

A descriptive study of clinical profile of psychiatric referrals from dermatology unit in a tertiary care center in north India

Vijendra Nath Jha^{1*}, Rajnish Kumar²

¹Assistant Professor, Department of Psychiatry, D.M.C.H., Laheriasarai, Bihar, India

²Senior Resident, Department of Skin and Venereal Diseases, D.M.C.H., Laheriasarai, Bihar, India

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Abstract

Background: Psychological stress has been known to play an important role in initiation and maintenance of many dermatological illnesses, however there is lack of awareness among dermatologists regarding this. **Aim:** To study the pattern and prevalence of psychiatric referrals from dermatology OPD. **Methods:** The study was carried out jointly in dermatology and psychiatry department of D.M.C.H., Darbhanga, Bihar, North India. Sample was drawn from confirmed dermatology cases attending the dermatology OPD. Those patients who gave consent to participate in the study and scored above the desired cut off (>3) on GHQ-12 were sent for psychiatric evaluation. Socio-demographic data were collected and based on clinical interview and mental state examination, psychiatric diagnosis was made. **Findings:** As per ICD-10 criteria 24.5% of dermatology patients had a diagnosable psychiatric illness. Depressive disorder was the most common diagnosis seen in 27.8% patients (n=92), followed by anxiety disorder in 15.7% patients (n=52). Other diagnoses were; OCD (7.5%, n=25), adjustment disorder (6.9%, n=23), somatoform (8.7%, n=29), substance abuse (4.2%, n=14), psychosis (2.7%, n=9). No psychiatric diagnosis could be made in 26 patients (7.8%). Amongst the dermatological diagnosis, Psoriasis (19.3%) was the most common followed by Urticaria (13.3%). **Conclusion:** Patients with dermatological illnesses have a high prevalence of psychiatric morbidity. Awareness programmes would help in removing stigma towards psychiatric illness and would lead to holistic management of such patients.

Keywords: "Dermatology"[Mesh], "Psychiatry"[Mesh], "Cross-Sectional Studies"[Mesh], "Referral and Consultation"[Mesh]

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Introduction

Psychodermatology is a field of medicine that deals with the matters of mind and skin. It is a part of Consultation-Liaison psychiatry wherein patients suffering from dermatological conditions with comorbid disorders of mind are treated together by a team of dermatologists, psychiatrists and clinical psychologists.

From embryological point of view, both the organs, i.e., Skin and the Central nervous system (CNS), develop from the same embryonic germ layer, the Ectoderm. Also, there is a complex interaction of neuroendocrine and immune system, termed as neuro-immuno-cutaneous system (NICS). This NICS is said to be destabilized during the course of several psychiatric and inflammatory skin conditions. Psychological stress has been shown to disturb the epidermal permeability barrier and acting as a precipitating factor for atopic dermatitis and psoriasis. Similarly, disfiguring skin lesions lead to a sense of shame and low self-esteem in the individual thereby leading to depressive and anxiety disorders[1].

Around 30-40% of patients seeking dermatology consultation have been found to have comorbid psychiatric illnesses[2]. Studies on this topic have been done around the world, but only few studies could be found on Indian population and almost none from the region where the authors treat their patient. In this study, the authors attempt to study the pattern and prevalence of psychiatry referrals from dermatology OPD in a tertiary care centre in the state of Bihar in North India.

Methods

The study was approved by the institutional Ethical committee.

*Correspondence

Dr. Vijendra Nath Jha

Assistant Professor, Department of Psychiatry, D.M.C.H., Laheriasarai, Bihar, India.

E-mail: drvijendrajha@gmail.com

Objective

To estimate the prevalence of psychiatric disorders and reason for psychiatry referrals among patients attending dermatology out-patient department (OPD) in a tertiary care centre.

Place of study

Sample was drawn from the dermatology OPD of D.M.C.H., Darbhanga, Bihar.

Study design

It was a descriptive, cross-sectional study.

Sample size

It was calculated based on prevalence of Psychiatric cases in dermatology patients around 30%, as reported in earlier studies and taking 5% absolute precision and 95% confidence interval. The formula gives a figure of 322, hence a sample size of 330 was thought to be adequate enough for proper representation of study population[3].

Sampling procedure

Systematic random sample. A fixed number (30 cases) of patients visiting the dermatology OPD on selected days of the week (Mondays and Thursdays, as the authors had their OPD on these days) were randomly chosen.

