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SOCIAL AND PSYCHOLOGICAL IMPAIRMENTS CAUSED BY ACNE VULGARIS

[1]*Areena Arooj, [2]Hina Kainat and [3]Dr. Bilawal Sultan

[1]MS Social Science (Psychology).
[2]MS Social Science (Psychology).
[3]PMDC # : 95889-P.

***Corresponding Author: Dr. Areena Arooj**

MS Social Science (Psychology).

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ABSTRACT

Background: Acne, often misunderstood as simple puberty -related condition, can lead to social and psychological impairments comparable to those caused by chronic diseases like asthma, epilepsy and arthritis. Measuring impact of acne on quality of life allows us to understand the disease from patient's view, selecting appropriate treatment and understanding the concept of counselling for better compliance. **Material and Method:** Cross sectional study on 700 acne patients attending Dermatology O.P.D, Services Hospital, Lahore over a period of 3 years was done. Inclusion criteria was males or females of >14 years with acne of any severity. Exclusion criteria was age <14 years, patients on drugs causing acneiform eruption, known psychiatric patients and those having other chronic skin conditions. Patients filled questionnaire on life quality based on CADI. Data gathered was analysed using Pearson coefficient of correlations and through SPSS software version 14. **Results:** Maximum impact on life quality was seen in moderate (58%) followed by mild (28.4%) and severe (12.7%) grades of acne. Highest impact of acne was found in age group 19-23 years (42.8%) followed by 24-28 years (42.7%) and above 32 years (2.28%). Handpicking (56%), rubbing (12%) and frequent hand washing (11%) were among commonly encountered habits. Among specific responses of CADI, 63% felt aggressive and frustrated, 73% showed social interference and 25% reported avoidance of public changing. **Conclusion:** Study confirmed that acne has significant impact on life quality. By identifying high risk patients and incorporating psychocutaneous information into treatment plan, can avert potentially disastrous emotional and functional sequelae.

INTRODUCTION

Acne vulgaris is a common skin disease affecting up to 80% of population at some point in their lives.[1]

Acne vulgaris, which was once regarded as merely a sign of 'growing up' and tagged as a trivial cosmetic problem, has been shown to play a major role in influencing the psyche of the patient.[2] Predominant adolescent involvement and anatomical distribution are the major reasons for acne to cause psychosocial impact.[3] Acne patients often describe level of their social, emotional and psychological problems which were found to be comparable to those reported by patients with asthma, epilepsy, diabetes, and arthritis.[4] Anxiety, depression, low self esteem, low self-assertiveness, embarrassment, social inhibition, shame, altered body image and suicidal ideation have been associated with acne.[5-7] Higher rates of unemployment were encountered in acne patients as compared to those without acne.[8]

In general, quality of life includes feeling of joy and satisfaction with life. World Health Organization (WHO) defines quality of life (QOL) as the individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns.[9] According to WHO, one of the duties of health care officials is to promote the level of QOL. Measuring the impact of acne on quality of life allows us to understand the disease from the patient's point of view and helps in selecting the most appropriate treatment for the patient thereby enhancing the compliance. Several studies have shown that effective treatment of acne leads to drastic improvement in quality of life.[10]

Many well validated and reliable instruments for assessing quality of life specifically in patients with skin disease became available recently. They are helpful in providing insight into effects of acne on quality of life that the patients may not be addressing themselves. Dermatology specific questionnaires include dermatology life quality index (DLQI), Skindex and dermatology quality of life scales (DQOLS). Acnespecific measures provide focused insight into quality of life. These include acne disability index (ADI), Cardiff acne disability index (CADI), assessment of the psychological and social effects of acne (APSEA), and acne quality of life (AQOL).[11] CADI is basically

derived from ADI as a short, five item questionnaire that can be easily used in clinical practice.[12]

We encountered scarcity of data on how acne impacts the quality of life in our country. How acne severity is related to quality of life, is also poorly understood. The present study was conducted to ponder over the importance of psychological aspects in acne patients. So, our aim was to study the impact of acne on quality of life and to correlate the severity of acne with the quality of life. Also we studied the correlation of commonly associated habits seen in acne patients with its impact on quality of life.

