

Life Style Practices And Health Risk Behaviors Of Medical Students: A Cross Sectional Study

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ABSTRACT

Objective: A health risk behavior like physical inactivity, unhealthy diet, tobacco use, drug abuse, unprotected sexual practices or harmful use of alcohol is linked with serious ailments like liver cirrhosis, hypertension, abnormal lipid profile and number of cardiovascular diseases. Our study is aimed to explore perception of students about health risk behaviors; eating routines, life style and stress handling practices and compare amongst medical students of first and second year.

Subjects and Methods: In this cross-sectional study, 233 female students between 18–25 years of age, from first two years of medical college were administered a self-structured questionnaire. Response of each item was rated on five-point Likert scale. Maximum points in the scale were five and the minimum was one for each item. Mean score was obtained by adding points of all responses. Degree of health awareness was categorized into low, medium and high on the basis of mean cumulative scores. Independent sample t test was used to compare means between study groups based on academic level (Year I and II medical students)

Results: The overall results of the study revealed positive health behaviors among medical students. Year I MBBS had superior acquaintance on healthy eating routines (p -value = 0.001), lifestyle patterns (p -value = 0.002), and stress handling practices (p -value < 0.001) as compared to senior class. Tendency to have anxiety attacks was more in 1st year students (p -value=0.002) while capability to withstand stress was better in senior class (p -value=0.004).

Conclusion: Majority of medical students practiced positive health behaviors. These attitudes in terms of selection of life style choices; healthy food and physical activity with avoidance of health risk behaviors and supportive practices was better in Year I students.

Key words: Health risk behaviors, nutrition, physical activity, stress, medical students

INTRODUCTION:

Global burden of non-communicable diseases like cardiovascular disorders, diabetes and infectious diseases is increasing¹. Poor health leads to increased morbidity and mortality that is attributed to insufficient health knowledge among the population². Health related behaviors are categorized into risk behaviors and positive health behavior³. "Health risk" is defined as "a factor that raises the probability of adverse health outcomes"⁴. A health risk behavior is therefore any activity that increases the risk of disease or injury may this be physical inactivity, unhealthy diet, tobacco

use, drug abuse, unprotected sexual practices or harmful use of alcohol. These behaviors are linked with serious ailments like liver cirrhosis hypertension, abnormal lipid profile and number of cardiovascular diseases⁵.

Positive health behavior is an action taken by a person to maintain good health and prevent illness. This includes intake of healthy food, safe practices and participation in physical activity.

The practice of unhealthy life style (junk food, soft drinks and physical inactivity) has led to an increased prevalence of obesity in Pakistan, with an inherent risk of developing chronic diseases in near future⁶. Health awareness is hence a must to equip individuals with bear minimum knowledge on issues related to physical as well as mental well being. Risk factors for the development of serious chronic diseases in later life can be altered by adaptation of healthy lifestyle, behavior or health hazards during adolescence and young adulthood⁷.

The aim of medical institutions is to educate and train future doctors, hence provision of the awareness and effective public healthcare strategies, including curing and caring among societies is pivotal in medical education⁸. American College of Health Association also encourages the educational institutes to bring awareness among their students for improving quality of life and avoid unhealthy practices to reduce risk for debilitating diseases in future. Delivering knowledge about health amongst medical students is essential because in addition to requiring it for themselves, as future

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physicians they shall promote health awareness and wellness amongst societies⁸.

The psychological stress of educational institutions may lead to harmful consequences like decreased life satisfaction, depressive moods, poor academic performance, diminished empathy and reduced competence skills. Literature suggests that those medical students who do not adopt healthy lifestyle, fails to provide effective health care to community in future as well⁹.

Therefore, there was a need to study the prevalence on health awareness in medical college students to explore the current status of their health practices. We planned this study to explore the eating habits, lifestyle pattern and stress coping strategies of year-I and year II undergraduate students. Based on these findings, activities could be created within the curriculum to enhance opportunities to increase their health awareness to embark positive effects on their future.

SUBJECTS AND METHODS:

This cross-sectional study was conducted at “The Medical and Dental College, University of Faisalabad” from March to December 2016. Sample size was 240, figured at a power of 80% and α at 0.05⁹. 240 students of Year I and Year II were included by convenient sampling technique, out of which 233 students completed the Performa. As this is a female medical college, the entire participant represented single gender. Those students who did not consent to take part in the study were excluded. Prior to data acquaintance, approval was sought from institutional ethical review board (UMDC/Dean/008/82) and informed consent was taken from each participant. Data was collected via self-structured questionnaire tailored on the basis of literature review⁹⁻¹³. Questionnaire comprised of questions on eating habits, lifestyle patterns and stress handling practices. The questionnaire was pretested and verified for error on a set of 50 students. Internal consistency and reliability of test items was determined by Cronbach’s alpha coefficient, which was 0.91¹². Reverse scoring was done for negative questions such as feeling of hopelessness and attacks of frequent anxiety. Responses were rated on five-point Likert scale. Maximum five points and Minimum one point were allocated for each item and cumulative mean scores were obtained by summing the points of all responses^{11,12}.

