

ASSESSMENT OF PSYCHO-SOCIAL IMPACT OF ACNE AMONG YOUNG ADULTS - A CROSS SECTIONAL STUDY AT A TERTIARY CARE HOSPITAL OF RAWALPINDI

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ABSTRACT

Objective: To assess the psychosocial impact of acne and to evaluate the quality of life in relation to severity of symptoms among young adults.

Study Design: Cross-sectional – analytical study.

Place and Duration of Study: Outpatient department, Pak Emirates Military Hospital, Rawalpindi, from Sep 2018 to Feb 2019.

Methodology: We included 300 individuals visiting the hospital and their quality of life was assessed using Acne quality of life Index questionnaire. Data was analyzed using SPSS-23.

Results: Total scores were calculated for three domains of Quality of life in patients with Acne i.e. Self-perception, Emotional well-being and Social life. Out of these three domains, Social Life was most affected by acne (mean score 15.61 ± 7.37 out of a total of 30) and Self-Perception was seen to be least affected (mean score 16.90 ± 8.20). There was a strong positive co-relation between the increasing severity of symptoms and impact on Self Perception ($r=-0.58$, $p<0.01$), between severity and Impact on Social life ($r=-0.581$, $p<0.01$) and between severity of symptoms and Impact on emotional well-being of the patients ($r=-0.551$, $p<0.01$). A significant difference was seen between the two genders with reference to the impact on “Social Life”, the mean score for Males being 13.96 ± 7.55 while that for Females being 17.29 ± 6.81 ($p<0.01$).

Conclusion: Acne has significant impact on the quality of life of patients treated by primary care physicians. The severity of symptoms had strong positive correlation with self-perception, social and emotional domains.

Keywords: Acne, Impact, Quality of life, Young adults.

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INTRODUCTION

Acne is a chronic inflammatory disease characterized by hyper secretion of sebaceous glands¹. There is blockade of the sebaceous gland ducts with resultant entrapment of oil in the ducts and resultant inflammatory lesions, non-inflammatory lesions or both along with significant scarring². Depending upon severity, acne is classified into mild, moderate and severe forms, each having its own specific dermatological manifestations¹.

Acne affects approximately 85% of adolescents and about two third of adults aged 18 and older³. Acne being a chronic condition is associated with massive psychological burden and mental health problems⁴. It may be presenting at younger age due to earlier puberty. Hormonal factors, diet and hygiene are also thought to be important factors in causing acne⁵. Acne is reported to persist till the age of 20 years in 64% of the people and may even persist in some people till the age of 30 years in about 43% of individuals, respectively⁶. Acne is hereditary and is reported in people with a positive family history⁷.

WHO has defined quality of life (QoL) as “indivi-

dual’s perception of their position in the context of culture and value system in which they live and in relation to their goal, expectations, standards and concerns”⁸. Several researches have been carried out worldwide to study effects of acne on patients’ QoL. Studies have addressed the psychological effects of acne such as depression, anxiety, emotions, self-esteem, self-identity, and suicidal tendency⁹. The problem of acne cannot be fully addressed without considering associated psychosocial disturbances. Assessment of non-dermatological effects of acne is critical to assist the doctors in treating its effects that are not just skin-deep. There is paucity of data on this topic in Pakistan, thus this study’s main objectives were to assess the psychosocial impact of acne among young adults and evaluate the impact of symptoms on their quality of life.

METHODOLOGY

This cross-sectional - analytical study was carried out at Outpatient department, Pak Emirates Military Hospital Rawalpindi, from September 2018 to February 2019. Non-probability consecutive sampling technique was used. Sample size was estimated to be 300 which was calculated through WHO sample size calculator with a confidence level of 95% and margin of error 5.6%. Study group included both males and females of age group (18-35) years. Participants had a confirmed

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diagnosis of acne which was made by the dermatologist working in OPD. The Individuals with any psychiatric disorder, systemic disease or any other skin disease were not included. Validated, acne quality of life index (AQLI) questionnaire containing 19 questions was used. It was comprised of 4 domains (emotional well-being, self-perception, social life and severity of acne). Participant's responses were numbered from 0-6 with zero being extremely affecting QoL and 6 being not at all. According to this scoring system, higher scores indicated less psychosocial impact and increased health related quality of life. To calculate the score answers of each domain were added, with 30 being the maximum and 0 being the minimum score. The severity scores were classified as: 0-10 was considered severe, 11-20 moderate and 21-30 mild. Data analysis was done using SPSS-23. Error bars denote the impact of acne on different domains in relation to gender. Moreover, correlations between three domains and severity of acne were assessed using Pearson correlation (R).

