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Emotion of Facial Acne, Perceived Dysregulation and Social Anxiety on Adolscents

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ABSTRACT

Millions of individuals throughout the world suffer from acne, one of the most common dermatological disorders. Despite being often believed to be a condition that mostly affects young adults, it is increasingly observed in adolscents, especially adult girls. This study was to assess how well the difficulties in emotion regulation (DER) predict social anxiety in participants with facial acne and investigate the connection between facial acne or prevalent psychopathologies including depression and anxiety. Cardiff Acne Disability Index (CADI) was used to assess the Social Appearance anxiety Scale (SAAS) while the severity of acne measured by Perceived Dysregulation Scale (DERS). CADI, DERS, and SAAS scores, as well as sociodemographic information, were gathered on standardized forms, and SPSS version 27 was used for analysis. The qualitative factors were displayed as percentages and frequencies, whereas the quantitative data were displayed as means. A P-value of less than 0.05 was deemed statistically significant. The mean age of the 100 participants in this study was 1.61 (.49), with 39 men and 61 women. The findings indicated a significant relationship (P<0.001) between the participants' social anxiety impairment and the severity of their acne vulgaris. This study found a substantial correlation between acne vulgaris and social anxiety. Cardiff acne disability index has shown to be a reliable method to assess the quality of life. Since mild disease may cause patients disproportionate distress, it is advised that dermatological clinics use it regularly to provide individualized treatment.

Keywords: *Acne vulgaris, patients, psychopathology, DERS, ASAS,*

INTRODUCTION

The skin is the body's largest and most visible organ that provides meaningful, biological, and social information e.g., facial expressions, attractiveness, ethnicity, health vital to our identities (Dalgard F.J, 2015). Among these, acne vulgaris, sometimes known as "acne," is a skin condition characterized by clogged pilosebaceous units that can manifest as either non-inflammatory (such as open comedone or "blackhead") or inflammatory (such as pustules and papules or "whiteheads") facial or body lesions. About 9.4% of people worldwide suffer from acne, which is the most frequent dermatological issue seen by doctors (AL., 2018). Acne exhibits global (Bashir K, Dar NR, Rao SU 2010). However, the efficiency of the tactics people employ and how they affect day-to-day functioning vary. In addition to experiencing more intense and persistent maladaptive emotions, people with emotional regulation deficits are more likely to experience a range of psychological disorders, such as personality disorders (Putnam & Silk,

2005), anxiety (Mennin, Heimberg, Turk, & Fresco, 2005), and depression (Gross & Munoz, 1995; Campbell-Sills & Barlow, 2007). The mechanisms by which problems with emotion regulation lead to impairment, however, are still largely unknown to scientists. Teens with acne have also reported feeling angry, having low self-esteem, being less attached to their peers, and paying less attention in class and extracurricular activities. Similarly, research on adults indicate troublesome subclinical signs such as feelings of immaturity, self-consciousness, and insecurity since acne is commonly seen as a "teenage problem" (Tayel, 2020). These uncomfortable feelings have been demonstrated to impair important life aspects like as job stability, personal relationships, and sexual pleasure, extending acne's detrimental influence well beyond physical appearance. These negative self-perceptions are triggered or reinforced by the unfavorable responses of others (Ritvo et al., 2011; Timms, 2013). Over 96% of kids suffer from acne, which is most common throughout adolescence and frequently persists into adulthood. When a person enters their early twenties, acne usually goes away or at least lessens for the majority of people. However, it is impossible to anticipate when it will completely go away, and some people will continue to have this disease far into their thirties, forties, and beyond (Sydney, 2006). The Dermatology-unique Quality of Life (DSQL) questionnaire, the Cardiff Acne Disability Index (CADI), and the Acne Disability Index (ADI) are some of the quality of life tools currently available that are unique to acne (Marron SE 2019 & El-Hamd 2017). The Cardiff Acne Disability Index (CADI) was utilized in this study due to its validity, reliability, and ease of use (Yap et al., 2024). It is a simple, five-item survey that was created in 1989. Distribution and impacts young people at the time of the greatest physical, psychological, and social transformations.

LITERATURE REVIEW

The psychological elements linked to social anxiety impairment in acne vulgaris have not yet been thoroughly explained. This study will assess how well the difficulties in emotion regulation (DER) predict social anxiety in patients with acne vulgaris and investigate the connection between acne vulgaris and prevalent psychopathologies including depression and anxiety.

