

Psychiatric Morbidity in Infertile Couples

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Abstract

Introduction: Having children is a social responsibility for a family. Inability to fulfil this responsibility adversely affects the social life, emotional status, marital relations, future plans, self-esteem and body image of the couple.

Aim: To estimate prevalence and determine correlates of psychiatric morbidity in infertile couples in tertiary care hospital.

Methods: Hospital based cross-sectional study entitled “To study the prevalence and determinants of psychiatric morbidity in infertile couples in tertiary care hospital”. Infertile couples attending infertility clinic and outpatient department of Obstetrics and Gynaecology Department, PBM Hospital within a defined period of one year were screened. Those fulfilling the inclusion and exclusion criteria were enrolled after proper counselling and written consent. 112 couples i.e. 112 males partners and 112 female partners were enlisted making a total of 224 subjects. Selected participants were interviewed using a pretested semi-structured interviewer administered questionnaire which consisted of two sections. One section included question related to socio-demographic background and possible determinants of psychiatric morbidity and second section included questions based on Depression Anxiety and Stress Scale (DASS-21) for estimation of depression, anxiety and stress. Data was collected and systematically analyzed.

Results: 70.5% subjects presented with primary infertility and 29.5% subjects with secondary infertility. Prevalence of depression is 72.3% and anxiety is 74.6% and stress is 71.9%. Depression (67.1%), anxiety (73.4%) and stress level (71.8%) was comparatively seen more in primary infertile patients than in secondary infertile patients.

Conclusion: Assessment of mental health status of the couples should be integrated with infertility management, so that counselling and treatment can be initiated as early as possible, achieving psychosocial wellbeing as well as improved infertility results.

Keywords: Infertility, DASS-21 Score, Mental Health Status.

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Introduction

World Health Organization (WHO) defines Infertility as “a disease of reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse”[1].

Worldwide, prevalence of infertility is around 15% of reproductive aged couples. WHO estimates 3.9% to 16.8% prevalence of primary infertility in India. An estimated 56% of these couples seek medical care for

infertility, which speaks of the burden on health, man power and healthcare costs [2].

Having children is a social responsibility for a family. Inability to fulfil this responsibility adversely affects the social life, emotional status, marital relations, future plans, self-esteem and body image of the couple.[3] Couples live in fear and anxiety about infertility as well as the infertility diagnosis, treatment process, and treatment outcome.[4]

The overall prevalence of psychological problems in infertile couples is estimated to be 25-60%, which is caused by complexity of factors. Most common psychological issues in infertile couples are anxiety, probably because of anticipated stressful nature of the treatment and treatment failure [5]. Depression is highest between the second and third years of infertility because of the inability to conceive [6].

Prospective studies of risk factors for psychiatric morbidity in infertile couples seeking treatment are scarce. Despite social, economic and physical implications, prevention and care of psychiatric morbidity with infertility often remains a neglected public health issue with low priority, especially for low income countries like India, that are already under population pressure. The aim of this study is to estimate psychiatric morbidity in infertile couples in a tertiary care hospital and determine its correlates.

Aim

To estimate prevalence and determine correlates of psychiatric morbidity in infertile couples in tertiary care hospital.

Methods

A hospital based cross-sectional study entitled "To study the prevalence and determinants of psychiatric morbidity in infertile couples in tertiary care hospital". Infertile couples attending infertility clinic and

outpatient department of Obstetrics and Gynaecology Department, PBM Hospital within a defined period of one year (2021-2022) were screened. Those fulfilling the inclusion and exclusion criteria were enrolled after proper counselling and written consent. 112 couples i.e. 112 males partners and 112 female partners were enlisted making a total of 224 subjects. Selected participants were interviewed using a pretested semi-structured interviewer administered questionnaire which consisted of two sections.

One section included question related to socio-demographic background and possible determinants of psychiatric morbidity and second section included questions based on Depression Anxiety and Stress Scale (DASS-21) for estimation of depression, anxiety and stress. Data was collected and systematically analyzed. Patients aged ≥ 18 years, Patients willing to participate, Confirmed case of infertility, as per WHO definition, Capable of understanding and completing the questionnaire by the husband and wife and Patients who are residents of the study state for past one year were included in study. Either partner refusing to give consent, either partner having any major surgical/medical illness, patients who had known psychiatric illness preceding infertility, either partner who are diagnosed case of mental retardation/ cognitive impairment were excluded. Based on the eligibility criteria, the participants were screened and selected from the OPD after informed consent. Selected participants were interviewed using a pretested semi-structured interviewer administered questionnaire.