METHODS

This cross sectional study examined consecutive 700 male and female patients attending dermatology outpatient department at Services hospital, Lahore over a period of 3 years. All those patients who were less than 14yrs, those taking drugs causing acneiform eruptions, which are already diagnosed with psychiatric disorders or had other comorbid chronic disease which can affect quality of life were excluded from the study. Severity of acne was graded according to Global Acne Grading System (GAGS) which calculate the severity of acne through the combined assessment of the types of acne lesions (comedones, papules, pustules and nodules) and their anatomic location (forehead, cheeks, nose, chin, chest and back). The scoring ranged from 1-18 (mild acne), 19-30 (moderate acne), 31-38 (severe acne) and ≤ 39 (very severe acne). All acne patients were requested to fill questionnaire on the quality of life namely Cardiff Acne Disability Index (Table1). Each question is scored from 0 to 3.Score was then graded as mild (0-4), moderate (5-9) and severe (10-15). Data gathered by questionnaires were analyzed using Pearson coefficient of correlations and through SPSS software version 14. P ≤ 0.05 was considered to be statistically significant.

Table 1: Table showing five item questionnaire, Cardiff Acne Disability Index (CADI).

Cardiff Acne Disability Index		
(a)	Do you think acne has interfered with your social life and relationship with opposite sex	Reflect the psychosocial consequences of acne
(b)	Have you ever felt aggressive, embarrassed or frustrated on account of your acne?	
(c)	Have you avoided wearing costumes or clothes which could expose acne over the trunk?	Related to avoidance of public places
(d)	Have you been concerned about the appearance of your acne?	Related to perceived severity of diseased state
(e)	Does your acne pose a problem to you now?	

RESULTS

The socio-demographic profile of the patients is tabulated in 'Table 2' which shows the composition of the study population, comprising of 452 females (64.6%) and 248 males (35.4%). Mean age of the patients being 22.6±2.6 years (mean ± standard deviation) and Mean Global Acne Grading Score (GAGS) being 26.01±8.4.

Table 2: Socio demographic profile of patients.

Socio-demographic profile of patients		
Male Female		
Age		
14-18	13	13
19-23	103	197
24-28	111	188
29-33	16	16
>33	5	5
Marital status		
Married	30	99
Unmarried	218	353
Acne severity		

1	43	71
2	112	246
3	70	99
4	23	36
Body Mass Index		
<18.5	69	124
18.5-24.9	153	275
25-29.9	26	52

CADI Score

Maximum CADI score was 14 while minimum was 1. Mean CADI score was 6.45±2.7 (5.0—9.0) which implied that most of the patients had moderate psychological impact. Impact on QOL (based on CADI score) was mild in 28.4%, moderate in 58.8% and severe in 12.7%.

While assessing specific responses of CADI score, respondents expressed negative emotions, some impairment in social interactions, would not publicly expose extra facial areas affected by acne, psychologically affected by acne and thought their acne was a problem as demonstrated in (Figure 1).

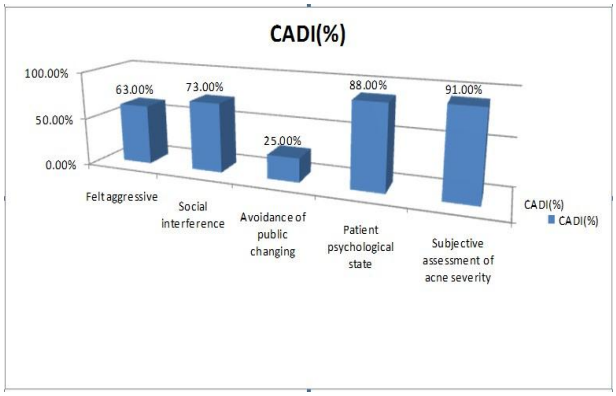

Figure 1: Specific responses of CADI. CADI and age.

There was no significant difference in quality of life based on age. (Chi-square = 9.5, df = 8, p = 0.297) (Table 3), (Figure2).

Table 3: Table depicting impact on quality of life in relation to age.

