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Association of Psychiatric Illness with Family and Social Pressure in Infertile Couples

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ABSTRACT
The reasons for infertility can involve one or both partners. To determine correlation between family and social pressure and psychiatric illness in infertile couples in tertiary care hospital. It is a hospital based cross sectional study conducted on 112 infertile couples(112 males and 112 females) making a total of 224 subjects attending outpatient department of Obstetrics and Gynaecology Department, PBM hospital during 2021-2023 for two year using random sampling. Those fulfilling the inclusion and exclusion criteria were enrolled in the study after proper counselling and written consent. 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. Among 112 male partners, 53 (47.3%) were illiterate, Out of 112 couples, 79 (70.5%) presented with primary infertility. When comparing family and social pressure and Stress score, we observed that in both females (wives) and males (husbands), stress levels increases significantly when pressure was there. Presence of family or social pressure has a statistically significant impact on the anxiety levels of wives however the impact in not much on husbands. 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.

INTRODUCTION

The reasons for infertility can involve one or both partners. In about one-third of cases, the cause of infertility involves only the male; in another one-third of cases only female and in the remaining cases both the male and female or no cause can be identified. Infertility affects couples and causes emotional and psychiatric distress in both men and women. The reaction to infertility differs among males and females. There is gender disparity in response to infertility with male sex having an upper hand as men are not reminded of infertility on a monthly basis. Men are often being assessed for infertility after the women and diagnostic procedures are also more complicated and invasive for women[1].

The important relationship between infertility and psychiatric morbidity is highlighted by some studies which suggest that it may result in lower percentages of pregnancy and lower commitment to future in vitro fertilization cycles also. The proposed mechanisms through which it can directly affect infertility involve the alteration in physiology which includes, elevated prolactin level, disruption of the hypothalamic pituitary adrenal axis and thyroid dysfunction[2]. It is assumed that stress has direct effect on cortisol production by increasing the release of pituitary hormones and therefore, a negative effect on fertility. Infertility, being perceived distress, leads to physiological reactions that actually interfere with successful treatments for infertility e.g., high cortisol levels negatively influence the outcome of IVF[3].

Most common psychological issues in infertile couples are anxiety, probably because of anticipated stressful nature of the treatment and treatment failure[4]. Depression is highest between the second and third years of infertility because of the inability to conceive[5]. Most of the infertile women had higher scores on the depression and anxiety scales[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.

Aim: To determine correlation between family and social pressure and psychiatric illness in infertile couples in tertiary care hospital.

MATERIALS AND METHODS

It is a hospital based cross sectional study conducted on 112 infertile couples(112 males and 112 females) making a total of 224 subjects attending outpatient department of Obstetrics and Gynaecology Department , PBM hospital during 2021-2023 for two year using random sampling. Patients aged ≥18 years, 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 the 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 ruled out from study.Those fulfilling the inclusion and exclusion criteria were enrolled in the study after proper counselling and written consent. 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. The data was entered and analyzed systematically. From this study, we estimated the burden of and factors associated with psychiatric morbidity among infertile couples. This information helped us to develop early diagnosis plans, identify high risk groups and design prevention strategies in this setting.

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. The p-value collected is 0.5029 Out of 224 subjects, 188 (83.9%) belonged to joint family while 36 (16.1%) belonged to nuclear family. About 96 out of 224 i.e., 42.9% were from rural background while 128 out of 224 i.e., 57.1% were from urban background.

Figure 1 shows distribution of subjects according to their occupation. 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.

Table 1 shows distribution of couples seeking infertility treatment according to type of infertility. Out of 112 couples, 79 (70.5%) presented with primary infertility while 33 (29.5%) presented with secondary infertility.

Table 1: Distribution of couples according to type of infertility

Type of infertility	No.	Percentage
Primary	79	70.5
Secondary	33	29.5

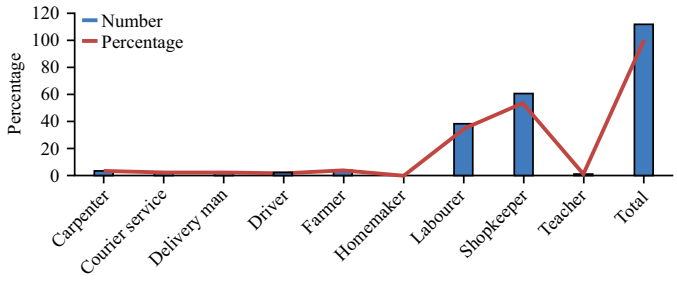

Fig. 1: According to their occupation

Table 2: Comparison of score with type of family

	Normal		Mild		Moderate		Severe		Extremely severe		
Depression scores	No.	%	No.	%	No.	%	No.	%	No.	%	p-value
Joint	51	27.1	37	19.7	59	31.3	17	9.0	24	12.8	0.319
Nuclear	11	30.5	7	19.4	7	19.4	7	19.4	4	11.1	
Stress score											
Joint	48	28.5	44	23.4	53	28.2	37	19.7	6	3.2	0.027*
Nuclear	15	41.7	10	27.8	7	21.2	1	2.8	3	8.3	
Anxiety score											
Joint	50	26.6	66	35.1	50	26.6	16	8.5	6	3.2	0.301
Nuclear	7	19.4	6	16.7	8	22.4	8	22.4	7	19.4	

