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# Health Complaints and Their Association Among Students Population (Sp) 2016

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**Abstract:** This study was carried out to determine the rates of health complaints among higher education students in Libya. The purpose of the study was to provide basic-data required by the university health program for planning related to the health need for students. The study sample consisted of 1300 higher education students from different high institutes and different disciplines. The self-rated health questionnaire included health complaints and the associated social and economic factors were during class time. Data were analysed using the statistical software package SPSS version 16. Health complaints were mostly high, with stomach complaints, back pain and headache reported as the most prevalent somatic complaints. The findings indicate gender differences in most of the health indicators used; female students rated their health worse in comparison with males. This study suggests that education related and general stress play an important role in life's of students in Libya.

**Keywords**: Health Complaints, Students.

## Introduction

In Libya little research has been undertaken into health and health-related behaviours among student populations. Current literature searches have not revealed any similar studies which have been conducted in Libya examining this important issue of health and health-related behaviours in SP, with the sole exception of two studies investigating smoking behaviours amongst

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medical students in Libya (Buni, 2006; Singh et al., 2006). However, studies have been conducted investigating students from a large percentage of the population of civilised countries. Therefore, such research will fill a clear gap in the literature, and also provide insight into the health status of SP. In addition, it will help to establish baseline data regarding the health status and lifestyle behaviours of Libyan students which could be useful for health authorities for planning improvements to the health of this population. Moreover, investigations such as this study will provide scientific evidence which could be used to as guide and direct the development of the strategies, policies and action plans to address all these major health concerns, and also could be useful for health promotion and risk prevention programmes.

Regarding general health complaints, the literature showed that the most common health complaints among students are: headaches; neck and back pain; depression; and insomnia. The incidence of headaches was found to be a widespread phenomenon among university students; for example, in Turkey, a total of 50.7% of medical students reported tension-type headaches and 46.3% suffered from migraine. Also students in Turkey reported that headaches affected their quality of life due to a resulting limitation of daily activities (Bicakci et al., 2007). These health complaints can be severe enough to have a serious impact on students' daily lives. More female students reported significantly worse health status than males. Moreover, Stock et al. (2007) reported high levels of headache, nervousness and backache amongst university students in seven European countries. Therefore, student health programmes are considered to be very important to prevent the development of psychosomatic complaints among students.

Although recurrent health complaints are a relatively frequent experience among university students, they are not well understood (Hadjistavropoulos et al., 2007). Furthermore, previous research indicated that a large and increasing number of students have presented with subjective health complaints and health worries, specifically psychosocial health such as depression and anxiety among higher education students (Stock et al., 2003;

Abdel-Khalek&Alansari, 2004; Rab et al., 2006; Mikolajczyket et al., 2007; Simonsson et al., 2008). The reason for studying health status and lifestyle behaviours in higher education students is that more research is needed in order to develop effective health education programmes and health promotion policies such as the Health Promotion Universities Project by the World Health Organization (1998). Self-related health is therefore an important area to investigate, along with the health status and lifestyle behaviours of student populations. Musaiger (2004) has indicated that there is a lack of research on students' health problems, such as obesity, in the EMR. In addition, Abolfotouh (2007) suggested that there is a need to promote lifestyle change and to reduce obesity to prevent the incidence of diabetes and hypertension among Egyptians. Therefore, there is an urgent need for national programmes to prevent and control obesity in the countries of the EMR.

## Methodology and Method

The aim of the present study was to investigate the health status and general health complaints. Recently, the number of surveys among student population has increased (Cheung et al., 2007; Malinauska et al., 2006; Stock et al., 2003), and the questionnaire method has been widely used as the data collection instrument. The use of anonymous questionnaires shows a higher response rate among students, presumably because they find it impersonal and confidential (Oppenheim, 1992). Other advantages of the questionnaire are speed, low cost, it is ability to be sent through e-mail or post, and it allows a large sample of students to participate so that statistical analysis is possible.

