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INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/17020

DOI URL: <http://dx.doi.org/10.21474/IJAR01/17020>



RESEARCH ARTICLE

A STUDY ON IMPACT OF ACNE VULGARIS ON QUALITY OF LIFE

Dr. Rayudu Rahul¹, Dr. G. Manmohan² and Dr. Syed Fiaz Hussain³

1. Post Graduate, Department of Dermatology, Bhaskar Medical College, Moinabad, Hyderabad.
2. Professor and HOD, Department of Dermatology, Bhaskar Medical College, Moinabad, Hyderabad.
3. Assistant Professor, Department of Dermatology, Bhaskar Medical College, Moinabad, Hyderabad.

Manuscript Info

Manuscript History

Received: 25 March 2023

Final Accepted: 30 April 2023

Published: May 2023

Key words:-

Acne Vulgaris, Quality of Life, DLQI

Abstract

Background: Acne vulgaris is a chronic inflammatory disease of pilosebaceous units. Complications of acne like scarring and psychosocial distress persists long after active lesions have disappeared⁽²⁾. Present study aims to study the impact of acne vulgaris on quality of life in patients with acne.

Materials and methods: A hospital based prospective study was done on patients with acne vulgaris. Patients with acne vulgaris of age group 16-35 years were included in the study. Patients with chronic comorbidities which can affect the quality of life and patients not willing to give consent were excluded from the study. Acne vulgaris was graded using a simple grading system and QoL was assessed using DLQI questionnaire. Data was analyzed using SPSS software version 17.

Results: 100 patients were included in the study. Mean age was 24.02 and most affected age group was 21-25 years of age. Majority were females (64%). Grade 2 acne was the commonest type seen. Mean DLQI was 8.09 and majority of patients had moderate effect on QoL. Pearson's correlation obtained on comparing acne grading with DLQI was 0.269 suggesting a significant weak positive correlation.

Conclusion: The present study observed moderate impact on QoL in most of the patients. Since acne definitely has a significant impact on QoL, present study highlights the need for measurement of QoL in every patient with acne through questionnaire so that patients with impaired QoL can be identified and counselled accordingly.

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Introduction:-

Acne vulgaris is a chronic inflammatory disease of pilosebaceous units characterised by seborrhea, open and closed comedones, papules, nodules and pseudocysts⁽¹⁾. Acne affects > 90% of the population at some point in their lives. Complications of acne like scarring and psychosocial distress persists long after active lesions have disappeared⁽²⁾. Scarring of face by affecting one's perception of body image impair quality of life leading to depression, feeling of inferiority. Hence evaluation of acne using clinical assessment does not capture the impact of disease adequately.

QOL is a multidimensional concept measuring persons wellbeing. WHO defines QOL as the "Individual's position in the context of culture and value systems in which they live and in relation to their goals, expectations standards,

Corresponding Author:- Dr. Rayudu Rahul

Address:- Post Graduate, Department of Dermatology, Bhaskar Medical College, Moinabad, Hyderabad.

and concerns.”⁽³⁾. Use of QOL as a measurable outcome in health has increased in recent decades as health care has been shifted from disease focused biomedical model to more holistic wellbeing focused biopsychosocial model⁽⁴⁾.

Acne affects QOL. Use of QOL questionnaires help us to understand how acne affects patients on a day to day basis. One such questionnaire is DLQI(Dermatology Life Quality Index Questionnaire) prepared by Finlay and Khan in 2004 and is useful to study health related quality of life in various skin diseases⁽⁵⁾.

There is poor understating about the psychosocial impact of acne among Indian population. Increased awareness and early intervention for psychosocial and psychiatric sequelae of acne benefits patients hence my study aims to study the impact of acne vulgaris on quality of life in patients with acne.

