

Study of Health Behaviours and Lifestyle Characteristics among Medical Students at Al-Azhar University, Assuit Branch

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Abstract

Background: Lifestyle is the way of living of individuals, families, and societies which can be healthy or unhealthy in terms of personal behaviors such as nutrition, physical activity, and stress management. A healthy lifestyle may result in better health and happiness, and in contrast, an unhealthy lifestyle may cause illness and morbidity.

Aim of Study: To find out the relationship between healthy lifestyle behavior variables of the study sample and students' sex and university years.

Patients and Methods: A cross sectional study was carried out enrolling 426 students data were collected using interview questionnaire it consists two following sections: (1) Personal data: Age, sex, university year, living place, working status, family income, number of family member, Father's education, and mother's education, (2) Healthy lifestyle behaviors: It included seven variables: Smoking habit, dietary habits, physical exercise and self-health habits, spend free time, taking non-prescribed drugs in last month, and sleeping pattern. Period of the study from May 2019 up to the end of March 2021.

Results: The mean age of the total samples was 21.5 ± 1.5 years. The majority (76.1%) were males. The students in the age group (20-24) years had the highest percentage (85.9%), while the students in the age group (<20 years) had the lowest proportion (3.3%). There was no statistically significant difference in age between male and female students. The majority of students in the final year (45%) were males (40.1%) and females (4.9%), with the difference being statistically significant.

This study revealed that 67.6% of students reported they had average family income, 70.1% and 58.8% of male and female students respectively were eating breakfast regularly, 76.6% of the second grade were eating breakfast regularly, 69.4% of male students were physically active, 76.6% of the second grade were practicing exercise routinely, 82.1% of male students perform dental examination in the last year.

Conclusion: 67.1% of students were living in students hostel, male students were eating breakfast and meat and fish regularly more than female, male students were physically

active more than female, 76.6% of the second grade were actively exercise than other grades.

Key Words: University students – Lifestyle – Healthy behaviours.

Introduction

LIFESTYLE is the way of living of individuals, families, and societies which can be healthy or unhealthy in terms of personal behaviors such as nutrition, physical activity, and stress management. A healthy lifestyle may result in better health and happiness, and in contrast, an unhealthy lifestyle may cause illness and morbidity [1].

The health promoting behaviours, as one of the major criteria that determines health, are known as one important demographic factor in the avoidance of many illnesses, and health promotion and disease prevention are directly associated with these behaviors. Some of the most important health promotion behaviours involve nutrition, regular exercise, avoidance of destructive behaviors and drugs, protection against accidents, timely detection of disease symptoms from the physical aspect, controlling emotions, feelings and thoughts and coping with stress and mental problems, and adjusting the interpersonal relations from the social aspect [2].

Unhealthy habits introduced during young adulthood usually persist in later life and can increase the risk of several chronic diseases. In a survey in a college population, 36% respondents revealed that time constraints posed a barrier to adoption of healthy practices. Initiation of unhealthy behaviours in medical students may be ascribed to peer pressure, mental stress, performance anxiety in a competitive academic environment, socio-cultural adjustment problems, inadequate parental supervision, home sickness after leaving their

parental homes, and greater financial autonomy as compared to their earlier years. Since their behaviours are amenable to change, studentship is particularly the right period for educational interventions regarding the importance of developing and maintaining healthy behavior [3].

Unhealthy lifestyles characterized by physical inactivity, poor diet, tobacco smoking and excessive alcohol use, as well as mental ill health, are seen as the main risk factors for chronic diseases and premature deaths [4]. In combination, they account for a significant amount of preventable deaths worldwide, with tobacco smoking alone claiming 6 million annual deaths, physical inactivity 3.2 million, harmful alcohol use 2.3 million, overweight and obesity 2.8 million and dietary risks 11.3 million [5].

Statistics indicate that 53% of the causes of Death are related to human lifestyle. Due to unhealthy lifestyle, there is happened a great increase in the prevalence and incidence of many chronic conditions, including obesity, atherosclerosis, and coronary heart disease (CHD) [6].

Unhealthy lifestyle behaviours are modifiable and usually established during youth or young adulthood. Furthermore, being overweight and obesity in youth are powerful indicators of being overweight in adulthood and related disease. Despite the widely-documented consequences associated with unhealthy lifestyle behaviours, globally, a substantial proportion of young adults, notably university students, engage in unhealthy lifestyle practices [7].

Healthy lifestyle behaviors are those behaviors that demonstrate responsibility for one's own health, taking part in physical activity, having adequate nutritional intake, realizing self-actualization, establishing interpersonal relations, and learning how to manage stress [8].

The aim of the present study was to find out the relationship between healthy lifestyle behaviour variables of the study sample and students' sex and university years.

Patients and Methods

The present study deals with "Study of Health Behaviours and Lifestyle Characteristics among Medical Students at Al-Azhar University, Assuit Branch".

This was a descriptive cross-sectional study. The study included students of (Faculty of Medicine for boys and girls) at Al-Azhar University, Assuit

branch, Assuit Governorate; who attending during the study period.

The present cross-sectional study was conducted at Faculty of Medicine for boys and girls at Al-Azhar University, Assuit branch during academic year 2019/2020.

The study was conducted from May 2019 up to the end of March 2021 and passed through the following phases:

1- *Preparatory phase*: During this phase the following steps were done:

Survey of literature:

It took about 4 months during the period from (first of May 2019) to (the end of August 2019). During this phase, the following items were covered:

• *Lifestyle behaviors*:

- Definition of lifestyle.
- What lifestyle factors mean?
- Lifestyle factors and diseases.
- How do lifestyle factors affect health?
- Impact of lifestyle behaviors on youth and society.
- Healthy lifestyle behaviors.
- Relationship between lifestyle behaviors and quality of life.

Some lifestyle behaviors:

• *Smoking*:

- What smoking means?
- What are types of smoking?
- Are there any benefits to smoking?
- Hazards of smoking:
- Smoking behaviors and health status
- Prevalence of smoking behaviors among university students:
- Impact of smoking behaviors on quality of life of university students:
- Smoking cessation:
- Benefits of stopping smoking.

• *Dietary habits*:

- What is the dietary plate?
- A Healthy Dietary Pattern.
- Healthy food.
- Unhealthy food.
- Impact of diet on health status and society.
- Recommendations about consumption of healthy diet.

