

# Study on Psychiatric Morbidity Among Young Patients of Acne Vulgaris at Tertiary Care Institute

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## Abstract

**Background:** Acne vulgaris is a skin condition occurs mainly in adolescents and young adults. It can affect an appearance of a person adversely. The impact of acne on the psychological well being has been the object of increasing attention in recent years. Most of the studies which have been conducted to identify the psychopathologies in patients with acne vulgaris have focused their attention on depression and anxiety. **Aim:** The aim of the present study was to identify socio-demographic profile and the psychiatric morbidity in patients with acne vulgaris as well as coping mechanisms used by them. **Setting and Design:** A descriptive observational study was conducted in the department of dermatology and psychiatry at a tertiary health care institute. **Material and Method:** Hundred patients of acne vulgaris were selected. They were interviewed using a special proforma, screened using Mini –international Neuropsychiatry interview English Version 6.0.0 and mechanism of coping scale by Parikh et al. **Statistical Analysis Used:** The data was analysed using SPSS version 19 & EPI INFO software. **Result:** Psychiatric morbidity was found in 35% of the study population. Psychiatric morbidity was found more in females, patients from nuclear families, patients living in rural areas and acne with grade 3 & 4. It is also found that coping mechanisms problem solving & expressive action were used more by the patients without any psychiatric morbidity. On the other hand, coping mechanisms fatalism & passivity were used more by the patients with psychiatric morbidity. **Conclusion:** Patients with acne vulgaris in whom psychiatric morbidity is present, should be routinely evaluated and their psychiatric morbidity need to be treated for maximise their health.

**Keywords:** Acne Vulgaris, Coping Mechanisms Psychiatric Morbidity, Young

## 1. Introduction

Acne vulgaris is a common disorder of youth & adolescence, a period with psychological instability.<sup>1</sup> Most common sites are forehead, cheek, nose, chin, chest, upper back.<sup>2</sup> As the face is a very common site of involvement by acne, its presence can alter one's perception of body image. It is reported, clinically significant levels of anxiety & depression are associated with acne and it has a potential to damage the emotional functioning of some patients.<sup>3</sup>

Clinically mild to moderate disease such as non-cystic facial acne can be associated with significant depression & suicidal ideation.<sup>4</sup> Studies have also suggested that acne negatively affects quality of life as well.<sup>5</sup> The acne patients reported levels of social, psychological and emotional problems that were as great as those reported by patients

with other chronic illnesses.<sup>6</sup> A study by Pruthi GK et al has noted that acne affects physical as well as psychosocial aspects of a person. For the management of acne, both dermatological and psychosomatic treatments are necessary.<sup>7</sup>

## 2. Material and Methods

The study was undertaken in the Outpatient department of Psychiatry of Dr Vasant Rao Pawar Medical College Hospital & Research Centre, Nashik, after an approval from the institutional ethics committee. The study was conducted over a period of about 18 months. Acne vulgaris patients were assessed for the study after their written consent. Patients who had past history of any psychiatric illness or any other dermatological illness

were excluded from the study.

The study population consisted of 100 patients of acne vulgaris in a tertiary health care centre. A patient proforma was prepared for collecting the demographic details, medical history and the mental status examination of these patients. The study subjects were then screened using the Mini – international Neuropsychiatry interview English Version 6.0.0 to identify any psychiatric morbidity.<sup>8</sup> Coping mechanisms were assessed by mechanism of coping scale by Parikh RM.<sup>9</sup>

The data obtained was pooled, tabulated and subjected to statistical analysis using the Statistical Package for Social Sciences, version 19.0 and tests of significance using EPI INFO software.

### 3. Results

Hundred patients with acne vulgaris had taken part in the study.

Table 1 shows socio-demographic profile of study population and psychiatric morbidity.

Significant relationship was found between psychiatric morbidity and socio-demographic factors gender, type of family and domicile of the patients. Psychiatric morbidity was found more in females, patients from nuclear families and patients living in rural areas.

Significant relationship was found between psychiatric morbidity and grade of acne. Psychiatric morbidity was found more in patients of acne with grade 3 & 4.

