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### Research Article

### Section: Psychiatry

## A Clinical Study of Socio-Demographic Variables & Their Correlation to Psychiatric Morbidities in Dermatological Disorders

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### HIGHLIGHTS

- Psychiatric issues are common in dermatology.
- Socio-demographics strongly influence morbidity.
- Married females are highly affected.
- Education level impacts outcomes.
- Need for holistic management.

### Key Words:

Dermatological disorders  
Psychiatric morbidity  
Socio-demographic factors  
Psychological distress  
Quality of life  
Mental health  
Hospital-based study

### ABSTRACT

**Introduction:** Psychological factors are increasingly recognized as important contributors to dermatological disorders. Many patients with skin diseases experience significant emotional distress, which negatively affects their quality of life and interferes with overall well-being. Symptoms such as anxiety, depression, low self-esteem, and social withdrawal are commonly reported. In addition to psychological variables, socio-demographic factors-including age, gender, marital status, educational level, and socioeconomic status may influence both the onset and prognosis of dermatological conditions. Understanding these associations is essential for guiding patient-centred and holistic management. **Aim & Objective:** The present study aims to evaluate socio-demographic variables and examine their correlation with psychiatric morbidities among patients with dermatological disorders. **Materials & Methods:** This hospital-based prospective study was conducted among patients attending the outpatient department (OPD) and inpatient ward of the Dermatology Department at B. S. Kushwah Medical College, Kanpur. Relevant socio-demographic information, along with psychiatric symptoms and diagnoses, was systematically assessed. **Results:** The findings demonstrate that gender, age, educational level, and socioeconomic status significantly influence the prevalence of psychiatric morbidities in dermatological patients. A statistically significant association was observed in married females, individuals aged 41-60 years, and those with education below the high-school level, who exhibited higher rates of psychiatric comorbidities compared to other groups. **Conclusion:** This study underscores the strong relationship between socio-demographic characteristics and psychiatric morbidities in patients with dermatological disorders. As individuals presenting to hospitals are more likely to have moderate to severe disease, these findings may not fully represent the general population of dermatology patients. Integrating psychological assessment and support into dermatological care may improve overall treatment outcomes and enhance quality of life.



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## INTRODUCTION

Healthy and intact skin is fundamental not only to physical protection and physiological functioning but also to emotional equilibrium, self-image, and confidence [1,2]. As the largest and one of the most visible organs of the human body, the skin plays a central role in non-verbal communication, identity, and social integration. It has long been regarded as an organ of emotional and psychological expression, often reflecting internal stress, emotional states, and mental well-being [1,4]. Because of this unique dual role, disturbances in skin appearance or function can significantly affect an individual's psychological health, social behavior, and quality of life [5,10]. The connection between dermatological conditions and psychiatric morbidity has been a subject of growing clinical interest. This association can be understood through a multidimensional framework involving biological, psychological, and social mechanisms. The first pathway relates to the visible and often chronic nature of dermatological disorders. Many skin diseases, such as psoriasis, vitiligo, and acne vulgaris, are characterized by unpredictable exacerbations, scarring, disfigurement, or long-term treatment needs. The appearance of these lesions may interfere with daily social functioning, personal relationships, and professional life, leading to emotional distress, lowered self-esteem, and development of psychiatric symptoms, including anxiety and depression [2,6,13]. With increasing societal and media-driven focus on physical appearance, individuals affected by visible skin disorders often experience heightened psychological burden, feelings of embarrassment, and avoidance behaviors [6,11].

The second pathway involves primary psychiatric disorders manifesting through the skin. Conditions such as obsessive-compulsive disorder may lead to compulsive skin picking, washing, or hair pulling, resulting in secondary dermatological injury. Similarly, delusional disorders-particularly delusional parasitosis can lead individuals to believe their skin is infested with parasites, prompting harmful self-treatment or repeated medical consultations [3,12]. These psychocutaneous disorders highlight the need for interdisciplinary management between psychiatry and dermatology.

A third pathway concerns the psychological side effects of dermatological therapies. Medications such as systemic corticosteroids, retinoids, and certain immunomodulatory agents are documented to cause mood alterations, irritability, anxiety, and in some cases, depressive symptoms [10]. Awareness of these adverse psychological effects is critical for early identification and prevention of treatment-related psychiatric complications.

Psychological stress has also been recognized as a significant modulating factor in dermatological disease expression and progression. Evidence suggests that stress disrupts epidermal barrier homeostasis and impairs immune regulation, leading to delayed wound healing and exacerbation of inflammatory skin

disorders, including atopic dermatitis and psoriasis [4,8]. These physiological mechanisms demonstrate the complex bidirectional communication between the skin and central nervous system, often described as the "brain-skin axis."

