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A STUDY ON PSYCHIATRIC MORBIDITY IN INFERTILE WOMEN.

Psychiatric

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ABSTRACT

BACKGROUND: Centuries of misconception and myths regarding fertility have increased the problem. Motherhood is of great social significance and infertility is perceived as a threat to mens procreavity and the continuity of lineage. Infertility can result in a strained relationship in the marital home. Women could be victims of violence, abuse and social exclusion. Hence the purpose of the study is to assess the prevalence of psychiatric morbidity in infertile women and to correlate them with physical variables and to know their clinical relevance.

MATERIALS AND METHODS: The sample was chosen from infertile women attending obstetrics and gynaecology op of a medical college hospital. Forty women meeting the WHO criteria for infertility who satisfied the inclusion and exclusion criteria were chosen for the study. They were analysed using the Mini international neuropsychiatric interview(MINI), Socioeconomic status scale, Hospital anxiety Depression scale(HADS),Rosenberg Self esteem scale(RSE),Eysenck Personality inventory(EPI). The results of the study were analysed using both qualitative and quantitative data. Statistical techniques include both analysis such as measures of central tendencies and distribution and inferential methods including parametric and nonparametric methods.

RESULTS: Prevalence of psychiatric morbidity in infertile women was 27.5%. Major depressive disorder is the commonest psychiatric illness irrespective of duration of infertility. Sociodemographic variables do not influence psychiatric morbidity. Longer duration of infertility reduces selfesteem but not quality of marital life. As the duration of infertility increases there is significant risk of psychiatric morbidity. Family history of psychiatric illness does not influence psychiatric morbidity. The personality profile of infertile women with a family history of psychiatric illness scored significantly higher on the ambivert than other dimension.

CONCLUSION: Women with infertility are more prone for psychiatric disorders. Depression and anxiety disorders are common psychiatric illness in infertile women. Duration of infertility do not influence the quality of marital life.Longer the duration of infertility lower the self esteem. The reactions the infertile women are faced with ,play an important role in the development of certain psychiatric symptoms.

KEYWORDS

Psychiatric morbidity ,infertile women, selfesteem.

BACKGROUND

The world health organisation (WHO) defines primary infertility as the lack of conception despite cohabitation and exposure to pregnancy(WHO. 1991).Secondary infertility is defined as the failure to conceive following a previous pregnancy despite cohabitation and exposure to pregnancy (in the absence of contraception , breast feeding or postpartum amennorhoea) (WHO , 1991).According to studies conducted by WHO, the extent of primary and secondary infertility in India is 3 and 8%respectively.Based on 1981 census data childlessnessss amongst ever-married women in India is estimated to be about 6%.(Vermuri et al 1986)[1]. As per the WHO multi centric studies of infertility in india , 40% of women and 73% of men had no demonstrable cause of infertility (Cates et al 1985)[2].

Many couples with infertility problems report being jealous and feeling inadequate when meeting with other pregnant women or couples with children (Mc Naughton et al 2000)[3]. Longer the infertility lasts more devastating are its effects (Domar et al 1992, Wang et al 2007, Verhaak et al 2007)[4,5,6] .Balan et al 2006[7] in his study among 108 couples with a mean infertility period of 8.6 years showed that the desire for children was still very strong especially among the women. A multivariate analysis showed that a lower income, a worsened spousal relationship , infertility related perceptions , pressuring oneself or spouse due to infertility and a strong desire for children were significantly associated with a lowered quality of life..Fido et al 2004 [8] in his study compared age-matched pregnant controls with infertile women. He found that infertile women exhibited a significant higher psychopathology in all HADS parameters in the form of tension , hostility, anxiety, depression, self-blame and suicidal ideation.