The mean rules were used to determine health awareness. Degree of awareness was categorized into low, medium and high depending upon the mean cumulative scores for the purpose of comparison between two study groups. Cutoff points for degree of awareness was taken from previous literature^{11,12}. Data analysis was done by statistical package for social sciences (SPSS) version 21. Descriptive analysis was performed to obtain means of demographic variables. Independent sample t test was used to compare means between study group with p value <0.05 considered as significant.

RESULTS:

Total number 109 Year-I students and 124 year-II students completely filled the questionnaire. The mean age of participants was 20.03 ± 1.04 years while the mean body mass Index (BMI) was found to be 22.27 ± 4.36 kg/m². There was no significant difference in BMI of first and second year students 21.88 ± 4.83 and 22.62 ± 3.90 kg/m² respectively. Majority of the students belonged to good socioeconomic status. Income of parents of 47.6% of students was higher than 100,000 Pakistani rupees, 47.2% between 50,000 to 100,000 and rest having less than Rs. 50,000. Students with 4-6 family members and 6-8 family members were 63.5% and 22.3% respectively. Rest of them either had less than four or more than ten family members.

Majority of the students from both classes showed healthy life style practices although there were some domains in which significant difference was observed. Table 1 summarizes the healthy eating routine and healthy practicing among the students. Year I students were particular about intake of water and avoiding salt intake ($P < 0.01$). Both groups had low scores on excessive fast food intake and soft drinks consumption. However, year II students practiced exhibited consumption of soft drinks more than Year I students ($p = 0.006$).

Table 2 represents the stress coping practices in our participants. Year I students were contributing their time and expenses for the community and were more optimistic and hopeful than Year II students ($p < 0.0001$). On the contrary, Year II students had greater ability to overcome their stress and anxiety than their junior class ($p < 0.004$). Table 3 shows cumulative scores for all the three domains eating habits, lifestyle patterns and stress handling with significantly better practices among students of Year I.

DISCUSSION:

Sustained performance of students lies in their health; both physical as well as mental. Therefore, it is essential to establish healthy environment in institutes and encourage the students to adopt healthy behavior. Efforts to improve the life style reside within awareness about the nutrition, physical activity, healthy environment like cleanliness and greenery and work places ethics. As the health awareness is critical for not only their own wellbeing but the society in general¹⁴, it was interesting to find out that year-I students had an overall better score in comparison to their seniors in all the three categories.

Healthy diets and consistent physical activity are major factors in the campaign of good health through the life time. Fat accumulates once and only calories consumed by food and drinks surpass that which can be compensated by an individual's breakdown and physical activity¹⁵. Sedentary life styles, availability of fast food at door steps, eating while watching television, enrichment of mobile and video games, and decrease in outdoor activity are health risk behaviors

Healthy diet and lifestyle Patterns	Mean ± SD		P value
	Year I MBBS	Year II MBBS	
Breakfast is an important part of my daily life	3.13 ± 1.32	3.12 ± 1.40	0.930
Fruits are part of my diet at least five times a week	3.78 ± 1.02	3.50 ± 1.14	0.132
I avoid eating too much animal fat	3.4 ± 0.92	4.07 ± 1.19	0.010*
I try to keep my body weight within normal range	3.70 ± 0.95	3.65 ± 1.07	0.599
I maintain water intake of around six to eight glasses	4.00 ± 1.18	3.00 ± 1.21	0.000*
I take fast food for at least three times a week	2.13 ± 0.91	2.35 ± 1.06	0.097
I consume more than five soft drinks per week	2.4 ± 1.08	2.75 ± 1.37	0.006*
I do exercise daily	3.23 ± 1.03	2.83 ± 1.19	0.007*
I sleep of seven to eight hours	3.26 ± 1.24	3.49 ± 1.31	0.181
I brush my teeth regularly	3.84 ± 1.33	4.61 ± 0.70	0.000*
I wear a seatbelt and drive limited speed while travelling in a car	4.08 ± 1.16	2.33 ± 1.19	0.000*
I try to maintain healthy environment in my house	3.62 ± 0.94	3.62 ± 1.00	0.996

The mean rules were used to determine health awareness: high score as five, medium as three and minimum as one for each item. Values are summed and represented as mean ± Standard deviation. Independent t test was used to compare the results

