



## To Study The Functioning ,Relationships, Quality Of Life And Mental Health In Patients Suffering From Premature Ejaculation And To Study The Correlation Between The Severity Of Pme And Above Mentioned Variables

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### ABSTRACT

**AIMS :** To study the functioning, relationships, quality of life and mental health in patients suffering from PME , To study the correlation between the severity of PME and above mentioned variables . **PROCEDURE:** Patients registered in the respective clinics (Sex and marital clinic and Adult OPD on specified days) are selected for study after applying inclusion and exclusion criteria's. Detailed history, physical examination and mental status examination was done according to semi-structured proforma in all study subjects, then subjects are administered Index of Premature Ejaculation scale , SOFA scale, GARF scale and WHOQOL-BREF scale , SADS-CB applied for assessment of subsyndromal symptomatology. **CONCLUSION:** Both Primary and Secondary PME patients have impairment in social and occupational functioning , with 85.7% of primary PME patients showing some impairment whereas 70% of Secondary PME patients showing slight impairment. Social and Occupational functioning of Primary PME patients was significantly ( $p=0.0004$ ) lower then those of Secondary PME patients .Primary and Secondary PME patients do not differ significantly ( $p >> 0.05$ ) in following areas - Intravaginal ejaculation latency time (IELT) , Distress over IELT , Satisfaction with length of intercourse . Both Primary and Secondary PME patients have impairment in global relational functioning , with 71.4% of primary PME patients showing seriously dysfunctional relational unit whereas 77.5% of Secondary PME patients showing somewhat unsatisfactory relational unit. Global relational functioning in Primary PME patients was significantly ( $p < 0.0001$ ) lower then those of Secondary PME patients . Both Primary and Secondary PME patients have impaired quality of life. Quality of life in Primary PME patients was significantly ( $p < 0.0001$ ) more impaired then those of Secondary PME patients

### KEYWORDS

PME ; Intravaginal ejaculation latency time (IELT) ; QOL; GARF

### Introduction:

Premature ejaculation (PE,PME), also sometimes referred to as rapid or early ejaculation, is one of the most common male sexual dysfunctions. According to the ICD (10th edition) [ICD-10], which is issued by the WHO, PE is defined as "the inability to delay ejaculation sufficiently to enjoy lovemaking, which is manifested by either an occurrence of ejaculation before or very soon after the beginning of intercourse (if a time limit is required: before or within 15 seconds of the beginning of intercourse) or ejaculation occurs in the absence of sufficient erection to make intercourse possible". [According to DSM-V the cut off is < 1min]

Conversely, and in contrast to the ICD-10, the DSM-V states that PE needs to cause marked distress and/or interpersonal difficulty before it can be classified as the sexual disorder PE.

Premature ejaculation is usually categorized into two different forms (Godpodinoff, 1989; Semans, 1956)<sup>1</sup> Primary (lifelong) PE has existed since sexual maturation, while Secondary (acquired) PE develops in an individual who previously had the ability to control ejaculation sufficiently. These categories are sometimes further divided into global and episodic PE; global PE is experienced during all (or most) sexual encounters and with all or nearly all female partners, while episodic PE occurs in a less frequent but predictable manner, such as during the beginning phase of a new relationship.

The prevalence of PE remains relatively constant with age, and affects men across a wide range of ages (Laumann et al., 1999)<sup>2</sup>.Historically, the causes of PE were considered to be purely psychological, and therefore early treatment approaches consisted primarily of behavioral interventions or psychotherapy (Masters et al., 1970)<sup>3</sup>. Behavioral and cognitive therapies showed substantial initial success (Masters & Johnson, 1970)<sup>3</sup> however, many patients reported reduced therapy

gains over the long term (De Amicis et al., 1985; Waldinger, 2002)<sup>4</sup>. More recently, PE has been described as a neurobiological phenomenon that can respond to pharmacotherapy (Waldinger, 2002)<sup>4</sup>. Typical pharmacotherapy for PE involves the off-label use of some conventional antidepressants, which are known to cause delayed ejaculation as a common side effect (Keltner et al., 2002; Rosen et al., 1999; Scharko, 2004)<sup>12</sup>. In 1994 , Waldinger and colleagues introduced and defined the term " intravaginal ejaculatory latency time" (IELT)- the time from vaginal penetration to the start of intra vaginal ejaculation- as an objective outcome measure.<sup>5-6</sup>

