The Relationship Between Health Factors And Satisfaction And Academic Performance Among Al Buraimi University College Students, Oman

*Dr.Abdul Hadi M. Al Khasawneh

INTRODUCTION

Health is considered to be one of the most important aspects of life, and one of the major factors that influences the individuals' performance. It affects the physical and mental abilities of individuals. An individual needs to maintain a healthy body to be able to perform physical and mental activities. When individuals suffer from diseases, their performance will be degraded in most situations. In general, health can contribute to the human lifestyle. In order for an individual to lead a healthy life, he must adopt healthy habits that can enhance his performance in life.

College is seen as a crucial time of transition from school life to the new college environment, where students can incorporate health-related habits to their new lives. The college life is more demanding and causes stress to the students. It also requires more independence, self-control and self-regulation.

College students not only face new academic challenges, but they also face psychological challenges in the new environment. Although some researchers (Rawson, Bloomer, and Kendall, 2001) (Angela Banitt, 2002) have studied new challenges that the students face when they start their new lives (e.g. cigarettes smoking, nutrition, sleeping behavior, physical exercise),yet limited attention has been given to the health habits and its relation to students' academic performance.

Few researches studied college students and their health habits and its influence on students' satisfaction and academic performance. Some studies (Budd&Preston, 2001) (Pilcher& Walters, 1997) indicate that college students do not adopt healthy habits. Some studies showed that the difficulty in achieving an optimal academic performance is a result of some of their incorrect health habits.(Kelly& Clanton, 2001).If college students are unable to achieve the basic health requirement, they will face physical and mental difficulties during their academic life.

SIGNIFICANCE OF THE STUDY

Students' life at the college includes many important factors and opportunities. These factors include: nutrition, sleeping behavior, religious involvement, physical activities, and stress. College students encounter many changes in their daily living habits. (Bran & Born, 2004). Academic achievement is important for college students, and academic performance can determine, to a large extent, their future career. It was, therefore, imperative to investigate the health factors that can influence the students' satisfaction and academic performance.

STATEMENT OF THE PROBLEM

Many college students are not aware of their health habits and its impact on the function of their bodies and minds. Several previous studies examined the college students' health habits, but fewer studies were conducted to explore the relationship between specific health factors and college students' academic performance.

PURPOSE OF THE STUDY

The purpose of the present study was to investigate several important health habits such as: nutrition, sleeping behavior, religious involvement, physical activity, and stress and to examine how they are related to the Satisfaction and academic performance of Al Buraimi University College Students.

RESEARCH QUESTION

The following broad research question is the guiding force for this study:

*Assistant Professor of Marketing, Al Buraimi University College ,Sultanate of Oman. Email : abu_eihab@hotmail.com

What is the relationship between health related behaviors and College students' satisfaction and academic performance?

HYPOTHESES

Ha₁: There will be positive association between college students' nutrition and students' satisfaction and academic performance.

Ha₂: There will be positive association between college students' sleeping behavior and students' satisfaction and academic performance.

Ha₃: There will be positive association between college students' religious involvement and students' satisfaction and academic performance.

Ha₄: There will be positive association between college students' participation in physical activities and students' satisfaction and academic performance.

Ha₅: There will be positive association between college students' stress and students' satisfaction and academic performance.

DEFINITIONS

❈**Academic Performance:** The ability to study and remember facts, and how they fit together, and the ability to communicate your knowledge verbally or on paper.

❈**Satisfaction:** The assessments of person's quality of life, dependent of the values and criteria deemed important by the individual.

❈**Physical Activity:** Any bodily movement produced by skeletal muscles which results in an expenditure of energy.

❈**Stress:** An emotionally disruptive or upsetting condition occurring in response to adverse external influences and capable of affecting physical health.

❈**Sleep:** A natural and periodic state of rest during which consciousness of the world is suspended.

REVIEW OF LITERATURE AND PREVIOUS STUDIES

There are many lifestyle factors that can lead to a healthy life. Nutrition is one major factor that is essential for the body to function properly. (Department of Health and Human Services, 2005).

