

Depression Among Primary and Secondary Infertile Women: Do Education and Employment Play any Role?

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ABSTRACT

Objectives: 1) To determine the frequency of depression among infertile women 2) To compare the frequency of depression among primary and secondary infertile women 3) To compare the difference in frequency of depression regarding age, educational and employment status.

Material and Methods: The study was Cross-sectional and conducted in Pakistan Ordnance Factory Hospital, Wah Cantt, from Jan 2014 to Aug 2014. The sample of 350 infertile women was selected by applying purposive sampling technique. The women were interviewed in Urdu after taking informed consent. A pretested questionnaire was used for data collection which consisted of demographic information, type of infertility and Beck Depression Inventory (BDI). Depression among infertile women was assessed by using operational definition; any woman who scored seventeen or above was considered depressive. The obtained data was entered and analyzed using SPSS version 19. Frequencies and percentages were calculated for qualitative variables and the difference between frequency of depression among primary and secondary infertile women was analyzed by applying Chi-square test. The association of age, educational and employment status with depression was also analyzed by Chi-square test. The p-value of < 0.05 was considered significant.

Results: In a sample of 350 women 76% women had primary infertility while only 24% women presented with secondary infertility. Among them depression was found in 50.8% women; 55.8% women with primary infertility were depressed while 35.2% women with secondary infertility had depression. There was a significant difference in the existence of depression among them (p value=0.001). The depression was positively associated with increased age (p value=0.019) while no association was established with educational status and working status. (p value=0.255, 0.665 respectively)

Conclusion: The study concluded that the frequency of depression among infertile women was fairly high and women having primary infertility were more depressed as compared to the women with secondary infertility. Women with increasing age were more depressed while the role of educational and working status was not established.

Keywords: infertility, cross-sectional study, depression, infertile women.

Introduction

Infertility is a rising problem all over the world and it affects an estimated 9-15% of couples of childbearing age.¹ It is generally believed that in the whole world 70 million couples are infertile.^{2,3} A health survey conducted in 190 countries and territories showed that prevalence of infertility was highest in South Asia, sub-Saharan Africa,

North Africa/Middle East and Central/ Eastern Europe and Central Asia.⁴ The prevalence of infertility in Pakistan is 21.9%; primary infertility is 3.9% and secondary infertility is 18%.^{5,6}

Infertility is a societal stigma and taboo with a wide range of socio-cultural, emotional, physical and fiscal

problems.⁷ It not only affects womens' health but it also has a great effect on mental health of man that leads to disharmony in marital life. Couples who failed to conceive have feeling of being defective and not feel themselves fit in the community.^{8,9}

It can lead to many psychosocial consequences like depression, anxiety, guiltiness, social seclusion, feeling of worthlessness, loss of self-esteem and even suicidal thoughts. Instead of so many serious consequences it got insufficient concentration in previous reproductive health program called safe motherhood.¹⁰⁻¹² but now infertility and its management is included in the current reproductive health program. Worldwide secondary infertility is more than the primary infertility. Not only primary infertility but secondary infertility is also associated with severe psychiatric disorders who are unable to conceive again or have abortions or stillbirths.¹³ The purpose of the study was to determine frequency of depression among infertile women attending infertility clinic of POF Hospital, to determine association of various factors like age, educational status, employment status with depression and to compare frequency of depression among primary and secondary infertile women so that more depressed group can be identified and provided with social and psychological support on priority basis.

Methodology

A cross-sectional study was conducted on 350 women who attended the infertility clinic of Pakistan Ordnance Factory Hospital Wah Cantt. The sample size was calculated using World Health Organization formula with a confidence level of 95%, anticipated population proportion of 35%¹⁴ and precision of 5%. The women were selected by purposive sampling technique and the study was completed in 8 months duration (Jan 14 to Aug14). Only those women were included in the study who had 3-6 years of infertility. A close ended structured questionnaire was used to collect data. The research objectives and methods were explained to the participants and verbal consent was obtained from them ensuring confidentiality before data collection. The first section of the questionnaire was concerned with demographic data i.e age, educational status, occupation and type of infertility while second part included Beck Depression Inventory (BDI) proforma which consists of 21 questions in multiple choice formats. Each question is rated on a 4-point scale rating from 0-3 and assess mainly cognitive and also somatic symptoms.¹⁵ An operational definition was used to assess depression among them. Those

women who scored seventeen or above were considered depressed. The data was analyzed by using SPSS version 19 and Microsoft excel. Frequencies and percentages of the categorical variables were calculated and the difference between the frequency of depression among primary and secondary infertile women was analyzed by applying Chi-square test. The association of age, educational and working status with depression was also analyzed by Chi-square test. The p-value of < 0.05 was considered significant.

Results

In a sample of 350 infertile women, 90 (25.7%) were in the age group of 15-25 years while 165 (47.1%) and 95 (27.1%) were in the age groups of 26-35 years and 36-45 years respectively. Regarding their educational status, 69(19.7%) were illiterate, 61(17.4%) got a Primary Education, 101(29%) had Secondary, 87(24.9%) had higher secondary and 32(29%) had master degree. Among them 260 (74.3%) were housewives while 90(25.7%) were working women. The mean score of depression among infertile women was 19.22 ± 12.766 SD. The type of infertility and status of depression among the sampled women were shown in Figure: I and Figure: II respectively.

