Prevalence, level of knowledge and lifestyle association with acne vulgaris among medical students

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Abstract

Objectives: To estimate the prevalence, knowledge and lifestyle association with acne among medical students at King Saud University, Riyadh, Kingdom of Saudi Arabia. *Methods:* This quantitative, observational and cross-sectional study was conducted among medical students in March 2015 by using self-administered questionnaire survey. Statistical analysis was performed using *p*-value. *Results:* A total of three hundred and seventy-five medical students were recruited, and more than half of them had acne vulgaris (*n*: 208; 55.5%) with less than one third of them being diagnosed by a physician. Most of the female students (*n*: 75; 61%) dealt with acne as a significant medical condition when compared with only third (*n*: 87; 34%) of the male students ($P < 0.05$). Eighty-nine female students (72%) believed more than male students (*n*: 104; 41%) that stressful environment played a significant role in acne vulgaris ($p > 0.05$). One hundred and twelve male students (44.8%) believed more than females (*n*: 39; 31%) that acne affects their marriage prospectus $p < 0.05$. *Conclusion:* Interestingly, more than half of our sample population was affected by acne vulgaris with two thirds of them not seeking for medical advice. Knowledge misconceptions were widespread among medical students, which necessitate further education in this regards.
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1. Introduction

Acne is a common human skin disorder which affects people of all races and ages (Ali et al., 2010; Ullah et al., 2014). A Study done in Portugal 2012 showed that its prevalence was about 62.2% among medical students with no significant gender predilection (Gonçalves et al., 2012). Another study done on adolescent and Adults Chinese population estimated that up to 10.4% of males and 6.1% of females are affected by acne among the general population (Shen et al., 2012). However, several studies conducted in Saudi Arabia found that more than half of its school and university students suffered from acne while this estimate was up to 64.5% among the general population (Al-Hoqail, 2003; Al Robaee, 2005; Al Mashat et al., 2013).

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Moderate to severe acne greatly affects the quality of life with reduced self-esteem, marred physical appearance and less social relationships with others (Tasoula et al., 2012). Several factors have been associated with the development of acne including hormonal activity such as menstrual cycles and puberty, genetic predisposition, diet [Carbohydrates], infection and stress (Albuquerque et al., 2014; Cho et al., 2014; Bek-Thomsen et al., 2008; Mahmood and Bowe, 2014). However, there are only limited studies that have explored the possible association of stress especially with study and a lot of work and acne (Yosipovitch et al., 2007).

The theoretical knowledge about acne among medical students is relatively limited before they start their clinical training (Shivaswamy et al., 2014). Forty-four percent of university students had inadequate knowledge about acne and most of them believed that the factors responsible for acne were hormones and stress (Al Robaee, 2005). Some students also have misconceptions and inadequate knowledge about acne (Ali et al., 2010).

There is also not enough information in the literature about acne vulgaris for the medical students in Saudi Arabia. There is a lack of evidence about the association of acne vulgaris with its causes. Henceforth, this study was undertaken to assess its prevalence, the level of knowledge and lifestyle association of acne among medical students.

2. Methods

In this quantitative, observational and cross-sectional study, the data were collected by using stratified random sampling technique from undergraduate medical students at King Saud University, Riyadh, Kingdom of Saudi Arabia, in March 2015. The sample consisted of 375 participants (250 males and 125 females) who were divided into 15 groups, 5 for females and 10 for males and 25 students were randomly selected from each group. The undergraduate medical students were included and the postgraduate doctors were excluded from this study. Mainly, a paper-based self-administered English questionnaire with an Arabic introduction was used to explain the goal of this research and to give the participants an important information about acne vulgaris with an exception for the first and fourth year medical students who were given an electronic questionnaire because of their examinations. This questionnaire also reaffirmed the study participants that this information was intended to be kept confidential. The questionnaire was divided into three sections: Sociodemographic section, estimating prevalence section and assessing knowledge section. A pilot study was also conducted to know the reliability, validity and feasibility of the questionnaire. Statistical analysis was performed using Statistical Package for the Social Sciences (SPSS) version 19 software (SPSS Inc., Chicago, IL, USA). Chi-square test or Fisher's exact test was used to compare between male and female groups with respect to all different nominal variables and also compare different academic years. It was assumed that there was a statistically significant difference when the P-value was less than 0.05. This research was approved by the ethics committee of family and community medicine department in King Saud University (see Table 1).

3. Results

A total number of three hundred and seventy-five medical students were recruited, with more than half of them had acne vulgaris (n: 208; 55.5%), and less than one third of them were diagnosed by a physician (n: 75; 20%) see Table 2. Out of all the participants, there were 250 males (66.7%) and 125 females (33.3%), the gender factor being statistically insignificant ($p > 0.05$). Most of the female students around (n: 75; 61%) dealt with acne as a significant medical condition when compared with only one third 87 of the male students (n: 87; 34%) ($P < 0.05$). Of all students, 135 (37.2%) think they have adequate knowledge about acne vulgaris wherein 47 (64.4%) were from the 5th year, 44 (62%) were from the 4th year, 16 (22.5%) were from the 3rd year, 16 (21.9%) were from the 2nd year and 12 (16%) were from the 1st year, which is statistically significant ($p > 0.05$), see Table 2. Various sources of Acne information including information from the Internet were chosen by 246 (65.6%) participants, and then doctors by 220 (58.7%) were the most common sources of information, whereas newspapers were the least one (n: 22; 5.9%), see Table 3. Eighty-nine females (72.4%) more than males (n: 104; 41.9%) believed that the stressful environment played an important role in causing acne vulgaris ($p > 0.05$). As to other causes, most of the students (n: 327; 87.2%) were of the opinion that acne vulgaris increased due to hormonal disturbance and 219 (58.4%) were of the opinion that it increased due to the consumption of fatty foods, see Table 2. One hundred and twelve male students (44.8%) thought that having acne affected their marriage prospectus more than females (n: 39; 31.2%) $p < 0.05$. Finally, most of the students (n: 276; 73.6%) were of the opinion that acne vulgaris had an impact on their self-confidence.

Table 1
Demographics and prevalence of acne vulgaris.

Gender	Age	Marital status	Academic level	Prevalence of acne
66.7% (Males)	28% (<21 Years Old)	99.2% (Singles)	40% (1st & 2nd Year)	55.5% (Yes)
33.3% (Females)	72% (≥21 Years Old)	0.8% (Married)	60% (3rd, 4th & 5th Year)	44.5% (No)