Materials and Methods:-

The present study is a hospital based prospective study done on patients with acne vulgaris attending department of dermatology Bhaskar Medical College. After obtaining informed consent patients with acne vulgaris of age group 16-35 years were included in the study. Patients with chronic co-morbidities which can affect the quality of life and patients not willing to give consent were excluded from the study. Acne vulgaris was graded using a simple grading system as follows⁽⁶⁾:

Grade 1– comedones, occasional papules. Grade 2 – papules, comedones, few pustules. Grade 3- predominant pustules, nodules, abscesses. Grade 4 – mainly cysts, abscesses, widespread scarring.

Quality of life was assessed using DLQI questionnaire, which grades QoL by assessing following domains:

1. Physical symptoms and feelings (questions 1&2)
2. Daily activities (questions 3&4)
3. Leisure(questions 5&6)
4. Work/school (question 7)
5. Personal relationships(questions 8 &9)
6. Treatment (question 10)

Scoring of each question is as follows:

Very much – scored 3

A lot – scored 2

A little – scored 1

Not at all – scored 0

Not relevant – scored 0

question 7 prevented work or studying scored 3

Final DLQI score is sum of all scores(range 0-30). High scores indicates poor QoL.

DLQI score interpretation is as follows:1 No effect , 2-5 small effect, 6-10 moderate effect, 11-20 very large effect.21-30 extremely large effect.

Data was entered in Microsoft excel sheet and analysis was done using SPSS version 17. Categorical data was represented in percentages and proportions. Continuous data was represented in means.For eliciting the statistical significance chi-square test was used.

Results:-

100 patients with acne attending the department of dermatology in a tertiary care center were studied. Mean age of the study population was 24.02.Majority of the patients (33%)were in the age group of 21-25 years, followed by 29% in the age group of 16-20(table 1 & figure 1).64% of the study population were females and 36% were males(figure 2). Grade 2 acne was the most common clinical type seen (49%) followed by grade 1(28%), grade 3 was present in 19% and grade 4 was present in 4%(figure 3).

Mean DLQI of the patients was 8.09. 46% of patients had moderate effect, followed by 28% of patients had small effect, followed by 14% had very large effect, and 7 % had no effect and 5% had extremely large effect on QoL (Table 2 & Figure 4).

Age categories in years	Frequency	Percent
16-20	29	29.0
21-25	33	33.0

26-30	24	24.0
31-35	14	14.0
Total	100	100.0

Table 1:- Age Distribution Of Acne.