A comprehensive study between infertile and fertile women showed that 44% of infertile and 28.7% of fertile women had a psychiatric disorder.(Noor Bala et al 2009)[9] . Women seeking treatment for infertility have an increased rate of depressive symptoms and possibly major depression (Williams et al 2007)[10]. Sbaragli et al 2004[11] in their study showed that psychiatric disorders were significantly higher among infertile subjects than among fertile controls especially for adjustment disorder with mixed anxiety and depressed mood (16% vs 2%) and for binge eating disorder(8%vs 0). Upkong et al 2006[12] have shown the prevalence of psychiatric morbidity was 46.4% in the infertile women, 37.5% and 42.9% were cases of anxiety and depression respectively. . The results also showed that the sociodemographic variables of the women with infertility contributed to the prediction of psychiatric morbidity .Increasing age , not having atleast one child and poor support from spouse contributed to psychiatric morbidity. Low level of education, polygamous marriage , unemployment, lack of support from in-laws and duration of illness were not predictors of mental ill health. Chen et al 2004[13] have shown that of a total of 112 participants attending an assisted reproductive technique, 40.2% had a psychiatric disorder. The most common diagnosis was generalised anxiety disorder (23.2%), followed by major depressive disorder (17.0%) and dysthymic disorder (9.8%). Depression , anxiety and self esteem were improved in infertile women as age and duration of infertility increased.(Guz et al 2003)[14]. Anxiety and related disorders were found in earlier age group whereas depression was found in later age groups.(Shohaib et al 2004)[15].Infertle women showed more “emotional disturbance” on rorschach protocols and were more likely to give schizoid and sexual responses.(Einser et al 1963)[16]. Infertility can lead to anger, make couples feel defective and lower their self esteem (Greil et al 1997)[17]. Newton et al 1990[18] measured relationship concern which included items about marital communication and found a positive association between relationship concern and higher symptom ratings of depression. Abbey et al 1994 [19]found that increased received emotional support between partners was related to increased marital life quality. Recent research suggests that a significant number of dropouts from infertility treatment are also due to psychological factors.(Domer et al 2004, Hammerberg et al 2001, Olives et al 2004)[20,21,22].

AIMS

This study specifically aims to,

1) Assess the prevalence of psychiatric disorders among infertile women.
2) To determine the association between psychiatric morbidity and quality of marital life.
3) To determine the association between psychiatric morbidity and psychosocial factors.

MATERIALS AND METHODS

Patients were selected from Obstetrics and Gynaecology outpatient department of a medical college hospital for a period of nine months after getting ethical committee clearance. Forty women meeting the WHO criteria for infertility who satisfied the inclusion and exclusion criteria were chosen for the study.

INCLUSION CRITERIA

Couples who were unable to conceive for 2 years without the use of any contraceptives(as defined by WHO).

Infertile women in the age group 20-40 years showing no gynaecological pathology.

Couple who had consented to participate in the study.

EXCLUSION CRITERIA

Women with past history of psychiatric illness or mental retardation.
women with medical or surgical causes of infertility.
women who are already on psychiatric treatment.

TOOLS USED IN THIS STUDY

The tools used in this study are proforma, Mini International Neuropsychiatric Interview, Socio economic status scale , Hospital Anxiety Depression Scale, Marital Quality Scale, Rosenberg self esteem scale and Eysenck personality inventory.

1) PROFORMA : Compiled for recording sociodemographic variables, duration of infertility, age of marriage and family history of psychiatric illness.
2) MINI INTERNATIONAL NEUROPSYCHIATRIC INTERVIEW (MINI) (Lecrubier and Sheehan 1992)[23] MINI is a short structured diagnostic interview and includes modules for 23 disorders and features on rule-outs, disorder sub typing and chronology .In India, Chandrasekaren et al 2005 in a study on attempted suicide used the MINI scale.
3) SOCIOECONOMIC STATUS SCALE(SES)[24,25] The scale consists of scores on 3 variables namely education, occupation and income on the basis of a 10 point scale. It consists of 10 categories of score ranging from the highest to the lowest. The categories are being grouped in 5 social classes namely very high, high, upper middle, lower middle and very low.
4) HOSPITAL ANXIETY DEPRESSION SCALE (HADS)[26] The HADS comprises fourteen statements which the patient rates based on their experience over the past week .Even-numbered questions relate to depression and odd-numbered questions relate to anxiety .Each question has four possible responses .Responses are scored on a scale from 0 to 3.The maximum score is 21 for depression and 21 for anxiety.
5) MARITAL QUALITY SCALE (MQS)[27]. The scale consists of 50 items in statement form with a four point rating scale of 'usually', 'sometimes', 'rarely' and 'never', indicating the frequency of occurence of various phenomenon in the marriage.The scale gives total score on twelve separate dimensions .It has both a male and a female form. Higher scores are indicative of a poorer quality of marital life.
6) ROSENBERG SELF ESTEEM SCALE (RSES)[28]. It is a 10 question scale that has four response choices from strongly agree, agree, disagree to strongly disagree. Studies have demonstrated both a unidimensional and a two-factor (self-confidence and self-deprecation)structure to the scale.
7) EYSENCK PERSONALITY INVENTORY[29]. It is a personality questionnaire to measure two independent dimensions of personality neuroticism-stability and extraversion-introversion dimension. It consists of 57 statements to which the subject responds by answering yes or no.The Tamil adaptation of the inventory(Varghese 1969) is employed because the N scores of this version was to effectively differentiate neurotic from normal.

