

## **A Hospital Based Cross Sectional Observational Study on Sexual Dysfunction and Sexual Quality of Life in Psychiatric Outpatients with Special Emphasis on Female Sexual Dysfunction**

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### **Abstract**

**Background:** Sexuality is an important aspect of the personality of an individual and influences psychological, physical and social wellbeing of both men and women, sexual dysfunctions are often associated with psychiatric illness mostly due to the psychotropic drugs prescribed to the patients also duration of illness has an impact of the quality of life of these patients. It is a paradox, that in the country where 'Kamasutra' by Vatsyayana took birth, there is a lack of research publications and sexuality related literature.

**Aim and Objectives:** To study sociodemographic profile, sexual dysfunction and sexual quality of life in male and female psychiatric outpatients.

**Method:** This was a cross sectional hospital based observational study conducted at psychiatry Department, MGM Medical College, Navi Mumbai. 400 consecutive patients from the outpatient department were enrolled for the study who fulfilled the inclusion and exclusion criteria. Subjects were interviewed using a structured questionnaire. Sociodemographic details of the patients were taken and patients were asked question based on FSFI and SQOL-F for females to diagnose female sexual dysfunction and sexual quality of life. SQOL-M for male was used. Data was entered on excel sheet and analyzed on SPSS using appropriate statistical methods.

**Results:** Study consisted of 142 females and 258 males belonging to age group 16yrs to 60yrs with minimum age of participant being 19 years and maximum age 58 yrs, 73% of the study sample were married and 27% were unmarried, 46.5% of the respondents were educated up to graduation, 32% up to higher secondary, 19% were educated up to Senior secondary school, 91.5% belonged to Hindu religion, majority of respondents were house wives 23.75%, 17.25% were self-employed, 16.75% were skilled workers, 14.5% were students. In our study 59.25% of the respondent belonged to middle class and 19.75% belonged to lower middle class. Depression was diagnosed in 28.75%, 14.75% had alcohol use disorder, 13% had schizophrenia, 22% of patients had interpersonal stressors, 10% of patients had Dhat syndrome, 38% of females had lack of desire, 51.3% had arousal problems, 49.8% had lubrication problems, 40.7% had orgasm problems, 35.2% satisfaction and 28.8% had pain. Female sexual dysfunction was 56.5% in our sample.

**Conclusion:** The findings in our study suggest that large number of patients attending psychiatry OPD need to be screened for sexual dysfunction as it may be caused by medication or the illness

itself, depression, schizophrenia, alcohol use disorder, BPAD were commonly associated with psychiatric illness further anti-depressants and anti-psychotics are known to cause sexual dysfunction and caution should be taken while giving these medications. Psychoeducation of the patients helps overcome many problem areas in these patients. Further research in this area is needed as there is lack of research from India.

**Keywords:** Sexual Disorders, Quality Of Life, Sexual Dysfunction.

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## Introduction

Sexuality is an important aspect of the personality of an individual and influences psychological, physical and social wellbeing of both men and women. It is a paradox, that in the country where 'Kamasutra' by Vatsyayana took birth, there is a lack of research publications and sexuality related literature, TSS Rao *et al.* signify the need for more studies in the field of sexology [1]. Female sexual dysfunction is a common, condition that significantly reduces the quality-of-life of the affected persons [2]. Adequate sexual expression is an essential part of many human relationships, and may enhance quality of life [3]. Sexual dysfunctions are highly prevalent in the community yet understudied. In a community, online study done by Shaer O and Shaer K called the Global Online Sexuality Survey found the prevalence rate of Erectile dysfunction in the United States of America is 33.7% in the year 2011, in contrast to the adjusted prevalence in the Middle East (47%) [4]. Sexual side effects are often under-reported and associated with chronic psychiatric conditions. Tharoor H *et al* highlight that there is a paucity of studies looking at psychiatrist's perception in dealing with patient's perspectives [5]. Haefliger T and Bonsack C have discussed that Sexual and reproductive function as side effects of atypical antipsychotics are frequent, often underestimated and badly tolerated. Prevalence of sexual dysfunction associated with atypical antipsychotic treatment is high, varying from 18 to 96% [6]. Kennedy SH *et al.* recommend that Antidepressant induced sexual dysfunction occurs in approximately

30% to 70% of patients who are treated with sertraline or paroxetine [7]. Diagnostic and Statistical Manual of mental disorders-V (DSM-V) describes sexual dysfunctions as a heterogeneous group of disorders that are typically characterized by a clinically significant disturbance in a person's ability to respond sexually or to experience sexual pleasure. DSM-V categorizes sexual dysfunction into several categories, including delayed ejaculation, erectile disorder, female orgasmic disorder, female sexual interest/arousal disorder, genito-pelvic pain/penetration disorder, male hypoactive sexual desire disorder, premature (early) ejaculation, substance/medication-induced Sexual Dysfunction, other specified Sexual Dysfunction, and unspecified Sexual Dysfunction. Sexual dysfunctions in females are more prevalent than in males [8]. Culture bound syndrome and sexual dysfunction have associations in previous studies. However, it is largely under studied area. In a study by Bhatia *et al.*, he found that Dhat syndrome was most common (76.7%), followed by possession syndrome (13.3%). Depression is the most common associated psychiatric disorder appropriately. Bhatia *et al.* suggest that the data on culture bound syndromes in Indian subcontinent is less, and calls for careful evaluation of these patients psychologically to detect and treat the associated psychiatric comorbidity [9]. Sandeep Grover *et al.* recommend that the evidence of existence of female equivalent of Dhat syndrome comes from various studies from south Asia. The women usually present with complaints of

safed paani (white water), dhatu or swed pradhar. Considering this overlap, it can be said that definitely there is a female equivalent of Dhat syndrome and there is a need for clinical characterization of the same [10]. Om Prakash and T. S. S. Rao *et al.* have pointed that most of the studies have concentrated on male sexual dysfunction and hardly a few have voiced the sexual problems in females. There is paucity of data on estimates of sexual dysfunctions in psychiatric outpatients in India. [11]. In an attempt to contribute to this lacuna in sexuality researches in India, this study was conducted with aim to explore sexual dysfunction and sexual quality of life among psychiatric outpatients with special emphases on female Sexuality.

### Objectives

1. To study sociodemographic profile of study population
2. To assess sexual dysfunction in female and male psychiatric outpatients
3. To assess sexual quality of life of psychiatric outpatients
4. To find correlates of sexual dysfunction and sexual quality of life in female psychiatric outpatients

### Methodology

This study followed a descriptive, cross-sectional study design. Participants were consecutive consenting patients attending the psychiatric OPD of MGM Medical College Hospital, Kamothe Navi Mumbai, over a period of 24 months from Oct 2015 and Oct 2017. MGM Medical College Hospital is a tertiary teaching hospital in Mumbai, Maharashtra.

Sample size (400) was obtained by calculating from the statistical formula for cross sectional studies. Sample size,  $N = \frac{4PQ}{L^2}$  [P = estimated prevalence of various sexual dysfunctions in psychiatric out patients (50%, from pilot study); Q = 100- P; L = relative precision (10% of P= 5); Sample size= 400 at

confidence interval of 95% & at 80% power of study]

### Inclusion Criteria:

1. Male & Female patients of Age between 18 to 60 years with a diagnosis of a psychiatric disorder according DSM-V
2. Patients willing to participate in the study after informed consent

### Exclusion Criteria:

1. Patients with co-morbid severe medical illnesses contributing to sexual dysfunction
2. Patients with grossly disorganized behavior or thought and/or significant cognitive impairment and intellectual disability.
3. Patients who were not willing for the interview, uncooperative, poor ability to communicate in interview.

**Procedure:** After Institutional Ethics Committee (IEC) approval, the sample collection was started. Patients attending Psychiatry OPD at MGM Medical College & Hospital were screened and diagnosed by the treating psychiatrist per DSM-5 criteria. Those fulfilling the inclusion and the exclusion criteria and willing to participate in the study were selected and written informed consent was obtained from patients and/or legally authorized relatives. Eligible participants were interviewed by trained psychiatry resident using appropriate instruments.

