



Evaluation of Key Pointers of Physical, Emotional and Mental Health among Medical Students: A Cross Sectional Study to Understand the Lifestyle Areas Needing Improvement

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Financial Support: None declared

Conflict of Interest: None declared

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How to cite this article:

Mishra A, Sharma VK, Dixit AK. Evaluation of Key Pointers of Physical, Emotional and Mental Health among Medical Students: A Cross Sectional Study to Understand the Lifestyle Areas Needing Improvement. Natl J Community Med 2020; 11(11): 402-408

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Date of Submission: 02-10-2020

Date of Acceptance: 11-11-2020

Date of Publication: 30-11-2020

ABSTRACT

Introduction: Medical schools are the places where students learn the art of allaying people's sufferings in ill health and of saving their lives. Various studies have shown that medical training and education are stressful and require remedial approaches for benefitting medical students.

Objectives: To understand the prevailing life style related health pointers, having potential adverse effect physical, emotional and mental health, among the MBBS students.

Methods: A questionnaire-based cross-sectional assessment involving 82 respondents.

Results: Average age of the study group was 21.61 years, with a majority (89%) belonging to urban areas, around 44% belonging to business family background. The average BMI for the group was 23.02, with 15.85% having BMI 25 or more (overweight). Only 31.71% respondents considered themselves healthy and fit, 53% were doing regular physical activities in any form. Questions related to inability to concentrate in the classroom, losing interest in hobbies, managing studies, feeling sad, depressed, anxious and worried, getting irritated on minor issues, language barrier, ability to express clearly etc. also revealed some valuable findings.

Conclusion: The study findings indicate the need for developing institutional approaches for bringing necessary lifestyle changes to address the issue.

Keywords: medical students, Lifestyle, health profile, mental health, stress among medicos

INTRODUCTION

Intensive studies, tough competition and desire to perform to the best for benefitting the patients is an unavoidable stressor in the field of medicine, especially during the undergraduate years. At the start of medical school, medical students have mental health similar to nonmedical peers, but it worsens through the period of medical training as shown by various studies.¹⁻⁷

Medical schools around the world aim to train and produce competent and empathetic physicians to help the sick, advance medical knowledge, and

promote public health⁸. However, medical education is considered to be one of the most academically and emotionally demanding training programs out of any profession⁹, and consequently, the time and emotional commitment necessary for medical students to devote to their training is extensive. Such a stressful environment often exerts a negative effect on the academic performance, physical health, and psychological well-being of the students¹⁰.

Superimposed on this is the fear of not getting the subject of choice for postgraduation. Trying to cut

down the stress and adapting healthier life style, right from the early years of medical education is still a neglected area across the medical colleges in India. This is surprising, more so in the times when management world is highly emphasizing on the importance of destressing, adapting healthier lifestyles, and also on emotional health, based on evidence from the field of medicine. Rising trend of lifestyle diseases and ways and means to cut them down should not only carry its importance from the examinations point of view, but should also be impregnated in the ways of living of medical students, right from their early student years. To set such initiatives rolling, the department of Community Medicine, People's College of Medical Sciences and Research Centre (PCMS & RC), Bhopal, took the initiative to develop a deeper understanding of the finer details around this problem, in order to help medical, paramedical institutions to develop policies and initiatives to address this important issue. To begin with, the Community Medicine department selected very broad and simple areas which can give institutions a clue to develop remedial strategies. This will be an ongoing exercise in the People's College of Medical Sciences and allied institutions with the scope of study widening with every successive round.

MATERIAL AND METHODS

The department of Community Medicine, PCMS & RC, identified key attributes of lifestyle of medical students that have a bearing on some selected areas of physical and mental health. In the current round, which is the initiation round, major emphasis was on making the study operationally simple, without going into very fine details of respective areas. Also, the rapidity and ease of answering to different questions was taken into consideration.

