A Study to Assess the Occurrence of Depression among Patients with Dermatological Conditions Attending Skin OPD of A Selected Tertiary Care Hospital in Kolkata

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I. Introduction

Human skin being the largest and visible organ reflects distinctly what goes on both in our mind and body.The relationship between the skin and the brain exists as the center of the psychological functions and the skin has the same ectodermal origin. Developing a skin problem affects not only the general wellbeingbut also the psychology of the individual.

Need & Background of the study

Global burden of diseases study 2013 recently demonstrated that skin diseases were the fourth leading cause of non-fatal disease burden. Prevalence of skin diseases becomes a common phenomenon in developing countries like India due to humid climate, poor living conditions etc.

Depression is expected to become the second most prevalent disease worldwide. Almost 5% of world's population suffers from depression at any given point of time. If not identified timely and treated, depression can be the most common cause for suicides across the world.
Hence care of patients with skin disease may be inadequate if their psychological problems are not recognized and treated on time.

Scope of the study

The study will reflect the true picture of existence of deep rooted depression among patients with dermatological conditions& will add on to the existing body of knowledge. This would further help medical team to initiate timely referral & setting up standard protocols for identifying early signs and symptoms of depression; it will also improve the overall quality of life and will serve as the correct modality of treatment for diseases having psychosomatic nature. The findings of the study will be utilized to propose routine screening of patients with skin diseases for depression, amalgamation of counseling services to prepare skin patients for accepting psychiatric intervention.

Statement of problem

"A study to assess the occurrence of depression among patients with dermatological conditions attending skin OPD of a selected tertiary care hospital in Kolkata."

Aim

To determine the occurrence of depression among patients with dermatological conditions attending skin OPD of selected tertiary care hospital in Kolkata.

Objectives of the study
* To determine the presence of depression among patients with dermatological conditions.
* To estimate the level of depression among patients with dermatological conditions.
* To find the association of depression with selected variables

II. Methods

Research approach
Quantitative non experimental descriptive approach
Research design
Cross sectional descriptive research design.

Research setting:
OPD of a selected tertiary care centrein Kolkata, This centre is a renowned medical and research institute of tropical medicine all over India which is well-staffed and equipped with modern amenities for providing multidisciplinary services to patients with almost all kinds of skin diseases. .

Sample : In this study, sample comprised of patients with dermatological conditions who fulfilled the inclusion criteria & were available for data collection in the research setting during the study period.
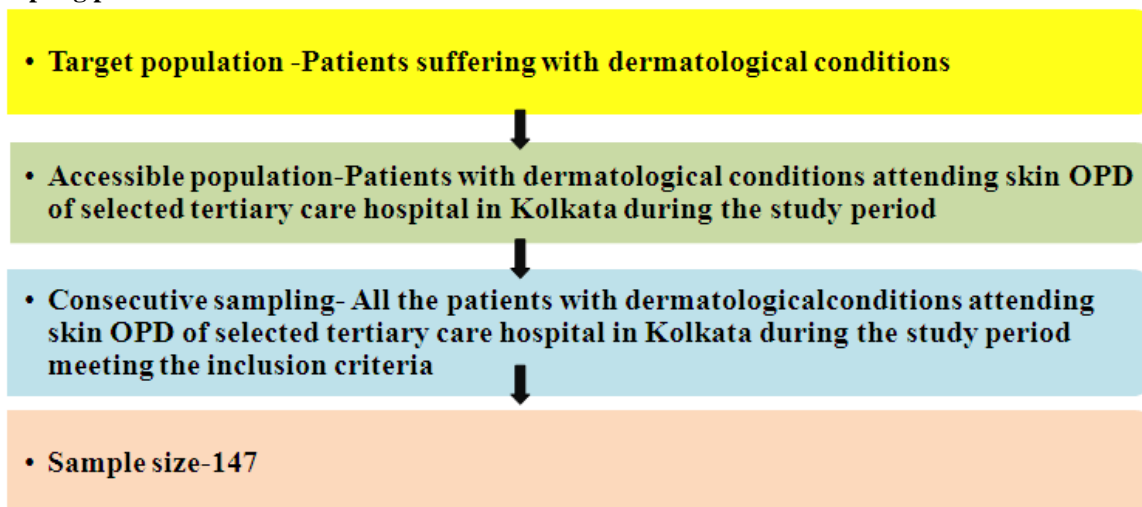**Sample size -**147