RESULTS

Total 300 acne patients took part in this study, out of which 149 (49.7%) were females and 151 (50.3%) were males. Regarding the different acne grades, 117 patients (39%) had mild acne, 122 (40.7%) had moderate acne and 61 (20.3%) had severe acne. Among different domains of Acne-QoL, the most affected was "Self-Perception" with mean score of 16.49 ± 8.38 in males and 17.32 ± 8.02 in females respectively. The difference between mean scores of males and females was not found to be significant ($p=0.38$). Mean Score for the do-main "Social Life" was 13.96 ± 7.55 in males and 17.28 ± 6.81 in females. Males had lower scores as compared to Females ($p<0.01$), meaning a greater impact on Social Life in Male gender.

Mean score for the domain "Emotional Well-being" was calculated to be 16.23 ± 8.01 males and 16.14 ± 7.51 females. However, the difference was not significant ($p=0.914$). The Mean scores for the Acne-oL domains of both males and females are shown in fig-1.

Positive co-relation was observed between the "Impact on Self Perception" and "Severity of Symptoms" with $r=0.581$, $p<0.01$. Positive co-relation was also observed between the "Impact on Social life" and "Severity of Symptoms" in the patients with $r=0.602$, $p<0.01$. In addition, there was a positive co-relation between the "Impact on Emotional Wellbeing" and "Severity of Symptoms" in Acne Patients where $r=0.551$, $p<0.01$ (fig-2(a-c)).

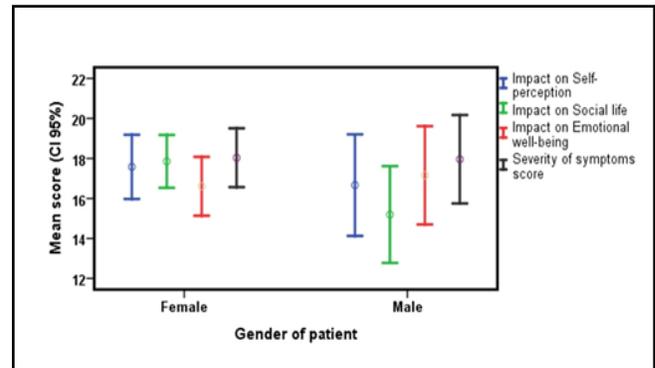


Figure-1: Mean scores of QoL between males and females.