(Michelle D. Florence, Mark Asbridge, Paul J. Veugelers, 2008) examined the association between overall diet quality and academic performance in a sample of 5200 school students in Canada. Across various indicators of diet quality, an association with academic performance was observed. Students with decreased overall diet quality were significantly more likely to perform poorly on the assessment. These findings demonstrate an association between diet quality and academic performance. This research supports the broader implementation and investment in effective school nutrition programs that have the potential to improve student access to healthy food choice, diet quality and academic performance.

Another major factor that contributes to the individual's health is sleeping behavior. Sleep is very important for an individual's life and is especially important for college students.(Kelly, Kelly , and Clanton 2001) hypothesized that undergraduate students who called themselves "short-sleepers" would have a lower overall grade point average than those calling themselves " long-sleepers".

A study was conducted by (Dearlove O. Briggs G. 2006).The findings strongly suggested that: **(a)** Students of different education levels (from school to university) are chronically sleep deprived or suffer from poor sleep quality and consequent daytime sleepiness; **(b)** Sleep quality and quantity are closely related to student learning capacity and academic performance; **(c)** Sleep loss is frequently associated with poor declarative and procedural learning in students; **(d)** Studies in which sleep was actively restricted or optimized showed, respectively, a worsening and an improvement in academic performance.

Pilcher and Walters, 1997 highlighted the effects of sleep deprivation on cognitive performance and psychological variables related to cognitive performance were studied in 44 college students. As expected, sleep-deprived participants performed significantly worse than the non-deprived participants on the cognitive task. The findings

indicate that college students are not aware of the extent to which sleep deprivation negatively affects their ability to complete cognitive tasks.

Jessica, F. Becky,B. Stacie,C, hypothesized that the sleepiness of fulltime college students aged 18-23 would negatively correlate with their cumulative college GPA.The 47 participants completed the Epworth Sleepiness Scale and their GPAs were obtained from the registrar. The data were analyzed and no significant difference between the variables was found. Therefore, the null hypothesis was retained.

Religious involvement is another important factor in an individual's life. Integrating religion into life is essential and beneficial. A national study of spirituality in higher education was done in the 2004.One of the most critical questions posed by this study is how spirituality affects other aspects of the student's college experience. The results of this study showed that spirituality is positively related to graduate level degree aspirations, college GPA, and intellectual self-confidence. Additionally, spirituality is positively associated with being satisfied with the sense of community on campus, interaction with other students, and the overall college students.

In addition to the previous factors, other factor that contributes to the overall performance among individuals is participation in physical activities .Participation in physical activities can promote physical health as well as mental health. (Feng S. Din 2006) conducted a study to determine whether participating in sport activities had any impact on students' academic achievements in rural high schools. The participants (N=225) immediate pre-season grades were compared with their immediate post-season grades in the same course. Results of data analyses indicated that no significant differences were found between the students pre-season and post-season grades, which suggests that participating in school sponsored sports activities did not affect the academic achievement for the participating rural high school students.

A positive relationship of physical activity and academic performance has been explored through several studies conducted in the USA by California Department of Education (Dwyer, Sallis, Blizzard, Lazarus & Dean, 2001), (Tremblay et al. 2000) and others. These studies support one another in suggesting that when a substantial amount of school time is dedicated to physical activities, academic performance meets and may even exceed that of students not receiving additional physical activity (Shephered, 1997).

Stress is another factor that can affect individuals' life. College students face many challenges to deal with and have many obstacles to overcome. Stress is one of these obstacles that can affect students' academic performance. (Laura, P. Womble, 2001) conducted a study to detect if there is a correlation between the stress that students perceive that they are under, and their GPA's. All of the participants (N=25) were tested under the same basic conditions. This study was unable to show a correlation between a student's amount of perceived stress and the student academic performance; though prior researches showed there was a connection between the two.

Tara Smith and Kimberly Renk, 2007 examined potential predictors of the academic-related stress experienced by college students. 93 undergraduate students completed self - report questionnaire that measures the variables under study. This study suggested a number of variables related to college students' academic related stress, especially the manner in which students cope with stress, parenting styles and social support.

The current study covers some potential health factors (nutrition, sleeping, religious involvement, physical activities, and stress to formulate a general health assessment. The current study also investigates these health factors to identify which health factor had stronger association with student's satisfaction and academic performance.