### Instruments

1. Study Proforma: General description, demographic data and psychiatric history and examination (both physical and psychiatric) were recorded using a semi structured interview proforma.
2. The Female Sexual Function Index (FSFI): The FSFI is a widely-used measure of Female Sexual Dysfunction (FSD). The FSFI, a 19-item questionnaire, has been developed as a brief, multidimensional self-report instrument for assessing the key dimensions of sexual function in women. It

assesses 6 domains: desire; arousal; lubrication; orgasm; satisfaction; and pain. The questionnaire described was designed and validated for assessment of female sexual function in studies. [12]

3. Sexual Function & Quality of Sexual Life Male (SQOL-M) Questionnaire: A 42 item questionnaire developed by Gavin Daker – White in 2000-2001 to assess sexual function and sexual quality of life in patients suffering from genito-urinary infections and further used in various studies conducted to assess sexual functioning and quality of sexual life. Internal consistency (Cronbach's  $\alpha$ ) of core items was 0.84 in 186 women (19 items) and 0.87 in 210 men (22 items). Construct validity was supported in comparisons with reference groups using one-way analysis of variance and post-hoc Scheffé testing [13].
4. The Sexual Quality of Life Female (SQOL-F): The SQOL-F questionnaire is a short instrument that specifically assesses the relationship between female sexual dysfunction and quality of life. Symonds and co-workers developed the questionnaire in 2005. The basis for the generation of the SQOL-F questionnaire was Spitzer's Quality of Life model that involved physical, emotional, psychological and social components. The scale has been validated in many regional settings with reliability evaluation revealed high internal consistency and good test-retest reliability. The Cronbach's alpha coefficient was 0.73 and intra class correlation coefficient was 0.88. [14].

### Statistical Analysis

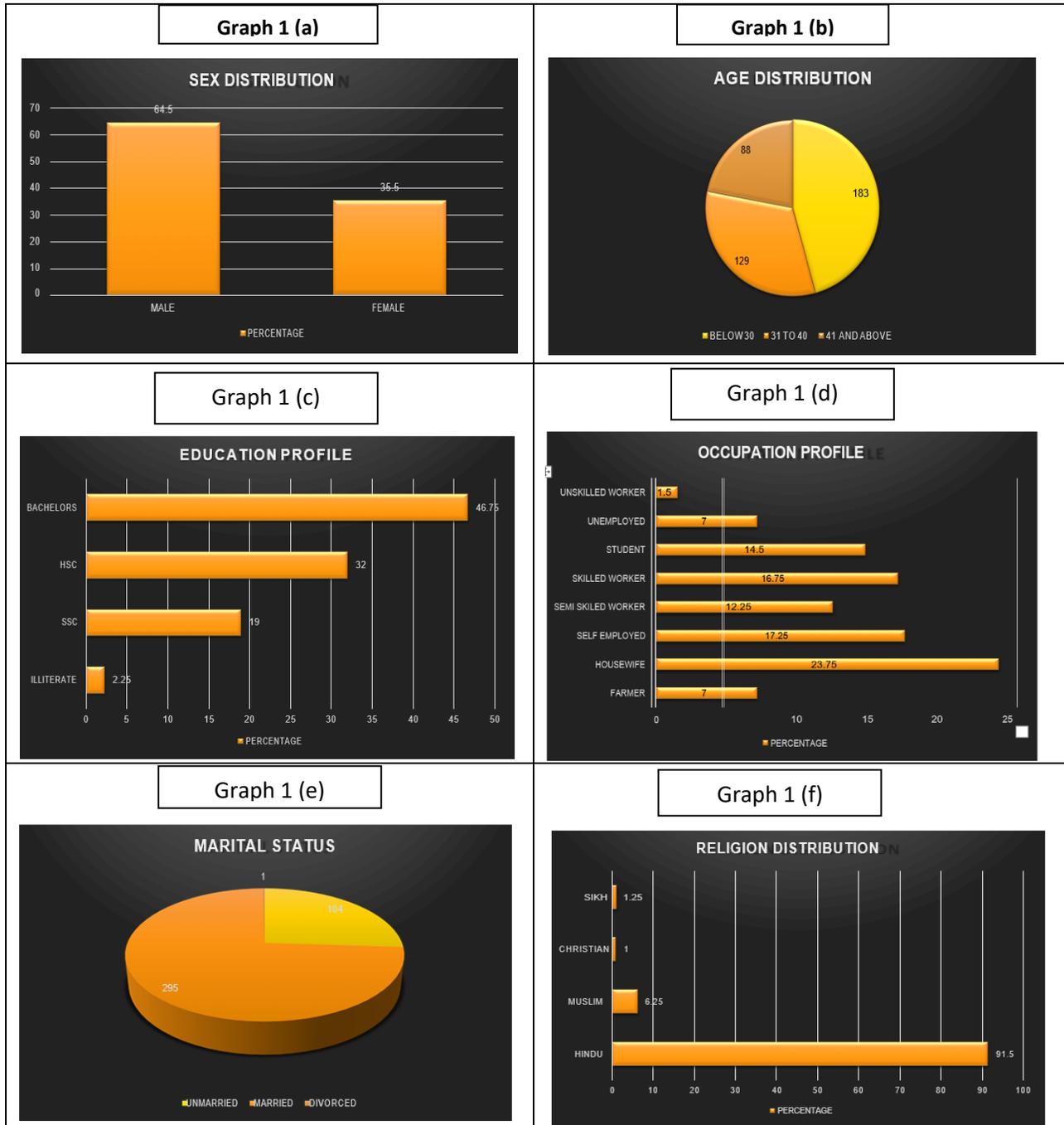
Data were entered into Microsoft Excel spreadsheet and statistical analysis was performed using SPSS 22.0. Categorical data were summarized into tables, while continuous data were summarized using mean and standard deviation. Pearson's chi-square test was used to determine the association between categorical dependent variables, while independent t-test or analysis of variance was

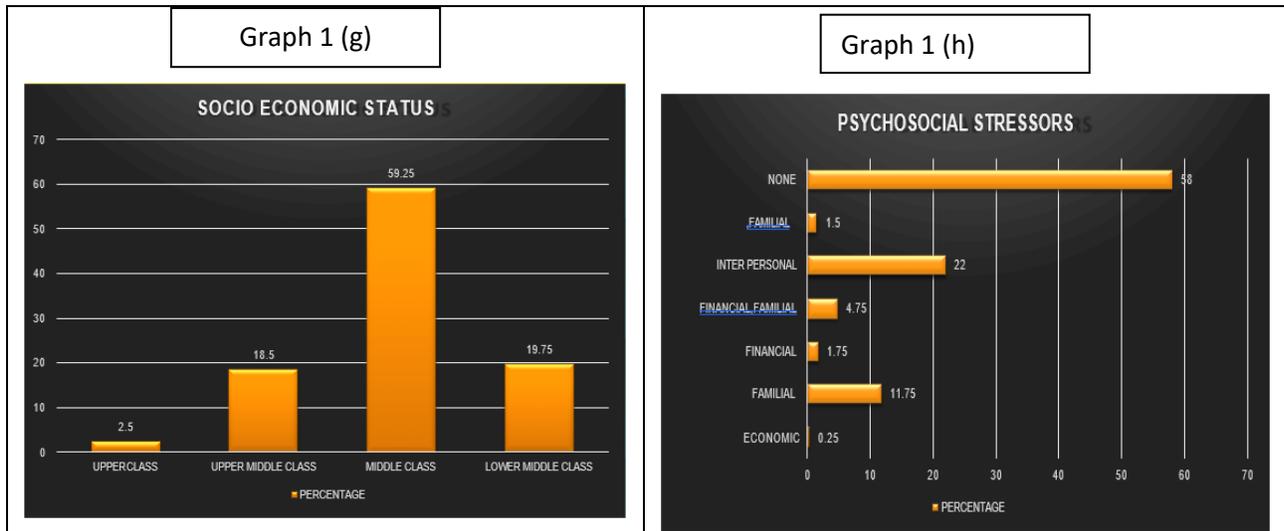
applied to continuous dependent variables. Pearson's correlation coefficient was used to test the association between continuous dependent and independent variables. All analysis was two-tailed and the level of significance was set at  $p < 0.05$ .

