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Depression and Anxiety in Pakistani Infertile Women

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ABSTRACT

Objective — *To identify the frequency of anxiety and depression among women with infertility using the Hospital Anxiety and Depression Scale (HDS).*

Study design — *Cross sectional study.*

Place & Duration of study — *Baqai Institute of Reproductive Diseases (BIRDS) Karachi, from May 2015 to October 2015.*

Methodology — *Married women with primary or secondary infertility were included. The study participants also completed the Hospital Anxiety and Depression Scale (HADS), a validated tool to measure psychiatric illness (anxiety and depression). SPSS 20.0 statistical software was used in the statistical analyses.*

Results — *Hundred women were interviewed. Seventy percent (n=70) were between 31-40 year of age. The age at marriage was less than 30 year in 69%. Primary infertility (78%) was more common. The mean HADS-A and HADS-D scores were 9.72 ± 3.97 and 6.05 ± 4.22 respectively. Seventy five percent of the women with infertility had anxiety. Depression (31%) was comparatively lower among these women. No significant association was found between anxiety and depression with age, years of marriage and infertility duration (p-value > 0.05).*

Conclusions — *The Hospital Anxiety and Depression scale could effectively measure the predominant psychiatric illness (depression and anxiety) among women with infertility. Specific counseling methods should be used for attaining better quality of life.*

Key words — *Anxiety, Depression, Female, Infertility.*

INTRODUCTION:

Infertility is defined as 'inability or failure of the couple to conceive for six months in women aged > 35 year or 12 months in women aged < 35 year.[1] Infertility is a complex problem having both physiological and psychological aspects. Studies conducted to identify the prevalence of infertility have reported the prevalence rates from 9% - 12%.[2-4] In the United States the prevalence of infertility was identified as 12%, in United Kingdom 9%,[3] and 12% in Portugal.[2-4] It is a significant health problem which is treatable, but only every second infertile couple acquires medical help.[4]

There is much stigma related to infertility. In addition to the somatic and sexual disorders, infertility predisposes both men and women to considerable psychological and mental stress.[5] Individuals can report loss of self-esteem, sexual distress, depression, anxiety, frustration, emotional stress and marital problems. Among these, anxiety and depression are the most common mental problems on account of the uncertainty related to the cause of infertility, an indefinite treatment duration, financial worries, and pressure from the family.[6] Researchers

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have reported that psychological problems have an impact on therapeutic success and reducing the burden of psychological distress might increase the chances of success of infertility treatment.[7]

Evidence from the literature suggests that infertility related stress is higher among women compared to men.[8] It has been reported that more than 50% of the women receiving treatment for infertility considers it the most stressful experience of their lives.[9] The study by El Kissi et al reported that psychological distress symptoms were significant in women compared to men.[10]

Infertility is a traumatic process that adversely affects the social, emotional and psychological aspects of the lives of women. More, importantly, anxiety and depression as psychological consequence of infertility, need further investigations. Anxiety is not the causative factor for infertility, but in fact associated with the duration of infertility, while depression is both related to causing infertility and associated with the duration of infertility.[11] Several factors associated with depression and anxiety have been identified, with most significant being duration of infertility. Domer at al reported that depression peaked during the third year of infertility.[12]

There have been studies reporting a variable degree of depression and anxiety among different regions but very little is known regarding the mental health of infertile Pakistani women. The aim of this study was to identify the frequency of depression and anxiety among women experiencing infertility.

METHODOLOGY:

The study was a cross-sectional survey conducted between May 2015 and October 2015 at Baqai Institute of Reproductive Diseases (BIRDS) Karachi. The inclusion criteria for recruitment were married women diagnosed with infertility, aged 18 year or above, literate, currently on fertility treatment and could communicate and demonstrate willingness to complete a multi-item survey. The local Ethics Committee of Baqai University approved this study. The aims of the study were comprehensively explained. Written informed consent was obtained from all study participants. Confidentiality and anonymity of the participant's response were maintained throughout the research.

A data collection form was developed and all demographic and clinical data were recorded. In the questionnaire, information on the variables age, education, employment, age at marriage, years of marriage, primary or secondary infertility and duration of infertility were collected. The study participants also completed the Hospital Anxiety and Depression Scale (HADS), a validated tool to measure anxiety and depression.

The Hospital Anxiety and Depression Scale (HADS) was developed by Zigmond and Snaith to measure depression and axiety.[13] The Urdu translated version of HADs was used in this study. The validated tool consists of 14 items, 7 each for anxiety and depression. All items in this validated tool were scored on Likert scale with four categories ranging from 0 to 3. Both anxiety and depression can be scored separately, with each subscale scored from 0 to 21. Higher scores on each subscale indicate higher level of anxiety and depression. The scores have also been used for grading of each subscale, with 0-7 indicated a non-case, 8–10 for mild anxiety or depression, 11–14 for moderate case and score of 15 and more indicates a severe anxiety or depression.