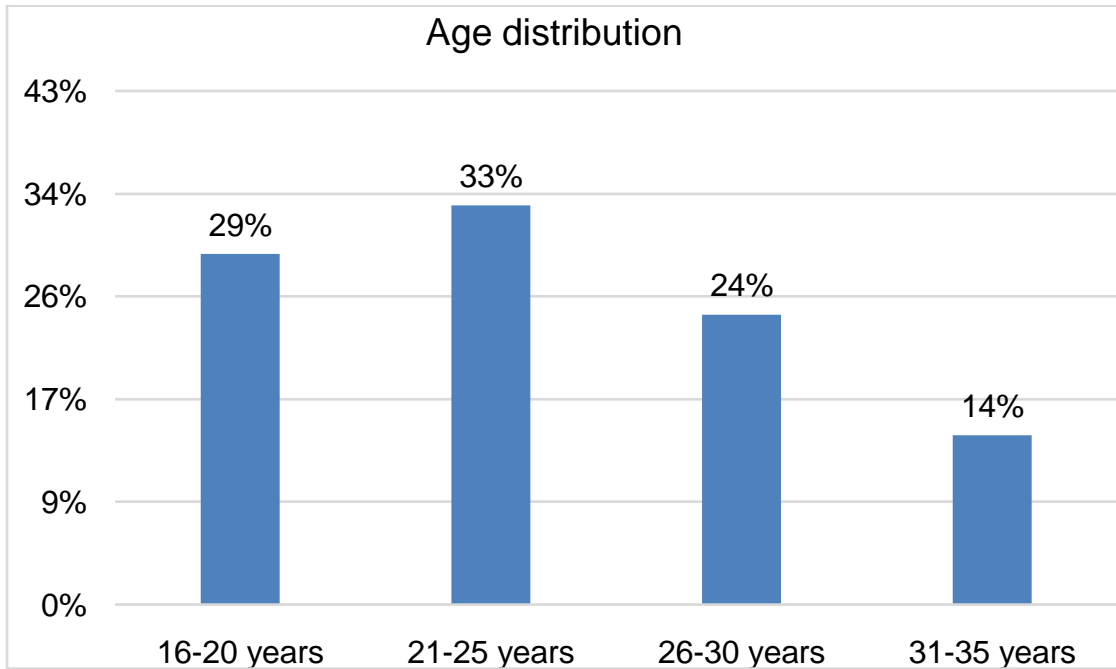


Figure 1:- Age Distribution Of Acne.

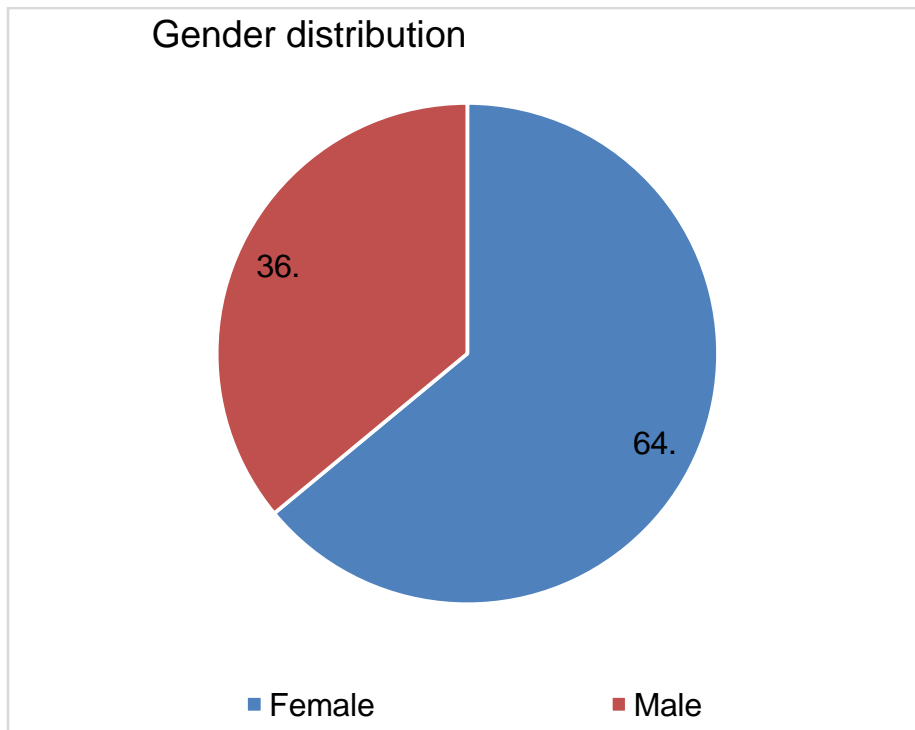


Figure 2:- Sex Distribution Of Acne Patients.

