



TO STUDY THE EVALUATION OF LIFE QUALITY IN PATIENTS WITH ACNE VULGARIS

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ABSTRACT

BACKGROUND: Common skin conditions like acne vulgaris can have a negative impact on a patient's quality of life. According to prevalence statistics from a dermatology clinic in a teaching hospital in Varanasi, India, 38.13% of girls and 50.6% of boys in the 12–17 age range had acne. Despite being viewed as just a cosmetic issue, it is linked to significant psychological impairment, making it similar to some chronic illnesses. Patients with acne are more likely to have social dysfunction, low self-esteem, and obsessive compulsive behavior, which can result in anxiety, sadness, and occasionally suicidal thoughts. People with acne have lower functional abilities, and their unemployment rate is higher than that of people without acne. Teens and young adults with acne may also experience difficulties in their personal and professional relationships, sports, and job prospects. The effect that acne has on a patient's quality of life must be considered when managing acne. Therefore, the goal of the current study was to ascertain how acne, and the severity of its symptoms, affected the quality of life of individuals with varying grades of acne across a range of age groups.

AIM: The aim of this study was to determine the quality of life in patients with acne vulgaris.

MATERIAL AND METHOD: The Department of Dermatology carried out this cross-sectional observational study. Patients with acne vulgaris who were seen at the dermatology department's outpatient clinic participated in the current cross-sectional study. The study included 200 participants with a diagnosis of acne vulgaris who were seen in the dermatology outpatient department. The patients in our study ranged in age from 16 to 35. The first step in the study's process was to identify its participants. After this identification, all participants gave their informed consent before any data was collected, and they were reassured of their privacy by being informed of the study's goal. Once all study participants gave their agreement, a thorough medical history was collected.

RESULTS: In all, 200 patients between the ages of 16 and 35 were included in the research. Patients were separated into three groups: patients between the ages of 18 and 25 made up the largest group, comprising 57.5% of those who were mostly college students; next in line were patients between the ages of 16 and 17, who made up 26.0% of the group, and patients between the ages of 26 and 35, who made up 16.5%. Forty percent of the individuals in this study had acne vulgaris for less than a year. Based on clinical criteria, all 200 patients were evaluated and assigned to one of four grades: I, II, III, or IV. Of these, the highest percentage—37.5%—was observed in grade II, followed by 25% in grade III, 20.0% in grade I, and 17.5% in grade IV.

CONCLUSION: The study showed that the general public could easily understand and swiftly complete the CADI and DLQI. In order to highlight patients who need therapeutic intervention as soon as feasible, we advise using these basic QOL measures as part of an integrative clinical strategy when evaluating patients for acne medication. This will give further information on QOL impairment. In order to help with more individualized interventions, dermatologists should be

urged to integrate Quality of Life assessments for teenagers with acne, as these may identify unique characteristics and deficits.

KEYWORDS: Quality of life, Acne vulgaris, CADI, DLQI and Clinical Severity

Introduction

A generic term for happiness and contentment with life is "quality of life." Patients with skin illnesses have not received adequate attention in terms of their quality of life (QOL), self-confidence, and self-esteem. Skin illnesses can lower a patient's self-confidence and undoubtedly alter their self-image or cutaneous body image, mental health, and quality of life because they impact their general health, well-being, function, and social adaptation.^{1,2} Even the slightest recurrent itching can cause severe disruption to a person's life.³ In addition to assessing the therapeutic approach, QOL recording can contribute to our understanding of the psychological stress related to dermatological illnesses.⁴

Acne vulgaris, a persistent inflammatory disorder affecting the pilosebaceous unit, impacts 85% or more of teenagers and young adults.⁵ According to prevalence statistics from a dermatology clinic in a teaching hospital in Varanasi, India, 38.13% of girls and 50.6% of boys in the 12–17 age range had acne. Eighty percent of people between the ages of puberty and thirty have acne. Additionally, it was noted in 40% of men and 54% of women over the age of 25. Pilosebaceous glands are found in large numbers throughout the body, although they are especially found in the face, back, and chest. *Propionibacterium acne* bacteria colonizes the skin, causing inflammation, altered keratinization, and androgen-induced sebum production.^{6,7} Acne vulgaris often takes on all the traits of a chronic disorder, as defined by the World Health Organization, in patients who previously thought of it as a self-limiting adolescent condition. These traits include a prolonged course, a pattern of recurrence or relapse, the ability to manifest as acute outbreaks or slow onset, and a psychological and social impact on the individual's quality of life.⁸

The most prevalent issue dermatologists see is acne. The face is typically affected by acne.

One of the key components of one's concept of body image is facial look. It follows that the development of a severe psychosocial handicap in a susceptible individual with facial acne is not unusual. Acne patients exhibit elevated levels of anxiety, rage, despair, and frustration as part of the emotional impact. The majority of research on the psychological effects of acne has been done on patient populations in the US and Europe; however, the Indian populace has little knowledge of this.⁹ Teens and young adults with acne may also experience difficulties in their personal and professional relationships, sports, and job prospects. Although it has been demonstrated that acne vulgaris patients' quality of life is negatively impacted, there is no proof that this has a direct relationship to the severity of the condition.¹⁰ These patients seek professional help more frequently for non-cutaneous manifestations such as poor body image, anxiety, depression, anger, frustration, diminished self-esteem and confidence, social isolation, and activity restriction because of their profound suffering in terms of social, vocational, and academic performance.^{11,12} The readership of this study can be informed on the significance of psychological factors to the degree that patients with acne vulgaris may benefit from psychological consultation and intervention. Furthermore, assessing a patient's limitations in order to provide them with better care can aid in directing healthcare resources toward the patients' actual requirements.