- Dietary recommendations for fiber.
- Consumption of food patterns among students.
- *Physical activity:*
 - Definition of Physical activity.
 - Types of Physical activity.
 - Levels of Physical Activity.
 - Physical Activity Intensity.
 - Importance of physical activity.
 - Prevalence of Physical activity among students.
 - Effect of Regular exercise and physical activity on our health status.
 - Hazards of physical inactivity.
 - Recommendations for practices Physical activity.
- *Overweight and obesity:*
 - Introduction & Prevalence of obesity.
 - Definition.
 - Causes:
 - Classifications.
 - Effect of obesity on health:
 - Recommendations of WHO about prevention of obesity.
- *Sleep pattern:*
 - Introductions.
 - Definition.
 - Evolution of sleep patterns across the lifespan
 - Development patterns and changes with aging:
 - Effect of sleep pattern on health of medical university students.
 - Recommendations for sleep duration.
- *Tooth brush:*
 - Introductions.
 - Definition.
 - Types of toothbrush.
 - Toothbrush and health.
 - Recommendations for regular toothbrush.
- *Leisure time:*
 - Definition:
 - Leisure activities and health.
 - Leisure time & students.
- *Hand washing:*
 - Definition.
 - Hand washing and health:
 - Recommendations for hand washing.

The review of literature was based on:

A survey of literature was based on: Libraries of the Faculties of Medicine for boys & girls at Al-Azhar University, Assuit branch. Recent text books and some previous researches. Periodic medical journals and WHO reports & publications. Computer research on different internet trusted sites. Reports from Ministry of Health in Egypt.

Administrative consideration: A formal approval was taken from the dean of each faculty or the corresponding administrator to facilitate the work of the study.

Ethical considerations: An informal Verbal consent was taken from the respondents with simple explanation about the aim of the study and emphasis that personal and other data would be used for scientific work only. A cover page describing the aim and confidentiality of the work was included in the questionnaire.

Inclusion criteria: All students of faculty of medicine for boys & girls at Al-Azhar University, Assuit branch; who also gave verbal consent to participate in the study voluntarily.

Exclusion criteria: Students at first grade of faculty of medicine for boys & girls at Al-Azhar University, Assuit branch because they have not been to university for a long time; they are less affected by their lifestyle choices.

Tools of data collection (research tools):

Data were collected by two tools:

I- Interview questionnaire was used for data collection. It was taken two weeks (frist two weeks of Sebtember 2019). It has two sections:

Personal data:

It included the following items:

- Age: The age was collected as a quantitative variable to estimate the mean age of the sample then classified into three categories (less than 20 years, from 20-24 years, and more than 24 years.
- Sex: Male or female.
- University years: (Second - third - final).
- Living place: With family, student's hostel, with friends and living alone.
- Working status: Not working and working.
- Family income: Equal to expenditures, higher than expenditures and lower than expenditures.
- Number of family member: Less than 3, 3-5 and more than 5 persons.

- Father's education: Read and write primary, secondary and high education.
- Mother's education: Read and write primary, secondary and high education.

Healthy lifestyle behaviors:

It included seven variables: Smoking habit, dietary habits, physical exercise, and self-health habits, spend free time, taking non-prescribed drugs in last month and sleeping pattern.

Dietary habits:

This included the following ten habits: (a) Eating breakfast regularly, (b) Limit usage of sugar or sweets, (c) Take excess salts in food, (d) Eat fried food, (e) Eat fresh vegetables, (f) Eat fruits, (g) Eat meat and fish, (h) Eating street food, (i) Drinking excess tea and coffee, and (j) Drinking soda.

Physical exercise:

Some examples of physical exercise are running, swimming, walking, biking, and other sporting practices.

Self-health habits:

This included the following four habits, (a) Dental exam in last year, (b) Using of tooth brush, (c) Eye exam in last year and (d) Flu vaccination in last year.

Spending free time:

As, participate in trips, social activities, the time spent at home like watching TV, reading, visiting relatives and friends, video games and so on.

II- Clinical assessment of following measurements:

BMI was used as a health outcome that affected by dietary habits, physical exercise and life style [9]. In our study we considered BMI is an important indicator for obesity prevalence among large populations and generally, reflects the degree of fitness among individuals. And was measured by body mass index (BMI) calculated from the equation: $BMI = \text{Weight (in kilograms)} / \text{squared height (in meters)}$ and categorized, according to Wang and Coups [9] classification, into: Underweight: BMI <18.5, Normal weight: BMI 18.5-24.9, and Overweight: BMI 25-29.9, Obese: BMI >30.

Sampling:

I- Sample design:

A- The Target Population: The target population of the study was the students of (Faculty of Med-

icine for boys and girls) at Al-Azhar University, Assuit branch, Assuit Governorate; who attending during the study period.

B- Sample frame: The sample frame of students was obtained from students affairs. They were originally classified into 6 strata representing the different academic years of faculties of medicine.

C- College students' population: The total number of the students' population of (Faculty of Medicine for boys and girls) at Al-Azhar University, Assuit branch for the academic year (2019-2020) was 1100, consisting of 811 male students and 289 female students.

D- Sample Technique: A stratified random sample technique was being conducted. Representative sample was obtained from each stratum. The selected participants from each stratum were being chosen using simple random sample technique. A structured questionnaire was used to collect data from students who accepted to participate in the study.

E- Sample Size: The sample size was calculated using (Epi-Info version 7) based on the following assumption: (1) Total number of the students' population (with exception of first grade students) of faculty of medicine for boys & girls for the academic year 2019/2020 and (2) Confidence level 95%.

The estimated sample size of students was (426) calculated by (Epi-Info version 7).

The sample size of students (426 students) from (Faculty of Medicine for boys and girls) according to the proportion of total number of the students' population (with exception of first grade students) in each faculty to total number of the students' population of both faculties.

As the same manner, we selected randomly participants from each grade according to their proportion to total number of students (with exception of first grade students) at this college, and all the chosen students were included in the our study.