**Instrument:** This study used a questionnaire as it is data collection tool, and the questionnaire was designed in English, developed from previously published tools (e.g., American College Health Association – National College Health Assessment 2005; WHO five Well-Being Index 1998 version; National Health Interview Survey(USA) 2007; Global School- based Students Health Survey GSHS 2005; Coin 1998; Cohen et al., 1983). Several

studies on student health have used questionnaires as an instrument for data collection (e.g. Meland, 2006; Kakeshita, 2006; Stock et al., 2003). The questionnaire was translated into Arabic; the translation was performed twice independently to check for inconsistencies. ***Data collection*****:** Based on previous studies (e.g. Chmara et al., 2007; Cheung et al., 2007; Abolfotouh et al., 2008), a random sample of 1300 volunteer undergraduate students from different universities (Tripoli, Bengazi, Omar El-Muktar, Sebha, Sirt and Misrata University) and 3 colleges (higher medical technology institute, higher industrial technology institute and higher computer technology institute) in Libya, which include both urban and rural areas, was selected by using random sampling. Also participants in this study were from different disciplines (engineering, medicine, science and arts). Data were collected over a period of 4 months.With regards to general health complaints, eight physical symptoms measuring health complaints were included in the questionnaire; i.e., stomach trouble, back pain, heart problems, headaches, sleep disorders, concentration difficulties, neck and shoulder pain, and depressive mood. These health complaints were adopted from previous studies (Stock et al., 2003; Stock et al., 2007; Mikolajczyk et al., 2008; Simonsson et al., 2008), because these studies were conducted on the same population (HES) in different countries. Respondents were asked the same question regarding health complaints; how often they had experienced the specified complaints during the previous year, reported on a four-point scale measuring if each symptom was experienced: 1= never; 2= rarely; 3 quite often; 4= very often. This was to ensure that international comparisons could be made.***Ethical issues*****:** In this study, the researcher informed the respondents of the nature and aims of the study, and the type of questions by using a participant information sheet. In addition, the questionnaire was anonymous, and the information gathered was used only for the purpose of the study. ***Data analysis*****:** The data were analysed using the SPSS version 16 computer software programme.

## Results

The results detailed in this section are classified and categorised under subheading to describe the prevalence of health complaints, broken down by age, and gender. This allows the results to be clearly and concisely compared with previous research carried out in this area of interest. Most of the findings presented in this section are based on collapsing response options to questionnaire items.

***Study Respondents*:** Participants from nine Libyan higher education institutes, 6 universities (Tripoli, Bengazi, Omar El-Muktar, Sebha, Sirtand Misrata University) and 3 colleges (higher medical technology institute, higher industrial technology institute and higher computer technology institute), completed surveys for these analyses. Out of 2000 questionnaires distributed, 1500 were returned from those students who attended lectures on the day of collection. Therefore a 75% response rate was achieved. 200 respondents were excluded because they had missing demographic data. This study used data from 1300 completed surveys for these analyses.

***Characteristics of the study sample:*** The sample includes 1300 higher education students, and it consists of 439 (33.8%) males and 861 (66.2%) females. Respondents were aged between 17 -34 years. The average age was 20.95, with a standard deviation of 2.37. The majority of participants were females because most of the students in the faculties were females. The growth in female student enrolment in higher education is a positive aspect of the Libyan education policy. The number of female university students has increased dramatically, in addition to female students enrolled in higher technical institutes. Females were concentrated in the humanities and males in science, engineering and business faculties. The sample included students from different disciplines and institutes, and from 9 campuses. For the descriptive characteristics of demographic and social economic variables see table (1).