### Results

A total of 400 consecutive patient were taken up for the study, of which 258 (64.5%) were males and (n=142)35.5% were females [Graph 1 (a)]. Of the total number of patients, (n=183) belonged to the age group below 30 years of age, 129 patients belonged to the age group of 31 to 40 years of age and 88 belonged to the age group above 41 years [Graph 1 (b)]. 46.75% of the respondents were having education up to bachelor degree, 32% were educated up to higher secondary school, 19% received school up to senior secondary school and 2.25% were illiterates [Graph 1 (c)]. Majority of them were housewives 23.75%, 17.25% were self-employed, 16.75% were skilled workers, 14.5% were students, 7% farmers and unemployed respectively and 1.5% were unskilled workers [Graph 1 (d)]. Marital status of the patients of our study consisted that of married were 295(73.5%), unmarried were 104(26%) and divorced 1 person (0.25%). [Graph 1 (d)].

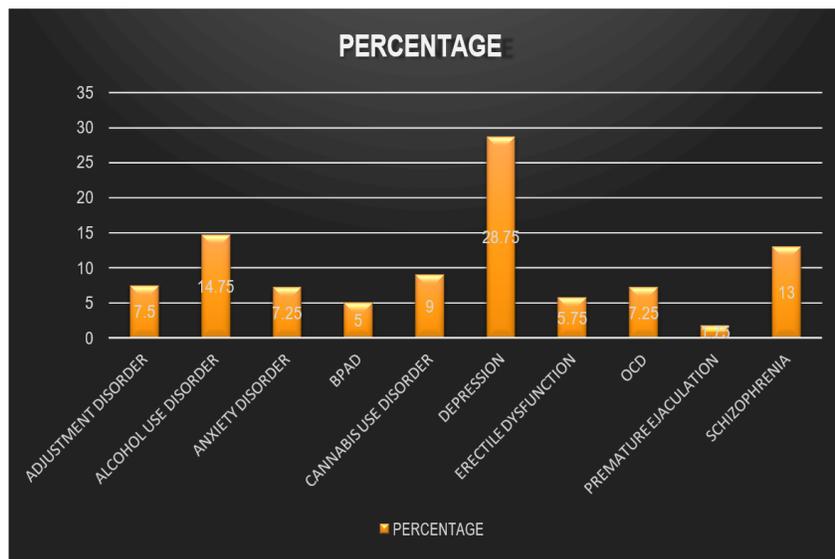
Majority of the patient were of Hindu community 91.5%, 6.25% belonged to the Muslim community 1.25% were from the Sikh community and 1% were from the Christian community [Graph 1 (e)]. 59.25% majority of the patients belonged to the middle class background, 19.75% to the lower middle class background, 18.5% to upper middle class and 2.5% to the upper class according to B.G.Prasad SES [Graph 1 (f)]. 58% of the patient reported to have no psychosocial stressors, 22% had interpersonal stressors, 11.75% has familial stressors, 4.75% had financial along with familial stressors, 1.75% had standalone financial stressors, 1.5% had interpersonal along with familial stressors, and 0.25% had economic stressors [Graph 1 (g)].





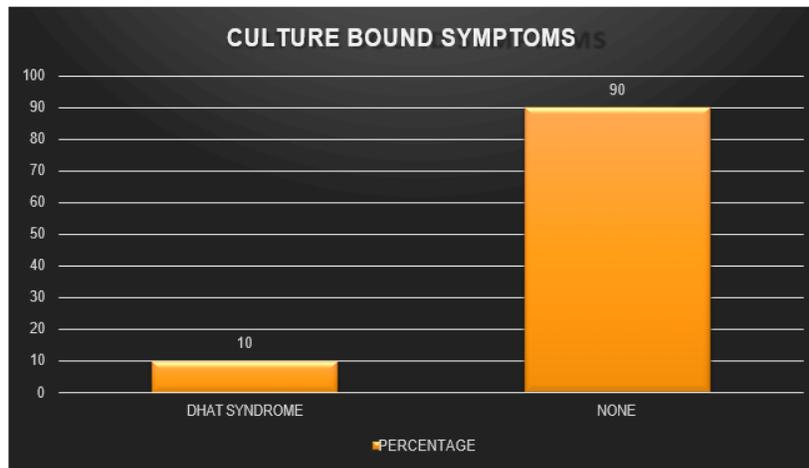
**Graph 1**

It was found in our study that the depression was most common psychiatric diagnosis with 28.75% was of Depression, alcohol use disorder in 14.75% of the patients, schizophrenia in 13% of the patients, cannabis use disorder in 9%, adjustment disorder in 7.5% of the patients 7.25% had anxiety disorder and OCD respectively, 5.75% presented with erectile dysfunction, 5% with BPAD, 1.75% with premature ejaculation (Graph 2)



**Graph 2: Psychiatric diagnosis**

In our study we had 40 respondents who had presented with complaints of passing semen in urine or Dhat Syndrome and comprised 10% of the total sample on the other side we had 360 respondents or 90% who did not present with culture bound symptoms. (Graph3)



**Graph 3: Culture Bound symptoms**

Graph 4 (a) depicts the Desire domain of the FSSI, here we find that majority of women responded that they had high sexual desire 29.6%, 17.6% reported desire most of the times in the past month. The table takes into account question 1 and 2 on FSSI.

Graph 4 (b) depicts Majority of respondents 21.8% said they had arousal sometimes, of moderate level, had moderate level of confidence and arousal about half of the times on scale items 3,4,5 and 6. Also 17.6% of women said they had almost always had arousal and had very high levels of confidence.

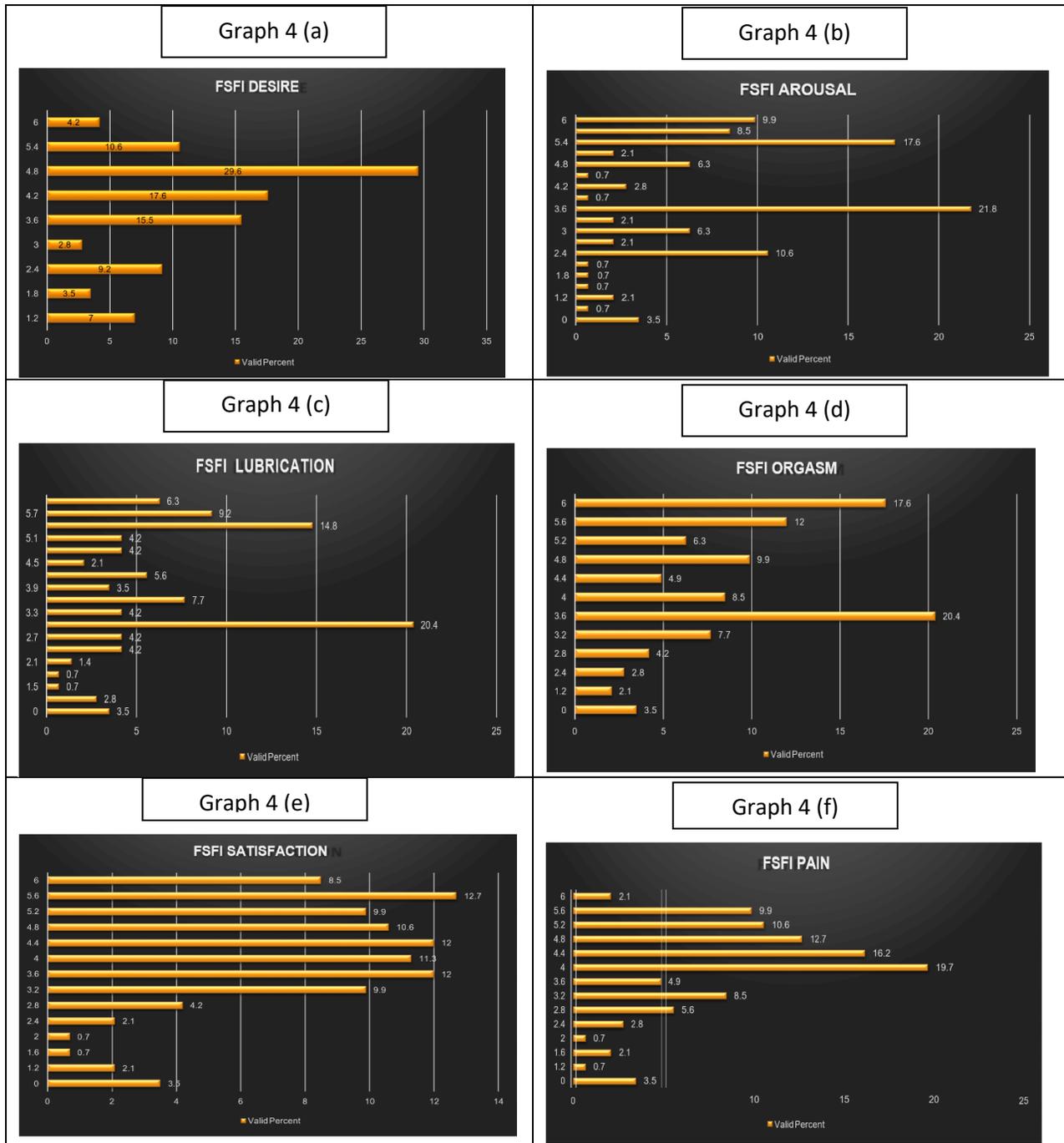
Majority of the Respondents 20.4% had problems with lubrication, and reported difficulty in either getting lubricated some of the times or had difficulty in maintaining lubrication as described on the items 7,8,9 and 10 of FSFI as depicted in Graph 4 (c), also 14.8% women had no problems with lubrication. In our study we found that majority of respondents had no problems in