SPSS 20.0 statistical software (IBM SPSS Inc., Chicago, IL, USA) was used in the statistical analyses. Questions with missing responses were excluded from analysis. Categorical variables were presented as number (percentage) and quantitative variables as mean ± standard deviation. A p-value of < 0.05 was considered statistically significant.

RESULTS:

Majority (70%) of women were between 31 - 40 year of age. Sixty nine percent of women married at the age less than 30 year. Thirty eight percent of women had attained educational degree of bachelors, while thirty four percent had educational qualification of intermediate or less. Majority (82%) of women enrolled in this study were unemployed. Most (76%) of the women had duration of infertility of less than five year duration. Among the women enrolled in this study, primary infertility was predominant (78%). The characteristics of the women are described in table I.

The mean HADS-A and HADS-D scores were 9.72 ± 3.97 and 6.05 ± 4.22 respectively. Distribution of scores falling within the categories of HADS-A and HADS-D using the cut-off values is given in table II. Seventy five percent of the women with infertility were having anxiety, and among those majority (46%) had mild anxiety. Depression was comparatively lower among these women with infertility.

The correlation of anxiety and depression with the independent variable (i.e. age, marriage years and infertility duration) is given in table III and IV. Negative

Table I: Characteristics of Women with Infertility

Characteristics	n (%)
Age (year)	
< 30	70 (70)
31 to 40	16 (16)
> 41	14 (14)
Age at Marriage (year)	
< 30	70 (70)
31 to 40	30 (30)
> 41	1 (1)
Education	
Intermediate or less	34 (34)
Bachelors	38 (38)
Masters or above	28 (28)
Employment Status	
Employed	18 (18)
Unemployed	82 (82)
Infertility Type	
Primary Infertility	78 (78)
Secondary Infertility	22 (22)
Duration of infertility	
< 5 year	76 (76)
> 5 year	24 (24)

Table II: Frequency of Anxiety and Depression

HADS Classification (Scores)	n (%)
HADS-A (Anxiety)	
Normal (0 – 7)	25 (25)
Mild (8 -10)	46 (46)
Moderate (11 -14)	17 (17)
Severe (15 -21)	12 (12)
HADS-D (Depression)	
Normal (0 – 7)	69 (69)
Mild (8 -10)	20 (20)
Moderate (11 -14)	6 (6)
Severe (15 -21)	5 (5)

correlation was found for anxiety scores with marriage years and infertility duration, with p-value as non-significant. When depression scores were correlated with independent variables (age, marriage years and infertility duration), positive correlation was found for age and infertility duration, while negative correlation for marriage years. The p-value for all correlation co-efficient was non-significant (p-value > 0.05).

Table III: Correlation of Anxiety with Age, Marriage years and Infertility Duration

Variables	Correlation Co-efficient	p-value
Age (year)	0.026	0.794
Marriage Years	-0.171	0.089
Infertility Duration	-0.062	0.542

Table IV: Correlation of Depression with Age, Marriage years and Infertility Duration

Variables	Correlation Co-efficient	p-value
Age (year)	0.181	0.071
Marriage Years	-0.049	-0.628
Infertility Duration	0.022	0.827

DISCUSSION:

In the current study, women with infertility seeking treatment were considered. Validated Hospital Anxiety and Depression Scale (HADS) was used. HADS is a suitable and brief tool to identify psychiatric illness. This self-rated instrument is a reliable tool which has been used previously in many studies from Pakistan. Previous studies have identified that anxiety is a significant psychiatric illness, and so is the depression. The present study identified that anxiety was more prevalent psychiatric illness compared to depression; with seventy five percent women diagnosed for anxiety and thirty one percent for depression.

In Pakistan, having different culture compared to Western world, the perception prevails that conception and child birth are a part of women responsibilities. This also applies to other traditional societies and few low income countries. Generally infertile women experience negative social consequences including marital instability, stigmatization and abuse. Infertility can have a serious effect on both psychological well being and social status of women. Chen et al previously conducted a study of 112 women referred to determine the prevalence of depressive and anxiety disordersby using a structured interview designed by a psychiatrist.[14] Among the psychiatric diagnoses in their study, anxiety had the highest prevalence. Furthermore, in an in-depth review carried out 20

years after infertility treatment, 14 Swedish women with involuntary childlessness expressed that they had experienced mood disorders owing to both infertility and divorce from their spouses.[15] The study conducted in Iran reported that among two hundred women with infertility, anxiety was prevalent in around sixty percent of women.[16] Moderate and severe anxiety was present in twenty five percent and ten percent respectively. Depression was less prevalent psychiatric illness among women with infertility, with twenty nine percent diagnosed with depression. The present study's finding that duration of infertility was not associated with anxiety or depression is in line with a Japanese study.[17] However, Ramezanzadeh et al showed that duration of infertility was associated with anxiety and depression among women in Iran.[18]

This study has few limitations. Sample size was small and results are specific to Pakistani context due to cultural peculiarities. Secondly this study was conducted on women in an infertility department of hospital; therefore, it may not be representative of population in general.