Data collection: The study was conducted during academic year 2019/2020. This phase lasts about 5 months (from first of October 2019 to end of February 2020). Data were collected using the previously constructed interview questionnaire. Each interview session lasted about 25 minutes on the average. More than one session was needed to complete the interview questionnaire. It necessitates the researcher to visit the research setting four visits per week at different hours of the day to ensure meeting the selected students. The period

of data collection was expanded for this 5 months period to accommodate with the nature of study within college of medicine that differs regarding different grades.

Evaluation phase:

This phase took about 7 months (between the first of March 2020 to end of September 2020).

Statistical analysis:

The collected data were coded, processed and analyzed using the SPSS (Statistical Package for Social Sciences) version 22 for Windows® (IBM SPSS Inc, Chicago, IL, USA). The mean was used as a measure of central tendency. The standard deviation was used as a measure of dispersion. Chi-square (χ^2) was used to indicate presence or absence of a statistically significant difference among the studied variables. *p*-value <0.05 was considered significant.

Binomial logistic regression analysis was done to predict the relation between different studied variables: (Smoking habits, dietary habits, physical exercise, self-health habits, spend free time, taking non prescribed drugs and sleeping pattern) and measures of BMI.

Also binomial logistic regression analysis was done to predict the relation between different studied variables: (Smoking habits, dietary habits, physical exercise, self-health habits, spend free time, taking non prescribed drugs and sleeping pattern) and measures of health outcome.

Results

The highest percentage (85.9%) of the students was in the age group (20-24) years and the lowest percentage (3.3%) was in the age group (<20 years). No statistically significant difference between students' males and females regarding to age. The majorities (45%) of the total students were in the final year, (40.1%) were males and (4.9%) were females, the difference was statistically significant regarding to university years. As regard living place, more than two third of the total students (67.1 %) were living in students hostel, while (2.1 %) of them were living alone, the difference was statistically significant between students male and females. Regarding to working status, the lowest percentage (20.9%) they worked beside study (19.5%) were males and (1.4%) were females, and the difference was statistically significant.

Around two third of students (67.6%) reported they had average family income and (5.9%) of

them reported insufficient family income, while (87.5%) of the students had family size consisted of (3-5) members, while (1.2%) were less than 3 members, the difference was statistically significant. On the other hand, there is no statistically significant difference between male and female students regarding their parent's education (Table 1).

The highest percentage of male and female students who used to eating breakfast regularly was (70.1%) and (58.8%), respectively, while the lowest percentage among male and female students who did not used to eating breakfast regularly (7.4%) and (5.9%) respectively, the difference was statistically significant. The percentage between male and female students who used to routinely eat limit amounts of sugar or sweets was (67.3%) and (55.9%), respectively, while the percentage between male and female students who did not use sugar or sweets was (9.0 %) and (3.9%) respectively, the difference was statistically significant. On the other hand the majority of male and female students reported that they were avoiding use excess salt in food was (66.7%) & (61.8%) respectively, while small proportion of male and female students who reported that they using excess salt in food was (8.0%) & (2.0%) respectively, the difference was statistically significant.

There was no statistically significant difference between male and female students regarding to eating fried food. Moreover there was statistically significant difference between males and females students regarding to eating fresh vegetables and & fruits routinely. The percentage of male students of study sample who were eating meat and fish routinely was (46.9%), while in female students was (53.9%) without statistically significant difference (Table 2).

The percentage of students who used to eat breakfast regularly was higher among students of the second grade (76.6%), compared to the students of the third grade (62.9%) and the final grade (63.0%), the difference was statistically significant. The percentage between the study samples who used to routinely eat limit amounts of sugar or sweets was (75.9%) among the second grade students, compared to the students of the third grade (55.7%) and the final year (60.9%), the difference was statistically significant. On the other hand among the study sample, nearly (74.5%) of the second grade students reported that they avoided using excess salt in food compared to (62.9%) and (60.4%) of the study sample for the third grade and the last grade respectively, the difference was statistically significant.

Table (1): Socio-demographic characteristics of the studied sample.

| Variable | Male | | Female | | Total | |
|---------------------------------|------|------|--------|------|-------|-------|
| | No. | % | No. | % | No. | % |
| <i>Age of student:</i> | | | | | | |
| <20 | 9 | 2.1 | 5 | 1.2 | 14 | 3.3 |
| 20-24 | 276 | 64.8 | 90 | 21.1 | 366 | 85.9 |
| >24 | 39 | 9.2 | 7 | 1.6 | 46 | 10.8 |
| Total | 324 | 76.1 | 102 | 23.9 | 426 | 100.0 |
| $\chi^2=3.1$ | | | | | | |
| <i>University year:</i> | | | | | | |
| Second Grade | 117 | 27.5 | 20 | 4.7 | 137 | 32.2 |
| Third Grade | 36 | 8.5 | 61 | 14.3 | 97 | 22.8 |
| Final Grade | 171 | 40.1 | 21 | 4.9 | 192 | 45.0 |
| Total | 324 | 76.1 | 102 | 23.9 | 426 | 100.0 |
| $\chi^2=105.2^*$ | | | | | | |
| <i>Living place:</i> | | | | | | |
| With Family | 19 | 4.5 | 16 | 3.8 | 35 | 8.3 |
| Students Hostel | 230 | 54.0 | 56 | 13.1 | 286 | 67.1 |
| With Friend | 67 | 15.7 | 29 | 6.8 | 96 | 22.5 |
| Living Alone | 8 | 1.9 | 1 | 0.2 | 9 | 2.1 |
| Total | 324 | 76.1 | 102 | 23.9 | 426 | 100.0 |
| $\chi^2=15.0^*$ | | | | | | |
| <i>Working status:</i> | | | | | | |
| Not Working | 241 | 56.6 | 96 | 22.5 | 337 | 79.1 |
| Working | 83 | 19.5 | 6 | 1.4 | 89 | 20.9 |
| Total | 324 | 76.1 | 102 | 23.9 | 426 | 100.0 |
| $\chi^2=18.3^*$ | | | | | | |
| <i>Family income:</i> | | | | | | |
| Average Expenditures | 213 | 50.0 | 75 | 17.6 | 288 | 67.6 |
| Higher Than Expenditures | 91 | 21.4 | 22 | 5.2 | 113 | 26.5 |
| Lower Than Expenditures | 20 | 4.7 | 5 | 1.2 | 25 | 5.9 |
| Total | 324 | 76.1 | 102 | 23.9 | 426 | 100.0 |
| $\chi^2=2.2$ | | | | | | |
| <i>Number of family member:</i> | | | | | | |
| Less Than 3 | 3 | 0.7 | 2 | 0.5 | 5 | 1.2 |
| 3-5 | 295 | 69.2 | 78 | 18.3 | 373 | 87.5 |
| More Than 5 | 26 | 6.1 | 22 | 5.2 | 48 | 11.3 |
| Total | 324 | 76.1 | 102 | 23.9 | 426 | 100.0 |
| $\chi^2=15.2^*$ | | | | | | |
| <i>Father's education:</i> | | | | | | |
| Primary | 8 | 1.9 | 4 | 0.9 | 12 | 2.8 |
| Secondary | 73 | 17.1 | 18 | 4.2 | 91 | 21.4 |
| High | 243 | 57.0 | 80 | 18.8 | 323 | 75.8 |
| Total | 324 | 76.1 | 102 | 23.9 | 426 | 100.0 |
| $\chi^2=1.6$ | | | | | | |
| <i>Mother's education:</i> | | | | | | |
| Primary | 13 | 3.1 | 5 | 1.2 | 18 | 4.3 |
| Secondary | 148 | 34.7 | 44 | 10.3 | 192 | 45.0 |
| High | 163 | 38.3 | 53 | 12.4 | 216 | 50.7 |
| Total | 324 | 76.1 | 102 | 23.9 | 426 | 100.0 |
| $\chi^2=0.3$ | | | | | | |