Age group	Impact on quality of life			Total
	Mild	Moderate	Severe	
14-18	4	17	5	26
19-23	93	175	32	300
24-28	75	179	45	299
29-33	22	32	5	59
>33	5	9	2	16
Total	199 (28.4%)	412 (58.8%)	89 (12.7%)	700

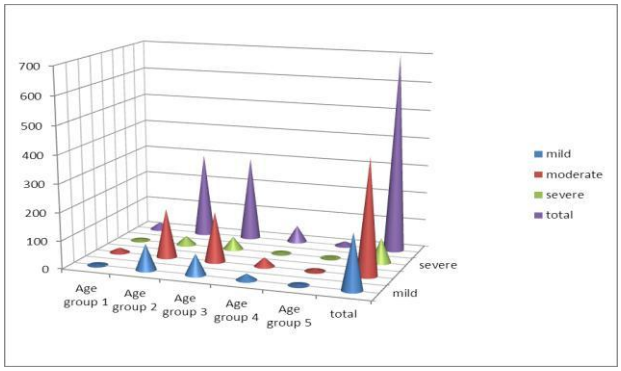

Figure 2: Graph depicting the relationship between acne and quality of life.

CADI and gender

There was no significant difference in quality of life based on gender. (Chi square = 1.4, df = 2, p = 0.484) (Table 4), (Figure3).

Table 4: Table depicting relationship of impact on quality of life with gender.

Sex	Impact on quality of life			Total
	Mild	Moderate	Severe	
Female	124	266	62	452
Male	75	146	27	248
Total	199	412	89	700

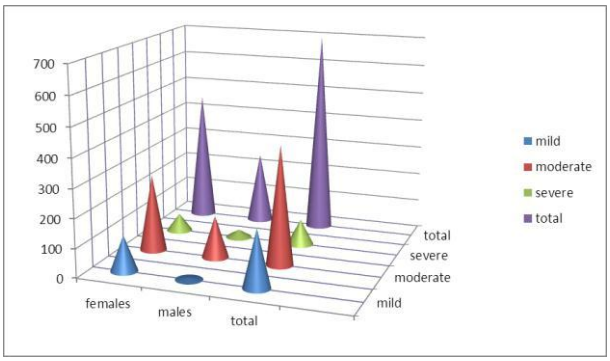

Figure 3: Graph depicting relationship of impact on quality of life with gender.

CADI and acne severity

While assessing the association between acne severity and CADI score, there was a statistical significant difference at 5% confidence interval (Chi square = 25.524, degree of freedom = 6, p = 0.000) between acne grade and its impact on quality of life. Grade 4 acne patients have a higher impact on QOL(30.5%) as

compared to grade 3 patients (14.2%). Thus, greater the severity of acne, greater is its impact on QOL (Table 5), (Figure4).

Table 5: Table showing relationship between impact on quality of life and acne grade.

Acne grade	Impact on quality of life			Total
	Mild	Moderate	Severe	
1	41	67	6	114
2	102	215	41	358
3	43	102	24	169
4	13	28	18	59
Total	199	412	89	700

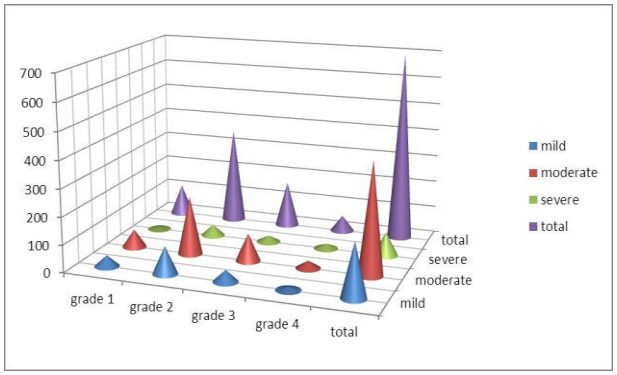

Figure 4: Graph depicting relationship between impact on quality of life and acne severity.

Common habits which we encountered were tabulated as shown in the Table 6.

Table 6: Common habits encountered in acne patients.

Habits	Frequency
Hand picking	392 (56%)
Rubbing	84 (12%)
Frequent face washing	77 (11%)
none	147 (21%)
total	700

There is statistically significance at 5% confidence interval (Chi square = 705.732, df = 18, p = 0.00) observed between commonly observed habits and impact on quality of life. This significant difference was suggestive of finding that patients who had commonly observed habits especially handpicking had greater influence in affecting their quality of life. (Table 7), (Figure 5).