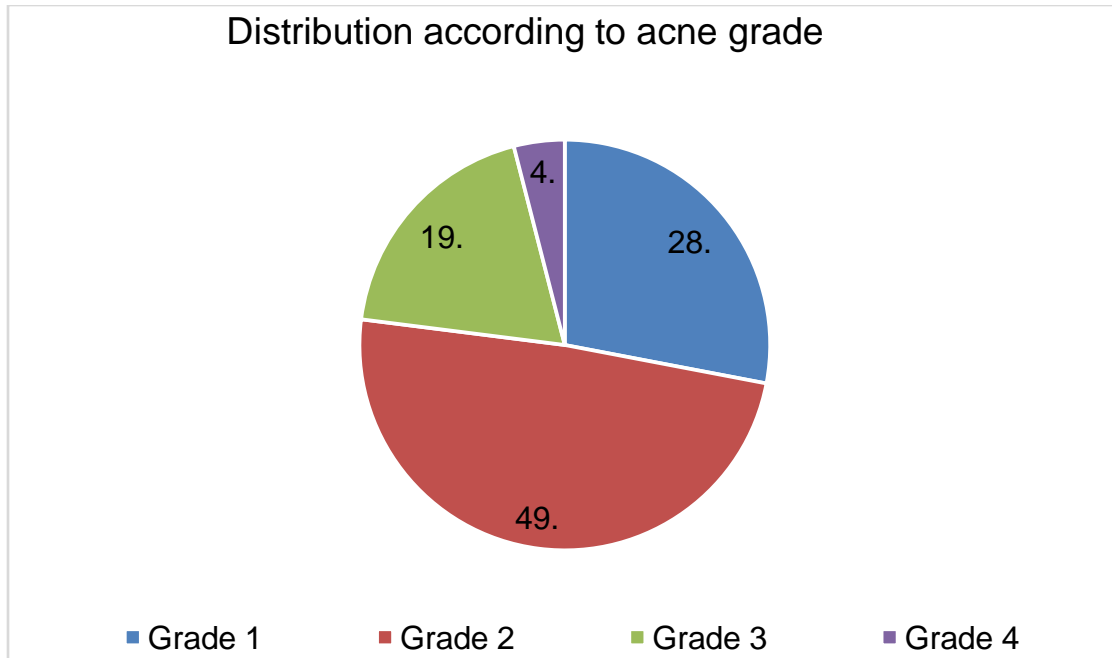


Figure 3:- Distribution Of Acne Grades.

DQLI categories	Frequency	Percent
No effect at all on patients' life	7	7.0
Small effect on patients' life	28	28.0
Moderate effect on patients' life	46	46.0
Very large effect on patients' life	14	14.0
Extremely large effect on patients' life	5	5.0
Total	100	100.0

Table 2:- Effect Of Acne On QOL.

