

# A Study of Personality Characteristics in Patients of Acne Vulgaris Attending Tertiary Care Hospital

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## ABSTRACT

**Introduction:** Acne vulgaris is a potentially disfiguring disorder, frequently affecting face, affects appearance of the person. The condition usually starts during adolescence, affects more than 85% of teenagers but frequently continues into adulthood. This is the time where they undergo maximum development of interpersonal relationships and social skills. Acne leads to significant effects on personality. Current research aimed to study personality characteristics in patients of Acne vulgaris.

**Material and methods:** 50 randomly selected patients of Acne vulgaris and 50 suitably matched controls (preferably relatives) attending Skin and VD OPD of MBS hospital Kota, were studied for presence of different personality characteristics using Eysencks personality inventory. Data thus obtained was analyzed statistically using chi-square test.

**Results:** Study revealed that acne patients had significantly lower score (11.78) in extraversion as compared to controls (15.33). Acne patients also had significantly higher score (10.65) in neuroticism when compared to controls (7.65). Mean psychoticism score for acne patients was 5.53 while for controls it was 5.05.

**Conclusion:** Acne patients had significantly high neuroticism and low extraversion scores. Difference in terms of psychoticism was not statistically significant.

**Keywords:** Acne Vulgaris, Personality, Extraversion, Neuroticism, Psychoticism

## INTRODUCTION

Acne vulgaris, a potentially disfiguring disorder affects appearance of the person which is very important factor of social and emotional functioning. When people first meet each other, it is often their appearance and mostly their face that draws attention. Psychosocial research has proved that qualities like 'friendly', 'socially skilled' and 'intelligent' are attributed more to physically attractive strangers compared to physically unattractive strangers.<sup>1</sup> Most common site of lesion in Acne Vulgaris is face. Acne affects young adults at the time when social skills and interpersonal relationships are being developed. It is said that Acne causes permanent scarring of face as well as personality.<sup>2</sup> Young adult patients with acne are particularly vulnerable to negative psychological effects. This vulnerability is due to critical and sensitive issues that arise during hormonally and emotionally volatile period of adolescence. During this age, issues of attractiveness, body image, dating, sexuality and social, scholastic and vocational competence are often confronted on a daily basis. Acne as a potentially disfiguring disorder can result in self defeating feelings that are generally reinforced by insensitive and

critical comments from others that lead to feeling of despair and interpersonal rejection.<sup>3</sup>

There have been several published studies which have demonstrated increased psychiatric morbidity like depression, anxiety, psychosomatic symptoms, suicidal ideations, chronic pain and social inhibitions in patients of acne vulgaris.<sup>4-10</sup> Sulzberger and Zaidens (1946) observed that acne affects personality, emotions, self-image, self-esteem and causes feelings of social isolation and poor ability to form social relationships.<sup>11</sup>

Effective treatment of acne leads to improved body image, self-esteem, self-confidence, affect, feelings of shame and social assertiveness.<sup>12</sup> There have been very few studies in our country on issue of personality characteristics of acne vulgaris patients, so this study was planned.

## MATERIAL AND METHODS

To fulfill above mentioned aims and objectives, this study was carried out in the OPD of Skin and V.D. Department in M.B.S. Hospital attached to Govt. Medical College, Kota (Raj.). Before starting the study approval of the Principal and Controller Medical College and ethical committee was taken.

**Sample of study:** This was a case control study. 50 randomly selected patients of acne vulgaris attending outpatient department of Skin and V.D. department who fulfilled inclusion criteria were taken for convenience and interviewed in detail. They were assigned as group A. They were compared with 50 matched normal healthy controls assigned as group B, preferably relatives of acne patients. Both groups were given assurance that information disclosed by them will be kept confidential and will be used for research purpose only.

## Inclusion Criteria

Persons over 13 years of age, who gave informed consent, with literacy level such that to understand the questionnaire

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were included in the study. For persons who were below 16 years of age, consent was taken from their parents/guardians.

### Exclusion Criteria

Persons suffering from major medical or surgical illness, other dermatological illness and with known psychiatric disorders were excluded from the study.

