1%	32.2%
	10000-50000	119	112	231
		55.9%	59.9%	57.8%
	>50000	25	15	40
		11.7%	8.0%	10.0%
Total		213	187	400
		100.0%	100.0%	100.0%

p-value = 0.437

- There was significant association between duration of infertility and depression i.e. among 187 females with depression 104 (48.8%) had < 5 years, 72 (33.8%) had 5-10 and 37 (17.4%) females had > 10 years duration of infertility, p-value < 0.05
- Table 7.**

Table 6: Comparison of Depression and Employment Status.

		Depression		Total
		Yes	No	
Employment Status	House wife	173	146	319
		81.2%	78.1%	79.8%
	Working woman	40	41	81
		18.8%	21.9%	20.2%
Total		213	187	400
		100.0%	100.0%	100.0%

p-value = 0.435

Table 7: Comparison of Depression and Duration of Infertility (Years).

		Depression		Total
		Yes	No	
Duration of Infertility	<5 Years	104	85	189
		48.8%	45.5%	47.2%
	5-10	72	91	163
		33.8%	48.7%	40.8%
	> 10 years	37	11	48
		17.4%	5.9%	12.0%
Total		213	187	400
		100.0%	100.0%	100.0%

p-value < 0.001

DISCUSSION

Infertility is a medical problem that affects a vast proportion of the world’s population. The World Health Organization definition based on 24 months of trying to get pregnant is recommended as the definition that is useful in clinical practice and research among different disciplines. In recent years, the number of couples seeking treatment for infertility has dramatically increased. There is less information about effective psychiatric treatments for this population; however, there is some data to support the use of psychotherapeutic interventions.

A study reported that there was a positive relationship between infertility duration and depression sco-

res. It seems that at an early stage of infertility, if the couple's hopefulness about the results of medical intervention and receiving support from the physicians and relatives for a higher pregnancy rate in the future be high and also if social and family stresses be absent and a deep understanding of infertility be present, mental stress and depression during the first year of infertility would be much lower.¹⁶ A long time period of infertility and repeated referring to the physicians, which are important physical stressing factors in infertile individuals; together with anxiety about the effectiveness of medical intervention, which is a psychological stressing factor in infertile persons, the infertility would gradually change to a chronic problem among infertile couples due to the barriers to reach one of the most important goals of marriage - to be reproductive. While confronting this problem, the infertile couples would experience monthly cycles of hope and hopelessness,¹⁷ posing a high rate of stress that would increase the depression rate and finally, after years, they would gradually adjust with infertility using moderate mechanisms such as adoption; or they may continue their lives without any child and consequently, their stress and depression severity would decrease but would never disappear.

This study has provided information on disease burden of depression in infertile females on a larger sample size and can also help in comparing data with the previous study regarding regional and over the time trends in the disease. This study can help gynaecologists for early screening, diagnosis and counseling of the couples. Moreover early referral of such couples can be made to help patients relieve from distress and persist in treatment in a reasonable way with a hope of success and remove a cause of subfertility because depression and anxiety is itself a significant factor causing subfertility.

Regarding the high rate of depression among infertile couples, it seems necessary to pay more attention to infertility centers that offer psychological and psychiatric service.¹⁸

It is **concluded** that in this study the prevalence of depression in females with infertility was present in 213 (53.2%) of the females. The prevalence was significantly higher in early age groups duration of infertility. In future gynecologists should collaborate with psychiatrist and support groups to prevent such psychological disorders of females with infertility.

Authors' Contribution

SA: Designed and conducted. AB: Helped in designing and data analysis. SA: Helped in data collection and analysis.

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