

Original Research Article

A study on the quality of life and adjustment of adolescents with acne vulgaris

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Received: 03 May 2018

Revised: 03 June 2018

Accepted: 04 June 2018

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ABSTRACT

Background: Acne vulgaris is a seemingly harmless disease affecting majority of adolescents. It is actually a psychodermatological disorder associated with psychological trauma. The impact of acne on the quality of life of Indian patients remains undocumented. A study is undertaken to assess the impact of acne on health, family, emotional and social wellbeing of acne patients.

Methods: 100 patients between age group of 13 to 19 years with acne vulgaris, attending St. Antony's Skin Clinic, Pala, Kerala, between April 2010 and March 2012 were selected for study. The control group consisted of 100 adolescents without acne. Both groups had no other dermatological or systemic disease. Acne cases were graded using global acne grading system. Quality of life was assessed using WHO QOL BREF. Four domains were derived from this, physical and psychological health, social relationship and environment. Adjustment levels were assessed using adapted version of bell adjustment inventory.

Results: The parameters assessed were quality of life, family, social, emotional, health related and overall adjustments in those with and without acne and severity of acne in relation to quality of life and all values were significantly in favour of those without acne.

Conclusions: Acne affects personality, self-esteem and self-image of patients. It affects social interaction. Adolescents with acne report low quality of life and resultant poor psychosocial adjustment. There is an inverse relation between severity of acne and quality of life. The severity levels and adjustment also has an inverse relationship.

Keywords: Quality of life, Adjustment, Acne vulgaris

INTRODUCTION

Acne vulgaris is a seemingly harmless disease affecting a vast majority of adolescents all over the world. It is considered as a mere nuisance by most of the people including physicians. It is actually a psychodermatological disorder which is associated with very severe psychological problems. Medicines alone usually fail to cure the disease.

Psychosomatic medicine is a branch of psychiatry which deals with the interaction and relationship between psychological factors and physiological phenomena. Psychosomatic diseases involve all the systems of the human body. Psychodermatology deals with the psychological causes of cutaneous disorders and the patients' psychological predisposition to suffer from skin diseases. A large number of dermatological conditions are classified as psychocutaneous disorders using

classification systems like ICD-10 and DSM-4. Examples are psoriasis, atopic dermatitis, alopecia areata, urticaria, seborrheic dermatitis, prurigo nodularis, pruritus vulvae, vulvodynia, vitiligo etc. Acne vulgaris is a psychocutaneous disorder classified under group-1 of the DSM-4 classification.¹ It causes severe psychological trauma and morbidity among adolescents resulting in farfetched negative effects in their lives.

Psychological factors play a significant role in acne in at least three ways. Emotional stress can initiate and exacerbate acne. Patients can develop psychiatric problems as a consequence of the condition and lastly, primary psychiatric illnesses such as obsessive compulsive disorders and psychosis may be based on a complaint that is focussed on acne.²

The impact of acne on the quality of life of Indian patients remains undocumented. The perception of the patient, rather than the objective severity determines quality of life. Adjustment is the ability to balance feelings, desires, ambitions and ideas in one's life. The organism behaves in a particular way or changes an existing behaviour to make it more comfortable and peaceful with the environment. The domains found to be most affected by acne are family, health, emotional and social. So, a study is undertaken to assess the impact of acne on health, family, emotional and social well-being and relationship of severity of acne with overall adjustment if any.

Aim of study

- To find out the extent of quality of life of adolescents with acne vulgaris.
- To compare mean scores of quality of life of adolescents with acne vulgaris with that of control group.
- To find out the domain wise and overall adjustment of adolescents with acne vulgaris.
- To compare the mean scores of adjustment of adolescents with acne vulgaris with that of control group.
- To find out the relationship between the severity of acne vulgaris and the quality of life of adolescents with acne vulgaris.
- To find out the relationship between the severity of acne vulgaris and adjustment of adolescents with acne vulgaris.