Inclusion criteria
The study recruited the patients (male and female) diagnosed with dermatological conditions attending skin OPD during the study period who were :-
- Of Age ≥17 years
- Diagnosed having Acne, Hansen's disease, Psoriasis and Vitiligo

Exclusion criteria: Family history of depression
- Multiple skin diagnosis
- Use of depression inducing drugs like steroids, beta blockers, benzodiazepines.
- Major psychiatric illness other than depression.
- Acute/Chronic medical illness such as DM-II, CAD, HIV, AIDS, Cancer.

Sampling procedure

- **Target population -Patients suffering with dermatological conditions**

- **Accessible population-Patients with dermatological conditions attending skin OPD of selected tertiary care hospital in Kolkata during the study period**

- **Consecutive sampling- All the patients with dermatologicalconditions attending skin OPD of selected tertiary care hospital in Kolkata during the study period meeting the inclusion criteria**

- **Sample size-147**

Schematic representation of selection of study sample

Tools and techniques
Structured questionnaire comprised of three parts:
Part I – Section ADemographic variables
Part I – Section B Variables of depression in dermatological patients
Part II-   Dermatology Life Quality Index (DLQI)
Part III-   Beck's depression inventory (BDI-II)

Data collection procedure
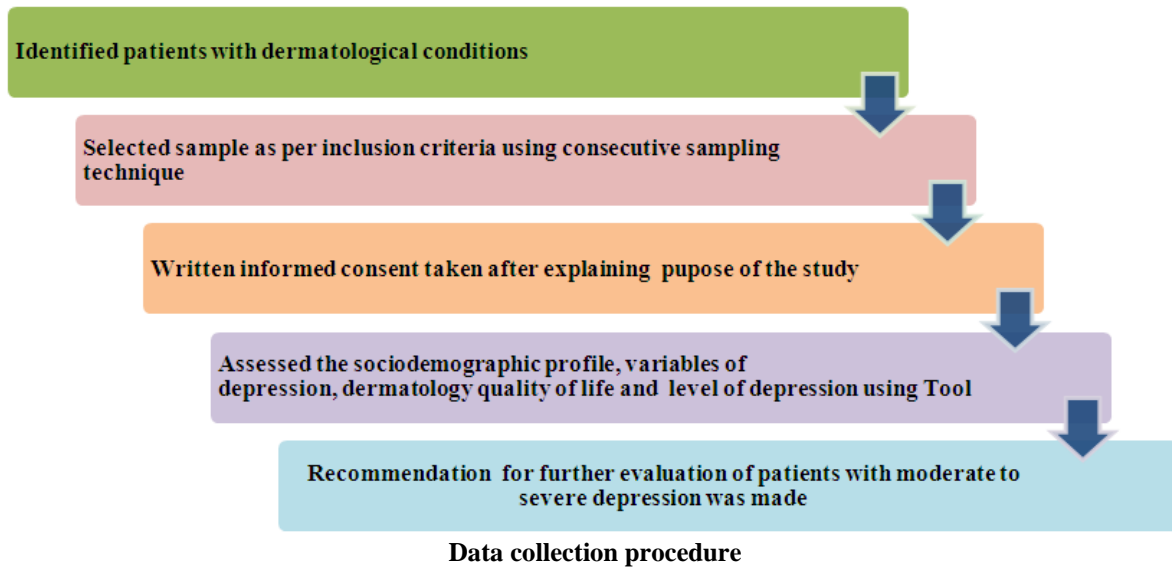
Descriptive analysis:
Frequency and percentage distribution of sample in terms of socio-demographic and other selected variables of depression in dermatological patients.