The batch of medical students which was selected for the study was 2017 admission batch. Both boys and girls were respondents in this study. A simple questionnaire to cover different aspects of selected areas was developed and pretested on a batch of 35 students. All necessary changes based on the pre-test observations were made and the questionnaire was finalized.

The selected sample had 82 respondents, comprising of 35 boys and 47 girls. This excluded the respondents who were selected for the pre-test. A brief orientation about the study was given to the

students and administration of questionnaire was initiated after seeking verbal consent of the students. The questionnaire was of multiple-choice type having simple questions to enable self-administration by the students.

Height, weight, Blood Pressure and pulse rates were also measured, Although, Blood Pressure records did not reveal any abnormally high or low blood pressure, it is not in the discussion as the international norm of recording three Blood Pressure measurements separated by a gap of 5 minutes from one another could not be adhered to.

RESULTS

Some key areas related to physical, mental, social and emotional dimensions in relevance to a medical school's environment were ascertained. A major part of the questionnaire was intended to understand perception of the respondents on certain areas and to get an understanding of their practices.

Students' Perception about their own health: To begin with, respondents' own perception regarding their own health was ascertained.

Daily physical activity: In order to understand the respondents' behavior regarding basic physical activities which are fitness oriented, and also for some routine activities like covering short distances by walking or taking stairs rather than elevators, direct question was posed and responses were analyzed. We found that 97% of girls were covering local short distances by walking, within the college campus as well as nearby places, as against the corresponding value of 51% for boys. Nearly 30 percent Students in the current study were preferring elevators during college hours or hospital working.

Some pointers of stress

Feeling of anxiousness & worry; About these feelings, a fairly large proportion of students reported that they experience such feelings. These are related to a variety of factors like studies, relations, stress of competition and future career prospects.

Irritability: Another sign of stress is irritability on minor issues which, generally should not be the cause of irritation. We found that the boys' group was more resistant to such irritability arising out of day-to-day minor issues

Table 1: Students' perception about their own health: Gender-wise breakup (n=82)

Response	Boys (%)	Girls (%)	Total (%)
Don't consider themselves healthy and fit (cited different degree of doubts)	21 (60.00)	34 (72.34)	55 (67.07)
Considered themselves healthy and fit	14 (40.00)	12 (25.53)	26 (31.71)
Non-response	NIL	1 (2.13)	1 (01.22)
Total	35 (100)	47 (100)	82 (100)

Table 2: Perception of respondent about key areas and practices of students

Response	Boys (n=35) (%)	Girls (n=47) (%)	Total (n=82) (%)
Physical activity for fitness			
Reported regular physical exercises	22 (62.86)	22 (46.81)	44 (53.66)
Not doing regular physical exercises	13 (37.14)	25 (53.19)	38 (46.34)
Non-response	0	0	0
Activities involved in the daily routine in the college			
Reported Using elevators in the college	12 (34.29)	15 (31.91)	27 (32.93)
Reported climbing by stairs	22 (62.86)	32 (68.09)	54 (65.85)
Non-response	1 (2.86)		0 1 (1.22)
Feeling of anxiousness & worry			
Occasionally or never	25 (71.43)	23 (48.94)	48 (58.54)
Often or always	10 (28.57)	24 (51.06)	34 (41.46)
Non-response	0	0	0
Irritation on minor issues			
Occasionally or never	30 (85.71)	35 (74.47)	65 (79.27)
Often or always	5 (14.29)	10 (21.28)	15 (18.29)
Non-response	0	0	0
Inability to concentrate adequately in the classroom			
Not able to concentrate adequately	10 (28.57)	6 (12.77)	16 (19.51)
No such issue, can concentrate adequately	3 (8.57)	8 (17.02)	11 (13.41)
Sometimes not able to concentrate	22 (62.86)	32 (68.09)	54 (65.85)
Non-response	0 (0.00)	1 (2.13)	1 (1.22)
Organizing and managing studies			
unable to cope up with it	5 (14.29)	9 (19.15)	14 (17.07)
well organized and doing it on daily basis	7 (20)	13 (27.66)	20 (24.39)
losing track of my studies due to other activities	23 (65.71)	21 (44.68)	44 (53.66)
Non-response	0 (0)	4 (8.51)	4 (4.88)
It's difficult to write answers in English			
True	10 (28.57)	6 (12.77)	16 (19.51)
False	24 (68.57)	40 (85.11)	64 (78.05)
Non-response	1 (2.86)	1 (2.13)	2 (2.44)
Clearly communicating with others			
Not confident	19 (54.29)	31 (65.96)	50 (60.98)
Confident about it	16 (45.71)	16 (34.04)	32 (39.02)
Non-response	0	0	0

