Acne vulgaris is an inflammatory disease of skin caused by inflammatory changes in pilosebaceous units produced by naturally occurring bacteria, Propionibacterium acnes.1 It can be a potential source of emotional distress and psychiatric illness leading to impairment of psychosocial adjustments.2 Acne is more common during adolescence and frequently continues into adulthood.3 Prevalence of acne has been reported in many studies but there is lack of precise information about frequency of the disease and its impact on mental health in late adolescents and young adults. The objectives of this study were to describe the frequency of acne in late adolescent and young adult students and to evaluate psychosocial impact of the disease by using Cardiff Acne Disability Index (CADI).

This cross-sectional study was conducted in four institutions. Students of age group 17-28 years, both males and females, were included. Those students who were having some other concurrent skin disease were excluded. Sample was selected by non-probability convenience sampling. Prior to examination, every student filled a detailed questionnaire and a self reported Cardiff Acne Disability Index.4 Severity of acne was assessed and classified as mild, moderate and severe according to the report of consensus conference on acne classification.5

The ADI comprised of five questions. First four were related to the feelings of aggression, frustration, interference with social life, avoidance of public changing facilities and appearance of skin. Fifth question gave indication of how bad the acne was. Answers to each of the five questions in the ADI were scored and a total score for the index was calculated for each student. ADI scores were graded as low (0-4), medium (5-9) and high (10-15). Higher the cumulative ADI score, greater was the level of disability experienced by the student.

Statistical analysis was done using Statistical Package for Social Sciences (SPSS 15), on the variables of specific interest including age, gender, grading of the disease, and disability associated with the disease. Chi- square test was applied to evaluate difference in frequencies of the disease between both the genders and ‘t’ test was used to compare the mean scores of ADI. Value of p < 0.05 was considered significant.

A total of 950 questionnaires were included in the study. Out of these, 408 (43%) were filled by boys and 542 (57%) by girls. Age range was 11 years (17 years to 28 years). Mean age for males was 20.79 ± 3.72 and females 20.61 ± 3.53. Overall, the frequency of facial acne was 74.6%. Difference between the genders was not statistically significant. Mean ADI score was 2.67 ± 5.35, and range was 0-13. The disease had a greater psychosocial impact on females as compared to males.

ABSTRACT
Objectives of the study were to describe the frequency of acne in late adolescent and adult students and to evaluate psychosocial impact of the disease. It was a cross-sectional study conducted in four institutions, from June to August 2008. Questionnaires with Cardiff Acne Disability Index (CADI) were filled by 950 students. They were examined for presence and severity of acne. Age ranged from 17 to 28 years. Frequency of facial acne was 74.6%. Difference between the genders was not statistically significant. Mean ADI score was 2.67 ± 5.35, and range was 0-13. The disease had a greater psychosocial impact on females as compared to males.

Key words: Acne vulgaris. Psychosocial aspect. Cardiff Acne Disability Index (CADI). Facial acne.

Table I: Frequency of mild, moderate and severe acne with respect to gender and age.

<table>
<thead>
<tr>
<th>Age group</th>
<th>Gender</th>
<th>Acne grade</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 20 years</td>
<td>Male</td>
<td>129 (63.2%)</td>
<td>27 (13.2%)</td>
<td>8 (3.9%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>153 (56.6%)</td>
<td>54 (21.7%)</td>
<td>9 (3.2%)</td>
<td></td>
</tr>
<tr>
<td>&gt; 20 years</td>
<td>Male</td>
<td>109 (53.4%)</td>
<td>26 (12.7%)</td>
<td>3 (1.5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>126 (48.3%)</td>
<td>45 (17.2%)</td>
<td>7 (2.7%)</td>
<td></td>
</tr>
</tbody>
</table>
ADI score varied from 0-13 out of a maximum of 15. The score was in the range of 0-4 in 81.3%, 5-9 in 15.5% and 10-13 in 3.2%. Mean ADI score was 2.65 ± 5.33. The mean score for males was 2.27 ± 4.84 and females 2.95 ± 5.60 (p=0.011). More disability was experienced by the students having more severe disease. Mean ADI score for the students with mild acne was 2.40 ± 4.60, moderate acne 4.50 ± 5.46 and severe acne 7.81 ± 7.40.

Reviewing the pattern of psychosocial disability, the appearance of skin during the last month yielded the highest score (0.83 ± 1.74) and avoidance of public changing facilities yielded the least (0.15 ± 1.04). There was a significant difference among genders regarding aggression, frustration, appearance of skin and indicating how bad their acne was. Aggression and frustration was more in females (0.72 ± 1.80) as compared to males (0.42 ± 1.36, p < 0.001). Females were even more sensitive about the appearance of their skin (0.94 ± 1.83) as compared to males (0.68 ± 1.58 p < 0.001). Indicating how bad their acne was, females scored higher than males (p < 0.001). There was no significant difference in both the genders about the effect on their social life and avoidance of public changing facilities (p = 0.788 and p = 0.226 respectively). This study outlines in detail the frequency of acne in late adolescent and young adult students. It was higher as compared with those from Saudi Arabia (56.2%). The reason could be seasonal variation as this study was conducted in hot and humid months, while in Saudi Arabia it was performed during winter season.

The overall difference in the frequency of acne in males and females in this study group was not statistically significant. Frequency of severe acne in this study confirms the finding of Cunliff et al. that acne is more common in males around 18 years of age. This finding correlates well with greater sebum secretion rate in males in this age. In the post adolescent period beyond 20 years of age, females were affected more than males. This may be due to decrease in serum levels of testosterone with age in males after puberty.

ADI demonstrated a good correlation between severity of acne and reported disability. These findings are also supported by Asad et al. irrespective of the degree of severity, patients with acne were at increased risk for anxiety and depression as compared to the normal population. Disability due to acne was more in girls as compared to boys. This is supported by the report of Aktan et al. which showed that adolescent girls were more vulnerable than boys to the negative psychological effects of acne. However, Asad et al. showed that there was no significant gender difference in the disability due to acne. Latter study was a welfare hospital-based in which the community belonged to lower and middle socioeconomic status was reported, where people are generally considered less concerned with cosmesis.

Acne and its complications are common in late adolescents and adults and affect their emotional health. Educational programmes should be organized to educate this age group regarding the concerns.

REFERENCES