Inferential analysis:
Pearson's Chi square and Fisher exact test was used to find association between depression and selected variables

III. Results
Table 1.1 Description of sample as per socio-demographic variables n=147

Sample characteristics	Category	Frequency(*f*)	Percentage(%)
Age(years)	**17-26**	70	47.6
	27-36	37	25.2
	37-46	26	17.7
	47-56	14	9.5
Gender	Male	44	29.9
	Female	103	70.1
Educational status	Illiterate	43	29.2
	Upto Matriculation	**53**	**36.1**
	Upto Higher secondary	37	25.2
	Graduate or above	14	9.5
Monthly income (Rs per month)	**up to 20,000**	77	52.4
	20,001-30,000	14	9.5
	30,001-40,000	35	23.8
	More than 40,000	21	14.3

Table 1.1 shows that out of 147 sample almost half (47.6%) of the participants were in the age group of 17–26 years, maximum (70.1%) were females, most were educated upto matriculation (36.1%) and more than half (52.4%) belonged to lower socioeconomic status.

**Table 1.2** Description of sample as per socio-demographic variables n=147

Sample characteristics	Category	Frequency(*f*)	Percentage(%)
Type of family	Nuclear	52	35.4
	Joint	**71**	**48.3**
	Extended	24	16.3
		67	**45.6**
Marital status	**Single**	**67**	**45.6**
	Married	13	8.8
	Divorcee/widow/ Separated		
		44	29.9
Occupation	Student	**49**	**33.3**
	Housewife	37	25.2
	Employed	17	11.6
	Retired/unemployed		

Table 1.2 reflects than out of 147 participants almost half of them (48.3%) were from joint family. An equal percentage (45.6%) of participants were single / married & maximum (33.3%) were housewives followed by students (29.9%)

**Table 1.3** Description of sample as per variables of depression n =147

Sample characteristics	Category	Frequency(*f*)	Percentage(%)
Diagnosis	**Acne**	**59**	**40.1**
	Hansen's disease	17	11.6
	Psoriasis	37	25.2
	Vitiligo	34	23.1
Age of onset of illness (years)	**≤ 20**	**72**	**49.0**
	21-40	68	46.2
	≥ 40	7	4.8
Duration of illness (years)	≤ 1	29	19.7
	1-5	24	16.4
	≥ 5	**94**	**63.9**
Smoking habits	Yes	11	7.5
	No	**136**	**92.5**
Alcohol intake	Yes	6	4.1
	No	**141**	**95.9**

Table 1.3 reveals that maximum participants (40.1%) suffered from Acne followed by Psoriasis (25.2%) & Vitiligo (23.1%) whereas only one tenth of the patients had Hansen's diseases(11.6%). Early onset of disease (<20 years) was seen among 49% of the participants and maximum (63.9%) had longer duration of illness (> 5 years). Majority of the participants were non-smokers (92.5%) & non-alcoholics (95.9%).
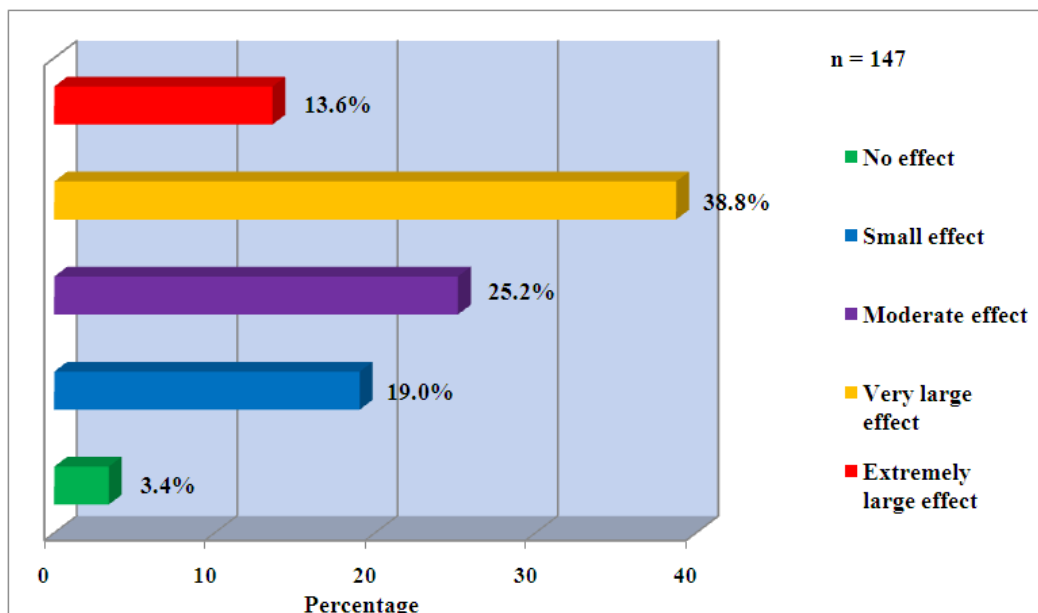

