

Original article:

Psychiatric morbidity among the patients with acne Vulgaris in a tertiary care Hospital

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Abstract:

Background: Acne vulgaris is a chronic inflammatory skin disorder which has a high prevalence among adolescence and young adults. Although acne does not cause direct physical impairment, it can produce a significant psychosocial burden. As the face is almost always the site of involvement of acne, its presence can alter one's perception of body image. Increased levels of anxiety, anger, depression, and frustration are also observed in patients with acne. Acne affects social, vocational, and academic performance of teenagers & young adult. **Objective:** To identify socio-demographic profile and to evaluate the psychiatric morbidity in patients with acne vulgaris in a tertiary care hospital. **Materials and Methods:** This cross sectional study was conducted from June 2017 to December 2017 among the patients of acne vulgaris attending outpatient department of Dermatology in Ibn Sina Medical College Hospital, Dhaka. Purposive sampling technique was used. The sample size of the study was 181. Data were collected by using semi structured socio-demographic questionnaire and the SRQ to screen psychiatric symptoms. The Self Reporting Questionnaire (SRQ), is a psychiatric case finding instrument, was developed by World Health Organization (WHO) to screen for psychiatric disturbance especially among developing countries. The data obtained was collected, tabulated and subjected to statistical analysis using the Statistical Package for Social Sciences (SPSS), for windows version 20. **Results:** Study was conducted on 181 patients comprising 135 (74.6%) were female & 46 (25.4%) were male. Age group between 16 to 22 years carried maximum incidence 100 (55.2%). Among the patients Psychiatric morbidity was found in 86 (48%) of the study population. Psychiatric morbidity was found more in young and females patients. Among the types of psychiatric morbidity Anxiety disorders were 57 (66.3%) & Major Depressive Disorder (MDD) was 29 (33.7%). Anxiety disorders were included social phobia (26.7%), generalized anxiety disorder (GAD) (18.6%), panic disorder (14%) and obsessive compulsive disorder (OCD) (7%). **Conclusion:** Patients with acne vulgaris in whom psychiatric morbidity is present, should be routinely evaluated and their psychiatric morbidity need to be treated adequately for maximize their health.

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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.^{1,2} Patients suffering from acne have been found to be having

low self-esteem, poor body image, and experience constriction of activities and social isolation. As part of the emotional impact, increased levels of anger, frustration, and anxiety are also observed. Depression has been found to be more prevalent among acne patients than controls. Even suicidal ideation was

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found in 6–7% of acne patients. It has been shown that females are more vulnerable than males to the negative psychological effects of acne.³

Acne vulgaris remains the most commonly skin disease treated by physicians with prevalence reaching up to 80% during adolescence. It is a disease of the pilosebaceous units, clinically characterized by seborrhea, comedones, papules, pustules, nodules and in some cases, scarring.³

Acne vulgaris most frequently affects the face, making it impossible to hide. It is most prevalent in young adults at the time when individuals undergo maximum development of social skills and interpersonal relationships.⁴

The psychological effect of acne on patients can be considerable. The interaction of acne and psychosocial issues is complex and, in adolescence, can be associated with developmental issues of body image, socialization and sexuality. Previous studies on the psychosocial impact of acne have documented dissatisfaction with appearance, embarrassment, self-consciousness, and lack of self-confidence in acne patients. Social dysfunction has also been observed, including concerns about social interactions with the opposite gender, appearances in public, interaction with strangers, and reduced employment opportunities. Furthermore, acne is associated with anxiety, depression, feel of anger and lower body satisfaction. It can be negatively associated with intention to participate in sports and exercise.⁵

A Norwegian study published in the Journal of Investigative Dermatology found that depression and suicidal thoughts were two to three times more likely in teenagers with severe acne than in those who did not have the skin condition.⁶

The burden of mental disorders is great as they are prevalent in all societies. They create a substantial personal burden for affected individuals and their families, and produce significant economic and social hardships that affect society as a whole. 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.³ The psychological effect of acne on patients can be considerable. The interaction of acne and psychosocial issues is complex and, in adolescence, can be associated with developmental issues of body image, socialization and sexuality. Previous studies on the psychosocial impact of acne have documented dissatisfaction with appearance, embarrassment, self-consciousness, and lack of self-confidence in acne patients. Social dysfunction has

also been observed, including concerns about social interactions with the opposite gender, appearances in public, interaction with strangers, and reduced employment opportunities. Furthermore, acne is associated with anxiety, depression, feel of anger and lower body satisfaction.⁵

Psychiatric morbidities found by earlier studies are depression, anxiety disorders mainly social anxiety and generalized anxiety disorder, obsessive compulsive disorder, somatisation disorder, body dysmorphic disorder and suicidal ideations.⁷⁻¹¹ Cotterill and Cunliffe have described sixteen cases of completed suicide among dermatology patients, seven of whom had acne.¹² This study was designed to evaluate the psychiatric morbidity in patients with acne vulgaris in a tertiary hospital. Since there is no study showing psychological & psychiatric problems related to acne in our county, hence this study was planned.