**Table 1.** Socio-demographic profile of patients & psychiatric morbidity

Variable	Total Psychiatric Morbidity	No psychiatric morbidity	Total	Statistical Analysis
<b>Age</b>				
18-22	24	39	63	Chi Square value $X^2 = 0.21$ $p > 0.05$ (not significant)
23-27	10	17	27	
28-32	1	9	10	
<b>Gender</b>				
Male	19	48	67	Chi Square value $X^2 = 0.047$ $p < 0.05$ (statistically significant difference ) Psychiatric morbidity was found more in female patients
Female	16	17	33	
<b>Marital Status</b>				
Married	5	13	18	Chi Square value $X^2 = 0.47$ $p > 0.05$ (not significant)
Unmarried	30	52	82	
<b>Education</b>				
Illiterate	1	0	1	Because of small sample size statistical test is not applicable
Primary	0	1	1	
Secondary	1	10	11	
Higher secondary	7	7	14	
Graduate	26	47	73	
<b>Occupation</b>				
Employed	9	11	20	Because of small sample size statistical test is not applicable
Housewife	2	1	3	
Student	24	51	75	
Unemployed	0	2	2	
<b>Religion</b>				
Hindu	33	65	98	Fisher exact value= 0.24 It is $> 0.05$ (not significant)
Muslim	2	0	2	
<b>Type of Family</b>				
Joint	1	21	22	Chi Square value $X^2 = 0.0006$ $p < 0.05$ (statistically significant difference) psychiatric morbidity was found more in patients from nuclear family
Nuclear	34	44	78	
<b>Domicile</b>				
Rural	20	23	43	Chi Square value $X^2 = 0.03$ $p < 0.05$ (statistically significant difference) Psychiatric morbidity was found more in patients living in rural areas
Urban	15	42	57	

**Table 2.** Association of psychiatric morbidity with duration & severity of acne vulgaris

Variables	Total psychiatric morbidity	No psychiatric morbidity	Total	Statistical analysis
Duration of Acne				
≤12 Months	19	47	66	Chi Square value $X^2 = 0.07$ $p > 0.05$ (not significant)
>12 Months	16	18	34	
Grade of Acne				
1 & 2	23	62	85	Chi Square value $X^2 = 0.00007$ $p < 0.05$ (statistically significant difference) Psychiatric morbidity was found more in patients with acne grade 3 & 4
3 & 4	12	3	15	

**Table 3.** Coping mechanism and psychiatric morbidity

Psychiatric Factor	Psychiatric morbidity Absent			Psychiatric morbidity Present			Total		
	Mean	Std. Deviation	Median	Mean	Std. Deviation	Median	Mean	Std. Deviation	Median
Escape Avoidance	4.4154	2.57325	4	4.6286	3.84314	4	4.49	3.05999	4
Fatalism	4.6615	2.45762	4	9.0286	5.25517	8	6.19	4.21564	5
Expressive Action	8.2308	5.10138	7	4.4286	3.20189	4	6.9	4.86484	5
Problem Solving	10.6615	6.62683	15	3.8571	3.08834	3	8.28	6.5042	5
Passivity	3.7231	2.58304	3	7.4857	5.27687	5	5.04	4.1388	4

Mann-Whitney Test

Factor	Psychiatric diagnosis	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Escape Avoidance	Absent	65	51.92	3374.5	1045.5	1675.5	-0.672	0.501
	Present	35	47.87	1675.5				
Fatalism	Absent	65	42.41	2756.5	611.5	2756.5	-3.836	0.000124928
	Present	35	65.53	2293.5				
Expressive Action	Absent	65	58.72	3817	603	1233	-3.896	0.0000978
	Present	35	35.23	1233				
Problem Solving	Absent	65	59.32	3855.5	564.5	1194.5	-4.168	0.0000307
	Present	35	34.13	1194.5				
Passivity	Absent	65	42.54	2765	620	2765	-3.778	0.0001581
	Present	35	65.29	2285				

**Escape avoidance:**

In the table, when we consider coping mechanism Escape avoidance, the median for all the 100 patients of acne vulgaris was 4. Whereas, the median was 4 for the patients in whom psychiatric morbidity was present and 4 for the patients without any psychiatric morbidity.

The table shows that there was no statistically significant difference between the coping mechanism Escape avoidance as far as the psychiatric morbidity is concerned.

**Fatalism:**

When we consider coping mechanism Fatalism, the median for all the 100 patients of acne vulgaris was 5. Whereas, the median was 8 for the patients in whom

psychiatric morbidity was present and 4 for the patients without any psychiatric morbidity.

The table shows a statistically significant difference between coping mechanism Fatalism as far as psychiatric morbidity is concerned. Fatalism is used as a coping mechanism more in patients with psychiatric morbidity than those without psychiatric morbidity.

**Expressive action:**

When we consider coping mechanism Expressive action, the median for all the 100 patients of acne vulgaris was 5. Whereas, the median was 4 for the patients in whom psychiatric morbidity was present and 7 for the patients without any psychiatric morbidity.

The table shows a statistically significant difference

between coping mechanism Expressive action as far as psychiatric morbidity is concerned. Expressive action is used as a coping mechanism more in patients without any psychiatric morbidity than the patients with psychiatric morbidity.