CONCLUSIONS:

The Hospital Anxiety and Depression scale could effectively measure the predominant psychiatric illness (depression and anxiety) among women with infertility. The women with infertility had comparatively higher level of anxiety and depression as compared to developed countries. This may be due to cultural differences.

REFERENCES:

1. Zegers-Hochschild F1, Adamson GD, de Mouzon J, Ishihara O, Mansour R, Nygren K, et al. The international committee for monitoring assisted reproductive technology (ICMART) and the world health organization (WHO) revised glossary on ART terminology, 2009. Fertil Steril. 2009;92:1520-4.

2. Louis JF, Thoma ME, Sørensen DN, McLain AC, King RB, Sundaram R, et al. The prevalence of couple infertility in the United States from a male perspective: evidence from a nationally representative sample.Andrology.2013;5:741-8.

3. Boivin J, Bunting L, Collins JA, Nygren KG. International estimates of infertility prevalence and treatment-seeking: potential need and demand for infertility medical care. Hum Reprod. 2007;22:1506-12.

4. Soares S, Rodrigues T, Barros H. Infertility prevalence in the city of Porto. Acta Méd Port. 2011;24:699-706.

5. Peterson BD, Newton CR, Feingold T. Anxiety and sexual stress in men and women undergoing infertility treatment. Fertil Steril. 2007;88: 911-4.

6. Boivin , Griffiths E, Venetis, CA. Emotional distress in infertile women and failure of assisted reproductive technologies: meta-analysis of prospective psychosocial studies. Br Med J. 2011;342: d223.

7. Cousineau TM, Domar AD. Psychological impact of infertility. Best Pract Res Clin Obstet Gynaecol. 2007;21:293-308.

8. Smeenk JM, Verhaak CM, Eugster A, Van Minnen A, Zielhuis GA, Braat DD. The effect of anxiety and depression on the outcome of in-vitro fertilization. Hum Reprod. 2001;1:1420-3.

9. de Klerk C, Hunfeld JAM, Heijnen EME. W, Eijkemans, M. J. C, Fauser, B. C. J. M, Passchier J, et al. Low negative affect prior to treatment is associated with a decreased chance of live birth from a first IVF cycle. Hum Reprod. 2008;23:112-6.

10. El Kissi Y, Romdhane AB, Hidar S, Bannour S, Idrissi KA, Khairi H, et al. General psychopathology, anxiety, depression and self-esteem in couples undergoing infertility treatment: a comparative study between men and women.Europ J Obstet Gynecol Reprod Biol. 2013;167:185-9.

11. Ramezanzadeh F, Aghssa MM, Abedinia N, Zayeri F, Khanafshar N, Shariat M, et al. A survey of relationship between anxiety, depression and duration of infertility. BMC women's Health. 2004;4(1):1.

12. Domar AD, Broome A, Zuttermeister PC, Seibel M, Friedman R. The prevalence and predictability of depression in infertile women. Fertility and sterility. 1992;58:1158-63.

13. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatr Scand. 1983;67:361-70.

14. Chen TH, Chang SP, Tsai F, Juang KD. Prevalence of depressive and anxiety disorders in an assisted reproductive technique clinic. Hum Reprod. 2004;19: 2313-8.

15. Wirtberg I, Möller A, Hogström L, Tronstad SE, Lalo A. Life 20 years after unsuccessful infertility treatment. Hum Reprod. 2007;22:598-604.

16. Maroufizadeh S, Karimi E, Vesali S, Samani RO. Anxiety and depression after failure of assisted reproductive treatment among patients experiencing infertility. Int J Gynecol Obstet. 2015;130:253-6.

17. Ogawa M, Takamatsu K, Horiguchi F. Evaluation of factors associated with the anxiety and depression of female infertility patients. Biopsychosoc Med. 2011;5(1):1.

18. Ramezanzadeh F, Aghssa MM, Abedinia N, Zayeri F, Khanafshar N, Shariat M, et al. A survey of relationship between anxiety, depression and duration of infertility. BMC women's Health. 2004;4(1):1.

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Sughra Abbasi: Concept generation, tool development, data collection, literature review and report writing.
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