NB: (*) Statistically significant difference.

Table (2): Food consumption pattern among the study sample regarding to sex.

| Variable | Male | | Female | | Total | |
|--|------|-------|--------|-------|-------|-------|
| | No. | % | No. | % | No. | % |
| <i>Have breakfast regularly:</i> | | | | | | |
| Routinely | 227 | 70.1 | 60 | 58.8 | 287 | 67.4 |
| Sometimes | 73 | 22.5 | 36 | 35.3 | 109 | 25.6 |
| Never | 24 | 7.4 | 6 | 5.9 | 30 | 7.0 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=6.7^*$ | | | | | | |
| <i>Limit usage of sugar or sweets:</i> | | | | | | |
| Routinely | 218 | 67.3 | 57 | 55.9 | 275 | 64.6 |
| Sometimes | 77 | 23.7 | 41 | 40.2 | 118 | 27.7 |
| Never | 29 | 9.0 | 4 | 3.9 | 33 | 7.7 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=11.7^*$ | | | | | | |
| <i>Take excess salts in food:</i> | | | | | | |
| Routinely | 26 | 8.0 | 2 | 2.0 | 28 | 6.6 |
| Sometimes | 82 | 25.3 | 37 | 36.2 | 119 | 27.9 |
| Never | 216 | 66.7 | 63 | 61.8 | 279 | 65.5 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| <i>Eat fried food:</i> | | | | | | |
| Routinely | 26 | 8.0 | 9 | 8.8 | 35 | 8.2 |
| Sometimes | 87 | 26.9 | 38 | 37.3 | 125 | 29.3 |
| Never | 211 | 65.1 | 55 | 53.9 | 266 | 62.5 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=8.0^*$ | | | | | | |
| <i>Eat fresh vegetables:</i> | | | | | | |
| Routinely | 227 | 70.1 | 63 | 61.8 | 290 | 68.1 |
| Sometimes | 71 | 21.9 | 34 | 33.3 | 105 | 24.6 |
| Never | 26 | 8.0 | 5 | 4.9 | 31 | 7.3 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=4.5$ | | | | | | |
| <i>Eat fruits:</i> | | | | | | |
| Routinely | 222 | 68.5 | 64 | 62.7 | 286 | 67.1 |
| Sometimes | 77 | 23.8 | 35 | 34.3 | 112 | 26.3 |
| Never | 25 | 7.7 | 3 | 3.0 | 28 | 6.6 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=6.0^*$ | | | | | | |
| <i>Eat meat and fish:</i> | | | | | | |
| Routinely | 152 | 46.9 | 55 | 53.9 | 207 | 48.6 |
| Sometimes | 145 | 44.8 | 40 | 39.2 | 185 | 43.4 |
| Never | 27 | 8.3 | 7 | 6.9 | 34 | 8.0 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=6.4^*$ | | | | | | |
| $\xi^2=1.5$ | | | | | | |

NB: (*) Statistically significant difference.

There was no statistically significant difference between students in different university grades regard to eating fried food. About three fourth of the studied sample of second grade students were consuming fresh vegetables & fruits routinely, on other hand about two third of the students of the third grade and the final grade were consuming fresh vegetables & fruits routinely, the difference was statistically significant. The percentage of study sample who were never eaten meat and fish was more among students in the final grade (11.5%), the difference was statistically significant (Table 3).

Among 277 students, who were engaged in physical activity routinely, the highest percentage (69.4%) was found among male students, while less proportion (51.0%) among female students, the difference was statistically significant. According to intensity of exercise the percentage of moderate physical exercise was higher among male students (50.9%). Compared to (42.2%) in female students, the difference was statistically significant (Table 4).

Out of 277 students, who were engaged in physical exerciseroutinely, the highest percentage

(76.6%) was found among second grade students, while less proportion (58.9%) among final grade students, the difference regarding physical exercise was statistically significant. According to intensity of exercise the percentage of vigorous exercise was higher among second grade students (10.9%) compared to other grades, the difference was statistically insignificant (Table 5).

Most of the male and female students reported that they did not use any type of medicine in last month not prescribed by the physicians, the difference was statistically insignificant. While (82.1%) of male students perform dental examination in the last year compared to (61.8%) of female students, with statistically significant difference. Regarding using of tooth brush there is statistical

significance difference was found between male and female students (Table 6).

Above (90%) of the different age groups of the studied samples were nonsmokers, the difference was statistically insignificant. The behavior concerned with healthy dietary habits was more prevalent among students under 20 year (85.7%) compared to (66.1%) of students between 20 and 24 years and (50.0%) of students above 24 year with statistical significant difference. The percentage of studied samples who practiced physical exercise was greater among students under 20 year (78.6%) compared to (59.3%) among students between 20 and 24 years and (39.1%) among students above 24 year with statistical significant difference.

