

# Do our Students Know About Acne: A Cross Sectional Study from King Edward Medical University, Lahore

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## ABSTRACT

**Aim:** To assess the knowledge of AHS and Nursing students of KEMU regarding acne.

**Method:** A cross-sectional study in 100 AHS and nursing students was conducted using a self-administered questionnaire.

**Result:** Of the 100 respondents, 85% considered frequent face washing as effective treatment, whereas 93% students considered taking into account consultant's opinion. Regarding causative agent, 94% students believed that hormones are responsible while only 9% considered it hereditary. Students considered oily skin (90%) as the most important aggravating factor. Contrary to literature, Diet (87%) and poor hygiene (87%) were considered important aggravating factors, which highlights students' ignorance. The greatest psychosocial effect entailed was embarrassment (64%). Online resources and educational texts were the main sources contributing to students' knowledge.

**Conclusion:** Results of this study not only pointed out the misconceptions of students but also depicted their outdated knowledge. It unveiled that a quarter of them didn't opt for treatment which is troublesome. Hence health education programs on acne should be incorporated in policy making not only to improve students' knowledge but to also satisfy patients in primary and secondary levels without burdening tertiary care.

**Keywords:** Acne, oily skin, hormones

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## INTRODUCTION

Acne is a long-lasting inflammatory disease of sebaceous glands<sup>1</sup>. It is an exceedingly common entity disturbing 91% of male and 79% of female teenagers<sup>2</sup> and 3% of male and 12% of female adults. Acne vulgaris is one of the commonest skin disorder with intense psychosocial impact. Dermatology Life Quality Index (DLQI) in our Pakistani population aged 15-32years has been found to be 11.93±6.51, range 1-25<sup>3</sup>.

A lot of misconception and myths exist among undergraduate medical students and health physicians about the cause and treatment of acne<sup>4</sup>. Undergraduate medical students may have dual impact. First, those having acne themselves will victim and secondly, they may spread the same misconception in the community.

Face, chest and back have high sebaceous gland activity that makes these sites more prone to acne. 87% face was the common site where acne lesions presented more whereas 26% acne usually affects neck and chest<sup>5</sup>.

Although it has multifactorial etiology, genetics seem to play a major role with environment as a "modifying agent". Acne mostly occurs around teens but it may start late in adulthood<sup>6</sup>. Before spontaneous remission it takes several years. Treatment of acne is usually postponed that patients may wait more than a year before seeking medical advice. Due to this controversy as well as scarcity of data on this aspect, this study is being conducted to assess the student's knowledge at our setup.

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## MATERIALS AND METHODS

In this quantitative, observational and cross-sectional study, the data were collected by using simple random sampling technique from allied health and nursing students at Mayo Hospital Lahore in February 2018. A sample size of 100 students comprising allied health students and nursing students of King Edward Medical University were included, while MBBS and BDS students were excluded. A predesigned, pretested English questionnaire was used consisting of multiple questions designed to test and evaluate basic knowledge regarding acne. Questionnaire also reaffirmed the study participants that this information was intended to be kept confidential. Statistical analysis was performed using Statistical Package for the Social Sciences (SPSS) version 20 software. Association between different demographic variables and responses was calculated using chi square test. It was assumed that there was a statistically significant difference when the P-value was less than 0.05.

## RESULTS

Out of 100 students recruited for this study, there were 95 females and 5 males. Mean age of participants was 2.78±3. Most of them were married (97%) and belonged to urban areas (77%). Out of 100, 92 belonged to Allied health sciences and 8 were nursing students. 86% students claimed to have knowledge about acne yet only 46% were confident to have up to date knowledge. 54% considered it a disease while only 48% considered it acquired. Following results were obtained:

Table 1: Students' beliefs about acne causes and aggravating factors

Acne is caused by poor hygiene	86%
Hormonal disorder is a cause of acne	94%
Consuming chocolates is causative	70%
Eating spicy foods is causative	86%
Eating oily foods	87%
Oily skin is prone	90%
Dry skin is prone	16%
Acne worsen by squeezing	83%
Association with cosmetics	80%
After facial or parlor treatment	58%
Seasonal change causative?	81%
Associative with menstrual cycle	87%
Aggravated by stress	68%
Aggravated by pregnancy	58%
Most common site is face	95%

Table 2: Emotional impact on the sufferers from acne.