Premature ejaculation affects the individual, his partner, the relationship, and overall quality of life (QOL). The association between sexual satisfaction, life satisfaction, and overall well-being has been recognized for more than 30 years (Bell, 1972; Masters & Johnson, 1970)<sup>8,3</sup>. Premature ejaculation has been shown to have a significant negative psychological impact on men with the dysfunction, which typically results in increased anxiety and loss of sexual confidence, and leads to distress and reduced satisfaction with the sexual experience. In addition, men with PE scored lower on all aspects of intimacy (emotional, social, sexual, recreational, and intellectual) (McCabe, 1997)<sup>7</sup>. To date, a definitive model correlating the interrelationship between a quantitative measure such as IELT with qualitative measures such as perceived control, distress, and sexual satisfaction has not been published. Understanding the relationships between these parameters may serve as a useful guide for understanding the impact and severity of the condition. ). Most of these early studies suffered from a lack of long-term follow-up, partner evaluation, and validated instruments to accurately assess the ejaculatory experience; in today's terms, they lacked scientific robustness, therefore in present study we tried to improve these lacking issues which are found in previous studies.

**Material & Methods:**

All old and new patients registered in Sex clinic and Adult Psychiatry OPD (Wednesday and Friday) of Department of Psychiatry, Muzaffarnagar Medical college Muzaffarnagar, fulfilling the ICD-10 DCR diagnostic criterion for PME would be assessed on selection criteria for inclusion in the study. The permission of human institutional ethical committee and consent by patient had been taken before proceeding of the study.

**INCLUSION CRITERIA:**

1. Sexually active males presenting at Sex clinic and Adult OPD (on specified days) of Dept. of Psychiatry, muzaffarnagar medical college who fulfill the ICD-10 DCR criterion for PME
2. Subjects between 18-50 years of age
3. Written informed consent from the patient

**EXCLUSION CRITERIA :**

1. Subjects with Erectile Dysfunction or Reduced sexual desire
2. Subjects with known underlying organic pathology or other major physical illness's
3. Subjects with alcohol or other substance abuse dependence
4. Subjects with psychiatric illness's before the onset of PME
5. Subjects taking medications ,including psychotropic medication's

The Index of Premature Ejaculation Scale , developed by Althof S et al ., 2006 is a validated questionnaire to assess the subjective aspects of premature ejaculation (PME) currently in use and severity of PME.<sup>8</sup>

The scale of social and occupational functioning was operationalized by Luborsky in the health – sickness rating scale. The SOFAS is derived from the GAS ( global assessment scale), a procedure for measuring overall severity of psychiatric disturbance.

The Global Assessment of Relational Functioning (GARF) Scale is used to indicate an overall judgment of the functioning of a family or other ongoing relationship on a hypothetical continuum ranging from competent, optimal relational functioning to a disrupted, dysfunctional relationship.

The WHO Quality Of Life Scale –BREF (QOL-BREF) assesses individuals perceptions of their position in life in the context of the cultural and value systems in which they live and in relation to their goals, expectations, standards and concerns.<sup>10</sup>

SCHEDULE FOR AFFECTIVE DISORDER AND SCHIZOPHRENIA-CHANGE BIPOLAR SCALE (SADS-CB) , there are three versions of SADS- the regular version (SADS), life time version (SADS-L), and the version for measuring the change (SADS-C). . The SADS is organized into two parts. Part-I is designed to yield an extremely detailed description of the subjects current episode or condition as well as his functioning during the week prior to the interview. Part-II is primarily for describing past psychiatric disturbance.<sup>11-12</sup> The results were statistically analyzed using the student “t” test, Chi-square test and Fisher’s Exact Probability Test .