Study period

Sample collection was done till adequate sample size was achieved (July to November 2021).

Inclusion criteria

1. Patient across all age group and gender who attended the dermatology OPD on selected days and scoring above cut off score on screening questionnaire (described below)
2. Patients giving written informed consent (or assent from legally appropriate caregiver, in case of minor) to participate in the study.

Exclusion criteria

1. Prison inmates, paramilitary personnel and those patients in whom reliable informants were not available were excluded.

Materials

1. International Classification of Disorders 10th Edition Diagnostic criteria for research (ICD-10):

ICD has been devised by the World Health Organisation. Diagnosis is based on clinical interview and other available information[4].

2. Modified Kuppuswamy’s socioeconomic scale:

It is the most widely used scale for socioeconomic data collection. Initially, devised in 1976, it is regularly updated as per the economic growth. It divides the study population into five statuses; Upper, Upper middle, Lower middle, Upper lower, Lower[5].

3. General Health Questionnaire-12 (GHQ-12):

This is a 12 item self-assessment questionnaire which reflects the mental health condition of the respondent. It is a short version of the original instrument developed by Goldberg consisting of 60 items. It’s strong psychometric property, brevity and efficiency makes it a very useful tool for assessing common mental disorders in primary care settings[6].

Data collection

Detailed assessment of socio-demographic pattern, psychiatric history, clinical interview was done using a semi-structured proforma. Patients scoring 3 or above on GHQ-12 were selected and sent for psychiatric assessment where diagnosis was made using ICD-10.

Statistical analysis

Appropriate and relevant statistical measures were employed to assess prevalence data and measures of central tendencies were calculated.

Results

Patients who attended the dermatology OPD on selected days during the study period with confirmed dermatological diagnosis were screened with GHQ-12 after taking informed consent. To achieve the desired sample size of 330 cases, a total of 1240 patients had to be screened for cut-off score of more than 3 on GHQ-12. Females constituted 57.9% (n=139) of the total sample and outnumbered the males which were 42.1% (n=191). The mean age of the sample was 28.74 years (Range 6-77). Maximum cases (51.8%, n=171) belonged to the age group of 18 to 50 years. It was followed by cases belonging to under 18 years group with 39.39% of cases. Only 8.78% of cases were above 50 years of age. Most cases were housewives (42%) followed by students (23%), rest 35% cases comprised of self-employed, government employed, retired and unemployed people. On the socio-economic strata, maximum cases belonged to the Upper-lower strata (35.7%), followed by Lower-middle strata (31.2%) and Lower strata (21.2%). Socio-demographic and clinical profile has been summarised in Table 1.

Table 1: Socio-demographic and clinical profile of all cases

Variables		Observed values	
		Number	Percentage
Age (in years)	Mean (± S.D.)		
< 18	12.85 (±3.53)	130	39.39%
18-50	35.12 (±7.52)	171	51.81%
> 50	62.31 (±8.05)	29	8.78%
Gender			
	Males	139	42.1 %
	Females	191	57.9 %
Socioeconomic status			
	Upper	13	3.9%
	Upper middle	26	7.8%
	Lower middle	103	31.2%
	Upper lower	118	35.7%
	Lower	70	21.2%
Reasons for referral			
Comorbid/previous psychiatric illness		62	18.7%
Suicidal attempt/Intentional self-harm		15	4.5%
Sad mood, crying		101	30.6%
	Anxious, restless	82	24.8%
	Multiple somatic symptoms	33	10%
	Psychosexual problems	28	8.4%
	Crawling/itching sensations	09	2.7%
Total cases (N)		330	100%

*S.D.= Standard Deviation

Concurrent ongoing or previous psychiatric illness were the reason for referral to psychiatry OPD in 18.7% cases (n=62). Those cases in which there were no previous history of psychiatric consultation, the most common reason for referral was sad mood and crying in 30.6% of the cases (n=101), followed by anxiety and restlessness in 24.8% (n=82). Patients complaining of multiple somatic symptoms comprised the next common cause for referral (10%, n=33). The remaining 17% cases were referred for psychosexual complaints, intentional self-harm and crawling/itching sensations, in that order.