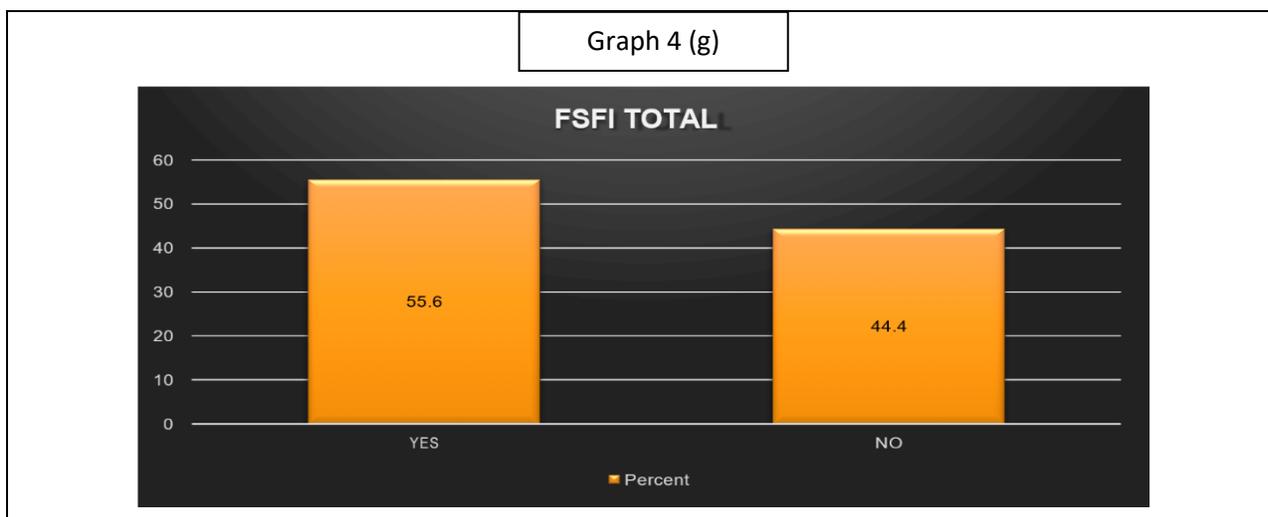
attaining orgasm considering majority scored above 5 and above on items 11,12,13 cumulative although we also found that 20.4% and 7.7 had difficulty attaining orgasm or had orgasm sometimes over the past month as depicted above in Graph 4 (d)

Majority of the respondents had scores of 4 and above on the items 14,15, and 16 depicting that majority of women were satisfied with their sexual life as seen above in Graph 4 (e)

Majority (19.7%) of respondents had pain during sexual intercourse a few times in the last month also 3.5% of the respondents did not attempt a sexual intercourse also 8.5%, 5.6%, 4.9% of the respondents had painful sexual activity. Graph 4 (f)

In our study we found that 55.6% of the respondent females had sexual dysfunction as calculated from the score on FSFI (score of 26.55 or lower have sexual dysfunction) as depicted in Graph 4 (g)





Graph 4

Table 1: Psychiatric Diagnosis in Males

Psychiatric Diagnosis	Frequency	Percent
Adjustment disorder	8	3.1
Alcohol use disorder	57	22.1
Anxiety disorder	15	5.8
BPAD	11	4.3
Cannabis use disorder	34	13.2
Depression	42	16.3
Erectile dysfunction	23	8.9
OCD	23	8.9
Premature ejaculation	7	2.7
Schizophrenia	38	14.7
Total	258	100.0

In our study sample a total number (n=258) were males 64.5% of the total sample of which maximum patients were of alcohol use disorder 22.1%, depression 16.3%, schizophrenia 14.7%, cannabis use disorder 13.2% and patients also presented with sexual dysfunction itself in the first place with erectile dysfunction 8.9% and premature ejaculation followed by other psychiatric illnesses. [Table 1 ]

Table 2: Sexual Function & Quality of Sexual Life Male using SQOL-M

	Question Responses	Frequency	Percent
Quality of Life	Awful	72	27.9
	Not very good	130	50.4
	Fairly good	5	1.9
	Good	36	14.0
	Very good	15	5.8
Urge	I did not have any sexual urges at all	37	14.3
	I hardly seem to get the urge	153	59.3
	Fairly strong	12	4.7
	Strong	10	3.9
	Very strong	46	17.8

Erection	Never	37	14.3
	Hardly ever	153	59.3
	Sometimes	12	4.7
	Usually	10	3.9
	Always	46	17.8
Problematic erection	I never get erections	37	14.3
	Yes i regularly had problems getting erections	153	59.3
	Yes i sometimes had problem getting erections	12	4.7
	No i hardly ever had problems	10	3.9
	No i never had any problems getting erections	46	17.8
Maintenance of Erection	I never get erections	37	14.3
	Yes i regularly had problems maintaining my erections	153	59.3
	Yes i sometimes had problems maintaining my erections	12	4.7
	No i hardly ever had problems	10	3.9
	No i never had problems keeping my erections	46	17.8
Strength of	I never had erections	3	1.2
	Very weak erections about 25% of full strength	54	20.9
	Semi erections about 50% of full strength	113	43.8
	Reasonable erections about 75 % of full strength	38	14.7
	Full 100% erections	50	19.4
Climax or Orgasm	I did not climax or orgasm	3	1.2
	Yes i regularly had problems trying to reach climax ororgasm	54	20.9
	Yes i sometimes had problems reaching climax or orgasm	113	43.8
	I hardly ever had problems reaching climax or orgasm	38	14.7
	No i did not have any problems reaching climax or orgasm	50	19.4
Pleasure from Orgasm/	A little pleasure but not like it used to be	10	3.9
	Less pleasure than is normal for me	135	52.3
	The same pleasure i have always had	110	42.6
	More fulfilment than is usual for me	3	1.2
Ejaculation	Yes some of the time	1	0.4
	Yes a little	77	29.8
	No hardly ever	138	53.5
	No not at all	42	16.3
Semen amount,	Yes a little	59	22.9
	No hardly ever	121	46.9
	No not at all	78	30.2
Importance of Sex Life	Not very inportant	79	30.6
	Fairly importatnt although no more or less importantthan anything else	115	44.6
	My sex life was very important part of my life	30	11.6
	My sex life was more important to me than anything else	34	13.2
Pain	Yes i agree	49	19.0
	I am not sure	152	58.9
	No i don't agree with it	57	22.1