The questionnaire was in two sections. One section included question related to socio-demographic background and possible determinants of psychiatric morbidity. Second section included questions based on Depression Anxiety and Stress Scale (DASS-21) for estimation of depression, anxiety and stress.

Statistical Analysis

The data was entered and analyzed systematically. Categorical variables were summarized as percentages and quantitative variables were summarized as mean with standard deviation (SD), or median with inter-quartile range (IQR) according to the distribution of variable. Appropriate statistical test was used to compare the outcome between two sub-groups.

Results

Among 112 male partners, 53 (47.3%) were illiterate and 59 (52.7%) were literate while 48 (42.9%) female partners among 112 were

illiterate and 64 (57.1%) were literate. Out of total 224 couples 188 (83.9%) belonged to joint family, 42.9% were from rural background. Out of 112 male partners, 42 (37.5%) were smokers, 34 (30.4%) were alcoholic. Out of total 112 males, 3 (2.7%) were carpenter, 2 (1.8%) were courier service men, 2 (1.8%) were delivery men, 1 (0.8%) was driver, 4 (3.5%) were farmer, 4 (3.6%) were milkmen, 38 (33.9%) were labourers, 57 (50.9%) were shopkeepers, 1 (0.8%) was teacher. All female subjects (wives) included in this study were homemakers. 70.5% subjects presented with primary infertility and 29.5% subjects with secondary infertility.

Table 1: Sociodemography

Variable	No.	%
Illiterate	101	45.1%
Literate	123	54.9%
Family		
Joint	188	83.9%
Nuclear	36	16.1%
Residence		
Rural	96	42.9%
Urban	128	57.1%

As per depression score, out of 224 subjects, 44 (39.3%) males and 18 (16.1%) females were normal, 23 (20.5%) males and 21 (18.8%) females were having mild depressive symptoms, 26 (23.2%) males and 40 (35.7%) females had moderate depression, 9 (8%) males and 15(13.4%) females had severe depression while 10 (8.9%) males and 18(16.1%) females had extreme severe depression.

As per anxiety score, out of 224 subjects, 43 (38.4%) males and 14 (12.5%) females were normal, 30 (26.8%) males and 42 (37.5%) females were mild anxious, 25 (22.3%) males and 33 (29.5%) females were moderately

anxious, 10 (8.9%) males and 14(12.5%) females were severely anxious while 4 (3.6%) males and 9(8%) females had extremely severe anxiety.

As per stress score, out of 224 subjects, 39 (34.8%) males and 24 (21.4%) females were normal, 38 (33.9%) males and 16 (14.3%) females were mild stressed, 19 (17%) males and 41 (36.6%) females were moderately stressed, 11 (9.8%) males and 27 (24.1%) females were severely stressed while 5 (4.5%) males and 4 (3.6%) females were extremely severe stressed. The p-value is 0.0001 which is less than 0.05 and hence, result is highly significant.

Table 2: Score

Depression Score	Normal	Mild	Moderate	Severe	Extremely Severe	P value
Husband	44 (39.3%)	23 (20.5%)	26 (23.2%)	9 (8.0%)	10 (8.9%)	0.0001*
Wife	18 (16.1%)	21 (18.8%)	40 (35.7%)	15 (13.4%)	18 (16.1%)	
Anxiety Score						
Husband	43 (38.4%)	30 (26.8%)	25 (22.3%)	10 (8.9%)	4 (3.6%)	0.0004*
Wife	14 (12.5%)	42 (37.5%)	33 (29.5%)	14 (12.5%)	9 (8.0%)	
Stress score						
Husband	39 (34.8%)	38 (33.9%)	19 (17.0%)	11 (9.8%)	5 (4.5%)	<0.00001
Wife	24 (21.4%)	16 (14.3%)	41 (36.6%)	27 (24.1%)	4 (3.6%)	

Prevalence of depression is 72.3 % and anxiety is 74.6 % and stress is 71.9 %. Depression (67.1 %), anxiety (73.4%) and stress level (71.8%) was comparatively seen more in primary infertile patients than in secondary infertile patients.