**Observation and result:**

the study was conducted on 47 patients of pre mature ejaculation age ranging 18-59 in sex and Adult clinic at Department of Psychiatry and sexology, Muzaffarnagar Medical College, Muzaffarnagar

**TABLE – 2 socio-demographic variables**

Demographic Variables		Primary PME (n = 07)	Secondary PME (n = 40)	Test of Significance
AGE (yrs)	20 – 30	03(42.8%)	09(22.5%)	$\chi^2 = 2.412, df=2, P=0.299$
	31 - 40	02(28.6%)	24(60%)	
	41-50	02(28.6%)	07(17.5%)	

DOMICILE	Rural	02(28.6%)	23(57.5%)	$\chi^2= 1.009, df=1, P=0.315$
	Urban	05(71.4%)	17(42.5%)	
FAMILY TYPE	Nuclear	05(71.4%)	16(40%)	$\chi^2=1.279, df=1, P=0.258$
	Joint	02(28.6%)	24(60%)	
MARITAL STATUS	Married	05(71.4%)	37(92.5%)	$\chi^2=1.007, df=1, P=0.315$
	Unmarried	02(28.6%)	03(7.5%)	

**TABLE – 2 socio-demographic variables**

Demographic Variables		Primary PME (n = 07)	Secondary PME (n = 40)	Test of Significance
TOTAL FAMILY INCOME(INR/ mth)	< 5000	01(14.4%)	18(45%)	$\chi^2=0.277, df=1, P = 0.598$
	5000-10000	03(42.8%)	13(32.5%)	
	>10000	03(42.8%)	09(22.5%)	
RELIGION	HINDU	06(85.7%)	34(85%)	$\chi^2= 0.277, df=1, P=0.598$
	MUSLIM	01(14.3%)	06(15%)	
OCCUPATION	SERVICE	04(57.1%)	11(27.5%)	
	BUSINESS	01(14.3%)	09(22.5%)	
	FARMER	00	11(27.5%)	
	LABOURER	00	02(5%)	
	SEMI SKILLED WORKER	02(28.6%)	02(5%)	
	SKILLED WORKER	00	05(12.5%)	

**TABLE – 04 : SOCIO-DEMOGRAPHIC VARIABLES**

DEMO-GRAPHIC TABLES		Primary PME (n = 07)	Secondary PME (n = 40)	Test of Significance
EDUCATION	Illiterate	00	03(7.5%)	Fishers exact probability test $p= 1.00$ { comparison was done between upto intermediate and above intermediate }
	Preschool	00	09(22.5%)	
	High school	01(14.3%)	08(20%)	
	Intermediate	03(42.8%)	05(12.5%)	
	Graduate	01(14.3%)	13(32.5%)	
	Postgraduate	02(28.6%)	02(5%)	

**TABLE-5 : TOTAL SCORES ON INDEX OF PE SCALE**

INDEX OF PREMATURE EJACULATION SCALE	MEAN ± S.D.
1. Frequency of control over ejaculation	4.1 ± 0.34
2. Satisfaction with length of intercourse	4.3 ± 0.32
3. Satisfaction with sexual intercourse	3.7 ± 0.45
4. Satisfaction with sense of control over ejaculation	3.8 ± 0.45
5. Confidence over timing of ejaculation	4.0 ± 0.53
6. Satisfaction with sex life overall	3.5 ± 0.70
7. Level of pleasure given by sexual intercourse	3.2 ± 0.7
8. Intravaginal ejaculation latency time (IELT)	4.7 ± 0.74
9. Distress over IELT	4.6 ± 0.41
10. Distress with control over ejaculation	3.3 ± 0.47
Total Score's on IPE (range 10 – 50)	39.4 ± 4.42