Table 3: feeling sad or depressed and perceived reasons of such feelings

Response	Boys (%)	Girls (%)	Total (%)
3 a: Experiencing feeling sad and depressed			
Occasionally or never	25 (71)	23 (49)	48 (59)
Often or always	10 (29)	24 (51)	34 (41)
Total	35	47	82
3 b: perceived Reasons of sadness and depression			
Behavior of others or some relationship issues	20 (43.48)	28 (46.67)	48 (45.28)
Inability to study well or worries about the career	26 (56.52)	32 (53.33)	58* (54.72)
Total responses	46	60	106*

(*some respondents gave multiple responses)

Ability to concentrate: This ability, particularly, in a teaching session or in focused working session, is determined by a variety of factors. Besides physical health conditions like anaemia, some other factors that influence it are lack of sleep, excessive fatigue, anxiety and environmental factors like noise, inadequate lighting etc. Inadequacy of sleep and anxiety are common among medical students and these can be attributed to pressure of studies and uncertainties about their academic future.

Disorganized or mismanaged studies: Organizing and managing studies is other related dimension

which the study looked into. A little more than half of the students said that they are losing track of their studies because of distractions due to other activities. In the present study, the authors have found that only around a quarter of the students felt that they are able to achieve this balance.

Probable Early manifestations of stress

The response to the question if the students have moments in their life when they feel depressed and sad was affirmative for more than 90 percent of respondents in total. However, when the frequency

of such moments was taken into account, around 40 percent respondents reported experiencing such feelings 'often or always'. The study attempted to get an understanding about the possible reasons of such emotional disturbance. In group of girls, the commonest reason reported was 'behavior of others' whereas for the boys' group the commonest reason was 'inability to study well'.

Importance of clear communication:

Language sometimes becomes a barrier in acquiring the knowledge in classroom taught teaching systems. In the present study, however, around 5% respondents in total reported to face difficulty in understanding the subjects. When it comes to writing answers in examinations, the language is essentially English. Therefore, comparatively higher percentage of respondents in total (around 20%) reported having difficulty in writing the answers. In regards to oral communication, nearly 61% reported that they are not confident about their ability to communicate effectively with friends and teachers.

Busting the stress:

Close and healthy friendships may provide youths with an environment conducive to healthy development and educational outcomes. It is also a source of emotional support. In the present study, less than 50% respondents reported to be having reliable friendship. More boys, in comparison to girls (46% v/s 34%), were sure of having reliable friends. Family and peers also offer much required emotional support. More than 35% in total and more than 30% of boys as well as girls expressing their need for emotional support can have a bearing on their emotional health, if it remains unsatisfied.

There is proven destressing effect of lighter moments and laughter and it's necessary to find such moments and enjoy them. In the present study, nearly 79% of respondents reported to enjoy such moments. The percentage was almost the same for boys and girls. The finding that concerns is 17% girls and 8% boys reporting not having such moments regularly.

Hobbies are another important destressing activity and are essential to stay in a positive frame of mind. It is revealed in our study that around one fifth of both boys and girls reported having lost interest in the hobbies.

Meditation is another important activity that is beneficial for almost every dimension of health. It's not only in vogue but its benefits have again been proven scientifically. We could not incorporate this aspect in the current study.