Table 1. Demographic and social economic variables

| Variables/Options | Gender | | | P-Value |
|---|---|---|---|---|
| | Female(n=8 | Male(n=439 | Total(n=130 | |
| **Accommodation during semester** | | | | |
| Alone | | 17 (3.9%) | 21 (1.6%) | .001 |
| My parent | | 325 (74%) | 1101 | |
| U/C Accommodation | | 97 (22.1%) | 178 | |
| Total | 861 (100%) | 439 | 1300 | |
| **Year of study** | | | | |
| Year 1 | 188 (43.5) | 244 (56.5) | 432 (33.2) | NS |
| Year 2 | 86 (24.2) | 270 (75.8) | 356 (27.4) | |
| Year 3 | 82 (25.8) | 237 (74.2) | 319 (24.5) | |
| Year 4 | 58 (40) | 87 (60) | 145 (11.1) | |
| Year 5 | 19 (59.4) | 13 (40.6) | 32 (2.5) | |
| Special year | 6 (37.5) | 10 (62.5) | 16 (1.3) | |
| **Satisfaction with social support** | | | | |
| Dissatisfied | 90 (10.5%) | 62 (14.15) | 152 | NS |
| Somewhat satisfied | 186 | 101 (23%) | 287 (22.1%) | |
| Satisfied | 585 | 276 (62.9%) | 861 (66.2%) | |
| Total | 861 (100%) | 439 (100%) | 1300 | |
| **Monthly income** | | | | |
| Insufficient | 198 (23%) | 154 (35.1%) | 352 (27%) | .001 |
| Sufficient | 663 (77%) | 285 (64.1%) | 948 (73%) | |
| Total | 861 (100%) | 439 (100%) | 1300 | |
| **Finance of study** | | | | |
| Parents support | 773 (89.8%) | 231 (52.6%) | 980 (77.2%) | .001 |
| Job during semester | 32 (3.7%) | 89 (20.3%) | 120 (9.2%) | |
| Scholarship | 48 (5.6%) | 50 (11.4%) | 98(8.5%) | |
| Job during breaks | 8 (0.9%) | 69 (15.7%) | 77 (5.9%) | |
| Total | 861 (100%) | 439 (100%) | 1300 | |

***Distribution of perceptions of health:***

Distribution of perceptions of health is shown in Table 2 Overall, 19.5% of students reported their health as excellent, and a third of the students surveyed perceived their health to be very good, while one third reported it as good, 11.8% as fair, whereas just 2.5% felt that their health was poor. Moreover, students were asked how often they had visited a doctor in the previous 6 months. Libyan students reported a high level of visits to a doctor, more than one third (35%) of the whole sample reported having visited a doctor at least once in the previous 6 months. Female students were (35.5%) slightly more likely to have visited a doctor at least once in the previous 6 months compared to males (32.8%). Dental problems, colds, headaches, and stomach trouble were the most frequent reasons given by students.

Table 2: Perceptions of general health by gender

| Gender | Options | | | | | | P-Value |
|---|---|---|---|---|---|---|---|
| | Poor | Fair | Good | Very good | Excellent | Total | |
| Female | 18 (2.1%) | 106 (12.3%) | 275 (31.9%) | 306 (35.5%) | 156 (18.1%) | 861 (100%) | NS |
| Male | 15 (3.4%) | 47(10.7%) | 149 (33.9%) | 131 (29.8%) | 97 (22.1%) | 439 (100%) | |
| Total | 33 (2.5%) | 153(11.8%) | 424 (32.6%) | 437 (33.6%) | 253 (19.5%) | 1300 (100%) | |

***General health complaints:***

General health complaints were measured by the following question: “How often did you have the following problems during the last 12 months?”The symptom checklist included eight items (stomach complaints, heart problems, back pain, headache, sleep disorder, difficulties to concentrate, neck and shoulder pain and depressive mood). Stomach complaints, back pain and headache were reported as the most prevalent somatic complaints for both sexes. Female students showed the highest rates in most of the categories of complaints, while male students had the lowest rates in most of the symptoms (Table 3).