**TABLE -6 : GROUPWISE PE SCORES**

Index of premature ejaculation scale	Primary PE (n=07) (14.9%) Mean ± s.d.	Secondary PE (n=40) (85.1%) Mean ± s.d.	Test of Significance
1. Frequency of control over ejaculation	4.2 ± 0.44	3.2 ± 0.43	p < 0.0001 t = 5.659 , df=45
2. Satisfaction with length of intercourse	4.8 ± 0.32	4.5 ± 0.41	p = 0.0732 t = 1.834 , df=45
3. Satisfaction with sexual intercourse	4.0 ± 0.49	3.0 ± 0.34	p < 0.0001 t = 6.713 , df=45
4. Satisfaction with sense of control over ejaculation	4.0 ± 0.35	3.5 ± 0.35	p = 0.0011 t = 3.487 , df=45
5. Confidence over timing of ejaculation	4.5 ± 0.33	3.6 ± 0.50	p < 0.0001 t = 4.569 , df= 45
6. Satisfaction with sex life overall	4.3 ± 0.30	3.6 ± 0.53	p = 0.0015 t = 3.380 , df=45
7. Level of pleasure given by sexual intercourse	4.4 ± 0.55	3.9 ± 0.45	p = 0.0117 t = 2.627 , df=45
8. Intravaginal ejaculation latency time (IELT)	4.7 ± 0.54	4.6 ± 0.52	p = 0.643 t = 0.467 , df=45
9. Distress over IELT	4.6 ± 0.41	4.5 ± 0.32	p = 0.468 t = 0.732 , df= 45
10. Distress with control over ejaculation	3.9 ± 0.47	3.1 ± 0.44	p < 0.0001 t = 4.397 , df=45
Total Score's on IPE (range 10 – 50)	43.43 ± 4.2	37.5 ± 4.29	p = 0.0015 t = 3.383 , df=45

**TABLE -07 :GROUP WISE TOTAL SCORES OF PE PATIENTS ON ALL THE SCALES**

Scale's ( max score )	Total score (n = 47 ) Mean ± sd.	Primary pme (n=07) (14.9%) Mean ± sd. (a)	Secondary pme (n= 40) (85.1%) Mean ± sd. (b)	Test of Significance a vs b
IPE (50)	39.4 ± 4.42	43.43 ± 4.2	37.5 ± 4.29	p = 0.0015 t = 3.383 , df = 45
SOFAS (100)	76.96 ± 5.34	70.71 ± 3.55	78.05 ± 4.85	p = 0.0004 t = 3.814 , df = 45
GARF (100)	63.85 ± 12.63	42.57 ± 15.32	67.58 ± 7.52	p < 0.0001 t = 6.812 , df =45
QOL-BREF (100)	72.10 ± 6.54	63.14 ± 3.02	73.68 ± 5.67	p < 0.0001 t = 4.771 , df = 45
SADS-CB	Anxiety NOS = 22 Sub Syn. Dep.= 02 Both = 15	0 01 06 (14.3%) (85.7%)	22 01 09 (55%) (2.5%) (22.5%)	

**TABLE -08 : GROUPWISE SCORES OF PME PATIENTS ON SOFAS (Social And Occupational Functioning Assessment Scale)**

SCORE ON SOFAS (Social and Occupational Functioning Assessment Scale)	Primary PME ( n= 07) %	Secondary PME ( n= 40) %
≥ 85 { good functioning }	0	5 (12.5 %)
84 – 75 { slight impairment }	01 ( 14.3%)	28 ( 70%)
74 - 65 { some impairment }	06 ( 85.7%)	07 ( 17.5%)
64 – 55 {moderate impairment}	0	0
54 – 45 {serious impairment }	0	0
44 – 35 {major impairment }	0	0

**Table-09: GROUPWISE SCORES OF PME PATIENTS ON GARF (Global Assessment of Relational Functioning) SCALE**

SCORE ON GARF (Global Assessment of Relational Functioning)	Primary PME ( n= 07) %	Secondary PME ( n= 40) %
81 – 100(sexual relations are satisfactory)	0	0
61 – 80(sexual relations reduced or problematic)	01(14.3%)	31(77.5%)
41 – 60(sexual dysfunctions are often present)	01(14.3%)	08(20%)
21 – 40(sexual dysfunction is commonplace)	05(71.4%)	01(2.5%)

