

## Depression and attitude towards appearance among patients diagnosed with acne attending dermatology clinic: A study from North India

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### Abstract

**Introduction:** Acne vulgaris is one of the most common diseases of the skin. It is common during adolescence and can impose a heavy emotional and psychological burden on patients.

**Aim/Objectives:** To study the depression and attitude towards appearance among patients with Acne vulgaris.

**Methods:** The study was conducted between March 2015 and April 2016. All patients with acne vulgaris who consented to participate in the study were included. The parameters included age, gender, age of onset, duration of lesions & grade of Acne.

**Results:** Out of 119 patients included in the study, patients with inflammatory acne had significantly more depression than patients with non-inflammatory acne. There was significant difference in attitude towards appearance between two groups. Attitude towards appearance was positively correlated with depression.

**Keywords:** Acne, Depression, Attitude, Psychological, Inflammatory.

### Introduction

Dermatological diseases are commonly associated with psychiatric co-morbidity which may be present at least in 30% of patients and have a detrimental effect on the overall associated disability.<sup>1, 2</sup> Patients suffering from acne have been found to be having low self-esteem, poor body image, and experience constriction of activities and social isolation.<sup>3</sup> As part of the emotional impact, increased levels of anger, frustration, and anxiety are also observed.<sup>4</sup> Depression have been found to be more prevalent among acne patients than controls.<sup>5-7</sup> Even suicidal ideation was found in 6–7% of acne patients<sup>8</sup> It has been shown that females are more vulnerable than males to the negative psychological effects of acne.<sup>9</sup> Recently Durai and Nair<sup>10</sup> in 2015 found acne vulgaris to affect the quality of life of individuals in South India. There is however, dearth of literature from North India on the impact of severity of acne on the attitude towards appearance and depression. Our study aims to examine sociodemographic profiles of patients with acne and presence of depression, attitude toward appearance of the same attending dermatology clinic in a tertiary care hospital in north India.

### Methods

Ours is a hospital-based, cross-sectional, questionnaire-based study and was conducted in the Dermatology department of Christian medical college and hospital Ludhiana from March 2015 to April 2016. The Purposive sampling methodology was adopted. A total of 119 patients between 12 and 40 years with diagnosis of acne were recruited for the study. Patients suffering from medical disorders or on drugs that may interfere with assessment of acne were excluded from the study.

Following instruments were applied for assessment

- Socio-demographic and clinical data sheet: A specially designed semi-structured Performa included various socio-demographic variables (age, sex, education, religion, residence, marital status, socioeconomic status) and clinical variables (the age of onset, duration of illness, treatment details) were applied.
- Attitudes to appearance (ATT), a five-point scale, using semantic differentials were used to measure attitudes to appearance due to acne.
- Beck depression inventory (BDI): It has a high coefficient alpha, (0.80). Its construct validity has been established, and it is able to differentiate depressed from non-depressed patients. It is a subjective scale in which patient has to give a response to 20 statements on 4-point scale 0-3. Total inventory score is 0-60. a self-report measure for depression was used to assess the depression associated with the severity of acne (Beck et al., 1961).

Appropriate statistical tests were applied using statistical package for social sciences (SPSS) version 20.0 for windows.

### Results

Table 1 compares sociodemographic and clinical variables between patients with inflammatory and patients with noninflammatory acne. Patients with inflammatory acne had significantly more depression than patients with non-inflammatory acne ( $p=0.032$ ). There was no significant difference in attitude toward appearance between two groups. Both attitude toward appearance and depression were comparable between males and females with acne ( $p=0.318$  and  $0.398$

respectively) (Table 2). Attitude toward appearance was positively correlated with depression. Both age and duration of illness were positively correlated with age (Table 3).