Fig 1 Distribution of sample as per DLQI scores

Fig 1 represents distribution of sample as per dermatology life quality index. It was seen that maximum participants (38.8%) had large impact on their quality of life followed by moderate effect (25.2%) however 13.6% had extremely large effect on their quality of life.
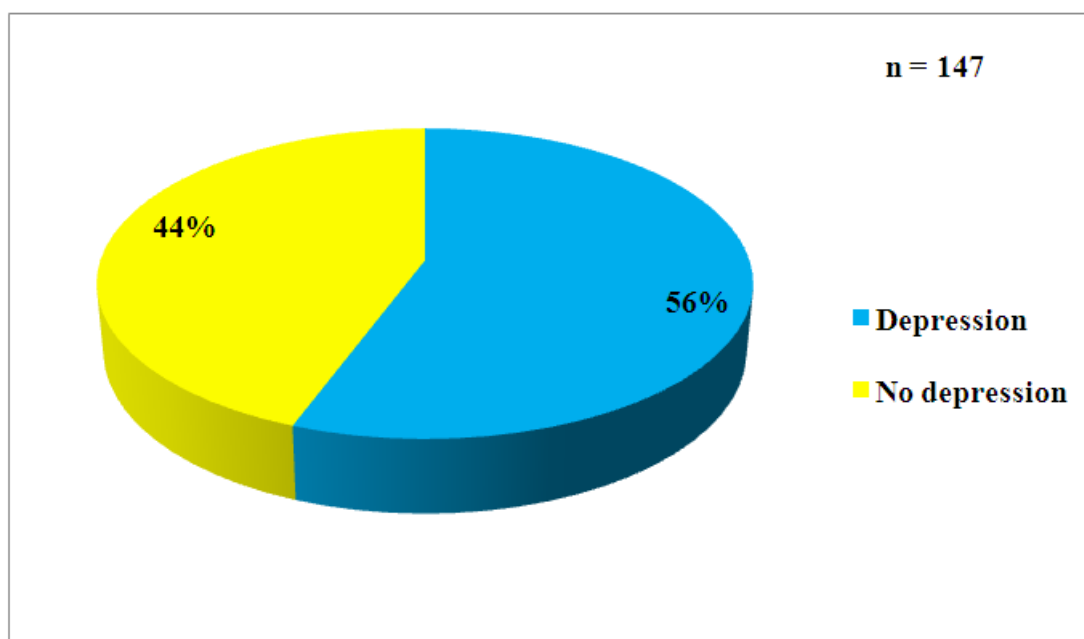
Fig 2 Occurrence of depression among dermatological patients

Fig 2 depicts that morethan the half (56%) of the participants had depression while 44 % were not depressed.
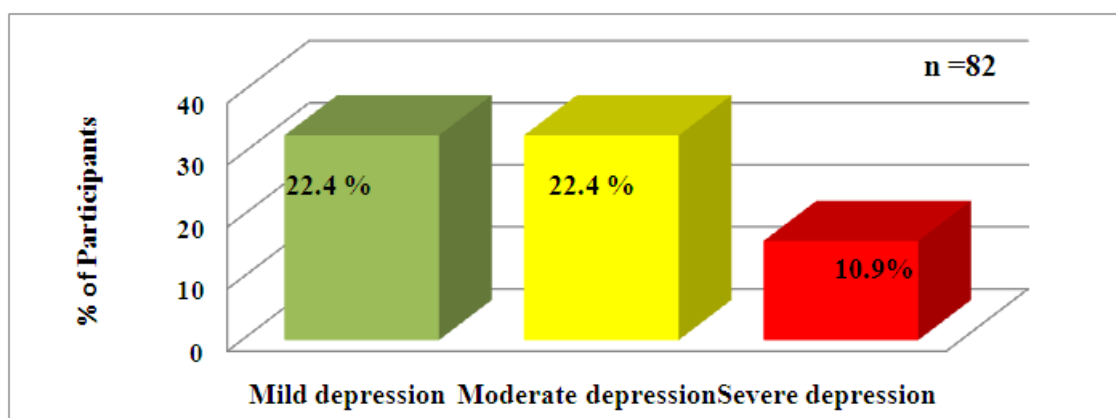
Fig 3 Level of depression among dermatological patients

According to the level of depression an equal number (22.4%) were detected to have mild to moderate level while 10.9% had severe depression as depicted in Fig 3.