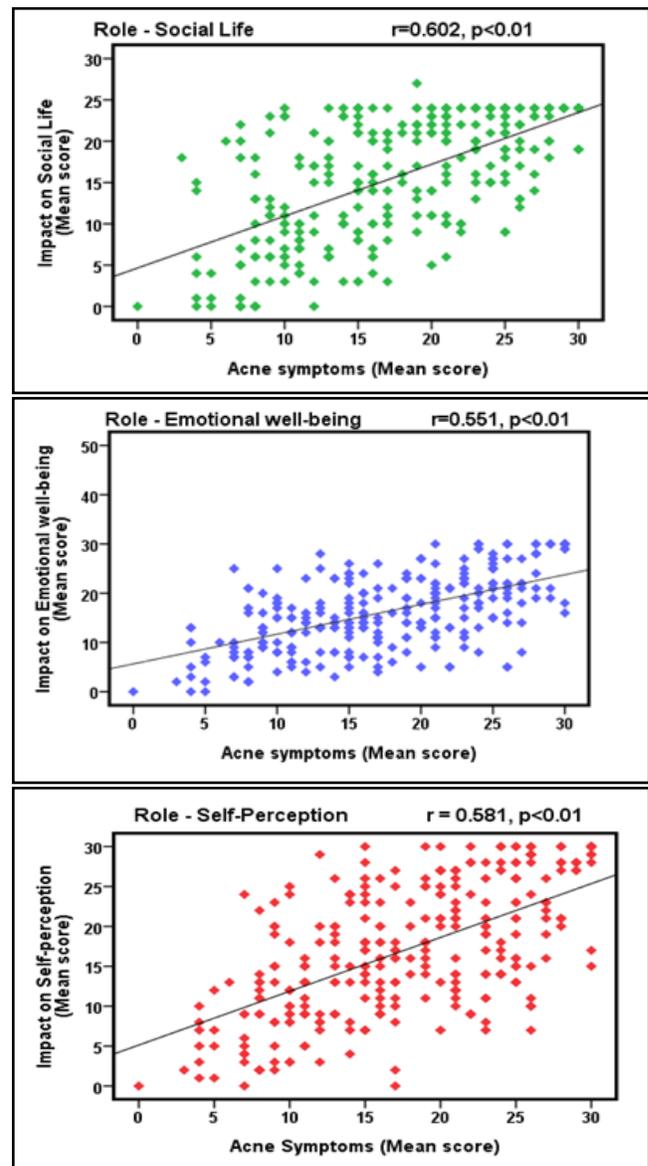


Figure-2: Impact on QoL based on symptoms.

DISCUSSION

The study results revealed that acne which is generally considered as a simple disease had a noteworthy impact on patients' QoL. Quality of life index (QAL) questionnaire was used that included four domains (emotional well-being, self-perception, social life and severity of acne symptoms), among those, the most affected domain was Social Life in patients suffering from acne and the least affected domain was self perception. Similar results were reported in a study carried out at Sultan Qaboos University in Oman. Their sample size was 100 students out of which 40 were males and 60 were females. Using Quality of Life Index (QOL), acne had the most drastic effect on social interactions¹. In another study carried out in UK, Italy and Germany, almost all the subjects were of the view that acne had a severe effect on their self-esteem and self-confidence whereas two third believed that their social life was disturbed due to acne¹⁰. Similarly, in a study conducted at Miami Hospital University, a lot of participants reported severely distressed quality of life due to acne¹¹.

With respect to gender, it was observed that negative impact on the Quality of life was greater among males as compared to females. This result was in contrast to study conducted at Sultan Qaboos where females were affected the most¹. In another study conducted in Missouri, USA by Darji *et al*, acne in female population is under recognized as it causes depression and anxiety and decreased focus at school and work¹². Another study in North Carolina by Rapp *et al* also revealed a greater impact on psychosocial wellbeing of female population¹³.

The results revealed that the effect of acne on quality of life was proportional to the severity of acne among the patients. Patients with severe acne reported greater impact on their QOL than patients with mild or moderate acne, reflecting a strong negative correlation between increasing severity of symptoms and self-perception, emotional well-being and social life¹⁴. Another study carried out by Connor *et al* in Birmingham reveals that dermatological disease decreases the quality of life which in turn worsens the disease¹⁵.

A similar study carried out in India by Hulmani *et al*, depression was reported in 81% of the acne patients¹⁶. A study done in indicated depression and suicidal tendency in acne patients of younger age group¹⁷. Moreover, improvement in acne symptoms after treatment have shown to boost self-esteem and social well-being of acne patients¹⁸.

There is conflicting evidence about how QOL correlates with the clinical severity of acne. Some studies have reported variable and inconsistent relationship between QoL and severity of acne. Some studies reported no significant associations between severity of acne with QOL¹⁹. The difference could be attributed to the lack of acne specific measures, lack of a consistent acne grading system, the limited range of scales used, variations in self-evaluation of the severity of acne, different sample sizes and a different age group.

The strengths of the study included that it was based on adolescent from university level who are more conscious about their social, physical and emotional well-being, and this is the time acne is most prevalent. Additionally, a self-administered questionnaire was used making respondents response unbiased and less likely to be affected by opinion of physicians. The limitations of study were relatively small sample size, and participants were selected from one setting only.

CONCLUSION

This study indicated that acne greatly affected the quality of life in affected individuals, according to the severity of their symptoms. Out of the four domains, social life was the most affected one while self-perception being the least affected one. Acne not only has physical effects on the body but also a significant psychosocial impact on the individual. Therefore, during its treatment the physicians should keep both aspects in mind. Acne is a very common condition in our population therefore, further studies on this topic, in different age groups may help to signify its importance and generate awareness in communities.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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