METHODS
PARTICIPANTS

This study was conducted during the period Dec.2008 to Jul.2009.

The participants of this study were three hundred undergraduate students conveniently selected from the total student population at Al Buraimi University College/Oman. Of the 300 students, 237 students completed the survey. A convenience sampling of 237 students- both male and female (n=150 female, n=87 male) and the ages were eighteen to thirty years and above.

MATERIALS

A survey of 45 questions was used to examine the health related behaviors of the participants. The survey was adopted from the following surveys: Student Health and lifestyle questionnaire (Engs. 2002), lifestyle and Nutrition

Questionnaire, and Impact of Stress Factors on College Students Academic Performance (Womble, 2001).
The participants were asked questions related to their behavior on nutrition, sleep, religious involvement, physical exercise, and stress. The questions were asked to measure how often students skip meals, and how often they take fast food, in addition to how much sleep they get each night, and how often participants practice prayers at home and at mosque, and the amount of exercise they practice every week. The participants were also asked about the sources of stress, and to report their current grade point average. Demographic questions were also included in the survey.

RELIABILITY AND VALIDITY

In order to establish the reliability of the research questionnaire, it was given to professionals in the related area for further evaluation. Cronbach's Alpha was used to measure the internal reliability of the instrument. As a rule, reliability of 0.60 or higher is required. For this instrument, the reliability was measured using Cronbach's Alpha. Cronbach's Alpha value was .864,therefore it is reliable.
Validity refers to whether the respondents have answered the questions honestly and consistently. This issue depends on the students' attitudes.

DESIGN AND PROCEDURES

This study was correlational design. The purpose of the study was explained to the participants, then participants were handed the surveys and they were given as much time as necessary to complete the surveys. They were also told not to put their names on the survey. After the participants completed the survey, they were debriefed and thanked.

RESULTS
CHARACTERISTICS OF THE SAMPLE

Table 1: The Demographic Characteristics Of The Sample

Variables	Categories	Frequency	Percentage %
Gender	Male	87	36.7
	Female	150	63.3
Age	18-20 years.	24	10.1
	21-23 years.	111	46.8
	24-26 years.	52	21.9
	27-29 years.	32	13.5
	30 years. and above	18	7.6
Place of residence	On- Campus	78	32.9
	Off- campus	159	67.1
Level of study	Freshman	12	5.1
	Sophomore	56	23.6
	Junior	67	28.3
	Senior	102	43

This study tested a total of 300 participants of undergraduate students from Al Buraimi University College. Questionnaires of 63 students were excluded from the analysis because they were incomplete. Of the remaining 300 students, 237 completed the survey. (Response rate=79%). Table 1 presents the demographic characteristics of the sample. The participants included 36.7% male and 63.3% female respondents. Participant's age ranged from 18 to 30 years and above, with a 56.9% age of 18 to 23 years. 32.9% of the participants live in on-campus apartments and 67.1% live in off-campus. The participants' classifications included 5.1% freshmen, 23.6% sophomore, 28.3% juniors, and 43% seniors.

DESCRIPTIVE STATISTICS

Table 2: Means and Standard Deviation

Variables	All Students		Male		Female	
	M	SD	M	SD	M	SD
Satisfaction and GPA	4.502	1.182	4.500	1.588	4.520	1.288
Nutrition	3.281	.5541	3.206	.5374	3.316	.5733
Sleeping Behavior	3.009	.7895	2.966	.8258	3.029	.8050
Religious involvement	3.467	1.005	3.429	.9695	3.412	1.082
Physical Exercise	1.50^7	.5999	1.547	.4939	1.492	.5006
Stress	3.220	.6638	3.187	.6691	3.252	.6499

Table 2 indicates descriptive statistics for the sample. The results from the descriptive statistics shows that the entire sample of respondents score highest on the religious involvement factor (3.467) (S.D =1.005), and lowest on the physical exercise factor (1.507) (S.D =.5999). Table 2 shows also that the male students score highest on the religious involvement factor, (3.429) (S.D =.9656) and lowest on the physical exercise factor. Female students as well, score highest on the religious involvement factor (3.412) (S.D =1.082) and lowest on the physical exercise factor (1.547) (S.D =.4939).