**Table 3: Association Between Female Sexual Dysfunction and Sexual Quality of Life Female**

SQOL-f domains	Female sexual dysfunction	N	Mean	Std. Deviation	Std. Error mean	P-value by unpaired t test
Psychosexual Feelings	Yes	79	24.38	3.247	0.365	0.25
	No	63	23.71	3.585	0.452	
Sexual relationship satisfaction	Yes	79	18.43	2.416	0.272	0.001
	No	63	19.87	2.324	0.293	
Self worthlessness	Yes	79	8.05	1.928	0.217	0.93
	No	63	8.08	2.074	0.261	
Sexual repression	Yes	78	9.88	1.837	0.208	0.64
	No	63	10.13	4.078	0.514	
SQOL-f total	Yes	78	60.81	5.618	0.636	0.35
	No	63	61.79	6.982	0.880	

Table 3 depicted above shows a comparison of mean scores of SQOL-F compared to FSFI. The mean score on sexual relationship satisfaction domain of SQOL-F was significantly low in females reporting sexual dysfunction. On all other domains of SQOL-F, the mean scores were low in the patients reporting sexual dysfunction, however this association was not statistically significant.

**Table 4: Co-relation of Sexual Quality of Life Female with Age Groups**

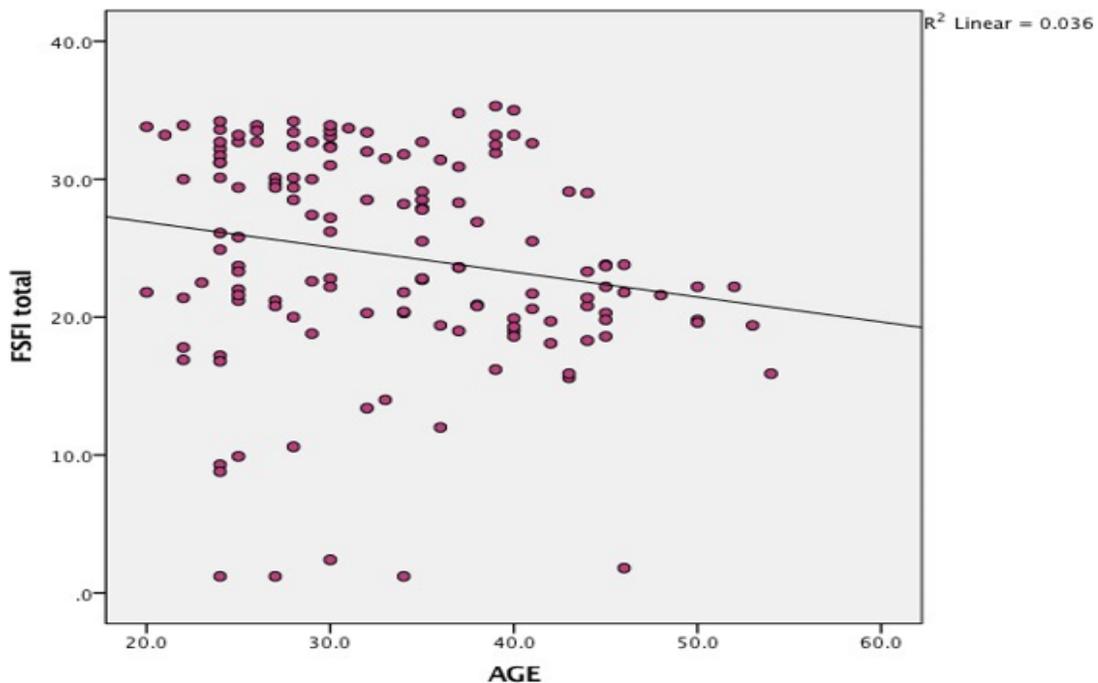
SQOL-f domains	Age group	N	Mean	Std. Deviation	Std. Error mean	P value by unpaired t test
Psychosexual Feelings	Below 30	67	24.45	3.653	0.446	0.47
	31 to 40	45	23.67	3.310	0.493	
	41 and above	30	23.90	2.964	0.541	
	Total	142	24.08	3.405	0.286	
Sexual relationship satisfaction	Below 30	67	19.45	2.488	0.304	0.25
	31 to 40	45	18.84	2.540	0.379	
	41 and above	30	18.57	2.285	0.417	
	Total	142	19.07	2.474	0.208	
Self worthlessness	Below 30	67	8.13	1.841	0.225	0.59
	31 to 40	45	7.82	2.177	0.325	
	41 and above	30	8.27	2.033	0.371	
	Total	142	8.06	1.987	0.167	
Sexual repression	Below 30	67	10.15	4.016	0.491	0.73
	31 to 40	45	10.00	1.846	0.275	
	41 and above	29	9.62	1.613	0.299	
	Total	141	9.99	3.039	0.256	
SQOL f total	Below 30	67	62.18	6.943	0.848	0.24
	31 to 40	45	60.33	5.440	0.811	
	41 and above	29	60.52	5.642	1.048	
	Total	141	61.25	6.260	0.527	

Table 4 depicts One way ANOVA analysis between age groups and female sexual quality of life, we observed that mean scores of psychosexual feelings were higher in age group of 30 yrs and below. Similarly sexual relationship and satisfaction was highest in the younger age group, feelings of self-worthlessness was highest amongst age group 41 and above. Sexual repression was highest in age group 30 yrs and below. Higher mean score on FSFI were noted depicting lesser sexual dysfunction amongst the young age group. All these co relation were statistically non-significant.

**Table 5: Co-relation of Sexual Dysfunction and Education**

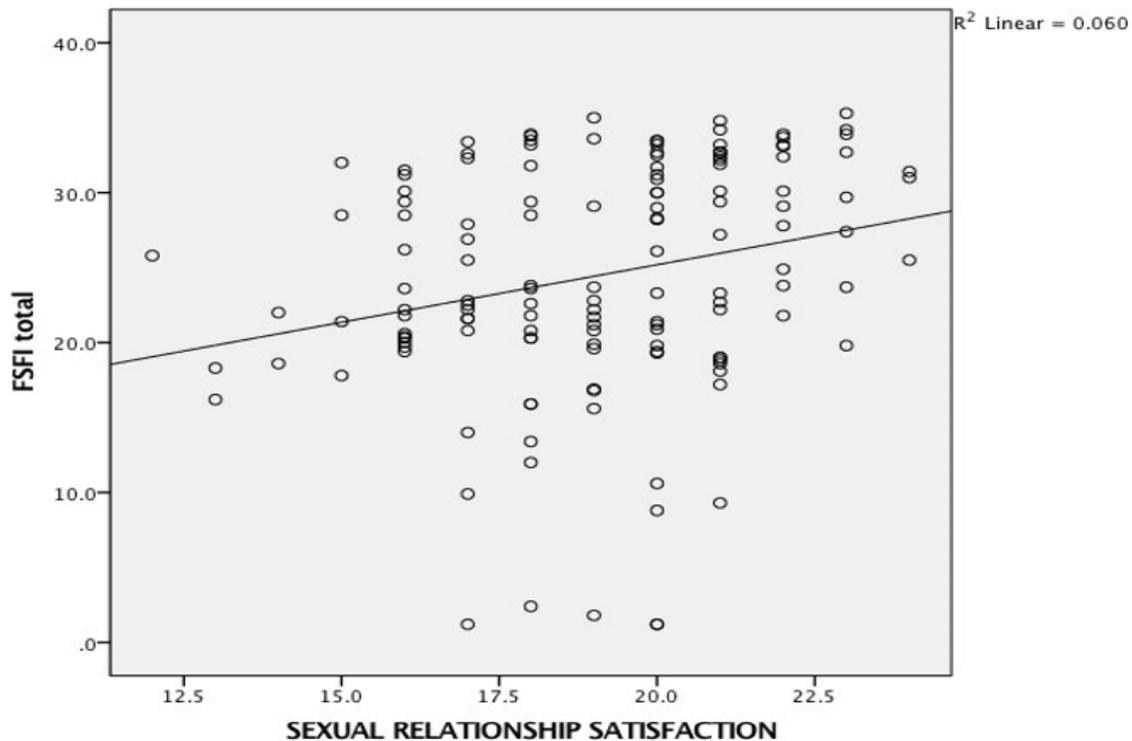
Education profile		Female sexual dysfunction		Total	P value
		Yes	No		
Education	Illiterate	5	0	5	0.0001
		6.3%	0.0%	3.5%	
	SSC	17	5	22	
		21.5%	7.9%	15.5%	
	HSC	31	16	47	
		39.2%	25.4%	33.1%	
Bachelors	26	42	68		
	32.9%	66.7%	47.9%		
Total		79	63	142	
		100.0%	100.0%	100.0%	