Table (3): Food consumption pattern among the study sample regarding to university years.

| Variable | Second grade | | Third grade | | Final grade | | Total | |
|--|--------------|-------|-------------|-------|-------------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % |
| <i>Have breakfast regularly:</i> | | | | | | | | |
| Routinely | 105 | 76.6 | 61 | 62.9 | 121 | 63.0 | 287 | 67.4 |
| Sometimes | 23 | 16.8 | 32 | 33.0 | 54 | 28.1 | 109 | 25.6 |
| Never | 9 | 6.6 | 4 | 4.1 | 17 | 8.9 | 30 | 7.0 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=11.4^* p\text{-value}=0.022$ | | | | | | | | |
| <i>Limit usage of sugar or sweets:</i> | | | | | | | | |
| Routinely | 104 | 75.9 | 54 | 55.7 | 117 | 60.9 | 275 | 64.6 |
| Sometimes | 22 | 16.1 | 40 | 41.2 | 56 | 29.2 | 118 | 27.7 |
| Never | 11 | 8.0 | 3 | 3.1 | 19 | 9.9 | 33 | 7.7 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=21.5^* p\text{-value}=0.000$ | | | | | | | | |
| <i>Take excess salts in food:</i> | | | | | | | | |
| Routinely | 11 | 8.0 | 2 | 2.1 | 15 | 7.8 | 28 | 6.6 |
| Sometimes | 24 | 17.5 | 34 | 35.1 | 61 | 31.8 | 119 | 27.9 |
| Never | 102 | 74.5 | 61 | 62.9 | 116 | 60.4 | 279 | 65.5 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=14.5^* p\text{-value}=0.006$ | | | | | | | | |
| <i>Eat fried food:</i> | | | | | | | | |
| Routinely | 8 | 5.8 | 7 | 7.2 | 20 | 10.4 | 35 | 8.2 |
| Sometimes | 33 | 24.1 | 34 | 35.1 | 58 | 30.2 | 125 | 29.3 |
| Never | 96 | 70.1 | 56 | 57.7 | 114 | 59.4 | 266 | 62.4 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=6.5 p\text{-value}=0.164$ | | | | | | | | |
| <i>Eat fresh vegetables:</i> | | | | | | | | |
| Routinely | 106 | 77.4 | 63 | 64.9 | 121 | 63.0 | 290 | 68.1 |
| Sometimes | 21 | 15.3 | 32 | 33.0 | 52 | 27.1 | 105 | 24.6 |
| Never | 10 | 7.3 | 2 | 2.1 | 19 | 9.9 | 31 | 7.3 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=16.1^* p\text{-value}=0.003$ | | | | | | | | |
| <i>Eat fruits:</i> | | | | | | | | |
| Routinely | 105 | 76.6 | 63 | 64.9 | 118 | 61.5 | 286 | 67.1 |
| Sometimes | 22 | 16.1 | 31 | 32.0 | 59 | 30.7 | 112 | 26.3 |
| Never | 10 | 7.3 | 3 | 3.1 | 15 | 7.8 | 28 | 6.6 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=13.3^* p\text{-value}=0.010$ | | | | | | | | |
| <i>Eat meat and fish:</i> | | | | | | | | |
| Routinely | 83 | 60.6 | 55 | 56.7 | 69 | 35.9 | 207 | 48.6 |
| Sometimes | 47 | 34.3 | 37 | 38.1 | 101 | 52.6 | 185 | 43.4 |
| Never | 7 | 5.1 | 5 | 5.2 | 22 | 11.5 | 34 | 8.0 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=24.0^* p\text{-value}=0.000$ | | | | | | | | |

NB: (*) Statistically significant difference.

Table (4): Physical exercise practices among the study sample regarding to sex.

| Variable | Male | | Female | | Total | |
|------------------------------------|------|-------|--------|-------|-------|-------|
| | No. | % | No. | % | No. | % |
| <i>Physical exercise:</i> | | | | | | |
| Routinely | 225 | 69.4 | 52 | 51.0 | 277 | 65.0 |
| Sometimes | 71 | 21.9 | 47 | 46.1 | 118 | 27.7 |
| Never | 28 | 8.6 | 3 | 2.9 | 31 | 7.3 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=24.0^*p\text{-value}=0.000$ | | | | | | |
| <i>Intensity of exercise:</i> | | | | | | |
| Mild | 96 | 29.6 | 55 | 53.9 | 151 | 35.4 |
| Moderate | 165 | 50.9 | 43 | 42.2 | 208 | 48.8 |
| Vigorous | 35 | 10.8 | 1 | 1.0 | 36 | 8.5 |
| Not Applicable | 28 | 8.6 | 3 | 2.9 | 31 | 7.3 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=26.5^*p\text{-value}=0.000$ | | | | | | |

NB: (*) Statistically significant difference.

Table (5):Physical exercise practices among the study sample regarding to university years.

| Variable | University year | | | | | | | |
|------------------------------------|-----------------|-------|-------------|-------|-------------|-------|-------|-------|
| | Second Grade | % | Third Grade | % | Final Grade | % | Total | % |
| <i>Physical exercise:</i> | | | | | | | | |
| Routinely | 105 | 76.6 | 59 | 60.8 | 113 | 58.9 | 277 | 65.0 |
| Sometimes | 22 | 16.1 | 34 | 35.1 | 62 | 32.3 | 118 | 27.7 |
| Never | 10 | 7.3 | 4 | 4.1 | 17 | 8.9 | 31 | 7.3 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=16.3^*p\text{-value}=0.003$ | | | | | | | | |
| <i>Intensity of exercise:</i> | | | | | | | | |
| Mild | 40 | 29.2 | 44 | 45.4 | 67 | 34.9 | 151 | 35.4 |
| Moderate | 70 | 51.1 | 42 | 43.3 | 96 | 50.0 | 208 | 48.8 |
| Vigorous | 15 | 10.9 | 8 | 8.2 | 13 | 6.8 | 36 | 8.5 |
| Not Applicable | 12 | 8.8 | 3 | 3.1 | 16 | 8.3 | 31 | 7.3 |
| Total | 137 | 100.0 | 97 | 100.0 | 192 | 100.0 | 426 | 100.0 |
| $\xi^2=9.7 p\text{-value}=0.137$ | | | | | | | | |

NB: (*) Statistically significant difference.

