Original Research Article

Sexual functioning in patients with psoriasis in south India: A cross sectional pilot study

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Abstract

Background: Sexual Functioning is an essential part of human life. Few studies exploring the impact of Psoriasis on sexual functioning found that sexual health is diminished in considerable number of patients. Certain studies found more distress among females especially those with genital lesions while prevalence of erectile dysfunction in males with psoriasis has also been found by few studies. Our study aimed to assess sexual functioning in psoriatic patients and explore the co-relation between type of Psoriasis, severity and presence of sexual dysfunction as a pilot project. **Methodology:** Cross sectional, Descriptive study. 95 diagnosed cases of Psoriasis, who met the inclusion and exclusion criteria were taken up for the study. The patients were interviewed using a semi-structured questionnaire for demographics followed by detailed assessment. Tools Used were the 1. International Classification of Diseases 10th Edition (ICD 10) 2. PASI –Psoriasis Area Severity Index, 2. ASEX: Arizona Sexual Experiences Scale. Statistical analysis was done using SPSS Version 16 and the results are represented as tables and graphs. **Results:** Males presented more with Sexual dysfunction. Erythrodermic Psoriasis (72.7%) showed significant co-relation with sexual dysfunction (p=0.003), the least co-relation being with Plaque psoriasis (21.9%). Moderate severity presented with more sexual dysfunction (36.5%) followed by Severe psoriasis (29.5%) (p=0.25). **Conclusion:** Sexual Dysfunction was found to be prevalent in Psoriasis. Erythrodermic psoriasis was found to have more risk of developing sexual dysfunction, and Moderate Severity of psoriasis was at increased risk for sexual distress. Keeping in mind limitations of study, the implication has to be viewed with caution.

Key Words: Psoriasis, Sexual Dysfunction, Severity, Types of Psoriasis.

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INTRODUCTION

The primary function of Skin as an organ is tactile receptivity and it has direct reactivity to emotional stimulus.[1]Skin therefore has a special place in psychiatry with its responsiveness to emotional stimuli and ability to express emotions such as anger, fear, shame and frustration. By providing self-esteem, the skin plays an important role in the socialization process, which continues from childhood to adulthood. Psychological factors tend to play an etiological role in the development of skin disorders. It is a two way relationship where they can exacerbate pre-existing skin disorder, and patients suffering from dermatological disorders which are disfiguring impact daily functioning.[2] Sexual function is an essential component of life. According to the World Health Organization, sexuality is a basic need and an aspect of human beings that cannot be separated from others, [3]and is extremely important in maintaining good mental health. According to the International Classification of Diseases Edition 10, Sexual dysfunction encompasses the various ways in which an individual is unable to participate in a sexual relationship as he or she would desire. Ranges from lack of interest, lack of enjoyment, failure of the physiological responses necessary for effective sexual interaction (e.g. erection), or inability to control or experience orgasm[4]. Each

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variation of presentation in psoriatic lesions has a significant effect on patients' psychological condition, self-esteem and body image. This leads to serious consequences in functioning in all other spheres of life (social, sexual, family, professional etc.) thereby amounting to poor quality of life. The impact of psoriasis on sexual functioning is significant, because the condition causes intense interpersonal strain.[5]Furthermore, a negative influence not only impacts human real-life collaboration, but also may unwittingly lead to psychosexual problems in context of human sexuality.[6] Among women, sexual dysfunction generally falls into four categories: hypoactive sexual desire disorder, female sexual arousal disorder, female orgasm disorder, and pain disorders[7]. Men manifest with Lack or loss of sexual desire, Erectile Dysfunction/ Failure of genital response, Orgasmic dysfunction, Premature ejaculation.[8] There are limited number of reports dealing with the association of psoriasis with ED. Common finding of these studies is increased ED frequency in psoriasis patients. Among the reasons studied for higher ED frequency were psychological disturbances and severity of skin symptoms.[9,10,11,] Several psychological features can be associated with psoriasis. Feelings such as rage, low mood, shame, and anxiety have been commonly reported, which can culminate in social isolation and sexual dysfunction. Despite being a common complaint among patients with psoriasis, sexual dysfunction has been rarely reported in the literature. [5]The increase in sexual dysfunction has been theorized as being associated to the severity of the disease, and psychological and physical co-morbidities associated to psoriasis.[12] The National Psoriasis foundation in 2012 stated that 1/3rd of those with psoriasis reported interference in sexual activities.[13] Gupta *et al*.[14] have found that, of 120 patients studied, 49 (40.8%) reported a decline in sexual activity after the onset of psoriasis. Psoriasis is also correlated with marked stigmatization regarding body image changes.[5,9] However, with the exception of the genital area, we have not found studies of the impact of psoriatic lesions' distribution patterns or types of Psoriasis upon sexual function. Our study aimed to assess for sexual dysfunction in Psoriasis and its association with disease severity and type of Psoriasis.

