

# Knowledge, beliefs and perception of youth toward acne vulgaris

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## ABSTRACT

**Objective:** This study was carried out to assess the knowledge, concepts and perceptions of the youth towards Acne.

**Methods:** This cross-sectional study included 700 students of both genders from all geographic areas in Riyadh, Kingdom of Saudi Arabia during the year 2001. They were asked to complete a self administered questionnaire that contained several items measuring different areas in their beliefs, knowledge and perceptions about acne. Acne and non-acne sufferers were included. Responses were matched with demographic data.

**Results:** Five hundred and seventeen students (73.9%) responded to the questionnaire. Male and female responders were 267 (51.6%) and 250 (48.4%). More than half of them

reported that they suffered from acne 276 (53.4%). Three quarters (76%) of the sample considered psychological conditions contribute to occurrence of acne, 72.1% believe that diet is one of etiologic factor. Only 15.9% reported that acne is an infectious disease. Sixty-two percent believed that acne is not a serious problem, while 56.7% consider it as both a cosmetic and health problem.

**Conclusion:** The results of this study pointed out that misconceptions and false beliefs on acne are widespread and enduring among the youth. Health education program on acne is needed to improve their understanding of the condition.

**Saudi Med J 2003; Vol. 24 (7): 765-768**

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Acne Vulgaris (AV) is an extremely prevalent skin condition-affecting adolescents of both genders.<sup>1,2</sup> Literature is wealthy of studies that looks to clinico-pathologic and treatment aspects of this common condition. However, few studies are interested to explore knowledge and experiences of the youth towards acne.<sup>3</sup> Moreover, in the Middle East little study was carried out in this direction particularly. This work is an attempt in a similar area of interest also trying to measure the psychosocial impact of acne. Such work should give a base for the health education programs planners to start an active and purposeful program for school students which are going to have its impact on promotion of health services for this age group.

**Methods.** The study was carried out on 700 students of high schools and colleges of both genders from all geographic areas of Riyadh, Kingdom of Saudi Arabia (KSA), aged 15-29 years. They were asked to fill a self directed questionnaire, which contained several questions on AV for measuring their level of knowledge, beliefs and perceptions. The questions asked were about causes, seriousness and other related factors of AV. It also include would AV affect scholastic and work achievements, self-confidence, friendship relations, anxiety status, marriage willingness, and marital relations. In addition, the questionnaire contained some demographic characters. In this study both, AV and non-AV sufferers were included.

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Received 19th January 2003. Accepted for publication in final form 5th May 2003.

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Table 1 - Demographic characteristics and self-reported acne among the studied group.

Characteristics	Acne (n=276) n (%)	No Acne (n=241) n (%)	X <sup>2</sup>	p-value
<b>Age in years</b>				
<18 (n=366)	195 (53)	171 (47)	0.052	>0.05
18-20 (n=107)	58 (54)	49 (46)		
>20 (n=44)	23 (52)	21 (48)		
<b>Gender</b>				
Male (n=267)	137 (51)	130 (49)	0.954	>0.05
Female (n=250)	139 (56)	111 (44)		
<b>Nationality</b>				
Saudi (n=457)	243 (53)	214 (47)	0.79	>0.05
Non-Saudi (n=60)	33 (55)	27 (45)		
<b>Education</b>				
High school (n=462)	243 (53)	219 (47)	1.082	>0.05
University (n=55)	33 (60)	22 (40)		
<b>Marital Status</b>				
Married (n=29)	12 (41)	17 (59)	1.78	>0.05
Single (n=488)	264 (54)	224 (46)		
<b>Residence</b>				
North (n=193)	102 (53)	91 (47)	3.768	>0.05
South (n=122)	70 (57)	52 (43)		
East (n=116)	54 (47)	62 (53)		
West (n=33)	19 (58)	14 (42)		
Central (n=53)	31 (58)	22 (42)		
The percentages in this table were calculated horizontally				