Table (6): lifestyle behaviour factors among the studied sample regard to sex.

| Variable | Male | | Female | | Total | |
|--|------|-------|--------|-------|-------|-------|
| | No. | % | No. | % | No. | % |
| <i>Taking non -prescribed drugs in last month:</i> | | | | | | |
| No | 283 | 87.3 | 94 | 92.2 | 377 | 88.5 |
| Yes | 41 | 12.7 | 8 | 7.8 | 49 | 11.5 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=1.8$ | | | | | | |
| <i>Dental exam in last year:</i> | | | | | | |
| Yes | 266 | 82.1 | 63 | 61.8 | 329 | 77.2 |
| No | 58 | 17.9 | 39 | 38.2 | 97 | 22.8 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=18.2^*$ | | | | | | |
| <i>Using of tooth brush:</i> | | | | | | |
| Routinely | 216 | 66.6 | 58 | 56.9 | 274 | 64.3 |
| Sometimes | 87 | 26.9 | 40 | 39.2 | 127 | 29.8 |
| Never | 21 | 6.5 | 4 | 3.9 | 25 | 5.9 |
| Total | 324 | 100.0 | 102 | 100.0 | 426 | 100.0 |
| $\xi^2=6.0^*$ | | | | | | |

NB: (*) Statistically significant difference.

Table (7): lifestyle behaviour factors among the study sample regard to age.

| Variable | Age of student | | | | | | | |
|---------------------------------|----------------|-------|----------|-------|----------|-------|-------|-------|
| | (-20) No | % | (20-) No | % | (24+) No | % | Total | % |
| <i>Smoking habits:</i> | | | | | | | | |
| Non Smoker | 13 | 92.9 | 350 | 95.6 | 44 | 95.7 | 407 | 95.5 |
| Smoker | 1 | 7.1 | 16 | 4.4 | 2 | 4.3 | 19 | 4.5 |
| Total | 14 | 100.0 | 366 | 100.0 | 46 | 100.0 | 426 | 100.0 |
| $\chi^2=0.3$ p -value=0.885 | | | | | | | | |
| <i>Dietary habits:</i> | | | | | | | | |
| Healthy | 12 | 85.7 | 242 | 66.1 | 23 | 50.0 | 277 | 65.0 |
| Unhealthy | 2 | 14.3 | 124 | 33.9 | 23 | 50.0 | 149 | 35.0 |
| Total | 14 | 100.0 | 366 | 100.0 | 46 | 100.0 | 426 | 100.0 |
| $\chi^2=7.4^*$ p -value=0.025 | | | | | | | | |
| <i>Physical exercise:</i> | | | | | | | | |
| Practice | 11 | 78.6 | 217 | 59.3 | 18 | 39.1 | 246 | 57.7 |
| Not Practice | 3 | 21.4 | 149 | 40.7 | 28 | 60.9 | 180 | 42.3 |
| Total | 14 | 100.0 | 366 | 100.0 | 46 | 100.0 | 426 | 100.0 |
| $\chi^2=9.4^*$ p -value=0.009 | | | | | | | | |

NB: (*) Statistically significant difference.

Discussion

Our results on Socio-demographic characteristics of the studied sample cleared that, the highest percentage (85.9%) of the students was in the age group (20-24) years and the lowest percentage (3.3%) was in the age group (<20 years). No statistically significant difference between students' males and females regarding age. The majorities (45%) of the total students were in the final year, (40.1%) were males and (4.9%) were females.

Regarding the age group of the study sample, our result agreed with those of the study conducted by Okafor et al., [10] who shows that the largest percentage was among the study sample with the age group of 20-24 (47.9%).

As regards living place, more than two-thirds of the total students (67.1 %) were living in students hostel, while (2.1%) of them were living alone, the difference was statistically significant between students male and females.

On other hand, our results agree with the study of Hanawi et al., [11], which revealed that Most of the participants live in campus (80.9%), 11.6% live in rented houses, and 7.5% with family.

In contrary to our results, Bhuiyan et al., [12], show that 36.4% of the participants were staying with family while the majority of them were not (63.6%).

Regarding working status, the lowest percentage (20.9%) they worked beside study (19.5%) were males and (1.4%) were females. Meanwhile, re-

garding family income, our results cleared that, show that around two-thirds of students (67.6%) reported they had average family income and (5.9%) of them reported insufficient family income.

Similar to ours, Msoga and Anase [13], found in their study that the majority (63.0%) considered themselves as coming from average income families, 23.0% considered themselves coming from well off families and 14.0% considered themselves coming from poor families.

Also, Haider et al., [14] reported that about 84% of graduate students belong to an urban area and had average family income, and 16% belong to the rural areas of a university. Findings of this study are consistent to the study reported by Salahuddin and Talukder [15] and that conducted by Miller and Birch [16] where they concluded, on average academic performance of graduate students with respect to their residential area are equal.

Meanwhile, our results on the food consumption pattern among the study sample regarding to sex, cleared that, the highest percentage of male and female students who used to eating breakfast regularly was (70.1%) and (58.8%), respectively, while the lowest percentage among male and female students who did not use to eating breakfast regularly (7.4%) and (5.9%) respectively.

Ackuaku-Dogbe and Abaidoo [17] show that the prevalence of breakfast skipping among females was significantly higher (74.56%) than in males (70.44%). Also, Mohammed [18] mentioned that the Students who skipped their breakfast were 80%.

Our results agree with the study done by Vinita et al., [19], who stated that for regular breakfast consumers, significantly ($p=0.001$) more male students (19%) had late breakfast (around 10-11 a.m.) than female students (4.9%). Female students (56.2%) started skipping breakfast after starting college, while male students (54.1%) started skipping breakfast at school.

Our results illustrated that the percentage between male and female students who used to routinely eat limited amounts of sugar or sweets was (67.3%) and (55.9%), respectively, while the percentage between male and female students who did not use sugar or sweets was (9.0%) and (3.9%) respectively, the difference was statistically significant. On the other hand, the majority of male and female students reported that they were avoiding use excess salt in food was (66.7%) & (61.8%) respectively, while a small proportion of male and female students who reported that they using excess salt in food was (8.0%) & (2.0%) respectively.