Table 3: Type of infertility

Stress Score	Normal	Mild	Moderate	Severe	Extremely Severe	P value
Primary	49(31.01)	42(26.6)	44(27.8)	18(11.4)	5(3.1)	0.0078*
Secondary	15 (22.7)	13 (19.7)	16(24.2)	12(18.2)	10(15.2)	
Anxiety Score						
Primary	42 (26.6)	58 (36.7)	41 (25.9)	11 (7)	6 (3.8)	0.0058*
Secondary	15 (22.7)	14 (21.2)	17 (25.8)	13 (19.7)	7 (10.6)	
Depression Score						
Primary	53 (33.54)	44 (27.84)	44 (27.8)	16 (11.1)	2 (1.26)	0.0008*
Secondary	17 (25.75)	13 (19.7)	200 (30.3)	6 (9.1)	10 (15.6)	

Our study shows that there is no difference in depression score, stress score, anxiety score with family background and type of family (except stress score).

Discussion

In our study, 45.1% subjects were illiterate and 54.9% subjects were literate. This is in contrast with a study conducted by Singh K *et al.* in which 83% of the infertile patients represented the literate[7].

In our study, among 112 couples, 42.9% belonged to rural background and 83.9% belonged to joint family as the type of infertility 70.5% presented with primary infertility and 29.5% with secondary infertility implicating the primary infertility as more worrying case in the studied patients, the results of Singh *et al.* are consistent with our study[7].

In our study, depression was absent in 27.7% subjects, 19.6% subjects had mild depressive symptoms, 29.5% subjects had moderate depressive symptoms, 10.7% subjects had severe depressive symptoms, while 12.5% had extreme severe depressive symptoms. However, on comparing the levels of depression between male (husband) and female (wife) partners, females have more depressive symptoms than males (p-value-0.001). Shounak Biswas *et.al.* conducted a similar study in which they found that depression was present in 50% of female and 59.2% study participants[8]. A similar study conducted in North India used Beck's Depression Inventory (BDI) to assess

depression, and it was found that 41.1% women had minimal range depressive symptoms and 8.82% had severe depression [9]. Yusuf L. concluded in his study that 49% of the subjects had moderate to severe degree of depression and 10% had extremely severe depression[10].

In our study, almost one fourth (25.4%) participants were not anxious regarding conception while 32.1 % had mild, 25.9% had moderate, 10.7% had severe, 5.8 % had extremely severe anxiety symptoms. Alike depression, anxiety levels are much more in female participants than male participants (p-value 0.0004). Yusuf L. conducted a study in infertile female patients in which he found 41% subjects in had moderate to severe anxiety and 29% had extremely severe anxiety which is in agreement with our study[10].

In our study, 71.9 % subjects had some degree of stress (mild stress in 24.1%, moderate stress in 21%, severe stress in 17%, and extremely severe stress in 4%). Similar to anxiety and depression, stress level was also significantly high in female participants than males (p-value <0.0001). This data is comparable to study conducted by Yusuf L. in which 69% subject had some degree of stress (mild stress in 14%, moderate stress in 21%, severe stress in 29% and extremely severe stress in 5%)[10].

It seems that gender (female) was the significant variable associated with all three DASS-21 subscale scores. Hence, the wives are at higher risk of developing anxiety, depression and stress. In our culture and society, negative attitudes to infertility are so throbbing that having a child is psychologically or effectively, a vital factor for women, and the absence of children may cause existential crisis. Infertility can have a serious effect on both psychological well-being and social status of women in our country.

In our study, anxiety level was comparatively seen more in primary infertile patients (73.4%) than in secondary infertile patients (77.3 %). These results are in agreement to the study conducted by Singh K *et al.* in which he also found that anxiety is more in primary infertility as compared to secondary with, 37.7% anxiety in primary infertile patients and 4.9% anxiety in secondary infertile patients[7]. This implicates that primary infertility is seen as more stressed state in majority of the cases of patients.

In our study, the depression levels was comparatively seen more in primary infertility subjects (67.1 %) than in secondary infertility (29.5%). Another study in this context revealed that depression level was comparatively seen more in primary infertile patients (29.5%) than in secondary infertile patients (4.9%)[10].

Conclusion

In our study, it was observed that psychiatric components were positively associated with couples (both males and females) seeking infertility treatments. Although female partners (wives) were more affected than males (husbands), yet psychological well-being of both partners need to be considered for better outcome.

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