

## “Quality of Life and Acne Patients Attended At A Dermatology Clinic Of Dhaka, Bangladesh”

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**Abstract: Background:** Acne vulgaris is a chronic inflammatory disease of pilosebaceous units which has great psychological impact and causes depression, anxiety, and low self-esteem. **Objective:** To assess the impact of acne on Quality of Life and acne vulgaris is a chronic disease affecting the face in adolescents and adults. **Material and Methods:** This study has been conducted in the Dermatology & Venereology Clinic of COMFORT DOCTORS Chamber & Consultation Centre, Uttara, Dhaka, Bangladesh. The study sample consisted of 501 consecutive patients with facial acne vulgaris who had attended the Dermatology Clinic over a period of 6 months from January to June-2018. The subjects with pre-existing psychiatry disorders were excluded. A detailed history regarding socio demographic profile, symptoms and clinical aspects was taken after obtaining consent from all the participants of the study. **Results:** Out of 501 patients, majority 52.4% belonged to 16-20 years age group. Only 13.77% patients belonged to the >30 years age group (Table 1). Majority of patients, i.e. 52% were females and only 48% were males. Majority of the patients were educated (74.45%) and unmarried (68.06%). Most of the participants (61.47%) were from the urban areas. 299 patients (59.68%) had an acne duration of >1 year. In 334 patients (66.66%) the CADI scores were >8 showing a clear impact on QOL. Severe acne was seen in 29.54% of patients and 48.7%, 21.75 had a moderate, mild grade of acne. Based on the DLQI scores 74.83% of the patients had a moderate to extremely large impairment of QOL. **Conclusion:** Acne is a common adolescent problem. It is not only a cosmetic problem, but also has significant psychological impact. Evaluation of Quality of Life in patients with acne is important as it helps in the pharmacological as well as psychological treatment of these patients in a more effective and integrated way. Acne has an impact on Quality of Life (QOL) and evaluation of Quality of Life helps in the better management of patients with acne.

**Keywords:** Acne, CADI, Psychological Impact, Acne-QoL.

### INTRODUCTION

Acne vulgaris is a common skin disease that can adversely affect the quality of life of patients. Acne vulgaris is a chronic inflammatory disease of pilosebaceous units, characterized by seborrhea; open and closed comedones; papules; pustules; nodules, pseudocysts, and scarring [1]. Since it mostly affects the face, it has great psychological impact and causes depression, anxiety, and low self-esteem [2]. Quality of life is a general term which includes a feeling of joy and satisfaction with life. Quality of life (QOL), self-confidences, and self-esteem in patients with skin diseases have not sufficiently been attended to. Since skin diseases affect well-being, general health, function, and social adaptation of the individual, they can decrease self-confidence of the patient and definitely disrupt self-image or cutaneous body image, mental

health, and quality of his life [3, 4]. Besides evaluating the treating procedure, recording QOL can advance our knowledge regarding psychosocial stress associated with dermatologic disorders [4]. Acne is observed in 40% of 17-year-old girls and 25% of 18-year-old boys. After this age, its prevalence decreases, and the patients would be on the road to recovery. In general, acne affects about 85% of people aged 12-24 years; however, the number of people with persistent or adult-onset acne is increasing. According to the studies carried out in Canada [5], USA [6], Egypt [7], Denmark [8], Iran [9], UK [10], Turkey [11], Saudi Arabia [12], Brazil [13], and many other countries [14-19], skin diseases have a great effect on the QOL of patients. QoL is defined by the WHO as “individual’s perception of their position in the context of culture and value systems in which they live and in relation to their goals, expectations,

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standards, and concerns”[20]. Several scales are available for assessing the QoL. General health-related quality of life (HRQOL) measures compare the effect of different conditions on patient’s life. Although the general measures are good, acne-specific HRQoL assessment is more appropriate [21]. It is the most sensitive way to determine the impact of acne and its effects on patients. There are several acne specific HRQoL indices like Cardiff acne disability index (CADI), Assessment of the Psychological and Social Effects of Acne (APSEA), Acne Quality of Life (AQOL), Acne-Specific Quality of Life (Acne QoL) etc. Therefore, many patients will have low self-esteem and difficulty in building relationships. Studies conducted on skin diseases have indicated that the psychosocial effects of acne are more devastating than psoriasis and eczema [22]. Moreover, it has been found that patients with severe acne are easier to set off than others which can affect quality of life on one hand and treatment satisfaction on the other and. In people with low self-esteem and mental image, acne can exert a profound effect on people in puberty which is associated with vulnerability [23].