In some additional questions, 30 percent respondents said that they feel they getting enough time to socialize or for their entertainment. 27 percent expressed that they feel social media has a negative role too and it distracts us from studies, around one fourth were not very confident if their relations with their room mates are good. When asked about their personality type nearly 32 percent considered themselves as of extroverted personality (46% boys vs 21% girls). People who identify as extroverts tend to search for novel experiences and social connections that allow them to interact with other individuals as much as possible. Some personal habits like use of tobacco and alcohol are likely to be picked up by youth during their college years. Sensitization on the harms of such habits is essential at the institutional level. The present study revealed that regular exposure to each of different categories of substance use (alcohol, tobacco, narcotic substances) was in the rage of 0-3 percent.

DISCUSSION

The study focuses on selective stressors, from the viewpoint of making certain lifestyle changes, fully understanding the fact that the life in a medical college would certainly have some kind of unavoidable stresses. However, it gives leads to certain areas which can be addressed through making some corrections in the lifestyles.

The institute intends to make this information collection process a regular affair in order to ensure that maximum batches of students are benefited.

Basic profile of the respondents:

The group of respondents in the current study came from families with different socioeconomic and occupational background and were between the ages of 20-25 years, which is the time when lifestyle changes, if not already done, can put a check of many disorders.

Family History: Getting some understanding of the family history gives some idea about possibility of predisposition to certain non-communicable diseases. Our effort was to understand family history related to key disorders. However, such information is needed to be analyzed in-depth.

Physical indicators Rising prevalence of overweight, obesity, and its linkages to hypertension, cardiovascular diseases, diabetes etc. suggest that weight disorders need to be addressed in the young population. Finding around 15% of respondents falling into the overweight category is certainly a concern. Both boys and girls are contributing almost equally to this burden. Also, nearly half of those who had BMI equal to or more than

25 had a family history of hypertension and / or diabetes mellitus.

Respondents' Perception on Lifestyle;

It is important to know an individual's perception about his / her own health. Most of the times, a perception of not being healthy leads to reduced productivity. Undoubtedly, in case of specific situations indicating towards probable derangement of health, identifying the problem through investigations is necessary. However, continued unfounded perception of suboptimal health becomes counter-productive. In the present study, only around one third of the respondents considered themselves healthy and fit. The percentage of those considering themselves healthy and fit was higher among boys whereas the perception of not considering themselves fully healthy and fit, expressing different degrees of doubts or uncertainties, was higher among girls.

Daily physical activity:

In the age group of the respondents that the study covered, regular physical activity can cut down the risk of diseases like hypertension, other cardiovascular diseases, diabetes mellitus etc. It can also result in sleep regulation, mood control besides many other advantages. Although, in our study around 60 percent boys and around 45 percent girls are reporting daily physical activity to maintain or improve their fitness levels, the major concern is about the remainder of the boys and girls, which is a sizeable proportion. Considering the rise in diseases like obesity, hypertension, diabetes and other related disorders, this is an important area to be focused upon for achieving positive lifestyle changes.

Practices like ways of covering short distances locally by walking, taking stairs rather than using elevators serve as indicators of inclination towards carrying out activities during routine course of the day. It was observed that the female respondents were more inclined towards covering short distances by walking, as against their male counterparts. It might be due to access to motorbikes by a large proportion of boys. It appears that the bicycle culture in the college has still not picked up and the approaches like 'paddling to work/ school/ college' are needed to be promoted for long term benefits to the students. Similarly, taking stairs and avoiding elevators may become a very useful practice to do some exercise during a routine day in the college. The requirement to climb up floors in institutional settings gives us a good opportunity to make our muscles work, burn calories and improve circulation, while on work. Although, the availability of modern elevators in institutions deters us from taking stairs to climb. Undoubtedly, in

high rise buildings it is a necessity. However, in teaching institutions, the practice of climbing in our day to day working routine is a practice that needs to be promoted.