Table 1.4 Level of depression in relation to demographic profile n =147

Socio-demographic Variables	Category	Level of depression (n =82)		
		Mild depression %	Moderate depression %	Severe depression%
Age (in years)	17-26	50.00	40.00	10.00
	27-36	43.24	45.95	10.81
	37-46	61.54	34.61	3.85
	47-56	42.86	28.57	**28.57**
Gender	**Male**	54.55	31.81	**13.64**
	Female	47.57	42.72	9.71
Educational qualification	Illiterate	46.51	48.84	4.65
	Upto matriculation	39.62	45.29	**15.09**
	Upto higher secondary	59.46	29.73	10.81
	Graduate	71.43	14.28	14.29

Monthly income (Rs / month)	<20000	42.86	44.17	12.97
	20001-30000	71.43	21.43	7.14
	30001- 40000	62.86	34.28	2.86
	>40000	38.10	42.85	**19.05**

As per Table 1.4 severe level of depression was seen maximum in the age group 47-56 years (28.57%), males(13.64%), educated upto matriculation (15.09%) and among higher socioeconomic group(19.05%).

Table 1.5 Level of depression in relation to demographic profile n=147

Socio-demographic Variables	Category	Level of depression (n =82)		
		Mild depression %	Moderate depression %	Severe depression%
Type of family	Nuclear	40.38	48.08	11.54
	Joint	53.52	36.62	9.86
	Extended	58.33	29.17	**12.50**
Marital status	**Married**	49.25	37.32	**13.43**
	Unmarried	44.78	44.77	10.45
	Divorced/widowed/separated	76.92	23.08	0.00
Occupation	Student	40.91	47.73	11.36
	Housewife	48.98	40.82	10.20
	Employed	64.86	27.03	8.11
	Unemployed/retired	41.18	41.17	**17.65**

As per Table 1.5 severe level of depression was seen maximum among married (13.43%), unemployed/retired participants (17.65%), and those who belonged to extended family (12.50%).
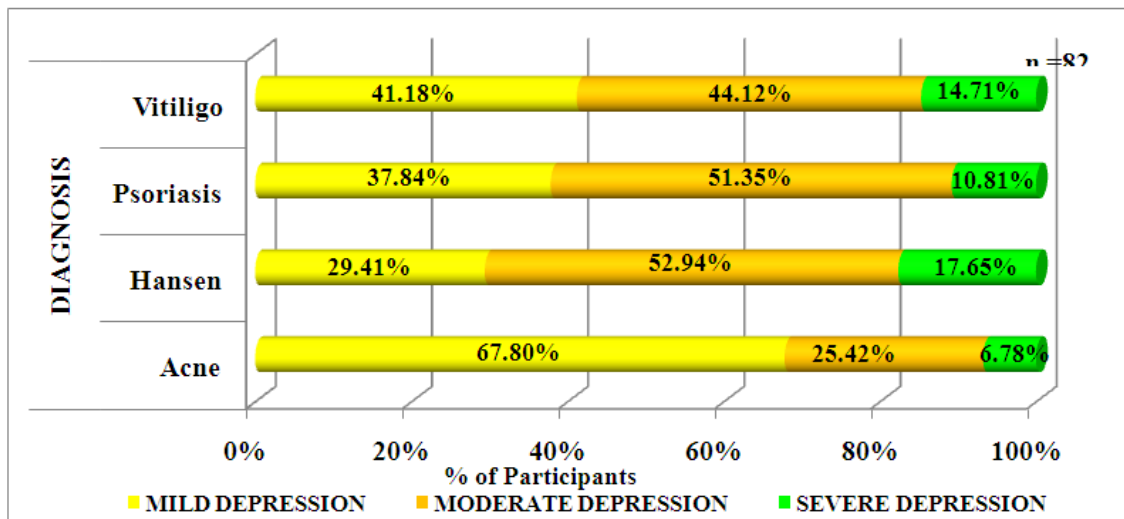
Fig 4 Level of depression as per diagnosis