MATERIALS AND METHODS

This is a Cross sectional Pilot study, conducted over a period of 18 months from the month of October 2011 to April 2013 at JSS Hospital, Mysore. This tertiary care hospital caters to the population of nearly eighteen districts. The objective of the study was to assess sexual functioning in individuals with Psoriasis and study the co-relation between type and severity of Psoriasis with sexual dysfunction.

The study population: The data was collected from the patients diagnosed with Psoriasis and satisfying the inclusion and exclusion criteria, from out-patients of the department of Dermatology and Venerology, J.S.S. Hospital, Mysore during the period of study. All the cases were screened and diagnosed by a consultant dermatologist followed by psychiatric interview by psychiatrist.

Inclusion and Exclusion Criteria: Individuals with Psoriasis for at least 6months duration, aged between 18 to 65 years, of both sexes, with a clinical and histopathological diagnosis of Psoriasis and sexually active over the last 1 year with willingness to give a written consent were included in the study. Patients refusing consent, those suffering from other chronic skin disorders apart from Psoriasis, or having been treated with systemic steroids, systemic retinoids or methotrexate currently or for the last 6 months were excluded from the study owing to propensity of these to impinge on mental health and sexual health. Patients who were having chronic systemic illness like diabetes mellitus, and hypertension which may lead to depression, those with a history of psychiatric illness before the onset of Psoriasis were also not included in the study.

Sampling Procedure: Purposive sampling method was used. Among 138 patients interviewed, 115 met the inclusion criteria, out of which 14 refused to give consent for the study and 6 were unable to provide the histopathological details for Psoriasis diagnosis and were excluded from the study. Hence the total patient population taken up for the study was 95.

Data Collection: Initial screening and confirmation of the diagnosis of Psoriasis and its type was done by a consultant dermatologist. The patient were explained about the nature of the study and were taken up for the study only after obtaining a written informed consent from the patient. A proforma consisting of the socio-demographic and other clinical details were collected. This included the profile of the patient such as the age, sex, marital status, education, occupation, domicile, family type, family history, past history including treatment details, lifestyle factors as well as self report of any stressful event. Modified Kuppusawmy's scale was used to classify socio-economic status. Psoriasis area severity[15]index was applied and severity score of each patient was noted. A detailed interview was done by the psychiatrist to evaluate for current psychiatric illness including substance dependence by applying ICD 10 criteria. The patients were screened for sexual dysfunction using Arizona Sexual Experience Scale[16],

and a score of 19 and above on ASEX was considered as having Sexual Dysfunctions.

Tools Used:1.Modified Kuppusawmy's scale for Socio-Economic Status (SES)[17]: Kuppuswamy's scale is widely used to measure the socio-economic status of an individual in urban community based on three variables namely, Education, Occupation and Income. The three variables are clearly defined and appropriate scores maintained. Each variable consists of seven categories. According to the total scores obtained in the three variables, the Socio-economic status was grouped into five classes.ie. Upper, Upper middle, Lower Middle, Upper Lower and Lower. In the present study, Modified Kuppuswamy's SES Scale (updated by N.Kumar, C.Shekhar, 2007)[17] was used. The authors revised family income per month according to the modification of price index (2008) was considered.

PASI: The Gold Standard to assess psoriasis is the Psoriasis Area Severity index (PASI).[15] In PASI, the body is divided into 4 regions: head, trunk, upper extremities and lower extremities. Each body region is assessed on 4 parameters which are: psoriasis area, erythema(redness), thickness, and scaliness. The different body regions are scored proportionate to the body surface area (BSA). 0.1 is numbered against head, trunk is 0.3, upper extremities is 0.2 and 0.4 for lower extremities. Scoring by PASI scale is used in clinical practice wherein dermatologists examine the lesions by visual and tactile assessment and then assign it to the PASI score based on the PASI description.[13] The scoring is divided into Mild (<7), Moderate(7-12) and severe (>12).The formula for calculating PASI score is as follows: PASI score = 0.1 (Eh +I h+D h) x A h + 0.2 (Eu + Iu + Du) x Au + 0.3 (Et+ It + Dt) x At + 0.4 (EL+ IL + DL) x AL Ah means area of head involved in psoriasis. Au means area of upper limb involved in psoriasis. At means area of trunk involved in psoriasis. AL means area of lower limb involved in psoriasis