Patients can benefit from greater understanding of the psychosocial and psychiatric effects of acne and from early management. Assessing changes in quality of life provide a patient's viewpoint on the effects of acne and can also be used to gauge how well a treatment is working.^{13,14} This study was carried out to determine the impact of acne and its clinical severity on quality of life among patients of different grades of acne patients in various age

groups using two questionnaires Cardiff acne disability index (CADI) and Dermatology Life Quality Index (DLQI).

MATERIAL AND METHODS

The Department of Dermatology carried out this cross-sectional investigation. Patients with acne vulgaris who were seen at the dermatology department's outpatient clinic participated in the current cross-sectional study. The study included 200 participants with a diagnosis of acne vulgaris who were seen in the dermatology outpatient department. The patients in our study ranged in age from 16 to 35. The first step in the study's process was to identify its participants. After this identification, all participants gave their informed consent before any data was collected, and they were reassured of their privacy by being informed of the study's goal. Once all study participants gave their agreement, a thorough medical history was collected. Based on the quantity, kind, and severity of the lesion, acne was classified into four categories (Grades I, II, III, and IV) in accordance with Indian classification.

Study tools

- Case record form to record clinical data
- Lab investigations: USG Pelvis if required to rule out hormonal acne
- Acne severity will be assessed by a grading system on clinical grounds.
- All patients will be asked to respond to 2 questionnaires (scales) CADI and DLQI.
- The Cardiff acne disability index (CADI) was used in this study. The CADI is a validated, brief, acne-specific questionnaire derived from the longer acne disability index and has been specifically designed for use in teenagers and young adults with acne.

Inclusion criteria

- Patients diagnosed with acne vulgaris (more than 1-month duration) above 16 years of age and below 35 years of age coming to dermatology OPD in PCMS and RC.

Exclusion criteria

- Patients below 16 years of age.
- Patients above 35 years of age.
- All other types of acne except acne vulgaris will be excluded.
- Known case of psychiatric illness in the present or in the past (as screened by a psychiatrist).

- Presence of any other associated dermatological disorder that may affect QOL in pts.
- Patients who are not willing to participate in the study.

Patients were given the Dermatology Life Quality Index (DLQI) and the Cardiff Acne Disability Index (CADI) to assess the effect of acne vulgaris on quality of life (QOL).^{5,9,14}

Acne-specific CADI questionnaire: five questions about feelings, how the condition interferes with social life and interactions with people of the opposite gender, how the skin looks, and how serious the condition is perceived are all related to the past month. The total score for all questions is 0–15, with a range of 0–3. A higher score indicates a significant influence on life quality. A CADI score of eight is thought to have a greater impact on QOL in our study. There are analogous Persian questionnaires that have been shown to be valid and reliable.

Ten questions about disease symptoms, feelings, daily activities, clothing type, social or physical activities, exercise, job or education, interpersonal relationships, marital relationships, and treatment make up the DLQI, a general questionnaire used to assess the quality of life in dermatology patients. Its range is zero, which has no effect on life quality, to thirty, which has a very significant effect on life quality. The impact of disease on quality of life can be categorized into five classes based on the score: very large effect, extremely huge effect, low effect, and no effect.

STATISTICAL ANALYSIS

Data was entered into SPSS version 21.0 and represented in proportions and percentages. Data was analyzed to compare the quality-of-life indices (CADI & DLQI) for the duration and severity of acne.

RESULT: -

In all, 200 patients between the ages of 16 and 35 were included in the research. Patients were separated into three groups: patients between the ages of 18 and 25 made up the largest group, comprising 57.5% of those who were mostly college students; next in line were patients between the ages of 16 and 17, who made up 26.0% of the group, and patients between the ages of 26 and 35, who made up 16.5%.

Table 1: Socio-demographic profile, clinical features, and quality of life measures in acne vulgaris Patients.

Socio-demographic profile	Number (n=200)	%
Age		
16-17 years	52	26.0
18-25 years	115	57.5
26-35 years	33	16.5
Sex		
Male	125	62.5
Female	75	37.5
Marital status		
Unmarried	130	65.0
Married	70	35.0
Occupation		
Housewife	15	7.5
Job/work	40	20.0
Student	145	72.5

The study population's mean age was 20.69 years. There were 200 patients in all, with 62.5% of them being men and 37.5% being women. The ratio of 1.03:1 indicated a majority of males. Of the 200 patients in this trial, 65 percent were single. The maximum patient population consisted of around 72.5% students, 20.0% working adults, and 7.5% housewives.

Table 2: Duration and grading of acne vulgaris among study subjects.