STATISTICAL DESIGN

For each of the scales and sociodemographic variables the central values (arithmetic mean) and dispersion tendencies (standard deviation) were calculated .In comparison of the data for categorical variables chi-square and for numerical variables student t test were used. For knowing the significance of psychopathological attributes correlation matrix were used.

RESULTS

Table 1 - Sociodemographic Details

S. No	Variables		Infertile Women (n=40)		Statistical Design
			n	%	
1	Age	<30 >30	32 8	80% 20%	Mean =27.48 Sd=4.26 Range 21-36
2	Education	Uneducated Primary Secondary Higher Secondary Degree	4 6 20 3 7	10% 15% 75% 7.5% 17.5%	
3	Consanguinity	Present Absent	11 29	27.5% 72.5%	
4	Family Type	Nuclear Joint	15 25	37.5% 62.5%	
5	Socio Economic Status	Middle Lower	24 16	60% 40%	

Mean age of the sample was 27.48, standard deviation 4.26 and Range between 21-36 years.

Table 2 - comparison of sociodemographic variables, duration of infertility, family history of psychiatric illness among women with and without psychiatric illness

S. no	Variables		Psychiatric illness absent (n=29)	Psychiatric illness present (n=11)	't'
1	Age	<30 >30	23 6	9 2	0.031
2	Education	Illiterate 1-5 6-10 11-12 >13	2 5 13 2 7	2 1 7 1 0	4.64
3	Consanguinity	Present Absent	7 22	4 7	0.598
4	Family type	Nuclear Joint	8 21	7 4	4.42*
5	Socio economic status	Middle Lower	16 13	8 3	1.02
6	Duration of infertility	<4 >5	20 9	1 10	11.46 5**
7	Family h/o psychiatric illness	Present Absent	3 26	1 10	0.014

The difference in socioeconomic status between the two groups was not statistically significant. The duration of infertility among infertile women with and without psychiatric morbidity shows statistically higher significance

Table 3 - psychiatric morbidity in infertile women

Variable		Infertile women (n=40)	
		N	%
Psychiatric illness	Present Absent	11 29	27.5% 72.5%

table 4 - type of psychiatric illness

S. no	Type of psychiatric illness	Infertile women (n=40)	
		N	%
1	Nil	29	72.5%
2	Generalized anxiety disorder	3	7.5%
3	Major depressive disorder	6	15%
4	Dysthymic disorder	2	5%

table 5 - prevalence of psychological symptoms in infertile women

Variable		Infertile women (n=40)		Statistical analysis
		N	%	
Hads anxiety symptoms	<10 >11	37 3	92.5% 7.5%	Mean = 4.23 Sd= 3.7 Range 0-16
Hads depressive symptoms	<10 >11	34 6	85% 15%	Mean = 6.23 Sd=5.1 Range 0-17

table 6 description of personality, duration of infertility and family history of psychiatric illness among infertile women

S. no	Variables		Infertile women N=40		Statistical analysis
			N	%	
1	Family history of psychiatric illness	Positive Negative	4 36	10 90	
2	Duration of infertility	<4 >5	21 19	52.5 47.5	
3	Personality Profile	Introversion Ambivert Extraversion	1 38 1	2.5 95 2.5	Mean=10.73 Sd=2.38 Range=7-18
		Stable Tendency to be neurotic Neurotic	9 25 6	22.5 62.5 15	Mean=8.18 Sd=4.12 Range=2-17

4(10%) of the total sample had a positive family history of psychiatric illness. Majority in the study population scored in ambivert(95%) and tendency to neuroticism(62.5%).

Table 7 - correlation of age, duration with psychological symptoms, self esteem and marital quality

S.no	Variable	Hads a	Hads d	Rses	Mqs
1	Age	0.262	0.283	-0.288	-0.140
2	Duration of infertility	0.338*	0.495**	-0.423**	-0.056

*p<0.05 **p<0.01

On analysis of age, it does not show significant correlation with psychological symptoms or self esteem or quality of marital life. Quality of marital life has not showed significant correlation with duration of infertility.