A sex: The Arizona Sexual Experience Scale[16]is intended for the assessment of sexual dysfunctions in people with health concerns as well as in psychiatric patients. (men and women).This is a clinician administered or self-report questionnaire. It consists of 5 items rated on a 6-point Likert scale. Each item's role is to explore a particular aspect of sexuality: 1. Sexual drive, 2. Arousal, 3a. Penile erection; 3b. Vaginal lubrication, 4. Ability to reach orgasm, 5. Satisfaction from orgasm. Only one item of the scale has a male and a female version (3a – 3b).This test provides good reliability index with a Cronbach's coefficient alpha of 0,90 and correlation (at intervals of 1 and 2 weeks) with r = 0,80.Evaluation of sexual functioning in the past week including on the day of interview is assessed by this scale. A total ASEX score ≥ 19, any one item with a score ≥ 5 or any three items with a score ≥ 4 would indicate sexual dysfunction.[14]

Statistical Analysis: Descriptive statistics were computed. Categorical variables were described as frequencies and percentages. For each of the scales, the central values (mean) and dispersion tendencies (standard deviation) were calculated. The chi square test was used to compare categorical variables. Cross tabulation and pearson's co-relation was used to co-relate the variables. A confidence interval of 95% was considered; "p value" of less than 0.05 was considered to be statistically significant. Data was managed and analysed using the statistical package for social sciences (SPSS) software version 16.0. Ethical Clearance: Ethical clearance was obtained from ethical review board of JSS medical college, Mysore.

RESULTS

Table 1: Socio demographic Details (Cross tabulation with Gender)

Socio Dem Variables	n	%	Males	Females	P Value, Df,X2
Age in years					
a)18-25	20	21.1	10	10	
b)26-30	17	17.90	11	6	Chi Sq: 13.06
c)31-40	23	24.2	12	11	P=0.23
d)41-50	18	18.90	10	8	df=3
e)51-60	12	12.6	10	2	
f)61-65	5	5.5	4	1	
Sex					
a)Males	57	60	57	38	Chi Sq:3.800
b)Females	38	40			P=0.051
					df=1
Marital Status					
a)Married	71	74.7	42	29	Chi sq:78.4
b)Unmarried	21	22.1	14	7	P=0.00
c)widowed/	3	3.2	1	2	df=2

separated					
Religion					Chi Sq:87.16
a)Hindu	93	97.9	57	36	
b)Muslim	2	2.1		2	P=0.00
					df=1
Education					
a)Illiterate	1	1.1	0	1	
b)Some Literacy	11	11.6	8	3	Chi Sq:47.926
c)7th pass	25	26.3	15	10	
d)High school Pass	34	35.8	16	8	P=0.00
e)<12th Standard	18	18.9	14	4	df=5
f)Graduate	6	6.3	4	2	
Residence					
a)Rural	60	63.2	34	36	Chi sq:6.579
b)Urban	35	36.2	23	12	P=0.010, df= 1
Occupation					
a)Student	8	8.4	3	5	
b)Unskilled	38	40.0	17	21	Chi Sq:54.495
c)Semiskilled	25	26.3	21	4	P=0.00
d)Skilled	13	13.7	9	4	df=5
e)Business	7	7.4	7	0	
f)Unemployed	4.2	4.2	0	4	
Socioeconomic Status					Chi Sq:0.366
a)Upper middle SES	24	25.3			
b)Lower Middle SES	4	43.2			P=0.833
c)Upper Lower SES	30	31.6			df=2
Family Type					
a)Nuclear	33	34.7	20	13	Chi Sq:138.053
b)Joint	56	58.9	31	25	P=0.00
c)Living alone	1	1.1	1	0	df=3
d)Extended	5	5.5	5	0	

Table 2: Frequency of Pattern (Type) of Psoriasis and Severity of Psoriasis

Type/Pattern	N=95	Percentage(%)
Plaque Psoriasis	73	76.8%
Guttate Psoriasis	9	9.95%
Erythrodermic	11	11.6%
Pustular Psoriasis	2	2.1%
Severity(PASI)		
Mild	24	25.26%
Moderate	52	54.73%
Severe	19	20%