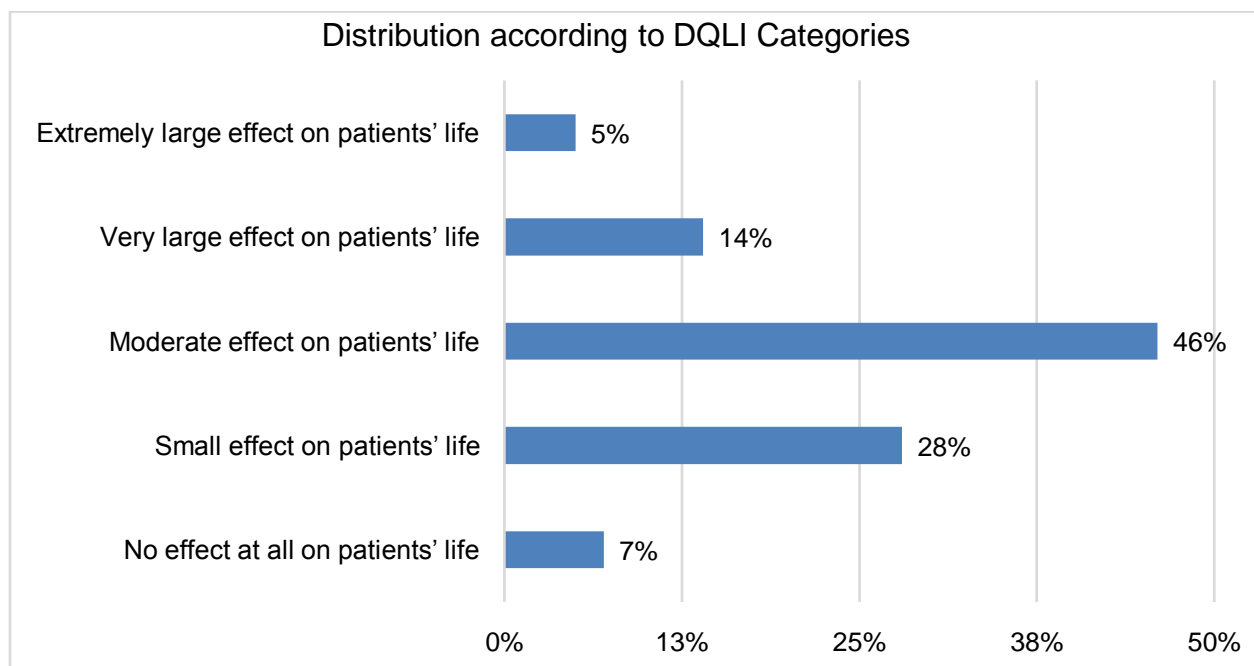


Figure 4:- Effect Of Acne On QOL

Acne Grade vs DQLI categories	DQLI categories					Total
	No effect at all on patients' life	Small effect on patients' life	Moderate effect on patients' life	Very large effect on patients' life	Extremely large effect on patients' life	
1	4	7	16	1	0	28
	14.3%	25.0%	57.1%	3.6%	0.0%	100.0%
2	1	13	23	9	3	49
	2.0%	26.5%	46.9%	18.4%	6.1%	100.0%
3	2	7	7	2	1	19
	10.5%	36.8%	36.8%	10.5%	5.3%	100.0%
4	0	1	0	2	1	4
	0.0%	25.0%	0.0%	50.0%	25.0%	100.0%
Total	7	28	46	14	5	100
	7.0%	28.0%	46.0%	14.0%	5.0%	100.0%
Chi square :19.52, p value:0.07						

Table 3:- ACNE GRADE VS DLQI categories.

On comparing acne grades with DLQI categories, 57.1% of the patients with grade 1 acne had moderate effect on quality of life.50% of the patients with grade 4 acne had very large effect on quality of life and 25% of the patients with grade 4 acne had extremely large effect on QoL.