Distribution of dermatological cases is shown in Table 2. It has been summarised as per the classification of psychodermatological disorders by Koo and Lee, 2003. (7)Psoriasis (19.3%, n= 64) was the most common dermatological diagnosis amongst the cases, followed by Urticaria (13.3%, n= 43). The number of patients with Acne and Chronic eczema were equal (9.3%, n=31). It was followed by Alopecia (8.4%, n=28) and Atopic dermatitis (8.1%, n=27). The diagnosis of Vitiligo was seen in 7.5% and Excoriation in 3.9% cases. Other minor diagnoses were seborrheic dermatitis, hyperhidrosis, albinism, delusional parasitosis, trichotillomania.

Table 2. Distribution of dermatological diagnoses

Diagnosis	Observed values	
	Number	Percentage
Psychophysiological disorders		
Psoriasis	64	19.3%
Urticaria	43	13.3%
Acne	31	9.3%
Atopic dermatitis	27	8.1%
Others (Seborrheic dermatitis, hyperhidrosis)	20	6.1%

Dermatologic disorders with psychiatric symptoms		
Chronic Eczema	31	9.3%
Alopecia	28	8.4%
Vitiligo	25	7.5%
Others (Albinism, Chronic infections)	12	3.6%
Psychiatric disorders with dermatologic symptoms		
Excoriation	13	3.9%
Eating disorders	9	2.7%
Delusional parasitosis	9	2.7%
Others (Trichotillomania, OCD, Dysmorphophobia, psychogenic pruritus)	18	5.4%
*Classification of Psychodermatologic disorders as per Koo and Lee,2003.		

Psychiatric diagnoses as per ICD-10 has been enlisted in Table 3. The most common psychiatric diagnosis that was made among the cases referred from dermatology OPD was Depressive disorder, seen in 27.8% patients (n=92); while Dysthymia, bipolar disorder constituted 6.9% of the cases. The ICD-10 category of Neurotic, stress-related and adjustment disorder constituted the majority group with 40.9% of all cases, with anxiety disorders (including Generalised Anxiety disorder, Panic attack, Phobic disorder) being the most common diagnosis seen in 15.7% cases (n=52). Somatoform disorder was diagnosed in 8.7% cases, followed by obsessive compulsive disorder (OCD) in 7.5% (n=25) cases. Adjustment disorder was seen in 6.9% (n=23) patients.

Table 3: Distribution of Psychiatric diagnoses as per ICD-10

ICD-10 Category	Psychiatric diagnosis	Number	Percentage
F10-F19	Substance abuse disorder	14	4.2%
F20-F29	Psychotic disorders	9	2.7%
F30-F39	Depressive disorder	92	27.8%
	Others (Dysthymia, manic episode, bipolar disorder)	23	6.9%
F40-F48	Anxiety disorder (GAD, Panic attack, Phobic disorder)	52	15.7%
	OCD	25	7.5%
	Adjustment disorder	23	6.9%
	Somatoform and Dissociative disorders	29	8.7%
	Other (Culture bound syndrome/Dhat syndrome)	07	2.1%
F50-F59	Sexual dysfunction (PME, ED)	20	6.06%
	Eating disorder	2	0.6%
F60-F69	Personality disorder, Trichotillomania	5	1.5%
F70-F98	MR, ASD, Tic disorder	3	0.9%
	NO DIAGNOSIS	26	7.8%
*ICD-10= International Classification of Disorders, 10th Edition; GAD= Generalised Anxiety Disorder; OCD= Obsessive Compulsive Disorder; PME= Premature ejaculation; ED= Erectile dysfunction; MR= Mental retardation; ASD= Autism Spectrum Disorder			

Non-organic Sexual dysfunction (Premature ejaculation and erectile dysfunction) was diagnosed in 6.06% patients (n=20). Substance abuse disorder was seen in 4.2% and Psychotic disorders in 2.7% cases. Of the 330 patients referred from dermatology OPD, there were 26 patients in whom no definite psychiatric diagnosis could be made. To summarize, a total of 1240 patients who attended the dermatology OPD were screened with GHQ-12 and 330 cases which scored above the desired cut off score were sent for psychiatric evaluation, of which 304 had a diagnosable psychiatric illness. This gives a 24.5% psychiatric morbidity among dermatology OPD patients in the present study sample.