Table 3: Frequency of Sexual Dysfunction, ASEX > 19

Sexual Dysfunction	N(95)	%
Present	28	29.5%
Absent	67	70.5%

Table 4: Co-relation between Sexual dysfunction and Type of Psoriasis

		Type of Psoriasis				Total
		Plaque	Guttate	Erythrodermic	Pustular	
Sexual Dysfunction	Present	16(21.9%)	4(44.4%)	8(72.7%)	0 (0%)	28(29.5%)
	Absent	57(78.1%)	5(55.6%)	3(27.3%)	2(100%)	67(70.5%)
Total		**73**	**9**	**11**	**2**	**95**

Contingency co-efficient= 0.35 ; p= 0.003(Significant)

Table 5: Co-relation between Sexual dysfunction and Severity of Psoriasis(PASI)

		Severity Of Psoriasis(PASI)			
		MILD	MODERATE	SEVERE	Total
Sexual	Present	5(20.8%)	19(36.5%)	4(21.1%)	28(29.5%)

Dysfunction	Absent	19(79.2%)	33(63.5%)	15(78.9%)	67(70.5%)
Total		**24**	**52**	**19**	**95**

Contingency co-efficient= 0.16; p= 0.25(Not significant)

Sociodemographic Characteristics: A total of 95 patients suffering from Psoriasis were evaluated for the study. Age of the patients ranged from 18 to 65 years with a mean age of 37.69 years, with majority of patients (24.2%) being in range of 31-40 years. Among 95 patients, 57 (60%) were male and 38 (40%) were female. Male: Female ratio was found to be 3:2. Majority of the individuals 93(97.4%) belonged to the Hindu faith and 2 (2.1%) were Muslim. Religious distribution was significant statistically (p=0.00) when cross tabulated with gender. Education was collected as Illiterate, Some literacy, High school completed, 7th pass, <12th std, 12th Completed, Graduate. Majority of 95 patients.ie. 34 patients (35.8%) were educated upto High-school followed closely by 25 (26.3%) having studied upto 7thStandard, followed by 18 (18.9%) being <12th Standard, with 11 (11.6%) being Some Literacy and 1 patient was illiterate. Education level was found to be statistically significant in association with gender (p=0.00). 38(40%) were unskilled, 25(26.31%) semiskilled, 13(13.7%) were skilled, 8.4% were students and 4.2% was unemployed with a significant value with gender (p=0.00). Most of them belonged to the lower middle socio-economic status 41 (43.2%), followed by 30 (31.6%) belonging to the upper lower socio-economic status. 71 (74.7%) of the patients were married, 21(22.1%) were unmarried and 3 (3.2%) of the study group was found to be widowed/widower, findings were found to be significant with gender association (p=0.00). Majority resided in a joint family setting (58.9%) and 34.7% lived in a nuclear family. (p=0.00).Table1.

Pattern /Type of presentation of Psoriasis with Severity: PASI Scores of the 95 patients further grouped them into the Mild, Moderate and Severe type based on disease severity i.e. Mild <7, moderate 7-12, and Severe >12 on PASI scores. Among 95 patients of Psoriasis, the majority of 52(54.73%) were of moderate severity as per the PASI rating followed by 24(25.26%) having mild disease severity and 19(20%) severe. 73 (76.8%)patients having Plaque Psoriasis formed the bulk of the patterns of presentation, with 11(11.6%) having Erythrodermic Psoriasis, 9 (9.5%)patients with Guttate pattern and 2 (2.1%)having Pustular Psoriasis. Table 2

Sexual dysfunction and gender distribution among sexual dysfunction patients: Our study observed that 28(29.5%) of the 95 studied had sexual dysfunction, and scored above 19 or equal to 19 on the ASEX Scale[16]. Table 3. Out of the 28 patients with sexual dysfunction, majority were males 15 (15.78%) although the percentage of afflicted females were close. ie. 13(13.68%). Table 4.