Embarrassment about acne	28%
Depression	25%
Frustration	19%
Anger	19%
Social withdrawal	18%

Table 3: Treatment strategy of acne

More face washing effective	85%
Dermatologist consultation required	93%
Home remedies effective	84%
Over the counter available medication better option	80%
Advice from friend	56%
No cure available	13%
Acne cream better	54%
Skin cleanser better	72%
Lotions effective	42%
Consider acne transitory	59%
No treatment required	25%

Table 4: Source of Information:



**DISCUSSION**

Acne, a disorder of sebaceous glands, is a multifactorial condition commonly seen in adolescents all over the world. Due to lack of authentic knowledge, a number of myths and misconceptions exist among undergraduate medical students and health physicians. Medical students need to update their knowledge to not only reduce the psychosocial

impact upon themselves but to also be an authentic guide to the patients.

A recent study in Pakistan (Sindh) depicted that nearly one fifth of their students considered hereditary factors as causative factors for acne in comparison to 9% in our study<sup>7</sup>. In contrast to this, Genetics is considered the main culprit in 80% of cases<sup>8</sup>. Similarly another study done in Saudi Arabia revealed that 56% participants considered their acne knowledge adequate. In fact, they attributed hormones and stress to be most important causative and aggravating factors respectively<sup>7</sup>. This is comparable to our study in which 94% attributed hormones to be causative factor and 68% considered stress as aggravating.

Considering the fact that more than 80% students considered diet (spicy,oily foods and chocolate) to be causative factor and also considered poor hygiene (86%) just as important, literature review suggests that apart from low glycemic foods , diet and personal hygiene don't have any significant relation with acne. Smith et al. established relation of high glycemic index foods with acne. These foods appear to alter insulin levels and thereby increase androgenic hormones leading to acne. Even though evidence suggests that milk consumption is linked with acne, it still needs further research<sup>11</sup>.

A total of 85% student' belief that the more you wash the better it is, doesn't hold true as excessive washing could actually aggravate acne, even cause acne detergenticans. A non-ionic, no-allergenic, fragrance-free cleanser should be opted<sup>12</sup>. Most claimed cosmetics and facial/parlor treatment as aggravating which is inaccordance with literature<sup>13</sup>.

Although acne improves as the person ages beyond puberty but it may still persist into adulthood. Acne, especially permanent scarring has a negative impact on person's psychological state causing low self-image, anxiety, even depression leading to suicides<sup>14</sup>. The result of our study shows similar impact as nearly 50% students associated acne with embarrassment, depression, frustration, anger and social withdrawal.

Considering treatment options, most students (93%) preferred dermatologist consultation over self-treatment options. This is in contrast to studies in developed countries<sup>15</sup>where students don't bother consulting specialists for acne. This may be explained keeping in mind the fact that students and general public in developed countries have greater self-awareness and knowledge about common health problems.

Our study also showed that internet, doctor, medical books and journals and friends, all of them had equal contribution. Newspapers had least impact which is contrary to Dr. Alrobaee survey in which newspaper was the most preferred source. However, in recent years electronic media taking over print media may be the reason behind this.

A total of 81% students believed that seasonal change had an effect on acne, which is in line with other studies though difference of opinion exists whether summer or winter aggravates acne<sup>16</sup>. Majority of students claimed menstrual cycles and squeezing pimples as important factors in aggravating acne which hold true, however only half considered pregnancy as culprit. In literature, even though most pregnant females haven't reported any

significant improvement or worsening, yet nearly 60% participants considered it an aggravating condition<sup>17</sup>. However, most students (97%) in our study were unmarried.

Among the over the counter available products, skin cleanser (72%) was preferred, followed by acne creams (54%) and lotions (42%), however, due to lack of awareness and knowledge a substantial number (25%) of participants didn't opt for treatment. This is troublesome in the long run as this leads to scarring which being permanent is the reason for psychosocial impact.

## CONCLUSION

Considering the fact that in this modern era, where enormous development and research has been done in this field and through electronic media, up-to-date knowledge is easily available, our research confirmed that students' information regarding acne is outdated. We recommend that certain common and high yield topics be included in educational policy. This will not only benefit students but also increase patient satisfaction. This will reduce burden on tertiary care hospitals, especially in country like Pakistan where tertiary care is overburdened due to lack of satisfaction at primary and secondary levels.

**Conflict of interests:** The author declares to have no conflict of interest.

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