METHODS

100 patients between age group of 13 to 19 years with acne vulgaris, attending St. Antony's Skin Clinic, Pala, Kottayam district, Kerala state between April 2010 and March 2012 were selected for study. The control group consisted of 100 adolescents without acne vulgaris. Both groups consisted of adolescents with no other dermatological or other systemic diseases. Simple

random sampling technique for sample selection was adopted to make the study as representative as possible.

Acne cases were graded using global acne grading system taking into account, the type of lesion and the region affected.³

Quality of life was assessed using WHO QOL BREF.⁴ Four domains are derived from this, physical health, psychological health, social relationship and environment.

Adjustment levels of the cases were assessed using Adapted version of Bell Adjustment Inventory.⁵ Personal information was collected using general data sheet developed by the investigator. Clinical details were recorded in clinical data sheet developed by the investigator. Grading of acne was done by multiplying the value assigned to the type of lesion and region of face where it is situated. The grading is done as:- Mild- 1-18, Moderate 19-30, Severe 31-38 and Very severe >38.

Adjustment levels were scored as follows. Positive scores were indicated by "yes" 3 marks, "No" 1 mark and "not sure" 2 marks. Reversal items were decoded and scored accordingly. Scoring of quality of life scale- WHO QOL BREF was done according to the manual. Out of the 26 items, positive statements were scored 1-2-3-4-5 and negative ones 5-4-3-2-1. The minimum score is 26 and the maximum 130. The grading was done as follows:- Good – 130-96, Average 95-61 and poor 60-26.

Statistical analysis was done using SPSS.

RESULTS

Among 100 patients, 55 were females and 45 were males. 58% belonged to age group 13-16 and 42% belonged to age group 17-19.

Table 1: Demographic data.

Age (years)	13-16	17-19
Male	26	19
Female	32	33
Total	58	42

Table 2: Mean values, standard deviation and t value of mean scores of quality of life of adolescents with and without acne vulgaris.

Group	Frequency	Mean	SD	t value
With acne	100	87.01	17.5	5.63
Without acne	100	98.74	11.38	

Significant at 0.01 level.

The mean scores of those with acne is 87.01 and of controls 98.74. T value being 5.63 is significant and can be inferred that quality of life is higher in adolescents without acne when compared to those with acne.

Table 3: Mean values, standard deviation and t values of mean scores of family adjustments of adolescents with and without acne.

Group	Frequency	Mean	SD	t value
With acne	100	28	5.28	-8.89
Without acne	100	33.82	4.94	

Significant at 0.01 level.

The mean scores of those with acne are 28 and those without acne is 33.82. T value of -8.89 shows that family adjustment is higher in adolescents without acne when compared to those with acne.

Table 4: Mean values, standard deviations and t value of mean scores of social adjustment of adolescents with and without acne.

Group	Frequency	Mean	SD	t value
With acne	100	18.74	2.03	-18.10
Without acne	100	29.32	5.34	

Significant at 0.01 level

The mean scores of those with acne is 18.74 whereas in controls, it is 29.32. t value is -18.10. Hence, social adjustment is higher in those without acne compared to those with acne.

Table 5: Mean values, std. deviation and t values of mean scores of emotional adjustment of adolescents with and without acne.

Group	Frequency	Mean	SD	t value
With acne	100	18.51	2.17	-19.24
Without acne	100	30.97	6.41	

Significant at 0.01 level

Emotional adjustment is higher in those without acne compared to those with acne as the scores are 30.97 and 18.51 respectively (t value -19.24).

Table 6: Health related adjustments in adolescents with and without acne.

Group	Frequency	Mean	SD	t value
With acne	100	26.47	4.17	-7.87
Without acne	100	31.79	5.36	

Significant at 0.01 level.

The mean scores being 26.47 (with acne) and 31.79 (without acne), is significant and hence, health related adjustment is higher in adolescents without acne.

Table 7: Mean values, std. deviation and t values of mean scores of overall adjustment of adolescents with and without acne vulgaris (significant at 0.01).