Association between sexual dysfunction and type of Psoriasis and its severity: Among 95 patients of Psoriasis, the clinical diagnosis included 73 Plaque Psoriasis, 9 Guttate, 11 Erythrodermic, and 2 Pustular Psoriasis. Our analysis found that, Erythrodermic type of psoriasis had higher risk of developing Sexual dysfunction(72.7%) as 8 out of 11 (72.7%)Erythrodermic Psoriasis individuals scored positively on the ASEX Scale for sexual dysfunction and least risk was associated with Plaque Psoriasis (21.9%) with only 16 out of 73(21.9%) individuals scoring positively on ASEX scale. The association of sexual dysfunction with pattern was found to be statistically significant, p=0.003.Table 5. On observing the severity of Psoriasis with sexual dysfunction, it was seen that though the association of severity and sexual dysfunction was not found to be significant, (p=0.25). moderate severity had more chances of developing sexual dysfunction as 36.5% individuals of moderate severity lesions scored positively on ASEX Sexual Dysfunction Scale followed by severe severity (21.1%) and mild severity (20.8%). Table 6.

DISCUSSION

Psoriasis has a profound impact on patients' everyday life. The disease state and associated burden extends beyond somatic manifestations and includes significant physical, social and psychological impairment. Numerous studies have demonstrated the significant negative impact of psoriasis on life. Psoriasis is associated with a variety of psychological difficulties, including poor self-esteem, sexual dysfunction, anxiety, depression, and suicidal ideation.[13]. High depression/anxiety scores, obsessions and difficulties with verbal expression of emotions, especially anger, social stigmatization, high stress levels, and other psychosocial co-morbidities experienced by patients with psoriasis are not always proportional to, or predicted by, other measurements of disease severity, such as body surface area involvement or plaque severity.[18] This could be true for sexual dysfunction occurring in Psoriasis patients as well. Sexual dysfunction although known to be associated with Psoriasis, is often overlooked. Our study aimed to assess the Sexual Functioning in individuals with Psoriasis, and co-relate the relation between type of Psoriasis and Psoriasis severity with Sexual dysfunction. We excluded psychiatric co-morbidity in order to exclude other

psychological factors influencing sexual dysfunction. The age of the individuals in this study ranged from 18 -65 years, with mean age of 38.5 years. This was similar to the study done by Cemal Bilac.[19] It included age ranges from 16-81 years, with the mean age of 39.5 +/_ 15.. The more recent study by Arbabi *et al* [20] also had similar mean age. ie.35.34+/_ 17. However, mean age was not similar to the study done by Manolache L[21] Comparison of mean age with prior studies were done as age may impact sexual functioning, and similar age range would allow for comparable factors. The duration of illness in our study ranged from, 6 months to 20 years with a mean duration of 8.55 years. This finding is not in agreement with the study done by Bilac [19]who observed the duration of disease ranged from 1 month to 40 months with a mean of 12.4 months. The difference in duration of illness may indicate that both chronic illness as well as recent onset of illness (8.55 years vs 1.4 years) may be associated with sexual difficulties. A large section of the population belonged to the lower middle socio-economic status, thus one may erroneously assume that Psoriasis is common among lower middle class. However, considering that the hospital caters to a large population belonging to this category, the results cannot be generalized. The over representation of married subjects in this population is the logical outcome of higher age, ensuring more chances of getting married as per the cultural norms. Similarly there is an over representation of Hindu patients, possibly due to majority faith being Hinduism around the location of the hospital. The majority of patients in this sample were educated upto high school (35.8%) followed closely by middle school educational status (26.3%) which were similar to the study done by Gaikwad *et al*[22] (23.3% were secondary educated). In this study 63.2% of individuals were from a rural background, again possibly owing to the general population presenting to the hospital from a rural background. Despite being a common complaint among patients with psoriasis, sexual dysfunction has been rarely reported in the literature. This study aimed at assessing the prevalence of sexual dysfunction in psoriasis. The National Psoriasis Foundation in 2012 stated that 1/3rd of those with psoriasis reported interference in sexual activities. [13]In the study by Mercan *et al*.,[10] sexual dysfunction was more common in the group of patients with psoriasis than in the control group. Gupta *et al*.[14] have found that, of the 120 patients studied, 49 (40.8%) reported a decline in sexual activity after the onset of psoriasis. Meeuwis *et al*.[12] focused mainly on the presence of genital psoriasis, and found greater sexual dysfunction in patients with genital lesions. In the study of Sampogna *et al*.[23] the prevalence of sexual dysfunction varied according to the question analyzed, from 35.5% with the Psoriasis Disability Index (PDI) question to 71.3% with the Impact of Psoriasis Questionnaire (IPSO) question. Guenther *et al*.[24]have assessed Psoriasis and the treatment with ustekinumab in 1,996 patients. Prior to treatment, 22.6% of the patients had sexual dysfunction. In our study, none of the patients presented with genital lesions. The prevalence of sexual dysfunction was 29.5%. These findings are similar to those of Sampogna *et al*[23] (35.5%-71.3%), Guenther *et al* [24] (22.6%), and Gaikwad *et al* (20.9).[21] Our study presented with lower prevalence rates of sexual dysfunction as compared to Gupta *et al* (40.8%)[14] and Al Mazeedi *et al* (38.9%).[11] There was preponderance of sexual dysfunction in males our study, (15.78%) compared to females (13.68%). Guenther *et al*.[24] found that sexual dysfunction was most frequent in women (27.1%) than in men (20.8%) which is in contrast to our findings. Possible reason could be societal constraints on women regarding sexuality causing fewer women being forthcoming with sexual difficulties. To our knowledge no other study has reported the association between type of psoriasis and sexual dysfunction. Our findings observed that erythrodermic type of psoriasis had higher risk of developing Sexual dysfunction (72.7%) and least risk was associated with plaque Psoriasis (21.9%). The statistical difference was found to be significant (p= 0.003). Al-Mazeedi *et al*[11] found dysfunction in 38.9% of the patients with severe psoriasis, in 29.7% of those with moderate psoriasis, and in 30.8% of those with mild psoriasis. Contrary to this, our study observed moderate severity (36.5%) had more chances of developing sexual dysfunction, with 21.1 % risk in severe psoriasis. This indicated that the incidence of severity of lesions need not be proportionate to the impact on sexual health. In our study, the reasons for this finding could be due to larger group belonging to the moderately severe variety lesions, or due to better adjustment with the disease on part of the individuals with severe lesions due to subjective perceptions. A recent study by Molina-Leyva *et al*,[26] studied the association between the different body areas afflicted by psoriasis and sexual dysfunction. Psoriasis lesions on the genitals, buttocks, abdomen or lumbar region were significantly linked to sexual dysfunction. The study also quoted a new variable termed as Areas of Sexual Impact lesions(ASI) and Psoriasis patients with ASI involvement showed a 7.9-fold higher risk of developing sexual dysfunction than psoriasis patients without. Although our study did not assess association of sexual dysfunction with different body areas afflicted, we have compared our findings with this new study as it showed a meaningful clinical association between moderate to severe psoriasis and sexual dysfunction which was a finding similar to our study, where significant association was found with moderate severity of Psoriasis.[5] A review reported that the severe/moderate