Table 3: Comparison of stress score with family and social pressure

	Stress score												
	Normal		Mild		Moderate		Severe		Extremely severe		Total	Within wife and	Between husband
Family pressure	No.	%	No.	%	No.	%	No.	%	No.	%	No.	husbands	and wife
Wife													
No	24	40.7	9	15.3	18	30.5	8	13.60	0	0	59	<0.0001	0.0004
Yes	0	0.0	7	13.2	23	43.4	19	35.84	4	7.5	53		0.062
Husband													
No	36	48.0	29	38.7	7	9.3	3	4.0	0	0	75	<0.0001	
Yes	3	8.1	9	24.3	12	32.4	8	21.6	5	13.5	37		
Social pressure													
Wife													
No	22	31.9	12	17.4	26	37.7	9	13.0	0	0	69	<0.0001	0.0007
Yes	2	4.7	4	9.3	15	34.9	18	41.9	4	9.3	43		0.2770
Husband													
No	37	42.0	33	37.5	13	14.8	5	5.7	0	0	88	<0.0001	
Yes	2	8.3	5	20.9	6	25.0	6	25.0	5	20.9	24		

Out of total 188 subjects who belonged to joint family 51 (27.1%) were normal, 37 (19.7%) mild, 59 (31.3%) moderate, 17 (9%) severe and 24 (12.8%) extremely severe against the 36 subjects belonging to nuclear family, 11 (30.5%) were normal, 7 (19.4%) mild, 7 (19.4%) moderate, 7(19.4%) severe and 4 (11.1%) extremely severe (p = 0.319) (Table 2).

Out of total 188 subjects who belonged to joint family 50 (26.6%) were normal, 66 (35.1%) mild, 50 (26.6%) moderate, 16 (8.5%) severe and 6 (3.2%) extremely severe against the 36 subjects belonging to nuclear family, 7 (19.4%) were normal, 6 (16.7%) mild, 8 (22.4%) moderate, 8 (22.4%) severe and 7 (19.4%) extremely severe (p = 0.301) (Table 3).

Out of total 188 subjects who belonged to joint family, 48 (28.5%) were normal, 44 (23.4%) mild, 53 (28.2%) moderate, 37 (19.7%) severe and 6 (3.2%) extremely severe against the 36 subjects belonging to nuclear family, 15 (41.7%) were normal, 10 (27.8%) mild, 7 (21.2%) moderate, 1 (2.8%) severe and 3 (8.3%) extremely severe (*p = 0.027) (Table 4).

When comparing family and social pressure and Stress score, we observed that in both females (wives) and males (husbands), stress levels increases significantly when pressure was there (p<0.0001 (Highly significant)). However, on comparing stress levels within the family (couple of wives and husbands), we observed that in the families where family pressure was not there, the level of stress was significantly more in wives (p = 0.0004) as compared to husbands but where the family pressure was present in the family, the stress levels were comparable in both wives and husbands (p = 0.062 (Not significant)) (Table 5).

Presence of family or social pressure has a statistically significant impact on the anxiety levels of wives however the impact in not much on husbands.

Table 4: Comparison of anxity score with family and social pressure

Family pressure	Anxiety score: Normal No.	Normal %	Mild No.	Mild %	Moderate No.	Moderate %	Severe No.	Severe %	Extremely severe No.	Extremely severe %	Total No.	Within wife and husbands	Between husband and wife
Wife													
No	14	23.7	29.0	49.2	13	22.0	3	5.1	0	0.0	59	<0.0001	0.0021
Yes	0	0.0	13.0	24.5	20	37.7	11	27.8	9	20.8	53		0.148
Husband													
No	39	52.0	20.0	26.7	14	18.7	2	2.7	0	0.0	75	<0.0001	
Yes	4	10.8	10.0	27.0	11	29.7	8	21.6	4	10.8	37		
Social pressure													
Wife													
No	14	20.3	37.0	53.6	15	21.7	3	4.3	0	0.0	69	<0.0001	0.0017
Yes	0	0.0	511.6	1841.9	11	25.6	9	20.9	43				0.0416
Husband													
No	40	45.5	23.0	26.1	19	21.6	6	6.8	0	0.0	88	<0.0001	
Yes	3	12.5	7.0	28.0	6	25.0	4	16.7	4	16.7	24		