Group	Frequency	Mean	SD	t value
With acne	100	91.71	9.59	-21.89
Without acne	100	126.08	14.12	

Significant at level 0.01.

Overall adjustment is higher in adolescents without acne compared to those with acne, as their scores are 126.08 and 91.71 respectively (t value- 21.89). Table 7 shows that when severity of acne increases, quality of life decreases.

Table 8: Mean values, std deviation and correlation of severity of acne and quality of life in adolescents with acne.

Variables	Frequency	Mean	SD	Correlation
Quality of life	100	29.08	9.77	-0.284
Severity of acne	100	87.01	17.50	

Significant at 0.01 level.

Table 9: Mean values, std. deviation and correlation of severity of acne and adjustment among adolescents with acne.

Group	Frequency	Mean	SD	Correlation
Adjustment	100	29.08	9.74	-0.143
Severity of acne	100	91.71	9.59	

Significant at 0.05 level.

There is a significant negative relationship between adjustment and severity of acne among adolescents with acne vulgaris..

DISCUSSION

In this study, the quality of life and adjustment among adolescents with acne vulgaris were subjected to assessment. The results showed that adolescents with acne vulgaris had a substantially poor quality of life when compared to those without acne. This is in agreement with most of the studies on this topic. Adolescence is a period in which very significant physical, emotional and social development occurs.⁵ Acne vulgaris is the most common dermatological disorder that affects adolescents who are undergoing the maximum physical, psychological and social changes, thus making it the major disease causing psychological morbidity. Psychologically, face is the most important body area and facial appearance represents a very important aspect of one's perception of body image.⁶ Person's with facial acne and scarring may develop severe psycho-social

disability.⁷ This in turn affects the quality of life of these individuals. Changes in body image may cause decrease in self-esteem, interpersonal difficulties, unemployment and high degree of stress, anxiety and depression and thus negatively impact quality of life.⁸

Another finding is that the severity of acne and quality of life bear an inverse relationship. This is in agreement with study of Ismail.⁹ The finding in this study shows that more the severity of acne, less the quality of life. Majority of other studies show that the quality of life is independent of the severity of acne. Most of those studies were conducted in other countries with a different socio-cultural background. In our country with unique and diverse social, economic and cultural characteristics, the findings in the present study may be more relevant and acceptable.

The next major finding in this study is that in adolescents with acne, the adjustment was very low compared to those without acne. Non-adjustive behaviour can be due to number of factors like biological, social, familial, emotional, occupational, health related and psychological.¹⁰ Susceptible individuals with acne develop severe psychosocial disability.¹¹ Feelings of social isolation and rejection leads to inability to form healthy social relationships.¹² Lack of self confidence and self esteem and social inhibition, suicidal ideas also lead to maladjustment in patients with acne.¹³

The results of this study undoubtedly confirm the fact that acne profoundly impacts adjustment in a negative fashion. The overall adjustment is significantly low in adolescents with acne compared to those without.

In this study, analysis of family, health, social and emotional domains were also done. All domains showed significantly low scores in adolescents with acne. This shows that the low overall adjustment scores in adolescents with acne vulgaris results from an equal contribution of scores from all these domains.

The relationship between severity of acne and adjustment was also studied which showed an inverse relationship. This was quite expected as the severity of acne increases, associated psychological problems also increase, which in turn produces a negative effect on adjustment.

CONCLUSION

Acne vulgaris which predominantly affects adolescents and young adults has an adverse psychosocial impact. It has been implicated in psychiatric and psychological processes more than most other dermatological conditions. Acne has a demonstrable association with anxiety and depression and affects personality, self esteem and self image. It affects social interaction and causes social isolation. Adolescent boys and girls with

acne report low quality of life and resultant poor psychosocial adjustment. There is an inverse relationship between severity of acne and quality of life. The severity levels and adjustment also has an inverse relationship.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

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Cite this article as: Karappally JJ, Padmam R, Kurien G. A study on the quality of life and adjustment of adolescents with acne vulgaris. *Int J Res Dermatol* 2018;4:415-8.