Despite descriptive studies (such as qualitative, cross-sectional, and archival) and meta-analytic findings that show detrimental effects on psychosocial well-being for a variety of age groups and cultures, acne and its relationship to poor mental health have remained on the periphery of the dermatological and developmental psychology literature, according to a recent review by Netsuke & Yates et al. (1967). With an emphasis on internalizing symptoms and diagnoses of MDD, GAD, and SAD, the goal of this narrative review was to further synthesize the literature on acne and its relationship to mental health, building on the work of Netsuke & Yates et al. (1967) (Elkind D., 1967). A sociocultural paradigm that identifies exposure to and internalization of beauty ideals and appearance-based psychosocial judgments as key players in the relationship between acne and mental health was used to examine the emergence of internalizing symptoms. The role of isotretinoin (e.g., Acutance) and hormonal contraceptives (HC), two main therapies for acne that have been connected to internalizing symptoms, was also taken into account in our narrative review (Elkind, 1996).

In dermatology, acne vulgaris, sometimes known as acne, is one of the most common externally apparent skin conditions that affect people in the United States between the ages of 15 and 40 (Stern R.S, 1995). Over the past 20 years, research and clinical practice have shown that acne is frequent in the adult population, despite the fact that it has traditionally been thought of as a teenage problem (Stern R.S., 1995) & Perkins AC (2010)). Research indicates that women are more likely than males to experience adult acne; between 12 and 22 percent of American women experience adult acne (Goulden V, 1999) in contrast to 3% of men (Perkins AC, 2010). Research on the epidemiology, clinical presentation, and symptom burden of adult female acne (AFA), a skin condition that is more common in women, is scarce.

In terms of its psychopathology, effects on everyday functioning, and social anxiety, facial acne is a multifaceted condition. According to Callender V.D. (2004) and Tanghetti E.A. (2005), acne has also been linked to poor emotional control in relation to health, sometimes with detrimental effects comparable to those of serious and even fatal illnesses. Acne on the face has been shown in earlier research to negatively impact psychological health, social interaction, and self-esteem. Adolescent and adult females are both affected by the symptomatology and psychosocial effects of acne, a condition that is apparent from the outside. According to published research, physical deformity including scarring and chronicity may make the symptoms of AFA worse. It is currently unclear if adult females need specialized acne therapies or attention to particular parts of acne clearance in comparison to normal care for teenagers, and the clinical characterisation of AFA has not yet been clearly defined (Lasek RJ & Chren MM (1998)). Research indicates that acne has a negative psychological impact on people of all ages, genders, ethnicities, and professionally measured severity. The ramifications of acne are varied and often include loss of self-confidence/self-esteem (Dunn, O'Neill, & Feldman, 2011; Ritvo, Del Ross, Stillman, & La Riche, 2011); negative body image anxiety (Saitta et al., 2011), and feelings of failure to meet the social portrayal of perfect, flawless skin (Magin, Heading, Adams, & Pond, 2011). These negative self-perceptions are triggered or reinforced by the unfavorable responses of others (Ritvo et al., 2011; Timms, 2013). Involving people in the formulation of the research agenda for acne is especially crucial, considering the impact that the condition has on individuals.

METHODOLOGY

This research is cross-sectional and correlational. In order to ascertain the impact of acne vulgaris on young adults' social anxiety and whether there is a relationship between the severity of acne and emotional dysregulation impairment, 100 young adults with acne vulgaris were evaluated. CADI scores and sociodemographic information were gathered using particular standardized forms. Data analysis was done with SPSS version 27. While the qualitative variables were portrayed as frequency and percentages, the quantitative data were displayed as mean ± SD and median. The significance of the results for quantitative variables was compared using the t-test. To evaluate the relationship between categorical variables, the chi-square test was employed. Statistical significance is defined as a P-value of less than 0.05. The CADI questionnaire consists of five items. Each question includes four responses, each worth a score between 0 and 3. All questions with a minimum score of 0 and a maximum score of 15 are added to determine the overall scores. On a scale of 0 to 5, minor quality of life impairment is represented by a score of 6 to 10, moderate by a score of 6 to 10, and severe by a score of 11 to 15. Difficulties Emotion Regulation Scale (DERS) is a popular 36-item self-report tool for evaluating challenges with comprehending, accepting, and controlling emotions. According to PsyPack, it examines how people view their capacity to control their emotions, with scores ranging from 1 (nearly never) to 5 (almost often).