| Complaints | Never | | Rarely | | sometimes | | Quite/Very often | | P-Value |
|---|---|---|---|---|---|---|---|---|---|
| | Female % | Male % | Female % | Male % | Female % | Male % | Female % | Male % | |
| Stomach trouble | 45.2 | 52.2 | 20.9 | 19.4 | 26.7 | 24.4 | 7.2 | 4.1 | NS |
| Heart problem | 50.9 | 63.8 | 18.5 | 19.6 | 24.9 | 13.2 | 6.6 | 3.4 | .001 |
| Back pain | 27.9 | 34.4 | 24.9 | 23.9 | 34.4 | 29.6 | 12.9 | 12.1 | NS |
| Headache | 11 | 17.5 | 24.4 | 29.6 | 42 | 40 | 22.5 | 12.8 | .001 |
| Sleep disorders | 24.9 | 33.5 | 22.4 | 22.1 | 33.8 | 30.3 | 18.9 | 14.1 | .005 |
| Difficulties to concentrate | 16 | 20.3 | 25.11 | 27.1 | 43.6 | 38.7 | 15.3 | 13.9 | NS |
| Neck/shoulder pain | 39.3 | 35.1 | 24.6 | 24.8 | 24.5 | 30.3 | 33.2 | 34.6 | NS |
| Depressive mood | 20.7 | 29.2 | 17.7 | 21.2 | 11.6 | 9.8 | 28.5 | 15 | .001 |

Table 3: General health complaints by gender

***Logistic regression analyses regarding general health complaints:***

For these analyses we used three health complaints which had the highest rates of prevalence among students (headache, pack pain and sleep disorder) were used. A total of 8 independent variables were entered into the model (gender, age, subject, year of study, HEI region, social support, satisfaction with social support, monthly income, finance of study and living place during the semester). The results showed that after adjustment for all factors, some of the predictors were independently associated with complaints (Tables 4, 5and 6). The analyses revealed four factors being independently and consistently associated with two complaints (headache and sleep disorder). These factors were gender, age, year of study and finance of study.

**Headache**: Table 4explains the effect of each independent variable on headache. The first variable which was significantly associated with headache by regression analysis was gender; it was observed that female students were 1.65 times more likely to suffer from headaches compared with

male students. The second variable was age: students in the second group (20 – 24.9) were by 1.37 times more likely to suffer from headaches compared with students under 20 years old. The third variable was year of study, which was significantly associated with headache: students who were in the second and third year of studies were more likely to suffer from headaches compared with first year students (1.35 and 1.40, respectively). The last variable which was significantly associated with headache was finance of study: it was observed that the probability of headaches decreased by half when students had a job during the vacation compared with students who reported that they financed their studies through parental support (Table 4).

Table 4: Logistic regression model for associations with headache

| Variable | % | Odds ratio | 95% CI | *p*-value |
|---|---|---|---|---|
| **Gender** | | | | |
| Male (reference) | 33.8 | 1.0 | | |
| Female | 66.2 | 1.65 | 1.29 – 2.12 | 0.001 |
| **Age** | | | | |
| <20 (reference) | 28 | | | |
| 20 -24.9 | 65 | 1.37 | 1.05 – 1.78 | 0.018 |
| 25 – 29.9 | 6.2 | 1.21 | 0.73 – 2.01 | NS |
| ≥ 30 | 0.8 | 0.29 | 0.07 – 1.13 | NS |
| **Subject** | | | | |
| Engineering (reference) | 22.2 | 1.0 | | |
| Medicine | 20.8 | 1.34 | 0.94 – 1.91 | NS |
| Science | 30.2 | 1.05 | 0.75 – 1.48 | NS |
| Arts | 26.8 | 0.82 | 0.58 – 1.15 | NS |
| **Year of study** | | | | |
| First (reference) | 33 | 1.0 | | |
| Second | 27 | 1.35 | 1.10 – 1.80 | 0.38 |
| Third | 25 | 1.40 | 1.04 – 1.89 | 0.025 |
| Fourth | 11 | 0.98 | 0.67 – 1.44 | NS |
| Fifth | 2.5 | 2.12 | 0.96 – 4.69 | NS |
| Special | 1 | 1.32 | 0.47 – 3.71 | NS |

| | | | | |
|---|---|---|---|---|
| **Satisfaction with social support** | | | | |
| Satisfied (reference) | 66.2 | 1.0 | | |
| Somewhat satisfied | 22.1 | 1.21 | 0.84 – 1.74 | NS |
| Dissatisfied | 11.7 | 0.99 | 0.75 – 1.30 | NS |
| **Monthly income** | | | | |
| Sufficient (reference) | 73 | 1.0 | | |
| Insufficient | 27 | 1.01 | 0.78 – 1.31 | NS |
| **Finance of study** | | | | |
| Parents support | 84.8 | 1.0 | | |
| Job during semester | 9.2 | 0.71 | 0.48 – 1.04 | NS |
| Job during breaks | 5.9 | 0.49 | 0.30 – 0.78 | 0.003 |
| **Living place during the semester** | | | | |
| My family (reference) | 84.7 | 1.0 | | |
| Accommodation | 13.7 | 0.79 | 0.57 – 1.09 | NS |
| Alone | 1.6 | 0.38 | 0.15 – 0.92 | NS |