**TABLE-10 DYSMORPHIC MOOD AND RELATED SYMPTOMS (SADS-CB SCORES FOR SUBSYNDROMAL CASES OF PME PATIENT)**

Symptoms	Primary Pme (n=07)	Secondary Pme (n=40)	Test of significance
Subjective feeling of depression....	2.08± 0.57	1.84 ±0.72	t = 1.13, p =0.27
Worrying, unpleasant thoughts....	2.64 ±0.95	2.08 ±2.08	t =1.82, p =0.07
Feeling of self-reproach....	1.76 ±1.76	1.35 ±1.35	t =1.43, p =0.16
Negative evaluation of self, inadequacy, failure....	2.42 ±1.18	2.05 ±1.05	t =1.12, p =0.27
Discouragement, pessimism, hopelessness	2.45 ±1.12	1.66 ±0.78	t =2.12, p =0.03**
Suicidal tendencies	-	-	-
Somatic anxiety	2.28 ±1.13	1.75 ±0.62	t =1.40, p =0.17
Psychic anxiety	1.52 ±1.29	0.83 ±0.72	t =1.70, p =0.09
Insomnia	1.28 ±0.82	0.08 ±0.29	t =3.6, p =0.00**
Initial insomnia	2	1	-
Middle insomnia	0	0	-
Terminal insomnia	0	0	-
Sleep more than usual	1.2 ±1.1	0.5 ±0.54	t =1.5, p =0.19
Subjective feeling of lack of energy	1.76 ±1.20	1.25 ±0.62	t =1.38, p =0.18
Loss of appetite	-	-	-
Weight loss	-	-	-
Phobia	-	-	-
Obsession and compulsions	-	-	-

Loss of interest/pleasure in work....	1.84 ±0.75	0.67 ±0.65	t = 3.70, p =0.00**
Concentration difficulties	0.52 ±0.77	0.44 ±0.51	t =0.42, p =0.67
Excessive concern with bodily functions or with real or imagined physical disability	2.32 ±1.03	2.16 ±1.02	t =0.42, p =0.67
Subjective feeling of anger...	2.25 ±1.06	1.2 ±0.442	t =4.14, p =0.00**
Overt expression of anger...	1.2 ± 1.1	0.8 ±0.58	t =1.38, p =0.18
Agitation...	0.4 ±0.58	0.24 ±0.45	t =0.79, p =0.43
Psychomotor retardation...	-	-	-
Diurnal mood variation...	0.84 ±0.90	0.42 ±0.51	t =1.51, p =0.14

**TABLE – 11 : CORRELATION TABLE OF IPE SCORES WITH OTHER SCALE SCORES**

SCALES	Pearson product moment correlation coefficient (r)	Coefficient of determination ( r <sup>2</sup> )
SOFAS SCORE	-0.36*	0.1296
GARF SCORE	-0.57**	0.325
WHOQOL-BREF SCORE	-0.42*	0.176
* p < 0.01 ; a significant fair inverse relationship **p < 0.001 ; a significant good inverse relationship		

**TABLE – 12: PSYCHOLOGICAL FACTORS ASSOCIATED WITH PME**

	PRIMARY PME		SECONDARY PME
Performance anxiety	59%	Unreasonable expectations (due to inadequate sexual information)	46%
Restrictive upbringing	26%	2. Restricted foreplay	30%
Expectation of negative outcome	15%	3.Performance anxiety	24%

**Discussion:**

The present research work was carried out to study the functioning, and relationships in patients suffering from premature ejaculation and to study the correlation between the severity of PME and above mentioned variables. The study was conducted in the Department of Psychiatry. The design of the present study is a cross-sectional observational descriptive one with the aim to do a clinical study of Premature Ejaculation.

47 patients were included in the present study for psychiatric assessment. Four stage procedure was applied for the assessment. In the first stage, ICD 10-DCR diagnostic criteria for PME was applied in subjects who satisfied all the selection criteria's. In the second stage all selected subjects were assessed on the index of premature ejaculation scale , for grading the severity of the subjects. In third stage three scales were applied to further assess for social and occupational functioning, and global relational functioning. In fourth stage subsyndromal cases were further assessed on SADS-CB which is a highly structured interview instrument and is most frequently used for research purpose.

In SADS-CB, first 27 questions are related to anxiety and depression. A rating of 2 is boundary for clinical significance. Assessment of anxiety NOS and subsyndromal depression in PME subjects was carried out with the help of first 27 questions of SADS-CB in the present study. In this study majority of Primary PME patients(42.8%) are of the age group 20-30 yrs

, which is expected , as in this part of the country most of the males get married at a younger age and since their problem is lifelong they come for treatment in the earlier stages .Whereas majority of the Secondary PME patients(60%) are in the age group of 31-40 yrs , as these patients develop the disorder after a period of normal sexual functioning so they tend to develop the disorder a little later. Overall 81% of total patients were of the age group 20-39 yrs , which is also the most common age group of patients attending the marriage and sex clinics in India (Kendurkar et al.,2008) In this study majority of total PME patients (54%) belonged to the rural areas, which can be explained by the fact that the catchment area of our department mainly caters to the vast rural areas surrounding it.

