Impact of Lifestyle on Academic Performance of Medical Students at University of Tabuk

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ABSTRACT We aimed toassesslifestyle effect on academicachievement among medical students.

The study was conducted at University of Tabuk, faculty of medicine.Eighty-nine (89) studentswere enrolled. Dataincludedsocio-demographic factors, reading materials, study preferences, learning styles, weekend learning activities, sleep duration, and hours spent on social media.Students was then categorized to excellent andaverage groupsas indicated bygrade point aggregation(GPA) ≥ 4 and < 4 respectively.

The majority (73%) of the students were excellent,(52.8%) used to sleep from 6 to 9 hours per day, and (43.9%%) of them spent less than two hours daily on social media.Significant statistical differences were evident between excellent and average students concerning weekend learning activity, sleeping between 6 and 9 hours, and spending few hourson social media (P <0.05).

Introduction:

Medical education is marked by stressful events, which can be categorized into three stages, the first one, during which the students adapt by changing their lifestyle and learning method. An intermediate stage then follow, when students confront extensive study content and various methods of assessments. The final phase, the students, is faced with many demands, requirements, responsibilities, and insecurities that characterize the end of the program (Frenk J, et al 2010).

Student's performance can be affected by demographic factors, active learning, student attendance, social activities, as well as peers influence and course assessment. The relation between Students' academic performance and lifestyle thoughwidely studied, not yet explored clearly, not only because of variations in culture and social background of the students, but also because of variations in curriculum design and manner of assessment.

We aimed to assess the impacts of lifestyle on the academic achievement, as assessing those factors, help consolidate their favorable effects, and mitigate negative consequences on learning outcomes.

Methods

Study population:

A cross-sectional observational study was conductedfrom April to June 2014 at the University of Tabuk, faculty of medicine. Eighty-ninestudents were enrolled; they were from third, fourth, fifth, and six academic classes.The objectives of the study were explained to participants; they responded to a self-administered questionnaire.Thesurvey was designed to assess demographics, English language entry score, attendance, seating preferences, reading materials, study preferences, reading styles, dietary habits, parents education, smoking, weekend educational activities, sleep duration, and average hours spent on social media.

Student performance was stratified as "excellentand average",indicated byGPA ≥4, GPA <4respectively.

Statistical analysis:

Numerical variables were expressed as the mean±SD. Both student t test and chi-square test were used for testing the significant difference between study groups. The results were considered statistically significant when $p \leq 0.05$.Statistical Package for the Social Sciences software (SPSS version 20) and MS Excel 2010 were used for the data management and statistical analyzes.

Approval was obtained from the ethical committee of theFacultyof Medicine.

Results:

Of the 89 students, 57 (64%) of them were males. Their ages ranged from 20 to 25 years with a mean of 22.47 years; table-1 showed other students' demographic characteristics. Fifty-nine (66.3%) of students scored (A) in English language, 21 (23.6%) of them scored (B), and 9 (10.1%) of them scored (C).Seventy-nine (88.8%) of the students had good attendance, 8 (9%), 2 (2.2%) of the students had moderate and weak attendance respectively. Sixty-four (71.9%) of the students preferred sitting in front. Table-2 showed other characteristics. There were statistically significant differences between excellent and average students (P-value = 0.000) concerning weekend learning activities, sleeping from 6 to 9 hours and spending fewer hours on social media. Table (3).

Table 1: Demographic and habitual characteristics of the study group:

Characteristics	Number (%)
Sex	
Male	57 (64%)
Female	32 (36%)
Residence:	
Inside Tabuk	68 (76.4%)
Outside Tabuk	21(32.6%)
Living with:	
Family	72 (80.9%)
Alone	7 (7.9%)
With friend	10 (11.2%)
Parents' education	
Father	
Basic education	33 (37.1%)
Higher education	56 (62.9%)
Mother	
Basic education	48 (53.9%)
Higher education	41(46.1%)
Daily sleeping hours	
<6	33 (37.1%)
6-9	47 (52.8%)
>9	9 (10.1%)

Table 2: learning characteristics among the study group:

Characteristic	Number (%)
English scores:	
Excellent	59 (66.3%)
Good	21 (23.6%)
Pass	9 (10.1%)
Seating preference	
In front	64 (71.9%)
Back	25(28.1%)
Reading style	
Following timetable	62(69.7%)
Arbitrary	27(30.3%)
Reading material	
Textbook	33 (37.1%)
E-book	11 (12.4%)
Lecture note	23 (25.8%)
Mixed	22 (24.7%)

Table-3 Hours spent on social media and weekend learning, and their relation to GPA

Characteristic	Range	Mean	95% CI	P-value
Weekend learning activity	0-15	3.3±3.2	2.6-4.1	0.000
hours spent onsocial media	0-12	3.4±2.6	2.9-4.0	0.000

Discussion:

Medical school is challenging and creating an environment of psychological impact on students' health [Finkelstein, et al (2007) &Graham, et al (2003), & Bonne, et al (2003)]. Medical students face a higher degree of stress compared with their matched peers in other programs (Chan, 1991). They are also prone to daytime somnolence (Alóe, et al 1997).

Our study showed a statistically significant relation between excellent performance and sleep duration from 6-9 hours,in accordance with BaHammam AS, et al (2012), who concluded that academic performance was adversely affected by the short duration of nocturnal sleep, late bedtimes, and increased daytime somnolence.Similarly, Lemma S, etal (2014) showed that the mean CGPA was highest for students who slept 6–7 h per night compared to those who slept higher or lower than 6–7 hours.This can be explained by the beneficial effect of sleep on memory [Gorfine, et al (2007) & Tucker and Fishbein (2008)] and the robust effect of total sleep deprivation on long-term memory (Kaida K, et al 2015).

Twenty-five (43.9%) of the excellent students paid less than two hours per day on social media, in accordance with Walsh JL.et al (2013), who explored the adverse effect of media use on academic outcomes.Most probably due to the distracting effects of social media.

Medical students were busy during weekdays. Several academic tasks needed to be accomplished, so that weekend catch-up study was crucial.Thirty-four (65.5%) of the excellent students, spent 2-5 hours on the weekend on educational activities, to our knowledge no study analyzed the relation between weekend academic activity and student performance.

Our study has several limitations.First, reliance on theself-reported questionnaire. Second, the small sample, both had adverse effect on the reliability of the study.

Conclusion: Sleeping 6 to 9 hours per day, spending fewer hours on social media, and studying on the weekend, were associated with good academic performance. Further larger studies are needed to analyze closely these associations.

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