**Back pain**: Table 5 explains the association of each independent variable with back pain. Only three variables were found to be significantly associated with back pain. The first variable significantly associated with back pain by regression analysis was year of study. It was observed that students in the third year were one and half times more likely to suffer from back pain compared with first year students. The second variable was satisfaction with social support: students who were somewhat satisfied or dissatisfied with their social support were 1.52 and 1.29 times more likely to suffer from back pain respectively compared with students who were satisfied with their social support (Table 5).

Table 5: Logistic regression model for associations with back pain

| Variable | % | Odds ratio | 95% CI | *p*-value |
|---|---|---|---|---|
| **Gender** | 33.8 | | | |
| Male (reference) | 66.2 | 1.0 | | |
| Female | | 1,23 | 0.97 – 1.58 | NS |
| **Age** | | | | |
| <20 (reference) | 28 | 1.0 | | |
| 20 -24.9 | 65 | 1.19 | 0.92 – 1.55 | NS |
| 25 – 29.9 | 6.2 | 1.24 | 0.82 – 2.21 | NS |
| ≥ 30 | 0.8 | 0.51 | 0.13 – 1.96 | NS |
| **Subject** | | | | |
| Engineering (reference) | 22.2 | 1.0 | | |
| Medicine | 20.8 | 0.92 | 0.65 – 1.30 | NS |
| Science | 30.2 | 1.24 | 0.89 – 1.74 | NS |
| Arts | 26.8 | 1.03 | 0.74 – 1.44 | NS |
| **Year of study** | | | | |
| First (reference) | 33 | 1.0 | | |
| Second | 27 | 1.01 | 0.76 – 1.35 | NS |
| Third | 25 | 1.50 | 1.12 – 2.02 | 0.006 |
| Fourth | 11 | 1.15 | 0.78 – 1.69 | NS |
| Fifth | 2.5 | 1.61 | 0.78 – 3.30 | NS |
| Special | 1 | 0.99 | 0.36 – 2.76 | NS |
| **Satisfaction with social support** | | | | |
| Satisfied (reference) | 66.2 | 1.0 | | |
| Somewhat satisfied | 22.1 | 1.52 | 1.07 – 2.15 | 0.018 |
| Dissatisfied | 11.7 | 1.29 | 0.99 – 1.69 | 0.059 |
| **Monthly income** | | | | |
| Sufficient (reference) | 73 | 1.0 | | |
| Insufficient | 27 | 1.17 | 0.90 – 1.50 | NS |
| **Finance of study** | | | | |
| Parents support | 84.8 | 1.0 | | |
| Job during semester | 9.2 | 1.09 | 0.75 – 1.60 | NS |
| Job during breaks | 5.9 | 1.10 | 0.69 – 1.76 | NS |
| **Living place during the semester** | | | | |
| My Family (reference) | 84.7 | 1.0 | | |
| Accommodation | 13.7 | 0.84 | 0.60 – 1.15 | NS |
| Alone | 1.6 | 1.29 | 0.54 – 3.08 | NS |

**Sleep disorder**:Table 6explains the effect of each independent variable on sleep disorder. Five variables were found to be significantly associated with sleep disorder. The first variable was gender: it was observed that female students were 1.40 times more likely to suffer from sleep disorder compared with male students. The second variable was age: the findings revealed that students who were older than 20 years old were more likely to suffer from sleep disorder. The highest probabilities of sleep disorder were found among students older than 30 years, who were four times more likely to suffer from sleep disorder compared with students under 20 years old. The third variable was subject: students who studied medicine, science and arts were one and half times more likely to suffer from sleep disorder compared with students who studied engineering. The fourth variable was year of study. This was also significantly associated with sleep disorder, students who were in the second, third and fourth year of studies were more likely (OR= 1.52, 1.79 and 1.93, respectively) to suffer from sleep disorder compared with first year students. The last variable which was significantly associated with sleep disorders by regression analysis was finance of study. It was observed that the probability of sleep disorder increased with students who had a job during the semester by 1.12 times compared with students who financed their studies by parents support (Table 6).