Table 7: Table showing impact on quality of life with commonly seen habits.

Impact on Quality of life	Habits				Total
	Hand picking	Rubbing	Washing frequently	None	
Mild	110	21	23	45	199
Moderate	233	49	47	83	412
Severe	49	14	7	19	89
Total	392	84	77	147	700

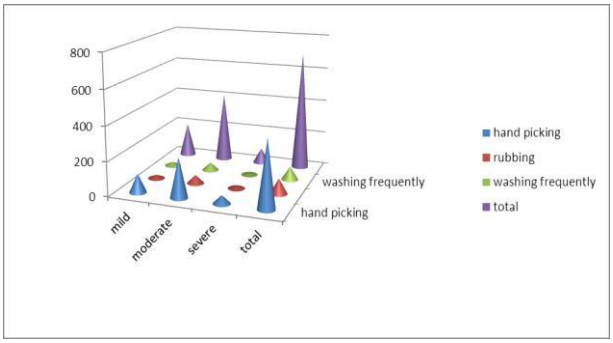

Figure 5: Graph showing relationship between impact on quality of life and commonly seen habits in acne patients.

DISCUSSION

While reviewing literature, we came across various studies assessing association of acne and quality of life in Cleveland, U.S.A, Spain, U.K, Iran and Greece. As far as our country is concerned, very less studies are done in that respect.

In our study, CADI score was 6.45. Mean CADI score has been 2.67 in Shahzad et al[13] study, 2.56 in Law study[14] in Hongkong, 1.9 in Walker study[15] in Scotland. Higher CADI score in our study could be explained by the fact that ours being hospital based study might be having higher percentage of persons with severe grade of acne. Overall impact of acne was found to be severe in 12.7%, moderate in 58.8% and mild in 28.4% of the patients.

Our study demonstrated a strong correlation between the total score of Cardiff Acne Disability Index and acne severity (based on GAGS).The impact on quality of life increased with acne severity. Similar relationship is seen in Hanisah[16] study however it is poor in Law[14] study and Safizadeh[17] study.

There was no significant statistical difference in the CADI score between the genders. This was consistent with the findings of Shahzad[13] et al, Hanisah[16] et al and Safizadeh et al.[17] However it contradicts with the results of Law et al which found that women generally experience more psychological morbidity than men. This finding is important as there may be perception among some health professionals that facial acne will have less impact on males.

A significant correlation was found between CADI score and habits like handpicking, rubbing or washing face frequently in acne patients. Thus patients with such impulsive habits tend to have an increased impact on quality of life. We have found no study in literature, to best of our knowledge, which looks for this correlation.

It is noteworthy to mention that this study may be affected by selection bias because our sampling framework was limited to dermatology clinics rather than general population.

The results of our study suggested that acne vulgaris has a significant impact on patients quality of life. Optimal acne therapy, besides taking into account the type and severity of acne, should also take into consideration, its impact on the quality of life of patient.

CONCLUSION

Acne has been shown to have a significant impact on quality of life which is positively correlated with the severity of acne. Habits like handpicking negatively impacts quality of life. Early treatment of acne will help in decreasing social phobia, improving patients self esteem, confidence, and thus their attitude towards life. Psychological consultation and intervention may play an important role in management of some acne patient. In the future it may be feasible to incorporate QOL index scores into the various grading systems for acne to give a true measurement of the impact of this disease.

REFRENCES

1. Ilse Truter, Evidence based pharmacy practice: Acne Vulgaris. Pharmaceutical journal, April 2009.
2. Dunn LK, O'Neil, JL Feldman S.R, Acne in adolescents: Quality of life, self esteem, mood and psychological disorders. Dermatology online journal.
3. Hanna S, Sharma J, Klotz J. Acne vulgaris: more than skin deep. Dermatology online journal.
4. Mallon E, Newton JN, Klassen A, Stewart Brown SL, Ryan TJ, Finlay AY. The quality of life in acne: A comparison with general medical conditions using generic questionnaire. Br J Dermatology, 1999; 140: 672.