Table 1: Lifestyle practices among medical students

Healthy diet and lifestyle Patterns	Mean ± SD		P value
	Year I MBBS	Year II MBBS	
I make deliberate effort to control or avoid stress	3.50 ± 0.84	3.41 ± 1.09	0.51
I try to support my friends in their time of stresses	4.23 ± .731	4.17 ± 0.66	0.50
Most of the time, I fell optimistic and hopeful	4.09 ± 1.14	3.15 ± 0.93	0.049*
I often feel helpless in dealing with the problems in my life	1.89 ± 0.94	1.99 ± 1.02	0.47
I suffer frequent mood swings and attacks of anxiety	2.24 ± 1.09	2.46 ± 1.07	0.112
I experience anxiety attacks especially before exams	2.71 ± 1.20	2.23 ± 1.13	0.002*
I am capable of overcoming my stresses	3.40 ± 1.31	4.0 ± 1.04	0.004*
I often seek help from my friends in emotional stresses	3.04 ± 1.19	3.30 ± 1.05	0.496
At times I have to take help from parents and family members	3.28 ± 1.08	3.00 ± 1.29	0.58
I have to visit a psychiatrist to seek help	3.62 ± 1.06	3.77 ± 1.16	0.319

The mean rules were used to determine health awareness: high score as five, medium as three and minimum as one for each item. Values are summed and represented as mean ± Standard deviation. Independent t test was used to compare the results

Table 2: Stress handling Practices

	Mean ± SD		P value
	Year I MBBS	Year II MBBS	
Healthy eating routines	33.58 ± 4.20	31.61 ± 5.2	0.001*
Lifestyle Patterns	41.00 ± 5.20	39.30 ± 6.1	0.002*
Stress handling Practices	56.27 ± 5.46	53.21 ± 6.5	0.000*

Independent t test was used to compare the results
P value < 0.05 is less than significant

Table 3: Comparison of cumulative scores of eating habits, lifestyle patterns and stress handling between Year I and II MBBS students

which attribute to ill health¹⁶. Group study is a common practice among medical students during which trends of consuming snacks, drinks, and avoidance of balance diet is increasing continuously in them^{17,18}. Year I students were used to take healthy diet as compared to their seniors which may be linked with the above explanation.

Healthy behaviors were practiced by majority of medical students. A previous study is in agreement with our study where medium level of health practices were noticed among students¹¹. However, study conducted at the University in Jordan¹² was incongruent, as they found lower health acquaintance among their university students.

In this study, first year MBBS student scored better for overall healthy behavior than Year II medical students. It seems that juniors are more conscious and careful about their health. A previous study has reported similar results¹². However a past study found a higher score for 2nd year than first year female students of Jordanian colleges¹⁸. Further studies in future should be conducted to evaluate the health awareness among the teachers of schools, colleges and universities level, as the teachers are role models and facilitators for their students. Teacher's awareness has greater impact on their students suggesting needs to focus on collective health awareness of all the cadets across university.

Results of our study reveal that overall awareness of health risk behaviors among medical students was satisfactory as it ranged between medium to high level. Majority of Year I students reported the use of seat belts while driving yet this practice was reported quite low in the year II students. Similarly Year I students were found to be engaged in regular physical activity as compared to Year II students. This reiterates the fact that extensive educational workload does seem to impact on healthy practices and therefore, the institutions should arrange avenues within their academic year to promote healthy activities. Therefore health-promoting programs in such institutes make students responsible not only for their own healthy lifestyle, but for the health of their families and society

Positive health behaviors besides intake of healthy diet and participation in physical activity comprise of effective interpersonal relationship, involvement in social events and spiritual activities which in turn help to withstand stress¹⁹. Regarding coping with stressful situation, students reported a better awareness in terms of their supportive practices. Both the years scored well while Year I slightly scoring higher than their seniors in this regards as well. As far as stress coping strategies are concerned, the students of senior class reported a better score and were confident that they were able to control their stresses. This might be due to the fact that they are more settled in their environment, well versed with the curriculum as has been reported in the literature²¹. As Year I students are new recruits, they face challenges hooked to a change in learning environment and

competing pattern of studies that turn out to be stressors and time and acclimatization is required cope up with these conditions²⁰. Other studies also report similar differences in practices of healthy behaviors among the students of various academic levels of their university with respect to supportive, dietary and healthy practices¹⁰.

Our study was limited by the fact that it was conducted only at one medical institution that comprised of female students only As we aimed to study students at other institutions in near future, we intend to compile this to understand the broader picture of current status of our students' understanding in this very critical aspect. We suggest that health awareness programs especially nutritional education should be arranged on a broader scale including students of schools to colleges to university levels for promotion of healthy eating habits and lifestyles for uplifting the health status of our society²¹. This awareness may increase one's effort to prevent diseases beforehand and to adopt a lifestyle that promotes individual health as well as of the society.

CONCLUSION:

Majority of medical students practiced positive health behaviors. These attitudes in terms of selection of life style choices; healthy food and physical activity with avoidance of health risk behaviors and supportive practices was better in Year I students.

This underlines the need of health awareness seminars on academic forum, counseling sessions, workshops on stress relaxation and time management and enhancement of outdoor recreational activities in all medical universities for all academic years.

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