Socio-demographic factors further influence the manifestation and psychological burden of dermatological conditions. Variables such as age, gender, socioeconomic status, and urban or rural residency have been associated with differences in psychiatric comorbidity, coping strategies, and disease progression among dermatology patients [5,7,14-16]. For instance, individuals with limited financial resources or poor access to healthcare may experience delayed diagnoses, inadequate treatment, or greater stigma, thereby increasing vulnerability to psychological distress [14,15].

Skin disorders occurring during childhood or adolescence carry an especially high emotional impact. These developmental stages are marked by identity formation, heightened sensitivity to peer evaluation, and strong emphasis on physical appearance. Visible dermatological lesions during this period may impair body perception, reduce social participation, and negatively affect peer relationships [8]. Studies report that adolescents with acne vulgaris, psoriasis, or alopecia areata frequently experience stigma, bullying, and social withdrawal, contributing to elevated stress, depression, and anxiety levels [9,11,17]. These psychosocial challenges further deteriorate health-related quality of life (HRQOL) and may worsen disease severity by perpetuating stress-induced inflammatory mechanisms [8].

Overall, the close interaction between the skin and mind highlights the need for a holistic, multidisciplinary approach to dermatological care. Recognizing psychological factors in skin diseases is crucial for improving outcomes, reducing stigma, and enhancing treatment adherence. Therefore, the present study aims to evaluate socio-demographic variables among dermatology patients and correlate them with psychiatric morbidities associated with dermatological disorders.

## MATERIAL & METHODS

This study was conducted in the Department of Psychiatry, B S Kushwah Medical College and Hospital, within a period of twelve months from 1<sup>st</sup> June 2023 to 31<sup>st</sup> May 2024. This was a hospital-based prospective study, and the study sample was selected from the patients who were diagnosed and confirmed by a senior consultant of the Outpatient Department (OPD) and the indoor ward of the dermatology department.

### *Sample size*

The sample size for the study is as follows-

Total cases of dermatological disorder taken: 140

Cases included for the study: 100

So, out of the total 140 cases of different dermatological disorders, 100 cases were included in the study, fulfilling the inclusion criteria that were laid out for the study. The cases available were mostly from the rural and urban areas of Kanpur, Farrukhabad, Unnao, Kannauj, and Hardoi.

**Selection Criteria****Inclusion Criteria:**

1. Patients of the age group 18-65 years.
2. Both male and female populations.
3. Diagnosed case of dermatological disorder as diagnosed by the consultant dermatologist.

**Exclusion Criteria:**

Adults fulfilling any of these criteria will be excluded from the study-

1. Psychiatric studies prior to the onset of dermatological disorder.
2. Patients suffering from chronic medical debilitating illnesses
3. Mental sub-normality.
4. Adults receiving or those who received steroids in the last 6 months.

**Tools used:**

1. Informed consent form.
2. A semi-structured proforma for socio-demographic data was developed and used in the Department of Psychiatry.
3. Mini international neuropsychiatric interview (MINI PLUS)
4. Diagnostic and statistical manual of mental disorders, TR IV.

**Description of tools**

1. *Informed consent form:* A self-designed informed consent form, which explained the nature of the study, the contents of which were explained in vernacular language, was read out to the subjects of study, and their signature or left thumb prints in case of illiterates were obtained.

2. *Pro-forma for socio-economic data:* A self-designed form to collect personal and socio-demographic details of the subjects has been used. This contains details about identification data like name, age, sex, residential address, and marital status. The family history records the type of family, the number of persons in the family, and the details of earning family members, like their age, sex, occupation, and the total monthly income of the family from all sources.

3. *Mini International Neuropsychiatric Interview: Plus (MINI-PLUS):* MINI PLUS (Mini International Neuropsychiatric Interview, English version 5.0.0): This brief structured diagnostic interview developed by Dr. David V. Sheehan of USA and Dr. Y. Lecrubier of France, aimed at the identification of a set of DSM-IV and ICD-10 mental disorders in multicenter clinical trials and epidemiological studies and its validity and reliability scores were acceptably high. It elicits all the symptoms listed in the symptom criteria for the major Axis I psychiatric disorder in DSM-IV and ICD-10.

**Procedure**

Patients attending the Outpatient Department (OPD) and admitted to the indoor ward of the dermatology department of B S Kushwah Medical College and Hospital were assessed and

diagnosed as per the different diagnostic criteria of dermatological disorders, and those meeting the inclusion criteria were recruited for the study. The confirmation of the diagnosis was made after discussing the cases with senior consultants of the dermatology department. After obtaining the consent, the cases were assessed for demographic variables and psychiatric morbidity, and disease activity by using the MINI-PLUS. The diagnosis thus made was confirmed with DSM IV. The time required for interviewing each patient ranged between thirty (30) to forty-five (60) minutes. The coding for the responses was made as per the provisions made for the study.