Table 5: Comparison of Depression score with Family and Social Pressure

Family pressure	Anxiety score: Normal No.	Normal %	Mild No.	Mild %	Moderate No.	Moderate %	Severe No.	Severe %	Extremely severe No.	Extremely severe %	Total No.	Within wife and husbands	Between husband and wife
Wife													
No	18	30.5	16	27.1	20	33.9	5	8.5	0	0	59	<0.0001	0.0064
Yes	0		5	9.4	20	37.7	10	18.9	18	34	53		0.7322
Husband													
No	44	58.7	17	22.7	11	14.7	3	4.0	0	0	75	<0.0001	
Yes	0	0.0	6	16.2	15	40.5	6	16.2	10	27	37		
Social pressure													
Wife													
No	18	26.1	15	21.7	28	40.6	4	5.8	4	5.8	69	<0.0001	0.0226
Yes	0	0.0	6	14.0	12	27.9	11	25.6	14	32.6	43		0.9881
Husband													
No	44	50.0	19	21.6	20	22.7	3	3.4	2	2.3	88	<0.0001	
Yes	0	0.0	4	16.7	6	25.0	6	25.0	8	33.3	24		

Presence of social pressure has a statistically significant impact on the depression levels of wives however the impact in not much on husbands.

DISCUSSIONS

In our study, 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. In our study, 83.9% belonged to joint family and 16.1% to nuclear family. The results of Singh *et al*.[7] are similar as our study.

In the present study, when comparing family pressure and parameters of DASS-21 scale i.e., Depression, anxiety and stress, we observed that in both females (wives) and males (husbands), depression, anxiety and stress levels increases significantly when family pressure was there (p<0.0001 (Highly significant)). However on comparing depression, anxiety and stress levels within the family (couple of wives and husbands), we observed that in the families where family pressure was not there, the level of depression, anxiety and stress was significantly more in wives (p = 0.0064, 0.0021 and 0.0004, respectively for D, A and S) as compared to husbands but where the family pressure was present in the family, the depression, anxiety and stress levels were comparable in both wives and husbands (p = 0.732, 0.148 and 0.062, respectively (Not significant). We inferred that presence of family pressure has a statistically significant impact on the stress levels of husbands however the impact in not much on wives or to say that females tend to develop depression, anxiety and stress even when family pressure is absent.

In the present study, when comparing social pressure and parameters of DASS-21 scale i.e., Depression, anxiety and stress, we observed that in both females (wives) and males (husbands), depression, anxiety and stress levels increases significantly when family pressure was there (p<0.0001 (Highly significant). However on comparing depression, anxiety and stress levels within the family (couple of wives and husbands), we observed that where social pressure was not there, the level of depression, anxiety and stress was significantly more in wives (p = 0.0226, 0.0017 and 0.0007, respectively for D, A and S) as compared to husbands but where the social pressure was present in the family, the depression, anxiety and stress levels were comparable in both wives and husbands (p = 0.988, 0.0616 and 0.277 respectively (Not significant). We inferred that presence of social pressure has a statistically significant impact on the

stress levels of husbands however the impact in not much on wives or to say that females tend to develop depression, anxiety and stress even when social pressure is absent.

Family support or the family pressure for giving the baby for continuation of family plays a important role on the psychological and the behavioral health of couples fighting with infertility. Similarly, the society in which we live in plays a important part. In our country and specially in some of the educationally backward areas, the women suffering from infertility are considered as outcast and many women also face threat of divorce[8]. Al-Homaidan[9] reported similar results in their study on infertile couples, that intervention of relatives especially husband's family, negative attitude and behaviour of surroundings (family, friends, neighbours, etc.) causes psychological problems for infertile women. Their study shows significant difference in mean depression score between infertile women who got pressure from family for not getting pregnant than those who have no pressure. Drosdzol *et al*.[10] found that female gender, age over 30 years, lower level of education, lack of occupational activity, diagnosed male infertility and duration of 3-6 years of infertility as risk factors leading to depression and anxiety among infertile couples. Other researchers have explored lack of self-confidence, feeling of grievance, sin and disappointment as factors that may be related to infertility. Infertile women who have social support, positive personal characteristics and have a satisfactory life with their spouse show fewer signs of depression.

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. Further larger studies that allow for a causal inference are needed to confirm the diagnosis and parallel assessment of psychological symptomatology to plan more efficient interventions for infertile patients.

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