

Psychological Impact of Acne Vulgaris among Female Secondary Students in Tabuk City, Saudi Arabia

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Abstract

Background: Acne vulgaris is an inflammatory skin condition that most commonly affects young people. Acne has many negative consequences for youthful people. Acne may affect personal satisfaction and affect personal confidence.

Aim: To estimate the psychological impact of acne vulgaris among female secondary school students.

Method: This study is cross-sectional, and it was conducted on female secondary schools in 5 random schools in Tabuk city. The study used a structured questionnaire to investigate the socio-demographics of females and to assess the psychological impact of acne. Statistical Package for Social Sciences program version 20 (SPSS Inc, Chicago, IL, USA) was used to analyze the data; P-value < 0.05 was considered for significance.

Results: This study included 388 females; there were 93.5% Saudi, 98.7% single females, and 87.9% in secondary school. Shyness and embarrassment were the most common impact affecting females very much (20.4%). There were 33.5% who showed low psychological impact, 17.3% showed no impact, 1.5% showed severe impact.

Conclusion: Acne has a significant psychological impact on female students with varying degrees that were affected by age and education of students.

Key words: Acne, Psychological impact, Females, Secondary school

Introduction

The term skin acne comes from the Greek word 'acme' and it has the feeling of skin ejection or eruption and "vulgaris" signifies "normal." Acne is considered as a chronic disease associated with inflammation of the pilosebaceous organs (1). It is described by knobs, papules, comedones, pustules, growths, and incidentally scars. It incorporates follicular sebaceous hypersecretion and hyper keratinization because of androgen incitement and follicular colonization caused by propionibacterium acnes and insusceptible and incendiary reactions. It influences special parts of the body including the face, foremost chest, and upper back (2).

Acne is an exceptionally common overall skin issue (3). It is most generally experienced by young people, proposing a hormonal impact. About 80% of young people have skin break out of acne due to hormonal theory (4). Different investigations report predominance in young people extending from 29% to 91% (5).

During youth, skin acne will in general be more typical in boys than in young girls. It apparently happens among 95% to 100% of boys aged from 16 to 17 years and 83% to 85% of young ladies in a similar age group (4). Acne is the fourth most normal explanation behind looking for medicinal therapies among patients aging from 11 to 21 years, and it represents 4% of all visits from patients aged from 15 to 19 in the USA (6).

Acne vulgaris includes significant anatomic, immunologic, biochemical, hereditary, and physiologic factors (4). It is supposed to have social impact and mental and psychological effects on patients including tension, discouragement, anxiety and depression (7, 8).

Acne vulgaris is a typical inflammatory sickness of skin influencing around 9.4% of the total populace with the most elevated occurrence in young people. It influences over 80% of females and 90% of males in every single ethnic gathering (9, 10). The commonness of acne in young people and grown-ups changes among nations and ethnic group (11).

The pervasiveness of acne was reported among 85% of young people in the USA (12). A study led on acne among students in medical colleges in Malaysia, announced predominance of skin inflammation was 68.1% (13). Also, the general pervasiveness among matured youths was between 13–19 years was 60.7% in Turkey (14).

The prevalence of acne among female adolescents in Saudi Arabia showed a variation in incidence of acne between different research studies but its prevalence was generally high (15).

Also, in Riyadh city higher prevalence was discovered among females (adolescent and youth) with an average of 68.2% (16) and it was 56.6% in Mekkah (17).

Lately, skin inflammation has been seen in more youthful patients because of earlier adolescence (18). Acne is increasingly normal in young ladies in the age scope of 12 years and more, yet it displays more in young men in the age scope of 15 years or more. Acne vanishes among most cases during the mid-twenties; but it may continue into adulthood which as a rule happens all the more regularly in females (19).

Acne has many negative consequences for young people. It causes uneasiness, peer pressure, deformation and even permanent scarring to the skin. It might likewise cause nervousness and shame in patients and may reduce the patient's physiological and social prosperity (20, 21). A few elements may initiate acne generation or increment its seriousness. A portion of these components incorporate hereditary qualities, the male gender, youth, stress and smoking, some prescriptions, and pore obstructing beauty care products. Research suggests that hereditary impact along with comedogenic hormones produce irregular volumes of sebum which add to skin inflammation sores (19, 22). At present, there is a connection found between diet and Acne vulgaris (23).