Table 3: Correlation Between Health Variables And Satisfaction And GPA

Health Variables	All students (N=237)	Male (n=87)	Female (n=150)
	Satisfaction and GPA		
Nutrition	.735**	.785**	.762**
Sleeping Behavior	.881**	.890**	.885**
Religious involvement	.863**	.778**	.828**
Physical Exercise	-.006	-.195	-.093
Stress	.643**	.760**	.597**

*P< 0.05 **P< 0.01 ** Correlation is significant at the 0.01 level

The hypotheses were tested to examine the relationship between the health variables and the satisfaction and GPA. Table 3 shows the correlations between the health variables and satisfaction and GPA.

TEST OF THE HYPOTHESES

Ha$_1$: The first hypothesis states, "There will be positive association between college students' nutrition and students' satisfaction and academic performance".
The hypothesis was tested by using Pearson correlation for the respective variables. Table 3 indicated that significant positive correlation was found between nutrition and satisfaction and GPA for the total sample (r =.735 P<.01) for male student (r =.785 P<.01) for female student (r =.762 P<.01). The result is significant. Hence, there exists a positive relationship between nutrition and students' satisfaction and academic performance. That is, students who always have breakfast, fruit and vegetables, and who do not skip meals have a corresponding increase in their level of satisfaction and GPA.

Ha$_2$: The second hypothesis states, "There will be positive association between college students' sleeping behavior and students' satisfaction and academic performance".
The hypothesis was tested by using Pearson correlation for the respective variables. Significant positive correlation was found between sleeping behavior and satisfaction and GPA for the total sample (r =.881P<.01) for male student (r =.890 P<.01) for female student (r =.885 P<.01). The result is significant. Hence, there exists a positive relationship

between sleeping behavior and students' satisfaction and academic performance. That is students who get 7-8 hours of sleep each night, nap, and go to bed early each night have a corresponding increase in the level of satisfaction and GPA.

Ha$_3$: The third hypothesis states, "There will be positive association between college students' religious involvement and students' satisfaction and academic performance".

The hypothesis was tested by using Pearson correlation for the respective variables. Significant positive correlation was found between religious involvement and satisfaction and GPA for the total sample (r = .863 P<.01) for male student (r =.778 P<.01) for female student (r = .828 P<.01). The result is significant. Hence, there exists a positive relationship between religious involvement and students' satisfaction and academic performance.

That is, students who often practice prayers at home and at mosque, and who believe that religion will provide them with guidance and strength have a corresponding increase in the level of satisfaction and GPA.

Ha$_4$: The fourth hypothesis states, "There will be positive association between college students' participation in physical activities and students' satisfaction and academic performance".

The hypothesis was tested by using Pearson correlation for the respective variables. Significant negative correlation was found between physical activities and satisfaction and GPA for the total sample (r = -.006 P<.01) for male student (r = -.195 P<.01) for female student (r =-.093 P<.01). In other words, there exists no significant relationship between physical activities and satisfaction and GPA.

Ha$_5$: The fifth hypothesis states, "There will be positive association between college students' stress and students' satisfaction and academic performance".

The hypothesis was tested by using Pearson correlation for the respective variables. Significant positive correlation was found between stress and satisfaction and GPA for the total sample (r =.643 P<.01) for male student (r =.760 P<.01) for female student (r =.597 P<.01).The result reflects that students who rarely feel worried, depressed, or overwhelmed by time pressure have higher level of satisfaction and GPA.

The qualitative data was checked to see the order in which the students ranked their stress factor. Not getting enough sleep ranked number one with 122 responses, working full-time came at number two with 114 responses, and being married came number three with 105 responses.