#### **Problem solving:**

When we consider coping mechanism Problem solving, the median for all the 100 patients of acne vulgaris was 5. Whereas, the median was 3 for the patients in whom psychiatric morbidity was present and 15 for the patients without any psychiatric morbidity.

The table shows a statistically significant difference between coping mechanism Problem solving as far as psychiatric morbidity is concerned. Problem solving is used as a coping mechanism more in patients without any psychiatric morbidity than the patients with psychiatric morbidity.

#### **Passivity:**

When we consider coping mechanism Passivity, the median for all the 100 patients of acne vulgaris was 4. Whereas, the median was 5 for the patients in whom psychiatric morbidity was present and 3 for the patients without any psychiatric morbidity.

The table shows a statistically significant difference between coping mechanism Passivity as far as psychiatric morbidity is concerned. Passivity is used as a coping mechanism more in patients with psychiatric morbidity than those without psychiatric morbidity.

The table shows, statistically significant difference between fatalism, passivity and presence of psychiatric morbidity. Whereas, problem solving and expressive action found to be negatively correlated with psychiatric morbidity.

## **4. Discussion**

The present study consisted of 100 patients of acne vulgaris. Majority of patients were belonging to 18-22 years age group (63%), mean age (SD) of patients being 22.1 years (2.91). Among these patients (67%) were male patients, (75%) were students by occupation, (73%) patients educated upto graduation, (82%) were unmarried, (98%) were belonging to hindu community, (78%) were came from nuclear families, (57%) were living in urban area.

In the present study majority of the patients (63%) belonged to the age group 18 to 22 years with mean age (SD) of 22.1 years (2.91) as well as trend of the psychiatric morbidity is more in the patients with the age group 18

to 22 years (38.1%). A study of social anxiety levels in acne vulgaris patients by Yolac yarpuz et al has found that psychiatric morbidity was more common among young patients.<sup>10</sup>

In this study, there was more psychiatric morbidity in female patients (48.48%). A study of prevalence of mental health problems in acne patients by Khan MZ et al has found that depression and social anxiety are more common among female patients.<sup>11</sup>

In this study, the trend of the psychiatric morbidity was found to be more in the illiterate patient (100%). However the sample size is small and this area needs further exploration. A study of social anxiety levels in acne vulgaris patients by Yolac yarpuz et al has found that psychological symptoms are negatively correlated with level of education.<sup>10</sup>

In the present study, trend of psychiatric morbidity was found to be more in housewives (66.7%). However the sample size is small and this area needs further exploration. No useful study has been found regarding occupation wise psychiatric morbidity in acne patients.

In the present study, the trend of psychiatric morbidity was found to be more among muslim patients (100%). No useful study has been found regarding religion wise psychiatric morbidity among acne patients.

In this study, psychiatric morbidity was more among unmarried patients (36.58%). There has not been much research conducted regarding marital status in patients of acne. However a study by Abolfotouh M et al has found that married patients experience less severe psychological impact as compared to single and divorced patients. This is probably due to the fact that married patients are more secure and have a stable life.<sup>12</sup>

In the present study, patients from a nuclear family showed much higher psychiatric morbidity (43.58 %). No useful study has been found regarding type of family wise psychiatric morbidity among acne patients.

In the present study, patients living in rural areas showed higher psychiatric morbidity. Psychiatric morbidity was found to be (46.51%) in patients living in rural areas. Kosaraju SK et al has similarly found that depression has been increasing among patients living in rural areas.<sup>13</sup>

In the present study, the trend of the psychiatric morbidity was found to be more in those patients having acne for longer than 12 months. No useful study has been found regarding duration of acne wise psychiatric morbidity among acne patients.

Psychiatric morbidity was found to be higher in patients having grade 3 & 4 acne (80%). A study by Saker AA et al has noted Statistical positive correlation between severity or grade of acne and depression, anxiety.<sup>14</sup>

### Coping mechanism and psychiatric morbidity:

In our study population, the highest mean score was found for the mechanism of problem solving.

A mechanism of escape avoidance was used equally by the patients with psychiatric morbidity and those without psychiatric morbidity.

A mechanism of fatalism was used more by the patients with psychiatric morbidity than the patients without psychiatric morbidity. A study by Rao et al noted that fatalism had a positive correlation with depression.<sup>15</sup>

A mechanism of problem solving was used more by the patients without any psychiatric morbidity than patients with psychiatric morbidity. A study by Creado et al has noted the coping mechanism problem solving was used more than the other coping mechanisms by the study population.<sup>16</sup>

A mechanism of expressive action was used more by the patients without any psychiatric morbidity than patients with psychiatric morbidity.

A mechanism of passivity was used more by the patients with psychiatric morbidity than the patients without any psychiatric morbidity.

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