Discussion

The index study sample which included 330 cases had a 24.5% psychiatric morbidity among patients attending the dermatology OPD at our tertiary care centre. The sample had a mean age of 28.74 years and was predominantly of female gender with 57.9% cases. Maximum number of the patients (51.8%) belonged to the age group 18-50 years. Over 35% patients belonged to the Upper-Lower socio-economic strata. The most common reason for psychiatric referral was sad mood (30.6%) followed by anxiety symptoms (24.8%). Concurrent or previous history of psychiatric illness was the third common reason for referral (18.7%). Psoriasis (19.3%) followed by Urticaria (13.3%) was the most common dermatological diagnosis in the current sample. Depressive disorder (27.8%) was the most common psychiatric diagnosis made in the referred patients, whereas,

neurotic and stress related disorders of ICD-10 was the most common group diagnosed (40.9%).

The prevalence of psychiatric morbidity of 24.5% among dermatology patients which was seen in our study is comparable to 25.2% morbidity reported by Picardi et al, 2000[8]. While, Seyhan et al, 2006 have reported lower prevalence of 15.3%[9], others like Raikhy et al, 2017 (34.2%), Aktan et al, 1998 (33.4%) Shenoiet al, 2013 (30%) have reported more prevalence than our study[10-12]. There could be several reasons for this comorbidity. First, the disfigurement from the skin lesions and resulting shame and guilt acts as stressor for the precipitation of psychiatric illness. Secondly, medications such as steroids used for skin diseases do lead to a variety of psychiatric illnesses. Systemic illnesses such as Porphyria, Systemic lupus have both dermatological and psychiatric manifestations. Lastly, as both these organ systems share a common embryological origin, there could be genetic factors which are as yet unidentified. All the studies mentioned above had female preponderance in their sample, but Raikhy et al have reported more males than females in their study. Seyhan et al had reported more cases of Urticaria (25.8%) than Psoriasis (15.5%) followed by alopecia (11.3%). While Raikhy et al have reported Acne (24.1%) as the most common dermatological diagnosis in their sample, followed by Psoriasis (22.1%), Urticaria (19.4%) and Vitiligo (13.1%). This could be due to regional differences in the prevalence of dermatological diagnoses. While there was difference in the percentage of dermatological diseases in different studies, almost all

the studies had similar prevalence of psychiatric disorders. Depressive disorder was the most commonly diagnosed psychiatric comorbidity in all of the studies, including ours, followed by Anxiety disorder, OCD, Adjustment disorder and others. This implies that whatever the *external* manifestations of the dermatological diseases may be, the *internal* affection of the mind/ the way the mind reacts to stressors was roughly similar in all the populations. Two psychiatric diagnoses in our study deserve worth mentioning; Dhat syndrome and psychosexual disorders. Many patients present in OPD with a mixture of psychosexual disorders including Premature ejaculation, erectile dysfunction and Dhat syndrome and the distress or morbidity reported is comparable to any other moderate to severe psychiatric disorder. Also, due to stigma or lack of awareness many such patients present to dermatology rather than psychiatry OPD and prefer to get treated by dermatologists rather than psychiatrists. The low prevalence of psychiatric morbidity in our sample could be due to several reasons. As majority of the patients belonged to rural area and lower socio-economic strata, social stigma and less inclination towards psychological well-being might have contributed to their low scoring on self-assessment questionnaire. Medical rather than psychological model of illness might also have led to less attribution of their discomfort to psychological causes.

It has been observed that usually psychiatric referral is done for psychotic, violent and severe depressed/suicidal cases only and mild/moderate cases remain undiagnosed and untreated, thereby prolonging morbidity. The reasons for this could be; clinician's factors (lack of knowledge and awareness about common mental illnesses) and patient factors (stigma, shame, privacy, guilt). The authors suggest that interdepartmental awareness programmes be organised for improving awareness about common and severe mental illnesses among primary care physicians as well as other non-psychiatrist specialists.

Strengths and limitations

Strengths of this study include a robust sample size and focus on Psychodermatological disorders.

Limitations

GHQ-12 is a subjective questionnaire and it has its limitations. The absence of control group and inclusion of only OPD patients warrant cautious interpretation of the results and its generalisation to the population.

Conclusion

Psychiatric morbidity has a high prevalence among dermatology patients as has been shown in this study. Dermatologists and primary

care physicians must be made aware about this high prevalence in order to remove any inherent bias towards psychiatric disorders. This knowledge and a brief counselling prior to psychiatric referral would also help in overcoming stigma towards psychiatric illnesses in the patients. Ultimately, these steps would ensure treatment of psychiatric illnesses alongside dermatological conditions and result in holistic management of the patient.

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