**Table 1: Socio-demographic and clinical characteristics of patients with inflammatory and non-inflammatory acne presentation**

	Acne Presentation	N	Mean	Std. Deviation	t	p
Age in years	Non Inflammatory	81	21.72	4.054	-480	0.632
	Inflammatory	38	22.13	5.068		
Education in years	Non Inflammatory	81	13.01	3.303	-946	0.346
	Inflammatory	38	13.63	3.381		
ATT Scale	Non Inflammatory	81	2.21	1.394	-1.761	0.081
	Inflammatory	38	2.68	1.317		
BDI	Non Inflammatory	81	5.77	5.817	-2.165*	0.032*
	Inflammatory	38	8.58	8.059		
Duration of illness in months	Non Inflammatory	81	25.70	31.776	-1.345	0.181
	Inflammatory	38	35.29	44.446		

**Table 2: Comparison of ATT and BDI scale between male and female**

	Sex	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2 tailed)
BDI	Male	55	56.61	3113.50	1573.500	3113.500	-.998	.318
	Female	64	62.91	4026.50				
	Total	119						
ATT Scale	Male	55	57.18	3145.00	1605.000	3145.000	-.845	.398
	Female	64	62.42	3995.00				
	Total	119						

**Table 3: Correlation among sociodemographic, clinical and BDI and ATT scales**

		ATT Scale	BDI	Duration of Illness	Age	Education
ATT Scale	Correlation Coefficient	1.000	.429**	.017	-.055	-.089
	Sig. (2-tailed)	.	.000	.851	.553	.338
	N	119	119	119	119	119
BDI	Correlation Coefficient	.429**	1.000	.006	.045	.055
	Sig. (2-tailed)	.000	.	.948	.627	.551
	N	119	119	119	119	119
Duration of Illness	Correlation Coefficient	.017	.006	1.000	.089	.232*
	Sig. (2-tailed)	.851	.948	.	.336	.011
	N	119	119	119	119	119
Age	Correlation Coefficient	-.055	.045	.089	1.000	.454**
	Sig. (2-tailed)	.553	.627	.336	.	.000
	N	119	119	119	119	119
Education	Correlation Coefficient	-.089	.055	.232*	.454*	1.000
	Sig. (2-tailed)	.338	.551	.011	.000	.
	N	119	119	119	119	119

## Discussion

This study is a hospital based cross sectional study based in northern part of India. We did not find any difference for depression between genders. This was unlike in few earlier studies where women were found to be having more severe depression than men,<sup>6,9</sup> but a recent study by Golchai et al have not found any difference between genders similar to ours.<sup>11</sup> Our results show that depression was significantly higher in inflammatory acne group compared to non-inflammatory acne group. Inflammatory acne tends to appear cosmetically more ugly which tend to increase the preoccupation towards the facial appearance and developing negative attitude towards oneself. It may result in perceived low self-esteem, stigmatization and avoidance behavior leading to social isolation.<sup>12</sup> Depression was positively correlated with attitude toward appearance. Whether depression led to misperception of attitude to appearance or vice versa could not be established, it would not be wrong to speculate direct causality between them. Though several studies found positive correlation between duration of illness and psychological impairments,<sup>13, 14</sup> our study did not find any correlation between duration of illness and depression among patients. In a qualitative study among patients with acne, appearance-related teasing, taunting or bullying were found to be considerable problems. Themes that emerged were the universally negative nature of the teasing, the use of teasing as an instrument of social exclusion, and as a means of establishing or enforcing power relationships, teasing related to contagion and fear, the emotional and psychological sequelae of teasing and the theme of 'insensate' teasing. For those who had suffered teasing or bullying, this was causally linked in respondents' accounts with psychological sequelae, especially self-consciousness and effects on self-image and self-esteem.<sup>15</sup> Our study found correlation of depression and poor attitude toward appearance among patients with acne. Patients with acne should be enquired about their mood symptoms and be managed accordingly for their comprehensive management. The study has limitation of small sample size with no matched control group.

## Conclusion

Our study found positive correlation between depression & attitude towards appearance. However further studies with large sample size and control group are needed to further correlate our findings.

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**Declarations**

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**Conflict of Interest:** None declared

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