Finally, the results and observations were done by using the Chi-square test to assess categorical data, Spearman's correlation for comparing categorical relationships, and Pearson's correlation to compare quantitative relationships.

**RESULTS**

In the present study, psychiatric morbidity according to the sex distribution is shown in Tables 1 & 2. Out of the total 60 male cases of dermatological disorders, 16 had psychiatric morbidity; the P-value was 0.0022, which is statistically significant. In females, out of 40 cases, 17 had psychiatric morbidity. P-value in females was 0.0017, which is more significant. According to marital status, psychiatric morbidity in cases of dermatological disorders is shown in Table 3. Married cases of dermatological disorders had statistically significant psychiatric morbidity, as 18 (30%) married cases had psychiatric morbidity out of 60 cases, with a significant P-value of 0.0019. In widowed cases, out of 7 cases, 4 had psychiatric morbidity with a significant P-value of 0.0032, whereas 11 (34.37%) out of 32 unmarried cases of dermatological disorders had psychiatric morbidity, but this finding was statistically insignificant as indicated by P-Female value of 0.0598. According to the type of family psychiatric morbidity in cases of dermatological disorders were found to be statistically significant in nuclear family and extended nuclear family cases, with a P-value of 0.002 and 0.004, respectively, as compared to the cases from joint family background, which was not significant (Table 4). As shown in the above (Table 5), psychiatric morbidity is statistically significant in illiterate patients, followed by those who studied below or up to middle school level, with P values being 0.0013 and 0.0015. This is followed by patients educated up to the primary school level of education, in whom the psychiatric morbidity is significant, P value is 0.0017. Psychiatric morbidity is insignificant in all other levels of education. As per locality, in our study cases of dermatological studies from rural setups had statistically significant psychiatric morbidity, P value at 0.004. The patients hailing from semi-urban and urban backgrounds did not have statistically significant psychiatric morbidity (Table 6). As shown in the above table, 35.5% Hindu patients have psychiatric morbidity, which is also statistically significant. (Table 7).

**Table 1: Psychiatric morbidity according to age distribution in patients with dermatological disorders**

Age groups in years	No. of cases of dermatological disorders n=100	No. of cases with psychiatric morbidity	Percentage (%)	P-value
≤ 20 yrs	9	3	33.33	0.3216
21 to 30 yrs	34	7	20.58	0.0031*
31 to 40 yrs	25	7	28	0.0025*
41 to 50 yrs	12	7	58.33	0.0013*
51-60 yrs	20	9	45	0.0011*
≥60 yrs	0	0	-	-

**Table 2: Psychiatric morbidity according to the Sex distribution in cases suffering from dermatological disorders**

Sex	No. of cases of dermatological disorders n=100	No. of cases with psychiatric morbidity	Percentage (%)	P-value
Male	60	16	26.67%	0.0022*
P-Female	40	17	42.5%	0.0017*

**Table 3: Psychiatric morbidity according to marital status in cases with dermatological disorders**

Marital status	No. of cases of dermatological disorders n=100	No. of cases with psychiatric morbidity	Percentage (%)	P-value
Married	60	18	30	0.0019*
Unmarried	32	11	34.37	0.0598
Widow/widower	7	4	57.14	0.0032*
Remarried	1	0	-	-

**Table 4: Psychiatric morbidity according to the type of family in cases of dermatological disorders**

Type of Family	No. of cases of dermatological disorders n=100	No. of cases with psychiatric morbidity	Percentage (%)	P-value
Nuclear	56	20	35.71	0.002*
Extended nuclear	25	9	36	0.004*
Joint	19	4	21.05	0.134

**Table 5: Psychiatric morbidity according to level of Education in cases of dermatological disorders**

Level of Education	No. of cases of dermatological disorders n=100	No. of cases with psychiatric morbidity	Percentage (%)	P-value
Professional	4	2	50	0.366
Graduate or postgraduate	4	3	75	0.327
Intermediate or post high school diploma	8	4	50	0.476
High school certificate	19	1	5.26	0.343
Middle school certificate	27	9	33.33	0.0015*
Primary school certificate	27	6	22.22	0.0017*
Illiterate	11	5	45.45	0.0013*

**Table 6: Psychiatric morbidity according to the locality in cases of dermatological disorders**

Locality	No. of cases of dermatological disorders n=100	No. of cases with psychiatric morbidity	Percentage (%)	P-value
Rural	46	16	32.60	0.004*
Semi-urban	31	9	29.03	0.096
Urban	23	8	34.47	0.132