Acne knowledge	Acne (n=276) n (%)	No Acne (n=241) n (%)	Total n=517	X <sup>2</sup>	p-value
<b>It is considered as</b>					
Health problem	46 (17)	49 (20)	95 (18)	1.687	>0.05
Cosmetic problem	54 (20)	46 (19)	100 (19)		
Both	162 (59)	131 (54)	293 (57)		
Unknown	14 (5.1)	15 (6)	29 (6)		
<b>Seriousness</b>					
Yes	107 (39)	70 (29)	177 (34)	13.74	<0.01
No	166 (60)	156 (65)	322 (62)		
Unknown	3 (1)	15 (6)	18 (3)		
<b>Relationship to diet</b>					
Yes	217 (79)	156 (65)	373 (72)	13.71	<0.01
No	57 (21)	78 (32)	135 (26)		
Unknown	2 (1)	7 (3)	9 (2)		
<b>Relationship to infection</b>					
Yes	45 (16.3)	37 (15)	82 (16)	0.698	>0.05
No	225 (82)	196 (81)	421 (81)		
Unknown	6 (2)	8 (3)	14 (3)		
<b>Relationship to stress</b>					
Yes	221 (80)	172 (71)	393 (76)	6.388	<0.05
No	48 (17)	64 (27)	112 (22)		
Unknown	7 (3)	5 (2)	12 (2)		
The percentages in this table were calculated vertically					

Table 2 - Acne knowledge among the studied group.

Statistical analysis was carried out using the statistical package for social sciences/Win release 9 statistical package.<sup>4</sup> The data were grouped and tabulated. Number, percentage and X2 test were calculated.

**Results.** Five hundred and seventeen students (73.9%) out of 700 responded to the questionnaire. Demographic characteristics of the studied sample are presented in **Table 1**. Their age range was 15-29 years with a mean of  $18.1 \pm 1.8$  years. Out of the 517, there were 267 (51.6%) males and 250 (48.4%) females. Of the total, 457 (88.4%) were Saudi and 60 (11.6%) non-Saudi. More than half of the participants (53.4%) reported that they have suffered from acne. There is no difference in the incidence of acne among the different age groups of the studied sample (**Table 1**). The relationship between sex distribution and occurrence of acne showed that, 51.5% of males and 55.6% of females were suffered from acne. This difference was not statistically significant. The occurrence of acne among Saudis and non-Saudi nationality had statistically similar distributions ( $P > 0.05$ , **Table 1**) The incidence of acne among the groups of high school and university students was 243 (52.6%) and 33 (60%). The differences were not statistically significant. The acne sufferer's region wise was North (52.8%), South (57.4%), East (46.6%), West (57.6%) and Central (58.5%). In relation to marital status, 11 (37.9%) of the married and 263 (53.9%) of non married groups reported that they have suffered from acne, but these differences were not statistically significant ( $P > 0.05$ ). Sixty-two percent of the studied sample believed that acne is not a serious problem, while 34.2% consider it as serious problem. Moreover, 38.8% of acne cases believed that acne is a serious problem compared to 29% of non-acne. These differences were found to be statistically significant ( $P < 0.01$ ). Almost equal percentages considering acne as health or cosmetic problem (18.4% and 19.3%), 56.7% considering it both and 5.6% has no answer to this question. Three quarters (76%) of the sample considered psychic conditions contribute to occurrence of acne, 72.1% believe that diet is an etiologic factor of acne. This believe regarding the relationship of occurrence of acne to diet, and psychic conditions showed significant association ( $P < 0.01$ ). Only 15.9% reported that acne is an infectious disease (**Table 2**). **Table 3** illustrated that, the role of acne in social participation; scholastic achievement, work achievement, self-confidence, friendship relations, anxiety status, marriage willingness and marital relations are variable. Only the impact of acne on self-confidence was highly statistically significant ( $P < 0.01$ ).

**Discussion.** As dermatologists we are confronted every day in our clinics with patients whom they are seeking medical care and treatment for their diseases for years, nevertheless, they know nothing with regards to it. We expect a common skin disease such as acne will be an exception. However, a lot of misinformation

Table 3 - Beliefs of studied group regarding impact of acne on psychosocial life.\*

Do you think acne has impact on	There is impact n (%)	No impact n (%)	No response n (%)
Social participation	339 (66)	162 (31)	16 (3)
Scholastic achievement	203 (39)	301 (58)	13 (3)
Work achievement	200 (39)	302 (58)	15 (3)
Self-confidence	304 (59)	201 (39)	12 (23)
Friendship relations	236 (46)	268 (52)	13 (3)
Anxiety status	393 (76)	109 (21)	15 (3)
Marriage willingness	291 (56)	213 (41)	13 (3)
Marital relations	239 (46)	252 (49)	25 (5)