Table 6: Logistic regression model for associations with sleep disorder

| Variable | % | Odds ratio | 95% CI | *p*-value |
|---|---|---|---|---|
| **Gender** | 33.8 | | | |
| Male (reference) | 66.2 | 1.0 | | |
| Female | | 1.40 | 1.10 – 1.80 | 0.007 |
| **Age** | | | | |
| <20 (reference) | 28 | 1.0 | | |
| 20 -24.9 | 65 | 1.64 | 1.27 – 2.13 | 0.001 |
| 25 – 29.9 | 6.2 | 2.18 | 1.31 – 3.61 | 0.002 |
| ≥ 30 | 0.8 | 3.99 | 1.0 – 15.39 | 0.045 |
| **Subject** | | | | |
| Engineering (reference) | 22.2 | 1.0 | | |
| Medicine | 20.8 | 1.67 | 1.20 – 2.35 | 0.003 |
| Science | 30.2 | 1.84 | 1.35 – 2.50 | 0.001 |
| Arts | 26.8 | 1.88 | 1.37 – 2.58 | 0.001 |
| **Year of study** | | | | |
| First (reference) | 33 | 1.0 | | |
| Second | 27 | 1.52 | 1.14 – 2.02 | 0.004 |
| Third | 25 | 1.79 | 1.33 – 2.40 | 0.001 |
| Fourth | 11 | 1.93 | 1.31- 2.84 | 0.001 |
| Fifth | 2.5 | 1.25 | 0.61 – 2.56 | NS |
| Special | 1 | 1.73 | 0.62 – 4.77 | NS |
| **Satisfaction with social support** | | | | |
| Satisfied (reference) | 66.2 | 1.0 | | |
| Somewhat satisfied | 22.1 | 1.46 | 1.03 – 2.07 | NS |
| Dissatisfied | 11.7 | 1.07 | 0.63 – 1.60 | NS |
| **Monthly income** | | | | |
| Sufficient (reference) | 73 | 1.0 | | |
| Insufficient | 27 | 1.05 | 0.82 – 1.36 | NS |
| **Finance of study** | | | | |
| Parents support | 84.8 | 1.0 | | |
| Job during semester | 9.2 | 1.12 | 1.03 – 2.07 | 0.033 |
| Job during breaks | 5.9 | 1.00 | 0.81 – 1.39 | NS |
| **Living place during the semester** | | | | |
| My Family (reference) | 84.7 | 1.0 | | |
| Accommodation | 13.7 | 1.19 | 0.87 – 1.64 | NS |
| Alone | 1.6 | 0.76 | 0.32 – 1.83 | NS |

***Dissection:***

The outcome of this study showed that a number of physical health complaints, including headache (19%), back pain (13%), difficulties in concentration (15%) and depressive moods (24%) were reported very often (Table 3). When combining two response (sometimes and very often), as a reflection of these problems with general health complaints, their prevalence in both sexes was 60% for headache, 45.5% for back pain, 57% for difficulties in concentration, and 58% for depressive mood, and these complaints were the most prevalent somatic complaints within both sexes. Female students showed the highest rates in other categories of complaints, while male students had the lowest rates in most of the symptoms.