Table 5 depicts co relation between education and sexual dysfunction. Significant relationship between education and sexual dysfunction was observed which highlights that patient with higher education had significantly lesser sexual dysfunction with a p value of 0.0001



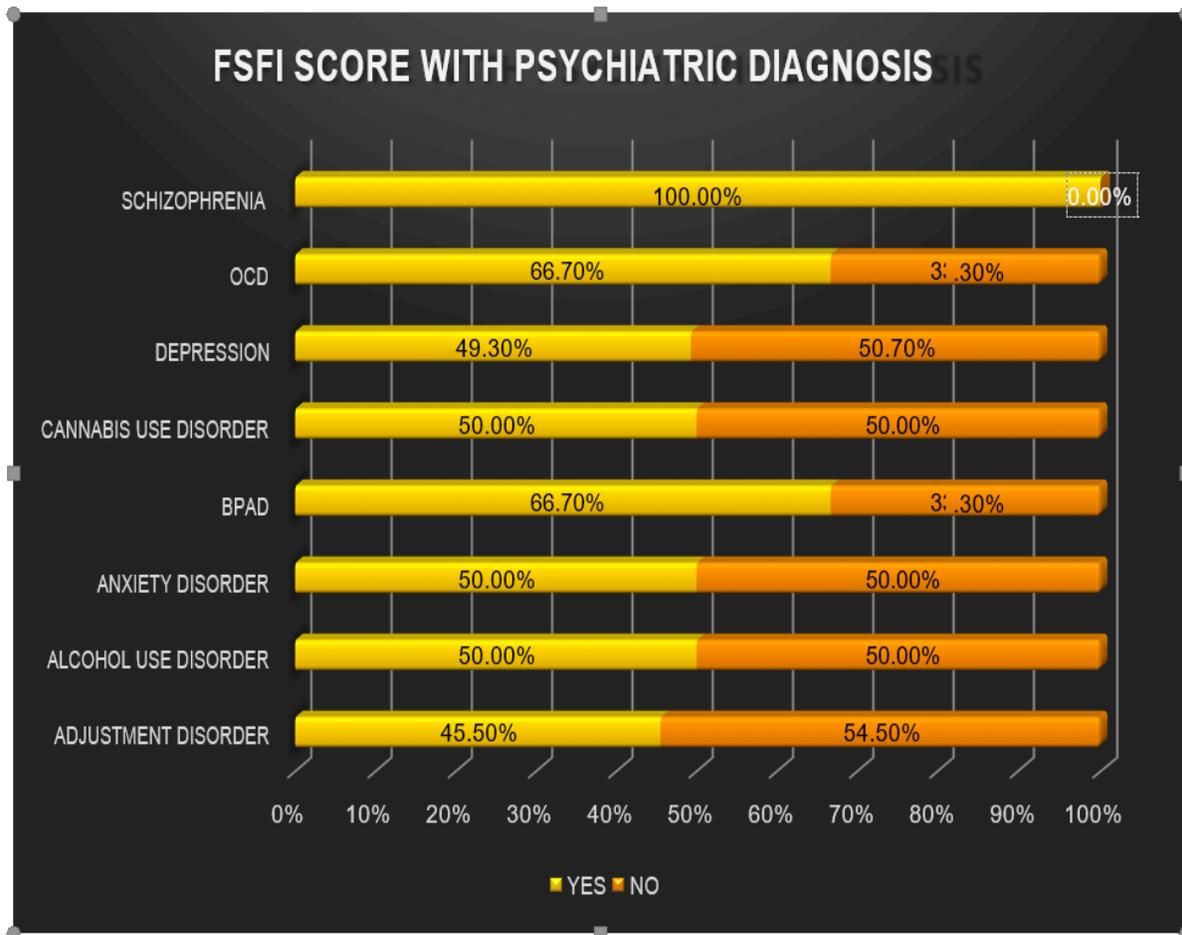
**Graph 5: Co-relation Between Age and FSFI Total Score**

In the above Scatter Graph 5 Depicts Pearson Bivariate Co relation. A negative co-relation was found between age and total score on FSFI, as the age advances there is decrease in total FSFI score indicating increase in sexual dysfunctions with increasing age. However, co-relation was not found statistically significant.



**Graph 6: Co relation Between FSFI Total Score and Sexual Relationship Satisfaction**

Graph 6 depicts Pearson Bivariate co-relation between FSFI total scores and domains of SQOL-F sexual relationship and satisfaction had a significantly positive co relationship between the two with p value of 0.003. This implies that sexual relationship and satisfaction increases with better FSFI scores, meaning less sexual dysfunction leads to better relationship and satisfaction



**Graph 7: Depicting Relationship Between FSFI total Scores and Psychiatric Diagnosis**

In the above-mentioned graph 7 we find that of total females, 100% of females having schizophrenia had sexual dysfunction followed by OCD, 66.70% BPAD 66.70%, 50% each in cannabis use disorder, anxiety disorder, alcohol use disorder and 49.30% in depression, 45.50% in adjustment disorder.

### Discussion

Sexuality in an essential part of human beings and most our lives revolve around it. The present study is a cross sectional study conducted in a semi-urban population aimed at studying patterns of sexual dysfunctions, associated sexual quality of life and their correlates in psychiatric outpatients with special concern over the sexual dysfunction in females as it has been studied much less in Indian settings.

In our study a total of 400 patients were interviewed in a time period between Oct 2015 and Oct 2017. Tharoor *et al.* conducted a study of 136 schizophrenic patients at specialty hospital in Chennai [5]. TSS Rao *et al.* conducted a study in rural south India with 1529 individuals [1]. In our study sample, 142 (35.5%) were females and 258 (64.5%) were male patients it is a fair representation of the sample as seen in Indian studies leaving epidemiological studies. Gurvinder Kalra *et al.* studies on 100 subsequent males presenting to psychiatric outpatients [15]. Vineet Mishra *et al.* studied sexual dysfunction in 153 fertile females [16]. Varghese *et al.* in their study on young married female had 150 participants also comparable to our study [17]. Veda Shetagiri *et al.* studied 100 females in their study of sexual dysfunction in women

receiving psychotropic medications [18]. Rajarshi Guha Thakurta *et al.* studied subsequent sample of 60 patients of Major depressive disorder of which 24 were male and 36 were female also studied quality of life [3].

In our study maximum study participants were in age group of below 30 years (n=183). Rao *et al.* reported that majority of the males were from 18 to 30 years of age followed by 31-40- and 41-50-years age groups, of the female's majority of subjects were of 18-30yr age group followed by 31- 40yrs age group.[1]

In our study, 46.5% participants were graduates, 32% were educated up to higher secondary school, 19% were educated up to senior secondary school, 2.25% were illiterates. In a study by JC Singh *et al.* on prevalence of risk factor and female sexual dysfunction the mean number of years of education was 8.9 years (SD 3.8; range 0-16 years). Of these, 32 (22%) had less than six years of education, 78 (52%) had completed high school and 39 (26%) had some form of college education, although this study was conducted in a rural setting [19].