\* The beliefs regarding the impact of acne on social life were analyzed using X<sup>2</sup> test, and only the impact on self-confidence was highly statistically significant ( $P < 0.01$ )

regarding this disease does exist among the youth who are the largest population affected by acne.<sup>5-7</sup> Although an ample number of studies with regards to acne in the literature are existing, the percentage of studies were interested on how much of knowledge do the youth have regarding it is too little among them.<sup>3</sup> Almost 2 decades ago this issue has been investigated by Rasmussen and Smith<sup>5</sup> in a University clinic setting. A crossing point with the present study is that both were including acne and non-acne patients in the survey. Thereafter, there was almost no touch of this issue until recently.<sup>6,7</sup> Therefore, studies concerning impacts of acne towards different aspects of sufferers lives are few.<sup>8</sup> This study is a trial to explore these issues in KSA.

In this study, it was found that 62.3% of the respondents believed acne is not a serious problem. This is a good indicator and should have its reflection on the impact of acne toward their life. On the other hand, it has been accepted that acne is either a pure cosmetic or health problem among the respondents by almost the same figure 19.3% and 18.4%. Indeed, more than half of the study population believe it is both cosmetic as well as a health problem 56.7% (**Table 2**). Considering acne as a pure cosmetic problem is really a worrying issue since this may lead the youth to seek the advices and treat their acne by beauticians and through cosmetic salons rather than making a medical consultation with dermatologists, and this bad practice has been observed in real life, among both genders.

Although dermatologists and some general practitioners accept the findings of published studies indicating that there is no relation between diet of any kind and acne<sup>9-11</sup> majority of the respondents in this survey 373 (72%) were lacking such information and believe the opposite (**Table 2**). This is by far more than

those reported previously by Rasmussen and Smith<sup>5</sup> and Tan et al.<sup>3</sup> In both studies the figure was 32%. It's worth mentioning here that the former report did include both acne and non-acne patients in concordance to this survey while the later included only sufferers. This implies the importance of finding an accurate way to correct this false idea among youths. Even more than diet, stress was believed to be as a causative factor for acne by 393 (76%) of the respondents in the present study (Table 2), which is in concordance to Rasmussen and Smith<sup>5</sup> result (74%). In their report, Tan et al<sup>3</sup> found 71% of those with acne do believe that stress play a role in aggravating the condition. However, in both works they did not comment on stress as a direct cause. On the other hand, infection was believed as a cause for acne in 15.9% in this survey (Table 2), which was similar to Tan et al<sup>3</sup> study in which 18% believed infection as cause of acne.

A wide variation and dispersal of responses towards impact of acne on different life activities to the extent that there seems to be no regular and clear pattern. Acne was reported to be influencing anxiety status by 76% of the respondents while only 21.1% reported that there was no relation. Moreover, acne was reported by 65.6% of the respondents to be influencing social retreat compared to 31.3% reported that there was no effect. More than half of the studied group indicated that acne has an impact on loss of self-confidence and marriage avoidance (58.8% and 56.3%). Marital and friendship relations come next to these (46.2% and 45.6%). On the other hand, work and school achievements were believed by the respondents to be affected by acne in 38.7% and 39.3%. A study of the impact of acne on different life activities among acne and non-acne patients revealed that only the impact on self-confidence was significantly statistically differ in the 2 groups (Table 3).

In a community-based study, Smithard et al<sup>12</sup> found a considerable impact of acne on emotional health and behavioral difficulties in English adolescents. Similar findings have been observed in several studies, concluded that disturbances of the psychological state with signs of depression or anxiety as well as missed depression and anxiety is frequently associated with acne.<sup>13-16</sup> Pearl et al<sup>7</sup> found a significant relationship between severity of acne and the extent of embarrassment, lack of enjoyment and participation in social life activities in both genders. More interestingly, one study found that treating acne with isotretinoin produced significant improvements across a wide variety of psychological functions, although they admit that emotional status of patients appeared to be more resistant to change.<sup>17,18</sup> However, one major drawback for this work is the small study sample since only 15 patients completed the study and hence generalizing such conclusion is not appropriate. On the other hand, Mulder et al<sup>19</sup> reported no relation between the significant clinical improvement of acne and

psychosocial impairment correction. It should be mentioned that all their sample were females, which could contribute in these discordance results in the 2 later studies.

This study suggests that misconcepts and false beliefs on acne are widespread and enduring among the youth and the need for wide nation projects for health education programs in this area and an easy access to appropriate information. This is our responsibility, and duty as doctors to educate them through community based lectures and through mass media to improve and promote health services in KSA to its excellence.

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