Material and methods:

This cross sectional study was done on 181 patients conducted from June 2017 to December 2017 attending the Outpatient department of Dermatology in Ibn Sina Medical College Hospital, Dhaka using purposive sampling technique. Both male and female patients age 16-35 years examined by a Dermatologist were the study population. Acne vulgaris patients were assessed for the study after obtained their written consent. Patients who had past history of any psychiatric illness or any other dermatological illness were excluded from the study. Following research instruments were used for the purpose of this study. Face to face interview was done using a semi-structured interview schedule to collect socio-demographic information. Information was taken from respondents. Confidentiality of the patients was strictly maintained. Semi structured socio-demographic questionnaire and the SRQ were applied to screen psychiatric symptoms. The Self Reporting Questionnaire (SRQ), a psychiatric case finding instrument, was developed by World Health Organization (WHO) to screen for psychiatric disturbance especially in developing countries. It is applicable for both health care facilities as well as residents in communities. It was well validated and widely used in many studies¹³⁻¹⁴. Diagnosis of the psychiatric disorders was done by using the Diagnostic and Statistical Manual for Mental Disorders, fifth edition (DSM-5) criteria. The data obtained was collected, tabulated and subjected to statistical analysis using the Statistical Package for

Social Sciences (SPSS), for windows version 20.

Ethical clearance: The study was reviewed and approved by the Ethics Committee of Ibn Sina Medical College, Dhaka, Bangladesh.

Results:

Table I: Demographic characteristics of the study subject (n=181)

Characteristic	Frequency	Percentage (%)
Age in years		
16-22	100	55.2
23-28	47	26.0
29-35	34	18.8
Mean±SD	22.48±4.74	
Sex		
Male	46	25.4
Female	135	74.6
Occupation		
Service holder	27	14.9
Business	5	2.8
Day laborer	7	3.9
Hose wife	35	19.3
Students	107	59.1
Education		
Primary	24	13.3
Secondary	65	35.9
Higher secondary	58	32.0
Graduate	18	9.9
Postgraduate	16	8.8
Marital status		
Unmarried	101	55.8
Married	74	40.9
Divorce	6	3.3

Among 181 patients 135(74.6%) were female & 46(25.4%) were male. Age group between 16 to 22 years carried maximum incidence 100(55.2%). Mean age was 22.48±4.74. Students 107(59.1%) & Unmarried 101(55.8%) were suffered more.

Discussion:

Acne vulgaris is a common disorder of youth & adolescence, a period with psychological instability. Most common sites are forehead, cheek, nose, chin, chest, upper back. 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

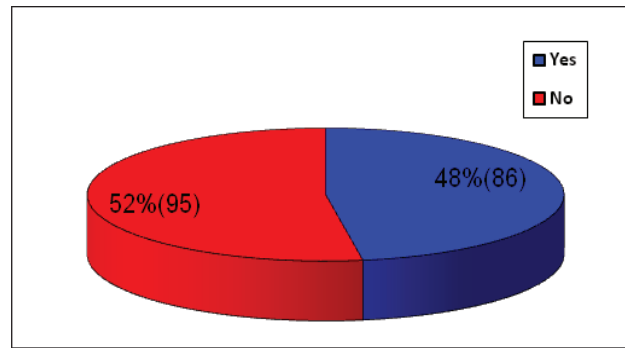


Figure 1: Prevalence of psychiatric morbidity among acne vulgaris patients (n=181)

Among 181 patients Psychiatric morbidity was found in 86(48%) of the study population.

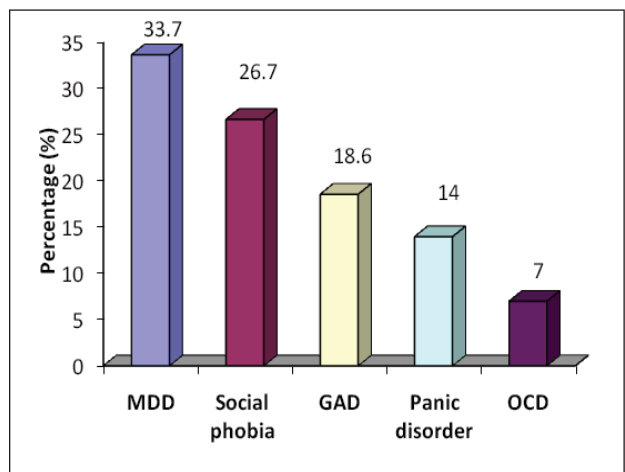


Figure 2: Types of psychiatric morbidity (n=86)

In this diagram among the types of psychiatric morbidity Anxiety disorder was 57(66.3%) & Major Depressive disorder (MDD) was 29 (33.7%). Anxiety disorder included social phobia (26.7%), generalized anxiety disorder (GAD) (18.6%), panic disorder (14%) and Obsessive compulsive disorder (OCD) (7%).

associated with acne and it has a potential damage to the emotional functioning of some patients.¹⁵

Clinically mild to moderate disease such as non-cystic facial acne can be associated with significant depression & suicidal ideation.⁵ Studies have also suggested that acne negatively affects quality of life as well.⁶ The acne patients reported levels of social, psychological and emotional problems that were as great as those reported by patients with other chronic illnesses.¹⁵ 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 psychological treatments are necessary.¹⁶