Both groups were subjected to detailed interview by using specially designed proforma which included: Identification and Socio-demographic data, details related to illness like site of lesion, site of first appearance, progression of the illness. Clinical diagnosis and severity of acne grading was confirmed by a consultant Dermatologist.

Subjects from both the groups were administered Eysenck PEN personality inventory<sup>13</sup> developed by H.J. Eysenck and Sybil B.G. Eysenck (1969). It measures three orthogonal and independent dimensions of temperament which constitutes individual personality. These dimensions are Extraversion-Introversion, Neuroticism-Stability and Psychoticism-Tough mindedness. These three principle dimensions have been

regarded as reflecting the major variance in the personality domain. PEN inventory is an improvement of Eysenck Personality inventory (EPI) as it includes the third dimension of psychoticism-tough mindedness. EPI was developed from Maudsley personality inventory. PEN inventory has been translated in Hindi and standardized in Indian setting at P.G.I.M.E.R. Chandigarh.

The main features of the PEN inventory are that it is self-administering, brief, easily scored, a lie-scale for the detection of response distortion is included and the items are not socially objectionable. It is a 78 items inventory.

Cut-off scores for psychoticism is 7+, for extraversion 13+ and for neuroticism 10+.

Information so obtained and data so collected were subjected to suitable statistical analysis (Chi square test) and conclusions were drawn.

### RESULTS

Table 1 shows Socio-demographic variables of both the groups. In our study all acne patients fell in age range of

Variable		Study Group (A)	Control Group (B)	P value
Age	13-19 years	30(60%)	26(52%)	p=0.2575, p>0.05
	20-30 years	20(40%)	24(48%)	
Sex	Male	28(56%)	26(52%)	p=0.5713, p>0.05
	Female	22(44%)	24(48%)	
Marital Status	Unmarried	45(90%)	46(92%)	p=0.6022, p>0.05
	Married	05(10%)	04(08%)	
Religion	Hindu	38(76%)	35(70%)	p=0.3545, p>0.05
	Muslim	12(24%)	15(30%)	
Domicile	Urban	46(92%)	48(96%)	p=0.1489, p>0.05
	Rural	04(08%)	02(04%)	
Education	Middle	11(22%)	06(12%)	p=0.1399, p>0.05
	Secondary	15(30%)	13(26%)	
	Sr. sec.	14(28%)	16(32%)	
	Graduate	08(16%)	10(20%)	
	Post grad.	02 (04%)	05(10%)	
Occupation	Student	40(80%)	38(76%)	p=0.8078, p>0.05
	Self employed	03(06%)	04(08%)	
	Private service	03(06%)	04(08%)	
	Housewife	03(06%)	02(04%)	
	Unemployed	01(02%)	02(04%)	
Family Income	<5000	24(48%)	20(40%)	p=0.1003, p>0.05
	5000-10000	22(44%)	20(40%)	
	>10000	04(08%)	10(20%)	

**Table-1: Socio-Demographic Variables**

Variable		Number of Acne patients
Site of lesion	Only Face	44(88%)
	Extrafacial (Face +back + chest +arm)	6(12%)
Duration of lesion	< 3 months	10(20%)
	3-6 months	06(12%)
	Months	16(32%)
	>12 months	18(36%)
Severity of lesions	Mild	15(30%)
	Moderate	21(42%)
	Severe	14(28%)

**Table-2: Details of study group**

Variable	Score	Study Group	Control Group	P value
Score on Extraversion	>13	24(48%)	36(72%)	p=0.0002, p<0.05
	<13	26(52%)	14(28%)	
Score on Neuroticism	>10	32(64%)	22(44%)	p=0.0044, p<0.05
	<10	18(36%)	28(56%)	
Score on Psychoticism	>7	17(34%)	14(28%)	p=0.3447, p>0.05
	<7	33(66%)	36(72%)	
Lie Score	>10	07(14%)	09(18%)	p=0.4616, p>0.05
	<10	43(86%)	41(82%)	

**Table-3:** Distribution According to Personality variables

13-30 years. Majority were adolescents between ages 13-19 years. In acne patients Males were 56% and females were 44%. Most of the acne patients unmarried (90%). Majority were from urban background as our center was urban in location. Hindus constituted 76% of acne patients while Muslims were 24%. Socio-Demographic variables in both groups were statistically not significant.