	Number (n=200)	%
Duration of acne		
≤1 Year	80	40.0
>1 Year	120	60.0
Acne grading		
Grade I	40	20.0
Grade II	75	37.5
Grade III	50	25.0
Grade IV	35	17.5

Forty percent of the individuals in this study had acne vulgaris for less than a year. Based on clinical criteria, all 200 patients were evaluated and assigned to one of four grades: I, II, III, or IV. Of these, the highest percentage—37.5%—was observed in grade II, followed by 25% in grade III, 20.0% in grade I, and 17.5% in grade IV.

Table 3: Distribution of study population according to scar, post-inflammatory hyperpigmentation (PIH), and location of the lesion.

Number (n=200)		%
Scar and PIH		
No Scar or PIH	110	55.0
Scar	25	12.5
PIH	50	25.0
Scar and PIH	15	7.5
Location of lesion		
Face	141	70.5
Other body part ± Face	59	29.5

A maximum of 70.5% of patients in the current study had lesions over their faces, with 15.5% of patients presenting with lesions over their faces and backs. Lesions over the face, chest, back, and shoulder affected about 10% of patients, while lesions over the chest, back, and shoulder affected 4% of patients. In addition to lesions, a maximum of 55.0% of patients did not have either scar or PIH. However, roughly 25% of patients also had lesions, 12.5% had scars, and 7.5% had both lesions and PIH.

DISCUSSION

One can measure the effect of acne on quality of life using metrics specialized to acne, dermatology, or general health. Quality-of-life measures must be simple to use, have significant scores, and be easily accessible in order to be employed more regularly in normal clinical work.

Al-Akloby et al. 2002¹⁵, in their study of 225 patients with acne vulgaris observed that the age at presentation was 19.2 ± 3.0 years for males and 18.4 ± 4.2 years for females. Kane et al noted that the mean age of presentation of their patients was 25.58 years. **Smithard et al.2001**¹⁶, in the present study, out of the total number of 300 patients between the age group 16 to 35 years, 153 patients (51%) were males and 147 patients (49%) were females. Overall, there was a 1.04:1 male to female ratio, indicating a majority of men. Because acne is frequently thought of as an adolescent condition, it is not surprising that a sizable number of the patients in the current study were students.

Tan et al.2001¹⁷ in their study observed that 74% of patients had a duration of more than 1 year before seeking medical attention. In all, 25% of patients had duration of disease. study by **Adityan et al.2009**¹⁸, grade I acne was the most prevalent (60.2%), grade II (27.5%), grade III (2.6%), and grade IV (9.7%). In the study by **Supreethi Biswas et al.2010**¹⁹, grade II acne was the most prevalent one (45%), grade III (16%), and grade IV (7%).

According to **Cohen et al.1995**²⁰, acne vulgaris is a dynamic disorder characterized by the presence of Comedones and usually but not always by papules, pustules, nodules, and scars. The main inflammatory lesions associated with acne are comedones, which can range in size from tiny papules to huge, painful fluctuant nodules. Acne rarely has true cysts in it. The

current study's findings nearly agree with those of the previous study.

Matsuoka et al.2006²¹ showed that directions on the usage of skincare and cosmetics for female patients with acne did not worsen acne treatment and affected patients' life quality effectively. They suggested a program for using skincare and cosmetics supplement traditional medical therapeutics for acne. **Hahm et al.2009**²² 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. Besides, **Niemeier et al.2006**²³ suggested that dermatologists should have some knowledge of the basics of psychotherapy and psychopharmacology, which sometimes must be combined with systemic and topical treatment of acne in conjunction with basic psychosomatic treatment.

Using a quick and easy four-grade categorization method, we assessed the severity of acne vulgaris in the current study.²⁴ The current study's findings clearly demonstrate how acne affects a patient's quality of life. Prior research has demonstrated that individuals suffering from long-term skin conditions such as acne, psoriasis, and atopic eczema have a lower quality of life (QOL) than those with other skin conditions.^{25,26}

The effects of acne on quality of life as well as the connection between acne severity and quality of life have been discussed in our study. In addition to causing symptoms, acne lowers self-esteem and makes one feel unworthy. In direct proportion to the severity of acne, relationships, looks, self-image, and self-consciousness are all negatively impacted. The information obtained from using them must persuade clinicians that it will help them make the best clinical decisions for their patients. Additionally, clinicians must be made aware of the possibility that using these measures will support their decisions. Therapy selection may be influenced by quality-of-life metrics. More aggressive therapy may be warranted for patients whose quality of life is severely compromised.

CONCLUSION:

The overall results of this study demonstrated that those with severe acne vulgaris have much lower quality of life. Measures specific to

dermatology, acne, and general health can all be used to assess how acne affects quality of life. The study showed that the general public could easily understand and swiftly complete the CADI and DLQI. In order to highlight patients who need therapeutic intervention as soon as feasible, we advise using these basic QOL measures as part of an integrative clinical strategy when evaluating patients for acne medication. This will give further information on QOL impairment. In order to help with more individualized interventions, dermatologists should be urged to integrate Quality of Life assessments for teenagers with acne, as these may identify unique characteristics and deficits.

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