These findings support previous studies (Hadjistavropoulos et al., 2007 Stock et al., 2007; Abolfotouh et al., 2007). However, Stock et al. (2003) suggest that students are a comparatively healthy population due to their young age and high education level. However, the results of their study indicate certain health problems which are common in the student population, and some of these problems were also found in the present study's population. Although there is no data available for health complaints in the general population or among students in Libya, it is possible to compare these findings with data from other countries. Data used to compare the prevalence of general health complaints (percentage reporting the symptoms quite/very often) was based on data from surveys conducted amongst university students from seven countries (Stock et al., 2007).

| Complaints | Libya N=1300 | Denmark N=548 | Lithuania N=1,031 | Poland N=572 | Bulgaria N=701 | Germany N=770 | Spain N=658 | Turkey N=1,037 |
|---|---|---|---|---|---|---|---|---|
| Stomach complaints | 6.2 | 10 | 18 | 22 | 25 | 22 | 25 | 26 |
| Back ache | 12.6 | 28 | 21 | 36 | 35 | 40 | 46 | 42 |
| Headache | 19.2 | 27 | 29 | 45 | 45 | 39 | 36 | 41 |
| Sleep disorder | 17.3 | 23 | 17 | 19 | 29 | 28 | 24 | 45 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Neck/shoulder ache | 11 | 39 | 16 | 34 | 29 | 45 | 33 | 45 |
| Depressive moods | 23.9 | 13 | 35 | 20 | 29 | 22 | 26 | 33 |

Table 7: Comparison with other survey data regarding general health complaints

Socures: Stock et al. (2007). The numbers in the above table are percentages.

The data presented in the above table suggests that rates of general health complaints amongst SP in Libya are relatively low, when compared with the literature reviewed in Chapter Three which contains studies that show much higher rates (see Table 7). For instance, when the prevalence of health complaints in seven European countries, namely Spain, Germany, Lithuania, Denmark, Bulgaria, Turkey and Poland were assessed using the same self-reported checklist in a sample of 5,317 university students, it was found that these symptoms were highly prevalent in the student population, affecting as much as 20-50% of students quite often or very often. The highest rates of complaints were found to be backache, headaches or neck/shoulder ache (Stock et al., 2007). Overall, a higher prevalence of complaints was reported when compared to the findings of the present study, in which the percentage of the Libyan student population reporting these symptoms quite often or very often varied between about 6-24%. The patterns of the most important complaints in Libyan students was similar to that in German and Spanish students, but at even lower levels. Furthermore, Libyan students' scores were also lower than the levels of health complaints reported among students in Slovakia, where a study found that in total, only 29.2% of all respondents reported no health complaints at all, (Sleskova et al., 2005).

In addition to the above, when comparing the results with students from other countries, the findings of the present study regarding the prevalence of health complaints are lower than those reported among students from Alexandria University in Egypt, where Alolfotouh et al. (2007) found higher rates of

complaints, 51% for example, with stomach trouble, 31.3% headache and 31% insomnia, using the same research method, whereas the prevalence of health complaints amongst student populations in Libya with regards to stomach trouble, headache and insomnia were 6.2%, 19.2% and 17.3%, respectively. It is interesting to speculate why Libyan students had lower levels of complaints compared with other students in different countries; this may be explained by the fact that the majority of Libyan students reported that they financed their studies with their parent's support. Another possibility is that most Libyan students reported that they lived at home, and these two factors have been shown to have an important effect on the health of the student population. Moreover, among Libyan students the highest rates of complaints were found with respect to depressive moods, headaches, back pain, and difficulty sleeping. A study conducted by Mikolajczk et al., (2007) showed high levels of reported depressive moods among students in European countries, and those experienced by female students tended to be more frequent, due to low levels of social support. Conversely, the findings of the present study regarding depressive moods were relatively high, however, students in Libya reported high levels of social support (Table 6.3). This result is the opposite of what the figures for social support would suggest, and the possible reasons are not known, however this might be discovered through the use of qualitative research.

In line with other previous studies (Curry and Green, 2006; Bicakci et al., 2007) which have shown that headaches are a common symptom in the SP population, the findings of the present study revealed that headaches frequently occur in SP of both genders in Libya, and sixty percent of respondents indicated that they experienced headaches either sometimes or very often. This is a similar result to that of Curry and Green, (2007), who determined the prevalence of headaches in a sample of 104 university students in the USA using the same screening tools. It was found that 60% of the total sample reported that headaches interfered with their usual activities. In addition, Bicakci et al. (2007) assessed the prevalence of headaches among university students in Turkey and indicated that it was identified in 50.7% of the total sample. It is not possible to compare the results of Bicakci et al. with

the present study due to differences in methodology and subject selection. However, it suggests that headaches are one of the most common health complaints in university undergraduate populations.