Niba et al., [20] reported that the consumption of sugar-sweetened beverages (twice or more times a week) was common among the students (39.5%), there was no significant difference between males and females. The proportion of those who consumed beans at least twice a week was significantly higher for males (23.5%) than females (17.8%). A significant difference in the consumption of fried foods by gender was reported for fried Irish potatoes. More than half (53.4%) of the participants ate fried foods (fried Irish potatoes and plantain) twice or more times a week. The consumption of fried food five or more times a week was more common among females (9.5%) than males (6.2%).

Our results agreed with those of Biswas et al., [21] about (29.9%) of the respondents had knowledge regarding the health effects of dietary salt intake, and 87.8% perceived that dietary salt reduction was important. More than half (52.4%) thought that they were taking the right amount of salt or less. Only 4.1% perceived that they consume too much dietary salt. The majority (93.2%) responded positively when they were asked if they knew about the health problems that excess salt consumption can create. More than two-thirds of the respondents (70.7% including always, often, and sometimes) consumed processed foods containing a high levels of salt. More than seven out of ten (72.8%) of the students were avoiding processed food as their control activity of salt intake habit.

Our study illustrated that eating fresh vegetables and & fruits routinely. The percentage of male

students of the study sample who were eating meat and fish routinely was (46.9%), while in female students was (53.9%).

In line with our study, about (89.5%) of subjects likes fruits and vegetables. (96.9%) of students reported that eating fruits and vegetables makes them feeling healthy, while (89.5%) considered fruits and vegetables as having a good taste. (92.7%) of the students believe that eating fruits and vegetables gives them more energy. (91.2%) believe it is healthier to eat fruits than juices, while (37.1%) don't believe that avoiding fruits and vegetables would make them unhealthy, (10%) don't believe that fruits and vegetables reduce chronic disease risk [22].

In terms of meat and fish consumption Hosu et al., [23] found that a total of 80% of male students (aged 18 to 38) in BDU consumed more than the recommended meat intake (52g and 56g) per day. Despite the fact that gender class at both colleges reflects the peculiarities of consuming the required amount of meat per day, female students consume less meat (46g) per day than their male counterparts.

Also, we found the percentage of students who used to eating breakfast regularly was higher among students of the second grade (76.6%), compared to the students of the third grade (62.9%) and the final grade (63.0%), the difference was statistically significant. The percentage between the study samples who used to routinely eat limit amounts of sugar or sweets was (75.9%) among the second-grade students, compared to the students of the third grade (55.7%) and the final year (60.9%).

Alzahrani et al., [24] observed that the total eating score was compared across categorical variables significant for the following factors: Different academic years, with the greatest scores in the sixth year and the lowest scores in the fifth year.

We found about three fourth of the studied sample of second-grade students were consuming fresh vegetables & fruits routinely, on other hand about two-third of the students of the third grade and the final grade were consuming fresh vegetables & fruits routinely. The percentage of the study sample that never ate meat and fish was more among students in the final grade (11.5%).

In agreement with our results Nola et al., [25] who Studied eating and lifestyle habits of first (n=169) and sixth (n=272) year students, aged 18 to 26 years, attending a Medical School in Zagreb, were compared related to the years of study. Both

year students reported a similar number of meals per day, irregular consumption of meals, skipping breakfast, frequency of vegetables, fruits, cereals, sweets, milk, and dairy products consumption.

Regarding physical exercise routinely among the study sample, our study revealed that, the highest percentage (69.4%) was found among male students, while less proportion (51.0%) among female students, the difference was statistically significant. According to intensity of exercise, the percentage of moderate physical exercise was higher among male students (50.9%). Compared to (42.2%) in female students.

Bianchini de Quadros et al., [26] found that the prevalence of physical inactivity was 13.8% among the university freshmen being studied, a higher percentage of female students being inactive than male students.

Our study was supported by Vinita et al., [19] where the highest percentage was found among male students (30%), while (11.3%) among female students who practice physical activity every day.

Our findings are consistent with those of El-Nimr et al., [27] who found that more than half of students (56%) reported engaging in physical exercise, with a statistically significant difference between males and girls (73.2% of males versus 39.1% of females, $2=47.252$, $p<0.001$).

Our study demonstrated that the highest percentage of the study sample who was engaged in physical exercise routinely (76.6%) was found among second-grade students, while less proportion (58.9%) among final grade students, the difference regarding physical exercise was statistically significant. According to intensity of exercise, the percentage of vigorous exercise was higher among second-grade students (10.9%) compared to other grades.

In addition, Lipošek et al., [28] revealed that binary logistic regression was used to examine the impact of physical exercise on academic success. Academically, the majority of students was successful and was usually admitted to the second year of study (86.5%). Regular entrance to the second year of study was influenced by two or three hours of weekly physical activity.

In the present study, we found that (82.1%) of male students perform a dental examination in the last year compared to (61.8%) of female students, with a statistically significant difference. Regarding using of toothbrushes.

In addition, Barnabas [29] reported that females had much more dental appointments and paid more attention to their oral health than males (52.5% vs. 28.1%, respectively). Females, compared to males, used a medium-strength toothbrush and brushed their teeth more frequently (90.0% vs. 52.6%).

Unlike our findings, Halawany et al., [30] found that a higher percentage of females (71.8%) than males (51.3%) reported brushing their teeth twice a day on average. The behavior of males and females when brushing their teeth.

In our results we found that above (95.5%) of the different age groups of the studied samples were nonsmokers, the difference was statistically insignificant. The behavior concerned with healthy dietary habits was more prevalent among students under 20 years (85.7%) compared to (66.1%) of students between 20 & 24 years and (50.0%) of students above 24 years with a statistically significant difference. The percentage of studied samples who practiced physical exercise was greater among students under 20 years (78.6%) compared to (59.3%) among students between 20 & 24 years and (39.1%) among students above 24 years.

Smoking prevalence is highest among young adults: 23% of those aged 16-24 and 24% among the 25-34 age groups [31].

Furthermore, Nasser and Zhang [32] discovered that smoking prevalence was higher ($p<0.001$) among students older than 24 years old; the prevalence was 54.5% in students older than 24 years old vs. 44.8% in students younger than 18 years old, and 21.0% in students aged 18-24 years old. Seniors in their third and fourth years were significantly more likely than juniors to smoke.