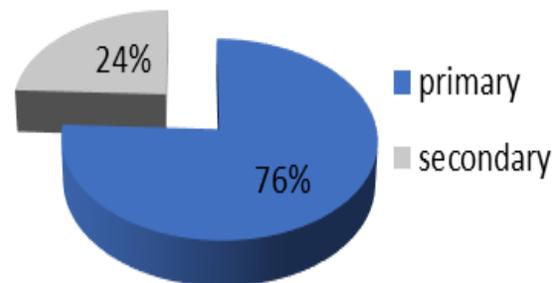


Figure I: Type of infertility among women

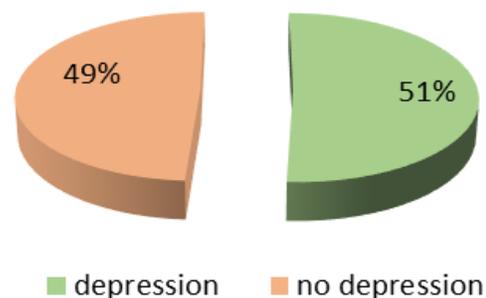


Figure II: Frequency of depression among infertile women

Chi-square test was applied on the type of infertility and presence of depression which showed significant difference between the two groups with a p-value of

0.001; the primary infertile women were more depressed as compared to secondary infertile women.

Type of infertility	Depression		Total	Percentage (%)
	No	Yes		
Primary	117	148	265	55.8
Secondary	55	30	85	35.2

(p value=0.001, df=1)

Chi-square test was also applied on various age groups and depression showing significant results. (p value=0.019). The women aged more than 36 years were more depressed. No significant association was established between educational status and working status of women with depression. (p value=0.255, 0.665)

Age groups of patients	Depression		Total	Percentage (%)
	No	Yes		
15-25	48	42	90	46.6
26-35	89	76	165	46.0
36-45	35	60	95	63.1

(p value= 0.019, df=2)

Discussion

The study was hospital based conducted on 350 infertile women attended POF hospital Wah Cantt. The study was carried out with the purpose of determining the frequency of depression among female infertile women, variation in depression with respect to age, educational and working status and also to explore difference in the frequency of depression among women with primary and secondary infertility so that the identified group would be more focussed for further interventions.

Mostly the women were in the age group of 26-35 years and many researches supported the result like Adamson et al showed mean age of women was 25.9 years¹⁶ and Shamila et al showed the prevalence of infertility was more among women aged 25-30 years¹⁷ but a study in Canada discovered most of the women who experienced infertility belonged to the age group of 35-44 years¹⁸. The reason might be that 25-35 years is an age period of marriage in Muslim countries and women face the pressure of being pregnant so they reported to the health facility for treatment.

In my sample, two third women had primary infertility and only one third presented with secondary infertility. The results were quite different from Sami et al¹³ showed the prevalence of secondary infertility was more in Pakistan, and Mascarenhas et al⁴ which disclosed prevalence of secondary infertility was more in Asian countries but a research by Shamila et al¹⁷ supported my

study result which showed 82.48% women had primary infertility.

An important result of the study was that 50.8% of infertile women were depressed which was fairly high. The reasons may be lack of hope, social pressure and gender itself as it is a fact that women are more likely to have a psychiatric illness as compared to men.^{19,20} The result was supported by Al-Homaidan et al showed 53.8% infertile women were depressed.²¹ and Pinto-gouveia et al observed that the women who are otherwise healthy but have infertility were more likely to be depressed.²² but a cross sectional study conducted among Polish people showed that 35.44% of infertile women showed severe symptoms of depression.¹⁴

Another important finding of the research was that the primary infertile women showed more depression than the women having secondary infertility. The reason might be that secondary infertile women are more hopeful than primary infertile women because of previous conception and they also faced less social pressure, including pressure from husband and in-laws. Primary infertile women have feeling of being defective and not feel themselves fit in the community. The marital stability, social security, rights of having property and personal satisfaction are less among women with primary infertility. In United States a research was carried out and showed that women with primary infertility had higher scores of fertility specific distress as compared to the secondary infertile women.²³ while a research of Nigeria did not support the result because it showed no significant difference in the occurrence of depression among the two groups.²⁴

Based on the findings primary infertile women should be taken into consideration first and treated not only medically but psychologically as well. Psychological treatment not only treats the current state of women but it had been proven by many studies that the likelihood of pregnancy is increased among women who had undergone psychotherapy.²⁵

Frequency of depression was more among women aged 36-45 years and perhaps this is due to the fact that in this age group the expectation of having pregnancy is decreasing and family and community pressure is increasing.

Regarding the educational status and presence of depression no significant association was noted. The results were very much similar to a research of Riyadh that showed educational status had no effect on

depression.²¹ while a research of United States affirmed that education was an important predictor of distress.²³ The frequency of depression was also evaluated with reference to the employment. The study showed there was no marked difference in the frequency of depression among women who were employed somewhere and housewives. The result was supported with the research conducted in Riyadh²¹ while contradicted with the study conducted in Sweden that showed depression was inversely related with employment.²⁶ It means literacy among women and having employment may makes no difference in getting depression and special psychological counseling is needed to combat against this problem.

Limitations: Being a hospital based study, actual frequency of infertility and depression may not reflect actual status in the population. The external validity of the study can be increased by adopting probability sampling technique. Understanding of various factors including social relationships can effect psychiatric distress among women with infertility is an important area for additional research.

Conclusion

The study concluded that the frequency of depression among infertile women was fairly high and women having primary infertility were more depressed as compared to the women with secondary infertility. Women with increasing age were more depressed while role of educational and working status was not established.

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