form was more associated with sexual dysfunction in two studies,[23,24] but two others showed no statistically significant difference.[24,25] The presence of psoriatic arthritis has been also related to sexual difficulties in studies.[11,24] The presence of genital lesion had an impact on quality of life, but showed no correlation with sexual function,[14,9,25] except in the study by Meeuwis *et al.*[12] who in their study showed that women with genital psoriasis had impaired sexual function, but the same was not reported in males.[5] Our study however, did not have any patients with genital lesions or arthiritis like the above studies and males presented with more sexual dysfunction than women.

CONCLUSION

We have found sexual dysfunction to be prevalent in patients with psoriasis. Males appear to be at higher risk for developing dysfunction in sexual functioning. Erythrodermic type of psoriasis and individuals with moderate severity were found to have greater risk of presenting with sexual difficulties. This goes to suggest that the assessment of sexual function should be a part of the comprehensive care of moderate to severe psoriasis patients in particular, as well as a wholistic approach to treatment in all psoriasis patients. During initial screening and physical assessment, the type, severity and areas of distribution should be given due attention as these may significantly impact sexual functioning.

LIMITATIONS OF THE STUDY

We acknowledge certain weaknesses in our methodology. The major shortcoming was the sample size, a larger sample size would have allowed for results to be more generalisable. Study being of cross sectional design, long term effects of the disorder could not be studied. Consecutive follow up could have ensured better understanding into the illness outcomes and associations. Substance dependence was excluded but harmful use was not taken into consideration. ASEX scale takes into account the sexual functioning of the past week, and is used primarily for screening as this is a pilot project. Although the study includes those patients who have been sexually active for the last 1year, detailed evaluation into specific types of sexual dysfunction, gender wise, is going to be taken up in the subsequent study. Stigma and psychiatric co-morbidities were not considered for study in this sample, and would prove fruitful in inclusion in the subsequent study.

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