## MATERIAL AND METHODS

This study has been conducted in the Dermatology & Venereology Clinic of COMFORT DOCTORS Chamber & Consultation Centre, Uttara, Dhaka, Bangladesh. The study sample consisted of 501 consecutive patients with facial acne vulgaris who had attended the Dermatology Clinic over a period of 6 months from January to June-2018. The subjects with pre-existing psychiatry disorders were excluded. A

detailed history regarding socio demographic profile, symptoms and clinical aspects was taken after obtaining consent from all the participants of the study. Acne was graded into mild, moderate and severe based on the number, type and severity of lesions [24]. Dermatology Life Quality Index (DLQI) and Cardiff Acne Disability Index (CADI) were administered on the patients to determine the impact of acne vulgaris on Health Related Quality of life (HRQOL). DLQI is a general questionnaire for evaluation of quality of life in dermatology patients and consists of 10 questions about disease symptoms, feelings, daily activities, type of clothing, social or physical activities, exercise, job or education, interpersonal relationships, marriage relationships and treatment. Its domain is from zero (without any effect on quality of life) to 30 (extremely large effect on quality of life). According to the score obtained, the effect of disease on quality of life can be divided into 5 classes which are- without effect, small effect, moderate effect, very large effect and extremely large effect [25]. CADI is a questionnaire which is specific for acne and contains 5 questions-related to the last month- about feelings, interference with social life and interaction with the opposite gender, avoidance of public places, appearance of the skin and perceived severity of disease state. Each question is scored from 0-3 leading to a total score of 0-15. A higher score shows a very large impact on quality of life [26]. In our study a CADI score <8 is considered to have a small effect on quality of life & a score >8 is considered as having a larger effect on QOL. Both the questionnaires have Persian equivalents with confirmed reliability and validity [27, 28].

**Table-1: Domain structure of the Acne-QoL.**

Self-Perception	Role-Emotional	Role-Social	Symptoms
Feeling unattractive	Upset about having facial acne	Concerns about meeting new people	Bumps on your face
Feeling embarrassed	Annoyed about time spent cleaning and treating face	Concern about going out in public	Bumps full of pus on face
Feeling self-conscious	Concerned about not looking your best	Socialising a problem	Scabbing form facial acne
Dissatisfied with Appearance	Concern about acne medication not working fast enough	Interacting with the opposite sex a problem	Concern about scarring form facial acne
Self-confidence (negatively affected)	Bothered by need to have medication and cover up available		Oily facial skin

## RESULTS

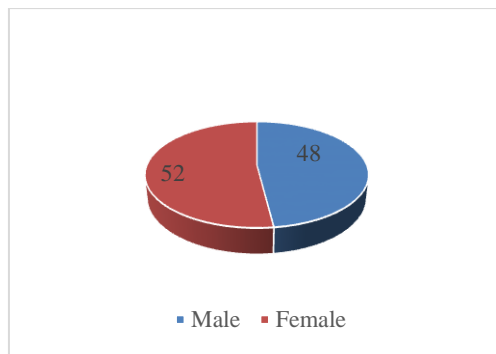
Out of 501 patients, majority 52.4% belonged to 16-20 years age group. Only 13.77% patients belonged to the >30 years age group (Table 1). Majority of patients, i.e. 52% were females and only 48% were males. Majority of the patients were educated (74.45%) and unmarried (68.06%). Most of the participants (61.47%) were from the urban areas. 299 patients (59.68%) had an acne duration of >1 year. In 334 patients (66.66%) the CADI scores were >8 showing a clear impact on QOL. Severe acne was seen in 29.54%

of patients and 48.7%, 21.75 had a moderate, mild grade of acne. Based on the DLQI scores 74.83% of the patients had a moderate to extremely large impairment of QOL.