Hypothesis

- There will likely to be a significant relationship among emotion of facial acne and emotion dysregulation and social anxiety among adolescents.
- There be a significant positive relationship between effects of facial acne and emotion dysregulation among adolescents.
- There might be a negative relationship between emotions of facial acne and social anxiety among adolescents.
- Gender will significantly moderate the relationship between facial acne and social anxiety among adolescents.
- Higher level of emotional dysregulation might lead to higher level of social anxiety among adolescents.

- There will be a significant difference in the levels of social anxiety among adolescents with different levels of facial acne severity.

RESULTS

The study population consisted of 100 participants. There were 61 (58.1%) females and 39 (37.7%) males. The mean age of the study population was 2.29 ± .656 years. The majority of the study participants were students (n=100), 34 were professionals and 29 were students. Out of 100 13 patients belonged to the upper class, 75 middle and 12 were from lower class. Regarding educational status 35 (33.3%) patients acquired education till matric level, 33 (31.4%) had inter and 32 (30.5%) completed bachelor education. The overall mean DERS score was 6.71 (2.54) (±7.7, range 10–40); Mild, moderate, and severe acne presented in 64 (39.3%), 82 (50.3%), and 17 (10.4%) patients, respectively. Among the patients with mild acne, there were 24 males and 40 females. Among moderate group, there were 12 males (30.8%) and 70 females (56.5%). Only 3 males (7.7%) and 14 females (11.3%) presented with severe acne. The mean CADI score was 17.16(4.83) (± 3.4, range 0-15), (Table-I). Among the study participants, 68 patients (41.7 %) had mild QOLI (42 Female: 61.8% and 26 Male: 38.2%). 74 patients (45.4%) had moderate.

Table 1: Reliability Analysis of Scales (N=100)

Variables	k	a	M (SD)	Actual Score	Potential Score
CADI	6	.89	17.16(4.83)	6-27	6-27
DERS	9	.68	6.71 (2.54)	3-12	1-15
ASAS	9	.77	9.94 (2.89)	4-17	1-20

Table showed mean, standard deviation, actual/potential score and reliability coefficient of CADI scale, perceived dysregulation and social anxiety among adolescents. All these scales showed good internal consistency.

Pearson product moment correlation

It was hypothesized that Cardiff acne disability index have negative relationship with psychological perceiving dysregulation and social anxiety have positive relationship with psychological perceived dysregulation of adolscents. Pearson product moment correlation was applied to test this hypothesis.

Table 2: Pearson correlation of emotion of facial acne perceived dysregulation and social anxiety. (n=100)

	CADI	DERS	ASAS
1 **CADI**		-.128	-.282**
2 DERS	-.128	1	
3 ASAS	-.282	.316**	1

**.correlation is significant at the 0.05 level (2-tailed)*
***. Correlation is significant at the 0.01 level (2 tailed)*

Table shows the result of that appears to be no meaningful relationship between acne-related disability and difficulties in emotion regulation. This may suggest that individuals with acne-related impairment do not necessarily experience higher emotional dysregulation. It's possible that coping strategies or personal

resilience buffer the emotional impact of acne for some individuals. *r = -0.282 (p = .005)* → Statistically significant negative correlation.

This negative relationship is somewhat counterintuitive. Typically, we might expect that higher acne-related disability would lead to higher acne-related anxiety. However, the inverse relationship could suggest that individuals with greater acceptance of their acne may report higher disability scores (due to lifestyle or social effects), but lower anxiety—perhaps due to desensitization, long-term adjustment, or support systems. This invites a deeper qualitative exploration of how individuals interpret and emotionally process their acne-related experiences. *r = 0.316 (p = .001)* → Statistically significant positive correlation.

Table 3: Hierarchal Regression analysis predicted CADI (Cardiff acne disability index) and adolescents social anxiety.

Predictors'	**Δ R^2**	**.β**
Step 1	.05	
CADI		69.01**
Step 2	.23	
Social anxiety scale	.07	
Total R^2	28	
N	100	

Note: P<.05* p<.01**. Δ R^2=significant change, .β= standardized coefficients, variables= Cardiff acne disability index and social anxiety scale.*

Table shows that a hierarchical regression was calculated to predict based on their CADI and social anxiety scale. Acne disability is a significant predictors of adolescents social anxiety scale. A significant equation was found in prediction of altruism F= (2.75), 8.18 p<000 with an R^2 (.08), .β 69.01 predicted perceived social support and job seeking stress. Perceived social support is also significant predictors of job seeking stress F= 6.05, 5.79, p<.001. This model suggests that acne-specific anxiety (ASAS) accounts for 10% of the variability in the dependent variable (likely emotional regulation difficulties, DERS). The positive relationship indicates that higher acne-related anxiety is associated with more difficulty regulating emotions.