Regarding to healthy dietary habits, the university students reported 2.86 ± 1.139 healthy dietary practices, according to their age [$t(825)=2.377$, $p=0.018$] and residence [$t(814)=4.590$, $p=0.000$] [33]. Regular engagement in sports practice was higher in boys than girls in all age groups [34].

Conclusions:

- The majority of study sample among students were in final year, In terms of living arrangements, more than two-thirds of all students were lived in a student hostel.
- Around two-thirds of students said their family income was average. Meanwhile, the majority of study sample among students said their family size was (3-5) members, In terms of their parents' education; however, there is no statistically sig-

nificant difference between male and female of the study sample.

- The percentage of male students who were eating breakfast routinely & were eating limit amounts of sugar or sweets routinely & were avoiding use excess salt in food routinely was higher more than females.
- The percentage of female students who were eating meat & fish routinely was higher more than male. Conversely the percentage of male students who were eating fruits & vegetables routinely was higher more than females.
- About two-thirds of male students (65.4%) were never drinking tea or coffee, while 39.2% of female students. The proportion of male and female students in the study sample who were drinking soda was (59.0%) and (58.8%), respectively.
- The percentage of students who were eating breakfast routinely (76.6%) & who were eating limit amounts of sugar or sweets was (75.9%) was higher among students in the second grade compared to students in other grades.
- The highest percentage regarding to practices of physical activity and moderate intensity of exercise was among male students of the study sample.
- The highest percentage regarding to practices of physical activity and moderate intensity of exercise was among students of second grade the study sample compare to students of other grades.
- Among the study sample the highest percentage regarding to good oral hygiene was among male students compare to female students.
- Regarding to dental examination in the last year & using of toothbrush the highest percentage among the study sample was among second grade compare to other grades.
- The percentage of non-smokers was more than 90% among students of different age group, the students of age group (-20) had the highest percentage of eating healthy food and practicing physical exercise than other students.

Recommendations:

Based on the results of this study, this study recommends the following:

- Establishment of committees in the university to achieve the health needs of the students and try to help them in monitoring their health behaviors through measurement of their healthy lifestyle and give them advice for changing their health behaviors to desirable ones.
- Enhancements physical education programs in the university in order to upgrade the physical activity of college students.
- Integration of healthy lifestyle education into the formal primary and secondary school educational program.
- Promotion of healthy lifestyle behaviors via mass media campaigns, school-based interventions, and healthcare interventions tailored to the needs of lower socioeconomic groups.
- Activate the role of awareness about hazards of unhealthy lifestyle behaviors among students and their impact on their health in the future.
- Implementation of the anti-smoking program among university students.
- Further researches targeting the impact of healthy lifestyle behaviors should be conducted among other students in different colleges.

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دراسة السلوكيات الصحية وخصائص أسلوب الحياة لدى طلاب الطب بجامعة الأزهر، فرع أسيوط: دراسة بحثية

خلفية البحث: أسلوب الحياة هو طريقة حياة الأفراد والعائلات والمجتمعات التي يمكن أن تكون صحية أو غير صحية من حيث السلوكيات الشخصية مثل التغذية والنشاط البدني وإدارة الإجهاد. قد يؤدي نمط الحياة الصحي إلى تحسين الصحة والسعادة، وعلى النقيض من ذلك، قد يؤدي نمط الحياة غير الصحي إلى المرض والاعتلال.

الهدف من البحث: معرفة العلاقة بين متغيرات سلوك نمط الحياة الصحي لعينة الدراسة وجنس الطلاب والسنوات الجامعية.

العينة وطرق البحث: تم إجراء دراسة مقطعية تضمنت ٤٢٦ طالباً تم جمع بياناتهم باستخدام استبيان المقابلة الذي يتكون من قسمين التاليين: (١) البيانات الشخصية: العمر، الجنس، السنة الجامعية، مكان المعيشة، الحالة العملية، دخل الأسرة، عدد الطلاب. أفراد الأسرة، تعليم الأب، وتعليم الأم، (٢) سلوكيات نمط الحياة الصحية وتضمنت سبعة متغيرات: التدخين، والعادات الغذائية، والتمارين البدنية وعادات الصحة الذاتية، وقضاء وقت الفراغ، وتناول الأدوية غير الموصوفة في الشهر الماضي، ونمط النوم. وتم إجراء الدراسة خلال الفترة من مايو ٢٠١٩ حتى نهاية مارس ٢٠٢١.

نتائج البحث: كان متوسط عمر العينات الكلية 21.5 ± 1.5 سنة. الغالبية (٧٦.١٪) كانوا من الذكور. وسجلت أعلى نسبة للطلاب (٨٥.٩٪) في الفئة العمرية (٢٠-٢٤) عام، بينما كانت النسبة الأقل (٣.٣٪) لدى طلاب الفئة العمرية (أقل من ٢٠) عاماً. لا توجد فروق ذات دلالة إحصائية في العمر بين الطلاب والطالبات وكانت غالبية الطلاب في السنة الأخيرة (٤٥٪) من الذكور بنسبة بلغت (٤٠.١٪) والإناث (٤.٩٪)، وكان الفارق ذو دلالة إحصائية.

أظهرت هذه الدراسة أن (٦٧.٦٪) من الطلاب أفادوا أن لديهم متوسط دخل عائلي، (٧٠.١٪) و (٥٨.٨٪) من الطلاب والطالبات على التوالي كانوا يتناولون الإفطار بانتظام، (٧٦.٦٪) من طلاب الصف الثاني كانوا يتناولون الإفطار بانتظام، (٦٩.٦٪) من الطلاب كانوا نشطين بدنياً، (٧٦.٦٪) من الصف الثاني كانوا يمارسون الرياضة بشكل منتظم، (٨٢.١٪) من الطلاب الذكور قاموا بفحص الأسنان في العام الماضي.

الاستنتاج: (٦٧.١٪) من الطلاب كانوا يعيشون في نزل الطلاب، وكان الطلاب يتناولون الإفطار واللحوم والأسماك بانتظام أكثر من الإناث، وكان الطلاب الذكور نشيطين بدنياً أكثر من الإناث، وكان (٧٦.٦٪) من طلاب الصف الثاني يمارسون الرياضة بنشاط مقارنة بالصفوف الأخرى.