**Table-2: Age distribution Quality of life in patient with acne (N=501)**

Age	No. (n=501)	%
11-15	44	8.78
16-20	263	52.4
21-30	125	24.9

>30	69	13.77
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**Fig-1: Sex distribution of acne patients.**

**Table-3: Socio Demographic profile, clinical features and quality of life measures in acne patients (N=501)**

	No. (n=501)	%
<b>Educational Status</b>		
Educated	373	74.45
Uneducated	128	25.54
<b>Socioeconomic status</b>		
Low	72	14.37
Middle	241	48.1
High	188	37.52
<b>Marital status</b>		
Married	160	31.93
Unmarried	341	68.06
<b>Region</b>		
Rural	193	38.52
Urban	308	61.47
<b>Duration</b>		
<1 Yr	202	40.31
>1 Yr	299	59.68
<b>CADI</b>		
<8	167	33.33
>8	334	66.66

**Table-4: Grading of Acne patients (N=501)**

Acne grading	No. (n=501)	%
Mild	109	21.75
Moderate	244	48.7
Severe	148	29.54

**Table-5: DLQI scores of acne patients (N=501)**

DLQI	No. (n=501)	%
No affect	40	7.98
Little affect	86	17.16
Moderate affect	178	35.52
Very much	145	28.94
Extremely large affect	52	10.37

## DISCUSSION

In this study, females were more commonly affected than males (1.5:1). This is in corroboration with other studies which may be because females are more conscious of their appearance than males [29, 30]. The age group of acne vulgaris patients included in

different studies done in this regard is variable. Most of the studies have included an age group between 13 and 18 years [31]. Our study includes patients in the age group of 11-30. According to Balakrishnan *et al.* acne is a chronic disease affecting 85% of the teenagers [32]. In a study by Kameran Hassan Ismail the majority of the study population was constituted by females, which differs from our study [33]. Our study revealed that there was a clear impact of acne on Quality of Life. It was observed that there was a large impact on QOL in 66.66% based on the CADI score. And as per the DLQI score there was a moderate to extremely large impact on the Quality of Life in 74.83% of patients. H. Safizadeh *et al.* found that acne influenced the quality of life in 51.8% of the patients based on DLQI score [34] and Hanisha *et al.* reported that based on the specific responses of CADI, 71.1% of the patients felt aggressive, frustrated or embarrassed as a result of having acne [35]. QoL scores correlate more strongly with patient-reported severity than with physician reported severity suggesting that patients' perceptions of their disease may be an important consideration in the evaluation and treatment of acne [36]. The Acne-QoL was developed as a tool to assess the effects of facial acne on QoL, and the impact of treatment on these QoL parameters. 7 In our study, based on the Acne-QoL questionnaire, maximum patients were in the 11-20 score range, followed by the 21-30 score range. Studies have shown that impairment of Quality of Life in females was more when compared to males which could be due to the fact that adolescent girls are more vulnerable to the negative psychological effects of acne [37]. Hahm *et al.* indicated that oral administration of isotretinoin in patients with acne vulgaris relieved symptoms of depression which was mostly related to acne-related life quality enhancements rather than to improvement in acne grade [38]. According to this scale, low scores indicate a higher level of disability. The use of this questionnaire helps to understand the impact of facial acne on patients [36].

## CONCLUSION

Acne is a common adolescent problem. It is not only a cosmetic problem, but also has significant psychological impact. Evaluation of Quality of Life in patients with acne is important as it helps in the pharmacological as well as psychological treatment of these patients in a more effective and integrated way. Acne has an impact on Quality of Life (QOL) and evaluation of Quality of Life helps in the better management of patients with acne.

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