Table 4 : Anova

		Sum of Squares	df	Mean Square	F	Sig.
X1	Between Groups	46.828	10	4.683	45.932	.000
	Within Groups	23.041	226	.102		
	Total	69.868	236			
X2	Between Groups	125.052	10	12.505	128.029	.000
	Within Groups	22.074	226	.098		
	Total	147.126	236			
X3	Between Groups	184.384	10	18.438	76.764	.000
	Within Groups	54.284	226	.240		
	Total	238.668	236			
X4	Between Groups	4.032	10	.403	1.589	.111
	Within Groups	57.347	226	.254		
	Total	61.379	236			
X5	Between Groups	51.798	10	5.180	22.422	.000
	Within Groups	52.209	226	.231		
	Total	104.007	236			

One way ANOVA test was used to test the relationship between the health factors and college's student GPA as Table 5 shows that there is a significant relationship between (x1) nutrition and (y) satisfaction and academic performance. The between group variance is large enough relative to the within group variance, and the F value (45.932) exceeded the critical level for α = .05 (95% confidence) at 2.21).Then, the null hypothesis is rejected and the alternate hypothesis

is accepted. Table 5 shows that there is a significant relationship between (x2) sleeping behavior and (y) satisfaction and academic performance. The between group variance is large enough relative to the within group variance, and the F value (128.029) exceeded the critical level for $\alpha = .05$ (95% confidence) at 2.21.Then the null hypothesis is rejected and the alternate hypothesis is accepted.In addition, there is a significant relationship between (x3) religious involvement and (y) satisfaction and academic performance. The between group variance is large enough relative to the within group variance, and the F value (76.764) exceeded the critical level for $\alpha = .05$ (95% confidence) at 2.21. Then the null hypothesis is rejected and the alternate hypothesis is accepted.

Table 5 shows that there is no significant relationship between (x4) physical exercise and (y) satisfaction and academic performance. The between group variance is not large enough relative to the within group variance, and the F value (1.589) is lower than the critical level for $\alpha = .05$ (95% confidence) at 2.21. Then the null hypothesis is accepted and the alternate hypothesis is rejected. Table 5 presents a significant relationship between (x5) stress and (y) satisfaction and academic performance. The between group variance is nearly the same as within group variance, and the F value (22.422) exceeded the critical level for $\alpha = .05$ (95% confidence) at 2.21. Then the null hypothesis is rejected and the alternate hypothesis is accepted.

DISCUSSION

The findings of this study showed that there was association between nutrition, sleep behavior, religious involvement, and stress and student's satisfaction and academic performance. As it was predicted, student's satisfaction and academic performance was correlated to these variables. The hypothesis that there will be positive association between college students' nutrition and students' satisfaction and academic performance was supported in this study. Students who always have breakfast, fruit and vegetables, and do not skip meals have higher level of satisfaction and GPA. Michelle D. Florence, Mark Asbridge, Paul J. Veugelers, (2008) examined the association between overall diet quality and academic performance. Students with decreased overall diet quality were significantly more likely to perform poorly on the assessment. The findings of this study are similar to the findings of Green & Rogers (1998) as students who skipped meals were found to have lower GPA than those who did not skip meals. The hypothesis that there will be positive association between college students' sleeping behavior and students' satisfaction and academic performance was supported in this study. Non-deprived students, students who get 7-8 hours of sleep each night, nap, and go to bed early each night have higher level of satisfaction and GPA from deprived students who sleep fewer than 6 hours. Dearlove O.,Briggs G.(2006) findings strongly suggested that sleep quality and quantity are closely related to student learning capacity and academic performance; and studies in which sleep was actively restricted or optimized showed, respectively, a worsening and an improvement in academic performance. Pilcher and Walters (1997) findings indicate that sleep-deprived participants performed significantly worse than the non-deprived participants on the cognitive task.

The hypothesis that there will be positive association between college student's religious involvement and student's satisfaction and academic performance was supported in this study. Students who often practice prayers at home and at mosque, and who believe that religion provide them with guidance and strength have higher level of satisfaction and GPA. A national study of spirituality in higher education (2004) showed that spirituality is positively related to graduate level degree aspirations, and college GPA. Thus, students who show a high level of religious involvement during college reported higher level of satisfaction with their overall college experience. The hypothesis that there will be positive association between college students' participation in physical activities and students' satisfaction and academic performance was not supported in this study. Physical activities were negatively correlated with students' satisfaction and academic performance. The findings of this study have a contrary view to previous research which found that physical activities is a health factor that is related to students' satisfaction and academic performance. A positive relationship of physical activity and academic performance has been explored through several studies conducted in the USA by California Department of Education, Dwyer, Sallis, Blizzard, Lazarus & Dean (2001), Tremblay et al. (2000) and others. The hypothesis that there will be positive association between college students' participation in physical activities and students' satisfaction and academic performance was supported in this study. Students who rarely feel worried, depressed, or overwhelmed by time pressure have higher level of satisfaction and GPA. Individuals who have higher stress levels have shown lower level of satisfaction. This study had some limitations that might affect the results. The limitation of the study involves the external validity, the research