Table 2 shows details of patients with acne (Group A). Face was the most affected site of lesion in 88% cases, 36% cases had lesion for more than 1 year. According to acne severity grading scale as determined by consultant dermatologist, 30% patients had mild, 42% had moderate and 28% of cases had severe Acne.

Table 3 reveals scores on PEN inventory for both the groups. 72% of normal controls scored high on extroversion while in acne patients the figure was 48%. Mean extraversion score was 11.78 for acne patients and 15.33 for controls, so acne patients scored low on extraversion as compared to normal controls (p value = 0.0002). The difference between both groups was statistically highly significant. Mean neuroticism score was 10.65 for acne patients and 7.65 for controls, so acne patients obtained higher score on neuroticism as compared to normal controls (p value = 0.0044) and the difference was statistically significant. Mean psychoticism score for acne patients was 5.53 while for normal controls it was 5.05 (p value = 0.3447). The difference between both groups in terms of psychoticism was statistically not significant. Mean lie score for acne patients was 7.47 and for controls it was 7.77 (p value = 0.4616) and the difference between both groups was statistically not significant.

## DISCUSSION

This study was aimed to find the personality characteristics in patients suffering from acne vulgaris. The patient and control groups were evaluated using Eysenck PEN personality inventory. Our findings suggest high neuroticism and low extraversion in patients of acne vulgaris. Many studies have revealed that acne causes emotional and psychosocial disturbances. Baldwin pointed out that acne may be associated with anger, embarrassment, frustration and depression.<sup>14</sup> Our findings of low extraversion and high neuroticism are consistent with the findings of Seinsbury (1960)<sup>15</sup>, Kidd C.B. et al (1967-1968)<sup>16</sup>, Shrivastava O.N. et al (1975)<sup>17</sup>, Lim CC, Tan TC (1990)<sup>18</sup>, Brook U et al (2006)<sup>19</sup>, Magin P et al (2006)<sup>20</sup>, Ali Gul et al (2015).<sup>21</sup> Personality influences the individual's perception of disability. Buthune

H.C. and Kidd C.B. (1961)<sup>22</sup> suggested that patients with acne had morbid self perception in respect of their skin skin lesions, which was the product of personality characteristic of neuroticism. This self perception was pathologically reinforced by their awareness of the response to their disfigured appearance by people around them. However Keyon F.E. (1962) administered M.P.I. to a random group of 100 dermatological outpatients, found no significant correlation of either neuroticism or extraversion with the diagnoses of skin lesions but this study included all dermatological diagnosis and not just acne.<sup>23</sup>

A study by Sneddon I. et.al (1981) found out that neurotic personalities often maladjust to their acne. Acne acts as a trigger that causes the neuroses to become clinically evident. This leads to preoccupation with skin, resulting in frequent squeezing, pinching and excessive applications of topical medications, eventually resulting in aggravation of the acne, resulting in a clinical condition called acne excoriee.<sup>24</sup>

Fried RG et.al (2002) in their study found out that most patients can potentially benefit from non-pharmacological psychocutaneous interventions. Goals of psychocutaneous interventions includes reduction in pruritus, decreased scratching activity, anxiety reduction, decreased frustration, decreased social withdrawal, decreased social embarrassment, improved sleep and improvement in the sense of well-being. But patients with severe psychological problems and poor premorbid functional status are more difficult to treat and less likely to achieve therapeutic success.<sup>25</sup> Patients with personality disorders and/or any active psychopathology are more difficult to treat as they are less responsive to the treatment. So the favorable treatment outcome is less likely in this population.

## CONCLUSION

Our study found High neuroticism and low extraversion in patients of Acne Vulgaris. Acne causes significant impact on personality, so these factors should be taken into consideration while doing assessment of these patients. It is advisable that Dermatologists should keep "mind body connection" in their mind and treat such patients in liaison with mental health professionals (Psychiatrist, Clinical Psychologist or other mental health or behavioral specialist) for better treatment outcome. So the Psychocutaneous intervention (combined psychological and dermatological intervention) should be the key approach in the assessment and management of

patients with acne vulgaris.

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