Table 8 - comparison of socio demographic variables, psychiatric morbidity and personality profile in relation to family h/o psychiatric illness among infertile women

S. no	Variables		Family h/o psychiatric illness present N=4	Family h/o psychiatric illness absent N=36	't'
1	Age	<30 >30	3 1	29 7	0.69
2	Education	Illiterate 1-5 6-10 11-12 >13	0 2 1 0 1	4 4 19 3 6	5.106
3	Consanguinity	Present Absent	1 3	10 26	0.014
4	Family type	Nuclear Joint	1 3	14 22	0.296
5	Socio economic status	Middle Lower	2 2	22 14	0.185
6	Mini	Nil Present	3 1	26 10	0.14
7	Epi	Introversion Ambivert Extraversion	0 3 1	1 35 0	9.29**
		Stability Tendency to be neurotic Neurtoticism	0 2 2	9 23 4	4.741

p<0.05 **p<0.01

Age ,educational status, consanguinity ,family type and socioeconomic status do not show significant difference in relation to family history of psychiatric illness among infertile women. The personality profiles on introversion-extroversion dimension shows significant difference between infertile women with and without a family history of psychiatric illness.

DISCUSSION

On analysis of sociodemographic variables and its correlation to psychiatric morbidity the results obtained in our study showed few important observations. Among infertile women with psychiatric morbidity, majority were below the age of 30(81.8%) compared to women more than 30 years of age(18.2%), but the difference was statistically not significant. Educational status and consanguinity were not significantly different among infertile women with and without psychiatric morbidity. In our study it has been found that infertile women living in nuclear families(63.6%) had significant risk of developing a psychiatric illness compared to those in joint family systems.There has been more prevalence of psychiatric morbidity in women belonging to middle socioeconomic status (72.7%). But when compared to women from low socioeconomic status the difference was statistically not significant. Prevalence of psychiatric morbidity in infertile women was 27.5% which has been found to be lesser than the rates compared to Noorbela et al [9] who showed 40.4%, Chen et al [13] and Shohaib et al [15] who showed a prevalence rate of 40.2% and 76% respectively.

In this study regarding type of psychiatric illness, major depressive disorder accounting for 15% has been the commonest disorder, followed by generalised anxiety disorder and dysthymia accounting for 7.5% and 5% respectively. These findings are similar to the studies by Upkong et al [12] Ashkeni et al [30] Colemen et al [31], Domer et al [4] and shohaib et al [15]who reported generalised anxiety disorder (23.2%) as the commonest psychiatric illness in infertile women followed by major depressive disorder (17%)and dysthymia (9.8%). Anxiety disorder was the commonest finding in studies by william et al [10] and csemickzy et al[32]. Lesser prevalent psychiatric illness such as somatisation disorder, conversion disorder, obsessive compulsive disorder, panic disorder, phobias were not found in any of the infertile women in our study. In our study depressive and anxiety scores based on HADS has been uniformly higher in all infertile women. This finding is in concordance with previous studies by Noorbela et al [9], William et al [10] Ozkan et al [33]

Regarding family history of psychiatric illness on comparison of infertile women with and without psychiatric illness, there has been no significant difference. The personality profile of infertile women in our study showed that infertile women with a family history of psychiatric illness scored significantly higher on the ambivert than the other dimension. In a study done by Thara et al[34] women in the infertile group had higher scores on the neuroticism scale than their controls. On analysis of duration of infertility and psychiatric morbidity our study findings reveal that as duration of infertility increases there is significant risk of psychiatric morbidity. Further duration significantly increases anxiety and depressive symptomatology and significantly decreases self esteem in infertile women. This is in accordance with Ashkeni et al[31] and Shohaib et al [15] who showed that depression was significantly more in women with longer duration of infertility than shorter duration, but Luz et al [14] has reported that depression, anxiety and self esteem improved in infertile women as duration of infertility increases. Duration of infertility do not influence the Quality of marital life in our study.

LIMITATIONS

Major limitation of the study is the fact that it is a cross-sectional analysis involving a small sample size. Consecutive follow up of the infertile women periodically for a longer period could have enabled a more detailed understanding of the illness.

CONCLUSIONS

Women with infertility have high prevalence of psychiatric disorders. Depression and anxiety disorders are common psychiatric illness in infertile women. Longer duration of infertility lowers self esteem but do not influence the quality of marital life. Family history of psychiatric illness does not influence the development of psychiatric illness in infertile women. Infertile women are at risk for anxiety and depression compared to fertile women and there is a need for considering emotional factors for effective management.

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