In spite of being a common disease, acne is neither perilous nor physically incapacitating, yet it can influence social and mental health of affected patients and lead to disintegration of their personal satisfaction and quality of life. Some acne injuries may leave hyper pigmentation or potentially atrophic scars that can influence the personal satisfaction and lead to decreased confidence, and less social communication with others. Additionally, it can prompt uneasiness, discouragement, and injury that compromises personal satisfaction (24).

Subjects and methods

I. Research Design

It is a cross sectional study.

II. Study Population

The study included female secondary schools in Tabuk City.

ELIGIBILITY CRITERIA

a. Inclusion criteria

The inclusion criteria are Saudi secondary school girls suffering from Acne vulgaris.

b. Exclusion criteria

- Non-Saudi subjects
- Not suffering from acne

Study Area

This study was conducted in Tabuk City at 5 random female secondary schools during the period from February 2020 to August 2020.

The schools were randomly chosen from different parts of Tabuk city.

Sample size

The sample size was designed established on the equation with a margin of error (5%) and a confidence level (95%) (25). It was proposed to include 400 girls.

Data collection tool (instrument)

The study was carried out using a structured questionnaire which was tested and verified based on a previous study conducted in Arar City, Saudi Arabia (26). The questionnaire consisted of 2 parts. Section one consisted of information regarding socio-demographic variables of the PHCPs (age, marital status, nationality). Section two consisted of questions to assess the psychological impact of acne.

Data Collection technique

Data was collected electronically through questionnaire among students in 5 schools.

DATA ENTRY AND ANALYSIS

The statistical analysis was done using the Statistical Package for Social Sciences version 20 (SPSS Inc., Chicago, IL, USA). P -value < 0.05 was considered for significance.

Results

A total of 540 questionnaires were obtained from respondent females to the online questionnaire; the mean \pm SD age of respondents was $17.9 \pm$ SD 2.8 years, with an age range of 15-49 years old, only 388 females were included as they were suffering from acne, whereas 152 respondents were excluded. The large majority of females were Saudi 363 (93.5%) and single 383 (98.7%). There were 341 (87.9%) females who had secondary education, whereas only 46 (12.1%) had a bachelor's degree, (Table 1).

The psychological impact of acne was investigated through 10 questions; there were 177 (45.6%) who reported little experience of pain or itchiness because of their skin. There were 127 (32.7%) who reported feeling shyness or embarrassment because of their skin. More than half of females 225 (58%) reported never facing difficulties in doing daily activities like shopping or home care. More than half of participants 246 (63.4%) reported that their skin condition never affected the way they dress. Less than half 190 (48.9%) reported that their skin condition never affected their social activity. There were 273 (70.4%) who reported that their skin condition never affected their physical activity. The large majority of females 370 (95.4%) reported that their skin condition never hinders their studies. There were 266 (72.7%) participants who reported that their skin condition never affected their ability to study. More than half 230 (59.3%) reported that their skin condition never affected their relationship with friends and family. Also, more than half of participants 205 (52.8%) stated that their skin condition never affected their time management and their home conditions. The details of the females' answers are shown in (Table 2).

The overall psychological impact was estimated, and it was as follows; 67 (17.3%) had no effect, 130 (33.5%) had a low effect, 92 (23.7%) had a moderate effect, 93 (24%) had a high effect, and 6 (1.5%) had a severe effect, (Figure 1).

There were significant correlations between the mean age of participants and each of experiencing pain ($P=0.0003$), feeling shyness ($P=0.01$), affecting their social activity ($P=0.001$), affecting physical activity ($P=0.006$), and affecting the relationships with family and friends ($P=0.002$). Regarding education, there were significant correlations between the level of education and each of feeling shyness ($P=0.04$), and affecting social activity ($P=0.01$), (Table 3).