In this study majority of total PME patients (55%) belonged to the joint family type, (90%) were married ,74% being educated up till highschool and above, (57.1%) were of service sector , which is compatible with majority of Primary PME patients (85%) having salaries > Rs 5000 / month and also the fact that majority of them (71.4%) belonged to an urban area. Whereas majority of Secondary PME patients (50%) were of farming and business sectors , which is compatible with large number of Secondary PME patients (45%) having salaries < Rs 5000 / month and also the fact that majority of them (57.5%) belonged to a rural area.

In this study a new validated scale (Stanley Althof, et al 2006) for assessing the severity of PME was used , The ' Index of Premature Ejaculation' has 10 questions ,each covering some part of the PME domain, each question carries max score of 5 and min score of 1 , more the score more severe being the impairment. In our study it was observed that certain domains had higher scores as compared to other domains e.g. overall patients scored higher in three domains ; Satisfaction with length of intercourse(4.3 ± 0.32) , Intravaginal Ejaculatory Latency Time" (IELT) (4.7 ± 0.74) and Distress over IELT(4.6 ± 0.41).

On comparison of scores of Primary and Secondary PME patients on this scale and applying test of significance between the two groups , it was observed that on three domains which are the same domains on which overall the patients scored higher , there was no statistically significant difference(p < 0.05) i.e. both types of patients had similar impairment on these domains. On all other domains Primary PME patients scores were significantly higher than those of Secondary PME patients. It can be inferred that domains for which the impairment is high, there is no diff between the two groups ; and domains for which the scores are lower overall , there the Primary PME patients have significantly higher impairment then Secondary PME patients. The other inference is that out of the four domains maximum impairment is seen in three domains – IELT , Distress (over IELT) and Satisfaction (over IELT).

**EFFECT OF PME ON SOCIAL AND OCCUPATIONAL AND GLOBAL RELATIONAL FUNCTIONING**

Few studies have directly assessed the impact of PE on the partners of men with the condition; most frequently, men with PE are asked to rate their partner's sexual enjoyment or sexual satisfaction. An observational study examined both patient and partner assessments of control over ejaculation, satisfaction with sexual intercourse, and interpersonal difficulty (Patrick et al., 2005)<sup>13</sup>. 61.8% of partners of men with PE reported "fair," "poor," or "very poor" satisfaction with sexual intercourse, compared to 10.1% of partners of men without PE (P < 0.001). In another study (McCabe, M. P.: Intimacy and quality of life among sexually dysfunctional men and women. J Sex Marital Ther, 23: 276, 1997 ) comparing intimacy patterns in sexually functional and dysfunctional populations men with PME scored lower on all aspects of intimacy (emotional, social, sexual, recreational and intellectual) than sexually functional men.

In this study patients of PME showed impairment on both

SOFAS (Social and Occupational Functioning Assessment Scale) and GARF (Global Assessment of Relational Functioning) scale.<sup>9</sup> The impairment of Primary PME patients on SOFAS ( $70.71 \pm 3.55$ ) and GARF scale ( $42.57 \pm 15.32$ ) was significantly greater than that for Secondary PME patients ( $78.05 \pm 4.85$ ;  $67.58 \pm 7.52$ ).

Social and Occupational Functioning Assessment Scale is divided into six slabs depending on the degree of impairment, 85.7% of Primary PME patients scored in 'some impairment' slab whereas 70% of Secondary PME patients scored in 'slight impairment' slab. No patient from either group scored in the moderate, serious or major impairment slabs. This can be explained by the fact that this scale has no questions for the sexual dysfunction component and therefore the overall level of impairment is not even moderate on this functioning scale.<sup>14-15</sup>

Global Assessment of Relational Functioning scale is divided into four slabs depending on the degree of impairment, 71.4% of Primary PME patients scored in 'severe impairment' slab whereas 77.5% of Secondary PME patients scored in 'mild impairment' slab. On this scale overall 13% of patients scored in the severe slab, as this scale also assesses the sexual relations between the couples, the degree of impairment was comparatively higher than in SOFAS scale.