depended on the collected data where students reported their GPA that measures the participants responses assuming that they answered truthfully, which might influence the external validity. Also, the current findings cannot be generalized to other college students. In addition, the questionnaire that was used was taken from several online surveys and adapted to the current study. Future researches in the area of health factors can be expanded. Researchers could find other health variables to be tested. It may be also beneficial to study large number of college students at different colleges to determine the health importance on academic ability.

RECOMMENDATIONS

Health factors seem to play an important role in student's satisfaction and academic achievement. These factors can influence student's physical health and mental health as well. Thus, through training programs,more awareness can be provided to improve the health behaviors.

CONCLUSION

The importance of health is continually increasing. Past studies have indicated that several health factors influence student's satisfaction and academic achievement. The present study provides some factors related to college students' health during their academic career. These factors may hinder students to exert more efforts during their academic years. The findings of this study revealed that health factors matter a lot and should be the concern for college students and faculty. More understanding of these factors is needed to enhance student's ability to improve their academic performance. With the support of the college faculty and staff, college facilities, student affairs and students' motivation, students can achieve more knowledge and make their college years more rewarding and successful.

BIBLIOGRAPHY

1) Angela Banitt (2002).Health Behaviors and academic performance among college students. Available:www.charis.wlc.edu/publications /symposium. Retrieved 29 Mar.2009.

2) Bray, S.R. & Born, H.A. (2004) Transition to University and rigorous physical activity.

3) Curcio G, Ferrara M, De Gennaro L. (2006) Sleep loss, learning capacity and academic performance.

4) Engs, R.C. (1992) Student Health and lifestyle Questionnaire.Indiane University retrieved Sep.17th, from http://www.indiana .edu/engs/quest/shq.html

5) Gurcio, G.Fermann, M.De Gennaro L. (2006) Sleep loss, learning capacity and academic performance.

6) Implications for health and psychological well being.Journal of American College Health.52, 181-187.

7) Jessica, Flood, Becky, Besieger, Stacie, Cheek, The impact of sleepiness levels on academic achievement for college students.

8) Kelly, W.E., Kelly, K.E., & Clanton R.C. (2001) The Relationship between sleep length and Grade Point Average Among g College Students. College Students Journal 35, 84-86.

9) Laura, P.Womble, (2001) Impact of stress factors on college students' academic performance. Available at: www. psych.uncc.edu

10) M.Scott, DeBerand, Glen, I.Spielmans, Deana, L.Julka (2004) Predictors of American Achievement and retention among college freshmen: A longitudinal study, College Student Journal, vol, 38.

11) Michelle D. Florence, Mark Asbridge, Paul J. Veugelers, (2008) Diet Quality and Academic Performance. Journal of School Health, abstract.

12) Pilcher, J.J., &Walters, A.S. (1997).How sleep deprivation affects psychological variables related to college student' cognitive performance, Journal of American College Health.46, 121-126.

13) Rawson, H.E., Bloomer, K., & Kendall, A. (2001).Stress, anxiety, and physical illness in college students. Journal of Genetic Psychology, 155,321-350.

14) Spirituality in Higher Education: A National Study of College Students' Search for Meaning and Purpose. (2000).

15) Tara, S. & Kimberly, R. (2007) Predictors of Academic-Related Stress in College Students: An examination of coping, social support, parenting, and anxiety, NASPA Journal, Vol.44 No.3.

16) Tremblay, M.S. Inman, J. W. & Willms, J.D. (2000) the relationship between Physical activity, Self esteem, and Academic Achievement in Pediatric Exercise Science, 12,312-324.

17) US Department of Health and Human Services, (2005) Dietary Guidelines for Americans available: http//www. hhs.gov, retrieved 15 Sep.2008

18) World Health Organization, Neglected Global Epidemics, available: http// euro.who.int.retrieved 15 Mar.2009.