Table 1: Socio-demographics of participants

Item	N	%
Nationality		
Saudi	363	93.5
Non-Saudi	25	6.5
Marital status		
Single	383	98.7
Married	5	1.3
Education		
Secondary	341	87.9
Bachelor degree	46	12.1

Table 2: answers to the questionnaire

Question	Never	Little	Much	Very much
How much did you experience pain or itchinness because of your skin?	103 26.5%	177 45.6%	70 18%	38 9.8%
How much did you feel shyness or embarrassment because of your skin?	108 27.8%	127 32.7%	74 19.1%	79 20.4%
How much difficulty did you face to do daily activities like shopping or home care?	225 58%	90 23.2%	56 14.4%	17 4.4%
How much did your skin condition affect the way you dress?	246 63.4%	87 22.4%	27 6.9%	28 7.2%
How much did your skin condition affect your social activity?	190 48.9%	86 22.1%	77 19.8%	35 9%
How much did your skin condition affect your physical activity?	273 70.4%	72 18.5%	30 7.7%	13 3.3%
Did your skin condition hinder your studies?	370 95.4%	0 0%	18 4.6%	0 0%
How much did your skin condition affect your ability to study?	266 72.7%	67 18.3%	33 9%	0 0%
How much did your skin condition affect relations with friends and family?	230 59.3%	84 21.6%	48 12.4%	26 6.7%
How much did your skin condition affect your time management and your home conditions?	205 52.8%	103 26.5%	57 14.7%	23 5.9%