Table 1.5 Association of depression with variables of depression n =147

Variables of depression	No Depression n(%)	Depression n(%)	Total	x^2	Table value	df	p value
Diagnosis							
Acne	38 (64.4)	21 (35.6)	59	17.797	7.82	3	<0.001[*]
Hansen's disease	3 (17.6)	14 (82.4)	17				
Psoriasis	12 (32.4)	25 (67.6)	37				
Vitiligo	12 (35.3)	22 (64.7)	34				
Dermatology quality of life							
No effect	4 (80.0)	1 (20.0)	5	25.069	9.49	4	<0.001[*]
Small effect	20 (71.4)	8 (28.6)	28				
Moderate effect	21 (56.8)	16 (43.2)	37				
Very large effect	17 (29.8)	40 (70.2)	57				
Extremely large effect	3 (15.0)	17 (85.0)	20				

* Significant at 0.05 level of significance

According to Table 1.5 there is statistically significant association of depression with diagnosis and dermatology quality of life as the computed Chi square value was more than the table value for these variables at 0.05 level of significance.

Table 1.6 Association of depression with Smoking & Alcohol n = 147

Variables of depression	Yes n (%)	No n (%)	Total	Table Value	p Value
Smoking					
No	3(4.6)	62(95.4)	65	8.932#	0.030*
Mild	3(9.1)	30(90.9)	33		
Moderate	1(3.0)	32(97.0)	33		
Severe	4(25.0)	12(75.0)	16		
Alcohol					
No	2(3.1)	63(96.9)	65	10.458#	0.020*
Mild	1(3.0)	32(97.0)	33		
Moderate	0(0.0)	33(100)	33		
Severe	3(18.8)	13(81.3)	16		

df = 3, table value=7.82,*significant # Fisher exact test

Table 1.6 represents that the calculated Fisher exact value was more than the table value at df=3 and 0.05 level of significance, hence there is a statistically significant association of severe depression with smoking & alcohol intake at 0.05 level of significance.

Table 1.7 Correlation between DLQI Score & BDI-II Scores n =147

	Correlation	Spearman correlation coefficient (r value)	p value
Mean BDI-II score	15.31		
Mean DLQI score	11.77	0.491	0.001*

* Significant at 0.05 level of significance

Table 1.7 represents moderately positive correlation (r=0.491) between depression and dermatology quality of life which signifies the impact of quality of life associated with skin condition on severity of depression.

IV. Conclusion

Major findings of the study
- The overall prevalence of depression was found to be 55.7% with 44.8% having mild to moderate and 10.9% having severe level of depression
- Severe depression was high among older participants, males, less educated & married.
- Participants who belonged to lower socioeconomic status and extended family were more severely depressed than others.
- More severe depression was seen in participants suffering from Hansen's disease (82.3%) followed by vitiligo (67.5%), Psoriasis(64.7%) and acne(35.6%).
- There was no association found between depression & any of the demographic variables.
- Diagnosis & Dermatology quality of life were found to be significantly associated with depression (p<0.05).
- Smoking habit & alcohol intake had significant association with severe level of depression (p<0.05).

Implication in clinical practice

Nurses are in constant contact with patients hence they are in better position to assess and identify the early signs of depression among dermatological patients. This study will enable nurses to explore depression by identifying the associated psychosocial factors like stigma, embarrassment, low self-esteem, poor body image etc. in the development and persistence of this disorder. This study shall motivate nurses to use various psychiatric assessment tools for in-depth assessment and identification of psychological problems/mood changes in their clients which will be helpful in making early referrals for mental health services to restore optimum mental health.

V. Conclusion

The study reveals a moderate level of depression among majority of the samples who attended the skin OPD at the selected tertiary care centre. Significant statistical association (p< 0.05) was found between depression and diagnosis, smoking, alcohol intake and dermatological quality of life.

Depression is one of the significant disabling illness growing worldwide, it becomes essentially important to identify early and manage such cases to reduce this burden. Nurse being the immediate care provider, has a unique role.