The present study consisted of 181 patients of acne

Table 2: Relationship between socio-demographic characteristics according to psychiatric morbidity

Characteristic	Psychiatric morbidity		P value
	Yes (n=86)		
	Number	Percent(%)	
Age in years			
16-22	55	64.0	0.001
23-28	17	19.8	
29-35	14	16.3	
Sex			
Male	25	29.1	0.001
Female	61	70.9	
Occupation			
Service holder	12	14.0	0.574
Business	4	4.7	
Day labourer	5	5.8	
Hose wife	16	18.6	
Others	49	57.0	
Education			
Primary	17	19.8	0.012
Secondary	37	43.0	
Higher secondary	17	19.8	
Graduate	12	14.0	
Postgraduate	3	3.5	
Marital status			
Unmarried	58	67.4	0.001
Married	26	30.2	
Divorce	2	2.3	

P value < 0.01

vulgaris. Majority of patients were belonging to 16-22 years age group (55.2%), mean age (SD) of patients being 22.48 years (4.74). Among these patients (25.4%) were male patients and 74.6% were female. This study observed that socio-demographic variables like young age, female gender and less education had statistically significant association with psychiatric morbidity. Similar findings have been reported in a study by Yarpuz AY et al, in which as patient's age and level of education decreased, the severity of psychiatric symptom scores increased.¹⁷ 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.¹⁷

In this study, there was more psychiatric morbidity in female patients (70.9%). Various studies have

reported that females with acne are more likely to have psychiatric morbidity than males.^{18,19} A study of prevalence of mental health problems in acne patients by Yarpuz et al has found that depression and social anxiety are more common among female patients.¹⁷ It has only been in recent years that the psychodermatological literature has begun to address the possibility that acne may have a differential psychological and emotional impact according to gender.²⁰⁻²¹ The differences between male and female scale scores suggest that the psychological impact of acne may be greater for women than it is for men. Our gender difference research also illustrated that girls are likely to experience greater psychological difficulties than boys across a wide range of psychological factors, including self-perceived stress, educational goals, social relations, peer relations, and self-esteem. It is likely that the gender difference observed in this study is due to the different level of cosmetic concern and perception regarding the appearance in relation to gender, thus it may exert differential psychological strain upon girls.

In this study, psychiatric morbidity was more among unmarried patients (67.4%). 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.²¹

In the present study, trend of psychiatric morbidity was found to be more in other occupational status (57%). 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.

This study found that prevalence of psychiatric morbidity in acne patients using DSM V criteria was 48%. Prevalence rates between studies are generally hampered by varied methods of acne grading, the wide range of diagnostic criteria, and the population characteristics.^{7,17,18} The rates of prevalence in the range of 41.7% to 93.3% have been reported in different countries with populations.^{7, 17, 18} Ghadge et al.¹⁵ study found 35% were psychiatric morbidity. Another study Dadarwala et al.²² study found 81% were psychiatric morbidity.

In this study shows major Anxiety Disorder was higher prevalence of psychiatric morbidity. Similarly study conducted by Javad Golchai et al, which

compared prevalence of anxiety and depression in acne patients found that prevalence of anxiety was more as compared to depression.⁷ Reverse was seen in study done by Shrivastav S et al, in which prevalence of depression was more than anxiety on Hamilton Rating Scale for Anxiety and Depression.²³⁻²⁴ On the contrary, few studies have reported that acne patients do not demonstrate increased frequency of depression and anxiety compared to healthy controls.^{25,26}

Association between psychiatric morbidity in our acne patients was statistically significant. This could be due to societal pressure and media's emphasis on external appearance and ideal perfect skin as portrayed in advertising, film, and television contributes to self-image and self-esteem issues in acne vulgaris. Ultimately this may lead to feeling of inadequacy, negative perception of self and feeling of uselessness.²²

Conclusion:

This study shows acne patients suffered from higher psychiatric morbidity. Most of common type of psychiatric morbidity was Anxiety disorder and Major Depressive Disorder(MDD). Anxiety disorder includes social phobia, generalized anxiety disorder, panic disorder and obsessive compulsive disorder. Patients with acne vulgaris in whom psychiatric

morbidity is present, should be routinely evaluated and their psychiatric morbidity need to be treated adequately for maximize their health.

Recommendations:

Acne vulgaris is an illness with the potential to cause important psychological and Psychiatric complications. Thus, collaborative work of psychiatrist and dermatologist for psychiatric evaluation, psychological support in the form of use of psychiatric medications if needed and psychological therapies like supportive therapy, relaxation technique and counseling to help rebuild confidence and self esteem should be a part of the acne treatment plan.

Conflict of Interest:

All authors declare there is no conflict of interests regarding publication of this article

Authors' contribution:

Data gathering and idea owner of this study: Ahmed F

Study design: Ahmed F

Data gathering: Ahmed F, Hossain A, Begum M, Alam N, Ibrahim MA

Writing and submitting manuscript: Ahmed F, Begum M

Editing and approval of final draft: Ahmed F, Hossain A, Begum M, Ibrahim MA

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