Figure 1: Distribution of psychological impact among participants

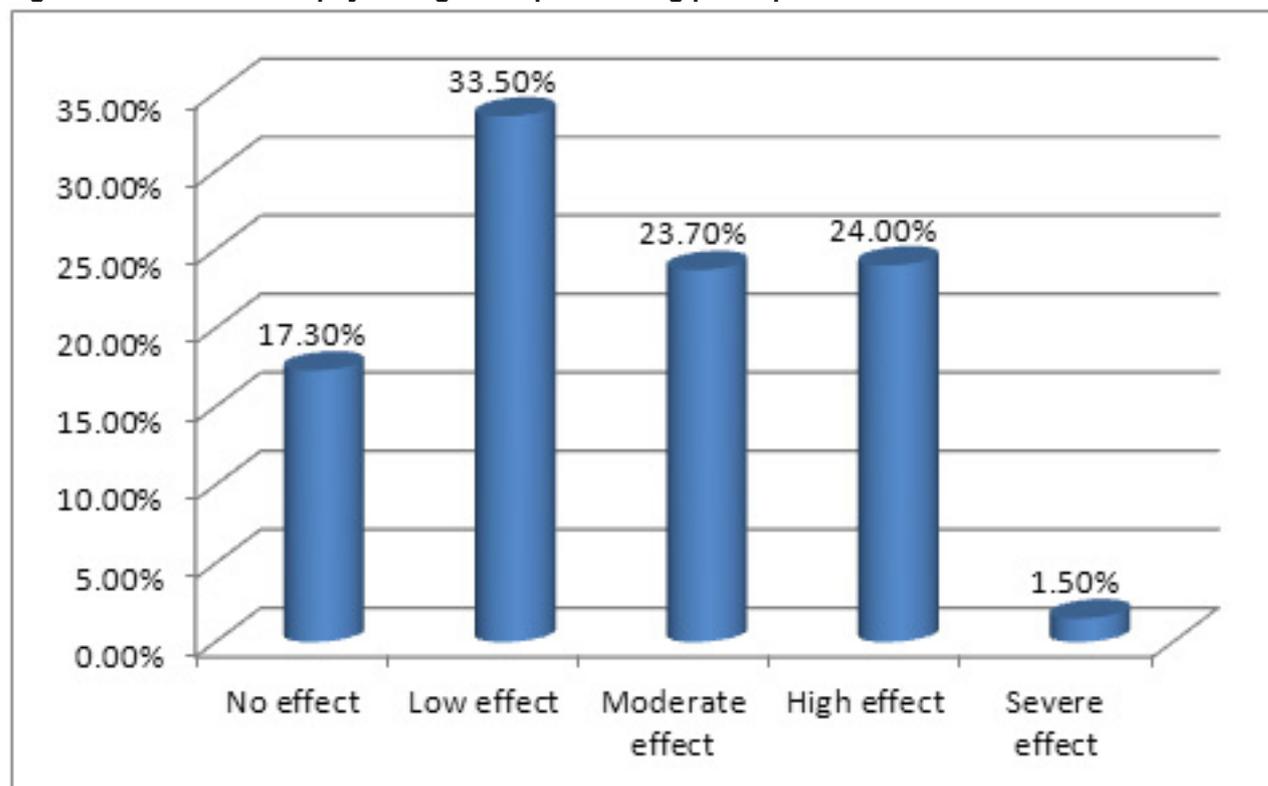


Table 3: Correlations regarding mean age and education of participants

Variables	Answers				P-value
	Never	Little	Much	Very much	
Age (Mean age)					
How much did you experience pain or itchiness because of your skin?	17.2	18.2	17.5	18.4	0.0003
How much did you feel shyness or embarrassment because of your skin?	17.4	17.9	18.6	17.7	0.01
How much did your skin condition affect your social activity?	17.4	18.8	17.6	18.2	0.001
How much did your skin condition affect your physical activity?	17.5	18.8	18.3	18.2	0.006
How much did your skin condition affect relations with friends and family?	17.6	18.9	17.8	17.5	0.002
Education					
How much did you feel shyness or embarrassment because of your skin?					0.04
Secondary	99	114	58	70	
Bachelor degree	9	13	16	9	
How much did your skin condition affect your social activity?					0.01
Secondary	166	72	75	28	
Bachelor degree	24	14	2	7	

Discussion

This study was established to investigate the psychological impact of acne on females. We included 388 females, where the large majority were Saudi and singles. The largest proportion of participants (33.5%) reported overall low effect, followed by moderate effect (23.7%), then high effect (24%), and no effect (17.3%), whereas the severe effect was found among 1.5% only of participants. In a previous Saudi study conducted on females of secondary school, it was found that 14.5% had a large impact, more than half, 56.3% had small to moderate impact, and 29% had no impact [26]. The proportions in our study varied from that of the previous Saudi study [26], where we found a high impact of 24% vs. 14.5% of the Saudi study, no effect among 17.3% of our participants vs. 29% of the previous Saudi study, whereas moderate impact was higher in the previous Saudi study compared to our findings, this may return to the variation in the area of study, and other demographics between the two studies.

In our study, we found that 82.7% were affected psychologically by acne with varying degrees which ranged from low to severe, compared to 71% in the previous

Saudi study [26]. A close percentage to our findings was reported by another Saudi study [27] where it was found that 84.6% of university students of both genders reported that acne had a negative impact on their life, and there was a social stigma associated with it.

A lower proportion was reported by Hazarika and Archana, who reported that 66% of acne cases were affected by acne [28]. A much lower proportion of 30.8% was reported from a Chinese study, where this percentage was affected by acne [29]. A study from India revealed that acne had significant impact on the patient's 'psychological life, especially self-image [30].

The most-reported impact of acne in this study was feeling shy because of their skin, followed by the experience of pain and itching, the impact of acne on the way the females dress, then the impact of acne on relations with friends and family. In a previous Saudi study [31], the most reported impact of acne included willingness to get married, followed by spouse relationship, then the impact on friendship. A study from Egypt [32] demonstrated that acne affected severely the emotional state, perception, and social activities of patients, where the most affected social activity was interacting with the other sex.

This study revealed that the age and education of participants affected the psychological impact. The mean age of participants was significantly associated with feeling pain very much, feeling shy very much, little effect on social activity, physical activity, and relations with family and friends. This indicates that participants with the age of 17.9 were more prone to experience pain and shyness, whereas their social and physical activities and family correlations were affected little. Regarding the education level, both feeling little shyness and no effect on social activity were significantly associated with secondary students. In a previous Saudi study, it was found that the impact wasn't affected by the age of participants [26]. In another Saudi study [31], it was found that more females were significantly affected by stress compared to males.

Limitations and Recommendations:

There were few studies conducted on this subject, so few comparisons between the previous findings and our findings were performed. Also, the studies had different study design, investigated different demographics, and were conducted on different subjects, which made comparison not perfect. Further studies should be conducted in Saudi Arabia, and they should include the whole kingdom as there were variations between the Saudi studies from different regions, so a large study will provide general findings that can be reference data.

Conclusion

This study revealed that acne had a significant psychological impact on female students, and this impact varied between females depending on their demographics. Early treatment of acne may lead to the early disappearance of such acne and reduce the psychological impact on females.

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