Logistic regression analysis using 8 factors as independent variables and three complaints (headache, back pain and sleep disorder) as dependent variables showed that year of study was the only factor independently associated with all three complaints. The factors 'gender', 'age' and 'finance of study' were each associated with two of the complaints (Headache and sleep disorder). This finding is in line with Bicakci et al. (2007), which suggested that health complaints affect the quality of life due to the limitation of daily activities. On the other hand, the variable 'satisfaction with social support' was found to be significantly associated only with back pain, and the variable subject was found to be significantly associated with just one complaint (sleep disorder, (see Table 6.44, 6.45 & 6.46). However, Takakura et al. (2005) found that students with low social support were more likely to have health complaints compared with students with high levels of social support (Section 3.6). The findings regarding the association of health complaints to gender (male students were less likely to suffer from health complaints compared with female students) were in agreement with the findings of a study in seven European countries conducted by Stock et al., (2007). Also, the factor subject of study was associated with two of the complaints. Compared with students studying an engineering subject as a reference category, those studying medicine and science were more likely to suffer from sleep disorder and back pain. Conversely, Stock (2003) found that students studying engineering were more likely to suffer from neck/back pain compared with students studying health subjects.

This study also reports differences with respect to gender; for example, male students were less likely to suffer from psychosomatic complaints, and female students reported significantly worse health status in terms of the number of their health complaints. The results showed that most complaints were significantly more often reported by females, and a chi-squared test

showed significant gender difference, these differences being highest for headaches, heart problem, sleep disorders and depressive moods, while they were less pronounced for back pain, difficultly in concentration and neck/shoulder ache. Similar results were also reported from other studies (Sleskova et al., 2005; Abolfotouh et al., 2007; Simonsson et al., 2008). For instance, at the University of Alexandria in Egypt, a significantly higher proportion of female students than males had poor perceived health status and more perceived symptoms (Abolfotouh et al., 2007). Similarly, Simonsson et al. (2008) found gender differences with regard to health complaints, with male students reporting fewer and less frequent symptoms than female students in Sweden. Sleskova et al. (2005) found that female students in Slovakia rated their health worse than male students on all indicators, and pointed to the fact that it is possible that women find the stresses and strains of student life more difficult than their male counterparts, and that in general female students mostly reported more health complaints.

The high level of back pain among students, especially Libyan students, may be due to a more sedentary lifestyle, indicated by a lower level of reported physical activity, with just 5% of the total sample found to be meeting the recommended levels of physical activity in Libya (Khalil, 2010). The results regarding physical activity can also help to explain why students in Libya had high rates of psychosomatic complaints. It could be concluded that low physical activity levels had the main effect on health complaints among both male and female students, because, according to Mikolajczyk et al. (2008), better health was found to be associated with higher levels of physical activity. The findings revealed that students in Libya reported high levels of subjective health complaints, and this could affect their study and life in general. For example, sleep disorder problems might also be serious enough to affect their academic performance, and from the above discussion the researcher can suggest that headaches are a very common symptom among student populations, and can affect the quality of life, due to a limitation of daily activities (Bicakci et al., 2007). Curry et al. (2007) indicated that screening for headaches is an important role of the primary care provider,

who is in an optimal position to assist patients with the recognition of headache types and the appropriate clinical management. Furthermore, health counselling and education aimed at increasing healthy behaviours amongst the student population could reduce more serious diseases later in life (Stock et al., 2007). The health needs of higher education students could be studied further by investigating potential positive and negative factors affecting their health. This study did not uncover the cause of the relatively fewer complaints about health amongst Libyan students. In order to provide the data necessary to contribute to a better health programme, further studies are recommended to investigate contributing factors associated with higher levels of health complaints such as social, structural, and cultural influences.

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