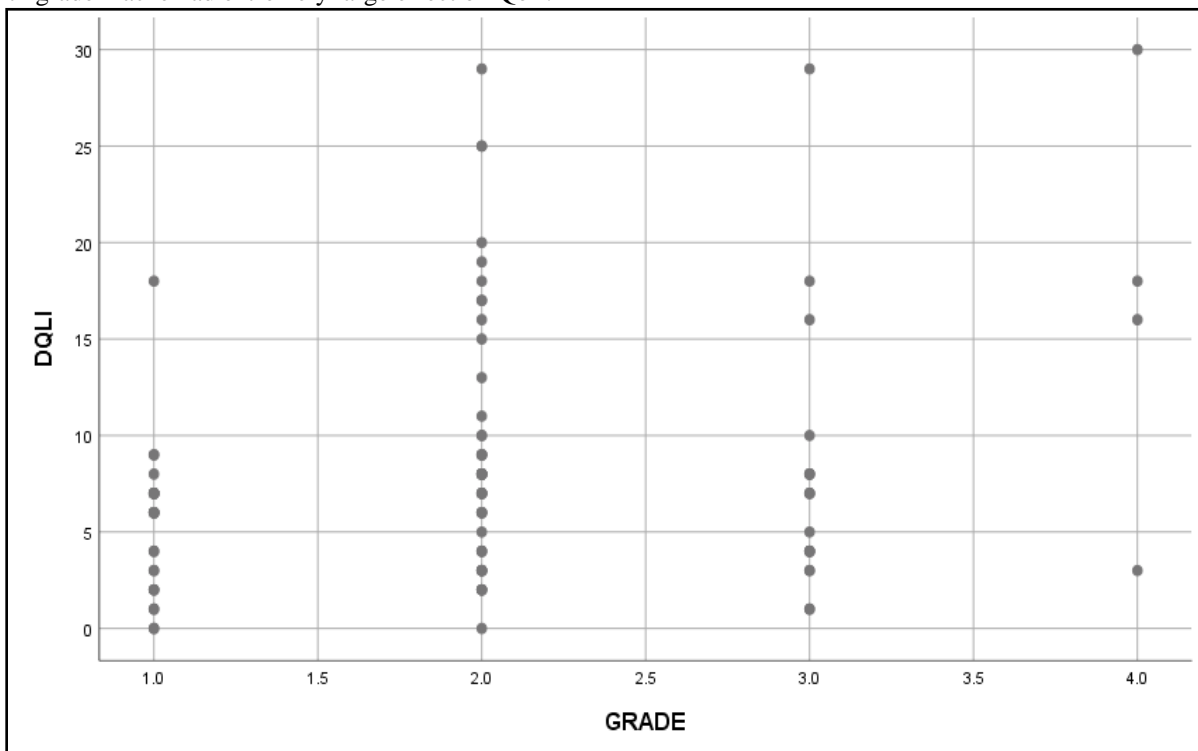


Figure 5:- Correlation Between Acne Grade And DLQI.

Acne Grade vs DQLI	
Pearson Correlation	.269**
Sig. (2-tailed)	0.007
N	100

Table 4:- Correlation Between Acne Grade And DLQI.

On comparing acne grading with DLQI pearson’s correlation obtained was 0.269 which suggests a significant weak positive correlation, suggesting that QoL becomesmore impaired as grade of acne increases.



Figure 6:- 22 Year Old Patient With Grade 3 Acne.

Discussion:-

Acne by affecting psychological and social functioning adversely affects quality of life. QoL measurement in patients with acne can be done through validated questionnaires like DLQI(Dermatology quality of life index), ADI (acne disability index), CADI(Cardiff acne disability score). In the present study DLQI questionnaire was used.

Mean age of the study population was 24.02 & most affected age group was 21-25 years of age. The mean age was 21.3 and most affected age group in the study done by Swathylekshmy J.L et. al.⁽⁷⁾ was 16-20 years of age. The mean age in the study by Kundale DR et. al.⁽⁸⁾ was 24.85 .Female predominance was seen in the present study which is similar to findings in study by Sivaramakrishnan et.al.⁽⁹⁾, Hazarika et. al.⁽¹⁰⁾, Kundale DR et. al.⁽⁸⁾ and Ismail.et.al.⁽¹¹⁾

Most of the patients were having grade II acne (49%) similar to the studies done by Sivaramakrishnan et.al.⁽⁹⁾(46%), Kundale DR et. al.⁽⁸⁾(48.3%).Mean DLQI score in the present study was 8.09. the mean DLQI score was 6.97 in a study by Pillai R et. al and mean DLQI observed in a study by Kundale DR et. al.⁽⁸⁾was 5.97.46% of the patients had moderate effect on quality of life followed by 28% had small effect on QoL. In a study conducted by Kundale DR et.al.⁽⁸⁾52% of the patients had moderate effect on quality of life and 30% had moderate effect on quality of life in a study done by Sivaramakrishnan et.al.⁽⁹⁾

A significant weak positive correlation was obtained between acne grading and DLQI, similar positive correlation is seen in studies by Sivaramakrishnan et.al.⁽⁹⁾ and Kundale DR et.al.⁽⁸⁾suggesting that more impairment in QoL as acne grade increases. This may be because of more prominent and visible lesions and more chances of scarring.

Conclusion:-

Acne definitely has a significant impact on QoL. The present study observed moderate impact on QoL in most of the patients. Present study highlights the need for measurement of QoL in every patient with acne through questionnaire so that patients with impaired QoL can be identified and counselled accordingly. As more adverse impact on QoL is seen in patients with higher grades of acne, considering appropriate treatment at low grades can be beneficial. Thus reduction in DLQI scores becomes an important indicator of treatment success in patients with acne.

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