We found that occupation profile of the patients was that of housewife 23.75%, self-employed to be 17.25%, skilled workers to be 16.75%, student to be 14.5%, semi-skilled workers to be 12.25%, farmers and unemployed to be 7% respectively and 1.5% unskilled workers. Sandeep Grover *et al.* found 91.25% to be housewives another 8.7% to be either unemployed or going out of house to work [20].

Majority of the respondents were married (73.7%). Rao *et al.* in their study found Most of the subjects (87.3%) were married and 12.7% of the subjects were single, either unmarried, divorced or their spouse had passed away [1]. Sandeep Grover *et al.* did a study of sexual. Dysfunction amongst married females of which 100% were married [20].

Majority of the patients belonged to the Hindu religion 91.5%, 6.25% Muslims, 1.25%

Sikh, 1% Christian. In the similar study conducted by Grover *et al.* found more than half (n=49; 61.3%) were Hindus, 30 patients (37.5%) were Sikhs and 1 patient (1.3%) was Muslim by religion [20].

In our study we found that socio economic status of the patients measured by the B.G.Prasad classification majority of the patients belonged to the middle class 59.25%, lower middle class 19.75%, upper middle class 18.5% and 2.5% belonged to the upper class. Rao *et al.* Majority of the study subjects belonged to either lower middle class (43.6%) or upper lower class (40.9%) according to modified Prasad classification for socioeconomic status [21].

In our study we found that Depression was the most common psychiatric diagnosis with 28.75%, Alcohol use disorder to 14.75%, Schizophrenia to be 13%, adjustment disorder to be 7.5%, Cannabis use disorder 9%, anxiety disorder to be 7.25%, OCD to be 7.25%, 5.75% of the patients presented with Erectile dysfunction, 5% with BPAD, 1.75% with premature ejaculation. Veda Shetagiri *et al.* found common diagnoses were severe depressive disorder with psychotic symptoms 19 (18.81%), paranoid schizophrenia 13 (12.87%), recurrent depressive disorder current episode severe without psychotic symptoms 9 (8.91%), moderate depressive disorder with somatic symptoms 8 (7.92%), mixed anxiety and depressive disorder 7 (6.93%), dysthymia 7 (6.93%), and obsessive-compulsive disorder 7 (6.93%). Other conditions were few in number (<5%) [18]. Arshad Hussain *et al.* found About 23% of cases had major depressive disorder as compared to 7.5% of controls, 1.8% had dysthymia, 15.45% had panic disorder compared to 5% of controls, 6.36% had obsessive compulsive disorder compared to 2.5% of controls, 8% cases had suicidality, 2.72% of cases were bipolar affective disorder, and 15.45% had generalized anxiety disorder (GAD) comparable to our study.[22]

In our study we found the prevalence of Dhat Syndrome to be 10% amongst all the respondents especially male patients. Grover *et al.* found 38.2% of the participants were passing Dhat at least once a day. In terms of quantity of Dhat, about 60% were either passing a spoonful or more each time they experienced the passage of Dhat [23]. Chadda, in his study on Indian patients, found that roughly 50% of the cases of dhat syndrome presented with depression; 18% with anxiety disorders; and 32% with somatoform disorders [24]. Sathya Prakash *et al.* found Dhat disorder in 25% of the patients [25].

In our study we used Female Sexual Functioning Index to determine the sexual dysfunction and a cut off score 26.55 scores below which depicts sexual dysfunction, we found sexual dysfunction in 55.6% of the total 142 female respondents. Mouluk Jaffarpour *et al.* found that (46.2%) women reported Female Sexual dysfunction. Prevalence of Female Sexual dysfunction increased with age, from 22% in women aged <20 years to 75.7% in women aged 40-50 years [26]. Singh JC using FSFI found FSD in two-thirds of the 149 women about 73.2% [19]. In a survey of the US general population, sexual dysfunction was more prevalent in women (43%) [27]. Nafiu Amidu *et al.* found the overall prevalence of sexual dysfunction was 72.8% [28].

In our study of the individual domains of FSFI we found that Desire domain of FSFI 38% of women had decreased desire or lack of desire, 51.3% of the patients had arousal problem, 49.8% had problems in lubrication, 40.7% had problems in reaching orgasm, 35.2% had problems with satisfaction with their sexual life, and sexual pain disorders were present in 28.8% of the patients. Mohammed Abdollahi *et al.* found about 68.4% of patients had an FSFI score < 28. In domains of desire 73.7%, arousal 64.9%, lubrication 21.1%, orgasm 33.3%, satisfaction 17.5%, and pain 40.4% of patients reported some degree of dysfunction [29]. Faruk Küçükduymaz *et al.* Prevalence of sexual dysfunction was found to be 87% in

study population. Mean FSFI score was  $18.6 \pm 1.21$  [30]. Grover *et al.* found that 95% (n=76) of patients had decreased desire, 60% (n=48) had decreased arousal, 37.5% (n=30) had decreased lubrication, 63.8 (n=51) had decreased orgasm, 55% (n=44) had decreased satisfaction and 25% (n=20) had pain during sexual activity [20].

In our study, 78.1% of males felt that they a poor sexual quality of life, while 73.3% of the respondents said they did not have urge or desire to have sex, 73% of the respondents had difficulty in having erections, also having problematic erections, also maintenance of erections, while 65.9% had very weak erections or hardly had any erections. 65% of the respondents had difficulty in orgasm, while 56.2% of the respondents had difficulty deriving pleasure from orgasm. 29.8% of the male respondents had problem of premature ejaculation, 69.4% of the respondents said that their sexual life was important to the establishing a relationship between sexual dysfunction and quality of life. 19% of the respondents had problems with pain during sexual intercourse. Bijil Simon Arackal *et al.* in their study reported aversion to sex to Premature ejaculation was reported by 37.5% subjects, the next most frequent sexual dysfunction reported was low sexual desire, which was reported by 36 out of 100 subjects. Erectile dysfunction was reported by 33.3% of the subjects with difficulty in achieving erection in (19.79%) and difficulty in maintaining erection in 13 subjects (13.54%). Fourteen subjects (14.58%) had a lack of pleasure and (10.41%) had inhibited or delayed ejaculation. Next was the complaint of dissatisfaction with the frequency of sexual intercourse in people (27.03%) and dissatisfaction reported by (19.79%) [31]. The most common sexual dysfunction in our sample was Premature ejaculation (PME) seen in 55% of the total respondents. It is, in fact, the most common male sexual dysfunction in various studies in every country [5].

In this study we also attempted association between Sexual quality of life amongst and female sexual dysfunction. The mean score on sexual relationship satisfaction domain of SQOL-F was significantly low in females reporting sexual dysfunction. On all other domains of SQOL-F, the mean scores were low in the patients reporting sexual dysfunction, but this association was not statistically significant.

In a cross tabulation (Table 5) between the total FSFI scores and age group we found that sexual dysfunction was less in women who are having higher education thus having statistical significance with p value 0.001.

In Scatter plot comparing total FSFI scores to age (Graph 5), we found that as the age increases there is decrease in FSFI mean score which means sexual dysfunction increases as the age increase however the co relation was not statistically significant.

In scatter plot between FSFI total scores and sexual relationship satisfaction domain of SQOL-F, (Graph 6) we find a significant co relation between FSFI total score and mean domain score of SQOL-F as the FSFI total score goes up sexual relationship satisfaction increases, also it is statistically significant with p value of 0.003.

In Graph 7 depicting FSFI total score to psychiatric diagnosis we find Schizophrenia patients had 100% sexual dysfunction followed by patients with BPAD and OCD.

Strength of study Fair representation of both the sexes especially females in our study as compared to other studies in Indian setting. Use of standardized assessment instruments which are culturally relevant ensured a sound comparison. Multi-trait and multi-method assessment using various measures concurrently allowed assessment of multi-dimensional aspects of psychiatric disorders & provided an opportunity to validate findings from different sources.