Another major point of difference is that while in Social and Occupational Functioning Assessment Scale 12.5% of patients scored in the good functioning category, no patient in Global Assessment of Relational Functioning scale scored in its satisfactory category, inferring that in PME patients there is always some degree of impairment in the relational functioning (as it includes sexual relationship with the partner too), whereas occupational functioning may or may not be impaired.

In several studies it has been observed that PME is accompanied by anxiety and depressive symptoms but not amounting to anxiety and depressive disorders. In an international study by T. Symonds, S. Althof et al., 2007 it was observed that 53.7% PME patients had anxiety symptoms and 46% had subsyndromal depressive symptoms. In India a clinical trial (Kendurkar et al., 2008) observed that 37.6% of PME patients had somatic and 41.2% had anxiety symptoms. In this study to assess for the subsyndromal symptoms SADS-CB (Schedule for Affective disorder and schizophrenia changed version modified for bipolar disorder) was applied. Overall 47% patients had only anxiety NOS; 4% patients had only sub syndromal depression and 32% had both. 85.7% of Primary PME patients had both anxiety NOS and sub syndromal depression, whereas 55% of Secondary PME patients had only anxiety NOS. It can be inferred from this study that in majority of Primary PME patients, both anxiety and depressive symptoms occur concurrently. Symptomatically, on four areas of SADS-CB there was a statistically significant ( $p < 0.05$ ) difference between the two groups. Primary PME patients having more impairment than the Secondary PME patients on these four areas viz Discouragement, pessimism, hopelessness, insomnia, loss of interest/pleasure in work and subjective feelings of anger. The first three symptoms are more commonly found in Primary PME group as they tend to get more hopeless and pessimistic about their problems for lack of normal periods of sexual functioning at all, they tend to think their problems are meant to be and they have to live with them. In all other areas there was no significant difference amongst the two groups i.e both type of patients have similar levels of impairment over all other areas of SADS-CB.<sup>15-16</sup>

In this study Pearson product moment correlation coefficient ( $r$ ) was applied to obtain the correlation between SOFAS and GARF, QOL-BREF scores. It was observed that they all had inverse relationships (i.e. ' $r$ ' = -ve) with IPE scores, which can be explained by the fact that IPE scale is scored in positive direction i.e. greater the score more is the severity; whereas all other scales used, are scored in negative direction i.e. greater the score less the severity. The value of ' $r$ ' differed for

all three, being maximum for GARF score ( $r = -0.57$ ;  $p < 0.001$ ) and minimum for SOFAS score ( $r = -0.36$ ;  $p < 0.01$ ). It can be inferred from these findings that, Global and relational functioning has a significant good inverse relationship with severity of PME, whereas both Social and occupational functioning and Quality of life have a significant fair inverse relationship with severity of PME. The higher level of correlation with GARF scores can be explained by the fact that only this scale amongst the three has a facet for sexual functioning between the partners. Coefficient of determination ( $r^2$ ) was also calculated, it tells the magnitude of the correlation between the variables; e.g.  $r^2$  for SOFAS score is 0.1296 which means that 12.96% of the variation in Social and occupational functioning in PME patient can be attributed to variation in severity of PME scores.<sup>17</sup>

Conclusion: Both Primary and Secondary PME patients have impairment in social and occupational functioning, with 85.7% of primary PME patients showing some impairment whereas 70% of Secondary PME patients showing slight impairment. Social and Occupational functioning of Primary PME patients was significantly ( $p=0.0004$ ) lower than those of Secondary PME patients. Both Primary and Secondary PME patients have impairment in global relational functioning, with 71.4% of primary PME patients showing seriously dysfunctional relational unit whereas 77.5% of Secondary PME patients showing somewhat unsatisfactory relational unit. Global relational functioning in Primary PME patients was significantly ( $p < 0.0001$ ) lower than those of Secondary PME patients. 83% of cases of PME exhibited subsyndromal symptoms of anxiety and depression not fulfilling diagnostic criteria. Primary PME patients exhibited significantly ( $p < 0.05$ ) higher levels of discouragement, pessimism, insomnia, lack of interest/pleasure in work and subjective feelings of anger. Severity of PME had a significant fair inverse relationship with Social and Occupational functioning ( $p < 0.01$ ). Severity of PME had a significant good inverse relationship with Global relational functioning ( $p < 0.001$ ).

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