**Table 7: Psychiatric morbidity according to religion in cases of dermatological disorders**

Religion	No. of cases of dermatological disorders n=100	No. of cases with psychiatric morbidity	Percentage (%)	P-value
Hindu	90	32	35.56	0.0021*
Muslim	7	1	14.28	0.079
Christian	3	0	-	-



**Table 8: Psychiatric morbidity according to socio-economic status in cases of dermatological disorders**

<b>Socioeconomic status</b>	<b>No. of cases of dermatological disorders n=100</b>	<b>No. of cases with psychiatric morbidity</b>	<b>Percentage (%)</b>	<b>P-value</b>
Lower	54	18	33.33	0.003*
Middle	38	14	36.86	0.0012*
Upper	8	1	12.5	0.128

## DISCUSSION

Healthy and normal skin is essential for a person's physical and mental well-being. Regardless of psychiatric morbidity, skin diseases can greatly affect patients' quality of life [19,21,24,26]. This study focuses on the impact of socio-demographic variables on psychiatric morbidities in dermatological disorders. In this study, a total of 100 patients with different dermatological disorders were examined to study the sociodemographic variables and their correlation with the psychiatric morbidities in different dermatological disorders.

The present study indicates that psychiatric morbidities are much higher in the age group of 41 to 50 years, as 58.33% of psychiatric morbidity was found to occur in this age group, followed by 51 to 60 years, and then patients in the less than 20 years age group. The study findings are in accordance with the study of Woodruff et al. [18], in which the mean age of patients with psychiatric morbidity was 44.88 years.

Prevalence of psychiatric morbidity was more in females (42%) than in males (26.67%). The findings are corroborated by a study conducted by Aydın et al. [23] in 2017. This finding may be because females are more concerned with their appearance as compared to males [20,27].

In our study, married patients had much more statistically significant psychiatric morbidity compared to their widowed and unmarried counterparts. This finding is different from studies conducted by Aydın et al. [23] and Aslam et al. [25], who reported a higher prevalence of psychiatric morbidity in unmarried and widowed patients. This finding in the study may be due to the small number of unmarried and widowed patients in the study sample [26].

According to the level of education, psychiatric morbidities are much higher in patients with a high school education as compared to cases attaining graduation and post-graduation. Earlier studies do not show any difference in the prevalence of psychiatric morbidity in different educational levels [20,21,28]. According to the type of family and locality, the nuclear family background and patients from rural areas had much more psychiatric morbidity compared to the cases from joint family backgrounds and urban areas. The reason behind these findings may be the support that patients receive in a joint family setup, as well as the better accessibility to health facilities among those living in urban areas [22,26,27].

## CONCLUSION

The present study sheds light on the socio-demographic variables in dermatological disorders and their correlation with psychiatric morbidities. Since it is a cross-sectional study hence follow-up could not be done. Further research is required in this area to compare data and to develop targeted interventions as per the epidemiological data.

## LIMITATIONS & FUTURE PERSPECTIVES

The study's limitations include a single-centre setting, a relatively small sample size, and a short study duration, which may limit the broader applicability of the results. Future studies should incorporate multicentre designs with larger populations to enhance validity, assess long-term outcomes, and investigate advanced diagnostic and management approaches. Such efforts will improve overall patient care and help minimize complications.

## CLINICAL SIGNIFICANCE

The clinical significance of this study lies in its potential to bridge the gap between research findings and practical healthcare applications. It emphasizes the importance of translating scientific observations into meaningful improvements in patient care, diagnosis, and treatment outcomes. By highlighting real-world relevance, the study contributes to evidence-based medical practice and supports informed clinical decision-making. Ultimately, the findings aim to enhance patient quality of life, optimize therapeutic strategies, and promote better disease management in clinical settings.

## ABBREVIATIONS

**OPD:** Outpatient Department

**SES:** Socio-Economic Status

**QoL:** Quality of Life

**SPSS:** Statistical Package for Social Sciences

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## AUTHOR CONTRIBUTIONS

All authors significantly contributed to the study conception and design, data acquisition, or data analysis and interpretation. They participated in drafting the manuscript or critically revising it for important intellectual content, consented to its submission to the current journal, provided final approval for the version to be published, and accepted responsibility for all aspects of the work. Additionally, all authors meet the authorship criteria outlined by the International Committee of Medical Journal Editors (ICMJE) guidelines.

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Authors declared that there is no conflict of interest.

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All data generated and analyzed are included within this research article. The datasets utilized and/or analyzed in this study can be obtained from the corresponding author upon a reasonable request.

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