Table 4: Table showing one way ANOVA indicating the difference of social anxiety and facial acne among adolescents (N=100).

						95%CI	
Variables	**M**	**SD**	**F**	**df**	**p**	**LL**	**UL**
Age							
i.10-13	43.18	4.91				.009	.198
ii.14-17	45.51	6.16				.009	.199
iii.17-20	39.98	9.81				.011	.216
Between group			5.62	2	.004		
Within group			97	.104			

Note, df= degree of freedom, CI=confidence interval, UL= upper limit, LL= lower limit
Table 5 shows the results of one way ANOVA depict that social rejection is higher among adolescents who is in the age of 14-17 or 10-13 year (M=45.51 SD=6.16) while the age of 17-20 year.

DISCUSSION

Having healthy skin is essential for boosting self-esteem and interacting with others (Akinboro AO 2018; Hazarika & Archana, 2016). Cosmetic disfigurements can sometimes result in low self-esteem and social rejection. According to the medical literature, there is a significant and intricate relationship between patients' psychological functioning states and skin problems (Pochynok, 2018 & Darji & Varade, 2017). Numerous research conducted in different countries evaluated the effect of acne on quality of life (Chernyshov, 2018 & Walker, 2006). Comparing these various studies is extremely challenging due to the variations in settings, cultures, and study population characteristics (Yap FB, 2012, Darji, 2017). Studies evaluating the impact of acne on quality of life in our local context are extremely rare. The study population consisted of young adults, Shams et al, also conducted the study on similar age group (Niaz & Shams, 2018). The young adults are usually attentive about their appearances and youth of a country helps a lot in the prosperity of the country. Understanding the possible harm to their mental health and effectively addressing the problems are essential (Anoop & Shyam, 2014). The mean age group of patients varies throughout study populations, and the quality of life is influenced by various factors such as age, gender, and local culture (Kokandi, 2010) Kokandi's study of adult female university students, whose mean age was 24, found no relationship between social anxiety and the severity of acne; neither the participants' age nor the CADI score was related to the length of the disease (Cohen BA & Wu JH, 2019). There were more women than men in the current study. It is because females are more conscious about their skin and seek dermatological consultation more frequently. It might also have resulted from using beauty creams more frequently in an attempt to achieve a fair, flawless complexion, but ultimately increasing the risk of acne and skin damage. The sex distribution matched that observed by Shyam et al. and El-Hamd et al. (60 percent female and 40 percent male). However, Do JE et al. discovered a preponderance of males in their study (El-Hamd & Shyam A 2017). The results of the current investigation showed a high correlation between QOLI and gender. Acne is more severe in women than in men. Additionally, this result is comparable to that seen by Ismail KH et al. Mohammed-Ali KB, Ismail KH, et al. (2012). These findings contrasted with a study by El-Hamd et al. that found no discernible relationship between acne grades and sex. According to El-Hamd MA et al. (2017), our study's mean global acne grading system score was greater than that of the majority of earlier research. Similar findings about acne grading were made by Shams et al. These findings contradicted those of studies by Kokandi, El-Hamd et al., and Shyam et al., in which the majority of patients had mild acne. (Shyam A, Anoop TV, & El-Hamd MA 2014). Our study's overall mean CADI score of 6.70 indicates that the average study population had moderate levels of social anxiety.

The severity of acne and CADI scores were shown to be strongly correlated in this study. Our findings supported those of El-Hamd et al., who also discovered a substantial correlation between QOLI and acne severity. Similar correlations were reported by (Shyam et al. and Ismail KH et al. 2014). There was no correlation between the severity of acne and CADI, according to Yap et al. and another Hong Kong study. These differences most likely reflect the various racial and cultural backgrounds (Yap FB et al. 2012). The current study's findings can be used to improve the evaluation criteria for emotional dysregulation and the steps that should be taken to protect acne sufferers from stress and mental damage. This study sheds light on the significance of evaluating acne patients' quality of life impairment using a useful, quantifiable, validated tool.

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