Limitations: Generalization of results- since our study was hospital based, our findings could not be applied to the various different community settings. Similar scales could have been used for both males and females as there are scales available which are common for both gender, which would bring out better co relations in the study. Targeting specific psychiatric diagnosis would have brought in better results

### Conclusion

The findings in our study suggest that sexual dysfunction is very common among patients with psychiatric disorders, including female patients as well. and impairment in sexual functioning affects patient's sense of personal satisfaction and impairs overall sexual quality of life. Hence, almost all patients attending psychiatry OPD need to be screened for sexual dysfunction. Sexual dysfunctions may be part of illness itself or they may emerge as side effects of the psychotropic medications. Side effect profile of medications should be always be taken into account and caution should be taken in prescribing these medications. Sexual functioning and satisfaction should always be taken into consideration while planning for holistic treatment of any psychiatric disorder. Psychoeducation of the patients helps overcome many problem areas in these patients.

### References

1. Sathyanarayana Rao TS, Darshan MS, Tandon A. An epidemiological study of sexual disorders in south Indian rural population. *Indian J Psychiatry*. 2015 Apr-Jun;57(2):150-7.
2. Nwagha UI, Oguanuo TC, Ekwuazi K, Olubobokun TO, Nwagha TU, Onyebuchi AK, Ezeonu PO, Nwadike K. Prevalence of sexual dysfunction among females in a university community in Enugu, Nigeria. *Niger J Clin Pract*. 2014, Nov Dec;17(6):791-6.
3. Thakurta RG, Singh OP, Bhattacharya A, Mallick AK, Ray P, Sen S et al. Nature of

- sexual dysfunctions in major depressive disorder and its impact on quality of life. *Indian J Psychol Med.* 2012 Oct;34(4):365–70.
4. Shaeer O, Shaeer K. The Global Online Sexuality Survey (GOSS): the United States of America in 2011. Chapter I: erectile dysfunction among English-speakers. *J Sex Med.* 2012 Dec;9(12):3018–27.
  5. Tharoor H, Kaliappan A, Gopal S. Sexual dysfunctions in schizophrenia: professionals and patients' perspectives. *Indian J Psychiatry.* 2015 Jan-Mar;57(1):85–7.
  6. Haefliger T, Bonsack C. [Atypical antipsychotics and sexual dysfunction: five case-reports associated with risperidone]. *Encephale.* 2006 Jan-Feb;32(1Pt1):97–105.
  7. Kennedy SH Jr, Eisfeld BS, Dickens SE, Bacchiochi JR, Bagby RM. Antidepressant-induced sexual dysfunction during treatment with moclobemide, paroxetine, sertraline, and venlafaxine. *J Clin Psychiatry.* 2000 Apr;61(4):276–81.
  8. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: DSM-5.* Washington (D.C): American Psychiatric Association; 2013.
  9. Bhatia MS. An analysis of 60 cases of culture bound syndromes. *Indian J Med Sci.* 1999 Apr;53(4):149–52.
  10. Grover S, Kate N, Avasthi A, Rajpal N, Umamaheswari V. Females too suffer from Dhat syndrome: A case series and revisit of the concept. *Indian J Psychiatry.* 2014 Oct;56(4):388–92.
  11. Prakash O, Rao TS. Sexuality research in India: an update. *Indian J Psychiatry.* 2010 Jan;52(7 Suppl 1):S260–3.
  12. Rosen R., Brown C., Heiman J., Leiblum S., Meston C., Shabsigh R., Ferguson D., & D'Agostino R., Jr. The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *Journal of sex & marital therapy,* 2020;26(2): 191–208.
  13. Daker-White G, Crowley T. Sexual function and quality of life in genitourinary medicine (GUM) outpatients and preliminary validation of a self-report questionnaire measure. *Qual Life Res.* 2003 May;12(3):315–25.
  14. Maasoumi R, Lamyian M, Montazeri A, Azin SA, Aguilar-Vafaie ME, Hajizadeh E. The sexual quality of life-female (SQOL-F) questionnaire: translation and psychometric properties of the Iranian version. *Reprod Health.* 2013 May;10(1):25.
  15. Kalra G, Kamath R, Subramanyam A, Shah H. Psychosocial profile of male patients presenting with sexual dysfunction in a psychiatric outpatient department in Mumbai, India. *Indian J Psychiatry.* 2015 Jan-Mar;57(1):51–8.
  16. Mishra VV, Nanda S, Gandhi K, et al. Female sexual dysfunction in patients with endometriosis: Indian scenario. *Journal of Human Reproductive Sciences.* 2016 Oct-Dec;9(4):250-253.
  17. Varghese, K.M., Bansal, R., Kekre, A.N. et al. Sexual dysfunction among young married women in southern India. *Int Urogynecol J.* 2012;23: 1771–1774.
  18. Shetageri VN, Bhogale GS, Patil NM, Nayak RB, Chate SS. Sexual Dysfunction among Females Receiving Psychotropic Medication: A Hospital-based Cross-sectional Study. *Indian J Psychol Med.* 2016 Sep-Oct;38(5):447–54.
  19. Singh JC, Tharyan P, Kekre NS, Singh G, Gopalakrishnan G. Prevalence and risk factors for female sexual dysfunction in women attending a medical clinic in south India. *J Postgrad Med.* 2009 Apr-Jun; 55(2):113–20.
  20. Grover S, Shah R, Dutt A, Avasthi A. Prevalence and pattern of sexual dysfunction in married females receiving antidepressants: an exploratory study. *J*

- Pharmacol Pharmacother. 2012 Jul; 3(3): 259–65.
21. Sathyanarayana Rao TS, Ismail S, Darshan MS, Tandon A. Sexual disorders among elderly: an epidemiological study in south Indian rural population. *Indian J Psychiatry*. 2015 Jul- Sep;57(3):236–4
  22. Hussain A., Chandel R. K., Ganie M. A., Dar M. A., Rather Y. H., Wani Z. A., Shiekh J. A., & Shah M. S. Prevalence of psychiatric disorders in patients with a diagnosis of polycystic ovary syndrome in Kashmir. *Indian journal of psychological medicine*. 2015;37(1), 66–70.
  23. Grover S, Avasthi A, Gupta S, Dan A, Neogi R, Behere PB et al. Phenomenology and beliefs of patients with Dhat syndrome: A nationwide multicentric study. *Int J Soc Psychiatry*. 2016 Feb;62(1):57–66.
  24. Chadda RK, Ahuja N. Dhat syndrome. A sex neurosis of the Indian subcontinent. *Br J Psychiatry*. 1990 Apr;156(4):577–9.
  25. Prakash S, Sharan P, Sood M. A study on phenomenology of Dhat syndrome in men in a general medical setting. *Indian J Psychiatry*. 2016 Apr-Jun;58(2):129–41.
  26. Jaafarpour M, Khani A, Khajavikhan J, Suhrabi Z. Female sexual dysfunction: prevalence and risk factors. *J Clin Diagn Res*. 2013 Dec;7(12):2877–80.
  27. Mezzich JE, Hernandez-Serrano R. Epidemiology and public health considerations. In: *Psychiatry and Sexual Health – An Integrative Approach*. Lanham: Jason Aronson; 2006. p. 33-43.
  28. Amidu N, Owiredu WK, Woode E, Addai-Mensah O, Quaye L, Alhassan A et al. Incidence of sexual dysfunction: a prospective survey in Ghanaian females. *Reprod Biol Endocrinol*. 2010 Sep; 8(1):106.
  29. Abdollahi M, Toghae M, Raisi F, Saffari E. The prevalence of female sexual dysfunction among migraine patients. *Iran J Neurol*. 2015 Jan;14(1):8–11.
  30. Küçükdurmaz F, Efe E, Malkoç Ö, Kolus E, Amasyalı AS, Resim S. Prevalence and correlates of female sexual dysfunction among Turkish pregnant women. *Turk J Urol*. 2016 Sep;42(3):178.
  31. Bijil Simon Arackal, Vivek Benegal. Prevalence of sexual dysfunction in male subjects with alcohol dependence. *Indian Journal of psychiatry*. 2007; 49: 109-112.