Some pointers of stress

Feeling of anxiousness & worry: Around 40 percent of students reporting experiencing the feelings of anxiousness or worry 'often or always' is a huge concern. These may be related to a variety of factors like studies, relations, stress of competition and future career prospects. This certainly needs some interventions for destressing either through sensitizing individuals, creating peer support groups or through institutional training programs.

To draw better interpretation for the groups, considering the number of students in each group, different categories were clubbed together, on the basis of the side they are leaning towards. This gives a much clearer view for the group as a whole. A higher proportion of girls were on the side 'often or always' response (51% vs 29%) whereas the response group 'occasionally or never' the percentage of boys was much higher than that of girls (71% vs 49%) for this group.

Irritation from minor issues: This is an important indicator of the stress. Getting irritated on minor issues may be considered 'not an alarming' manifestation as there can be moments of excessive work pressure in a professional setting. However, around 15 percent of respondents reporting this happening needs to be further looked into. More than a quarter of boys reported that they never get irritated on minor issues whereas the corresponding percentage for the group of girls was less than ten percent. Also, in the responses which indicated that the respondents get irritated on such issues sometimes, the percentage of girls was much higher than that of boys (57% against 31%). Comparatively more respondents in the boys' group Boys said that they occasionally experienced such feeling.

Ability to concentrate: The ability to concentrate in a teaching session or in focused working session is determined by a variety of factors. In the present study, we found that more boys than girls reported that they are not able to concentrate in the class room. The percentage of boys reporting so was nearly double than that of girls expressing this feeling.

Organizing and managing studies: Many students reported discontinuing their hobbies because of loss of interest in them and at the same time saying that other activities are making them lose track of their day-to-day studies. This certainly points towards inability to manage time in an effective

manner and also not able to spend time in leisure activities which are reenergizing.

Experiencing feeling sad or depressed: The commonest reasons reported by the respondents for such feelings were 'worry about career' and 'inability to study well', which are interlinked. This is also needed to be examined in view of effective time management skills of the students. Also, reinforcing a regular and effective mentoring approach by faculty members and by senior students' support group would work towards addressing this issue.

Perceived deficit of emotional support: Feeling of emotional support deficit is another very important area in the personality expressions. Vaux differentiated among five different types of available supportive behavior that may be provided separately by family and peers: emotional, practical, financial, advice/guidance, and socializing¹³. Expressed need for emotional support is an area that influences emotional and mental health, and also has an effect on academic performance. In the race for academic excellence and for securing career, this area should not remain neglected. As stated in the sections on friendship such frameworks of emotional support become critical in helping an individual to effectively manage the stresses of life.

Communication: An important soft skill:

The ability to communicate clearly and share thoughts, feelings and ideas is helpful in all relations with other people. Communicating effectively is an important soft skill and every student should try to acquire it. This helps us in putting forth our viewpoints in a manner that is well-understood. This skill adds to the general confidence and helps in building healthier relations. Coherence in speaking and in writing are equally important. In a medical school, there are students from different sociocultural, educational, linguistic backgrounds, and hence it becomes important for the institution to emphasize upon developing effective communication skills, both in speaking and in writing. The study findings certainly indicate towards the need of some program to enhance communication skills of the students.

A few channels of destressing

Friendship: Close friends for every one of us create a support system in a stressful institutional atmosphere. It provides students with an environment conducive to healthy development and better educational outcomes. Also, friendship reciprocity is an important indicator of social support above and beyond the numbers of friends reported by youth¹¹. Individuals need to understand and overcome the barriers in creating this valuable support system having a high destressing effect.

Destressing moments of laughter: There is a proven effect of laughter on reducing stress. Such moments need to be tapped to the fullest. A majority of the students' report enjoying such moments regularly. However, even if a small proportion reports deficit in availing such moments of joy, it should be looked into. Afterall, in the proverbial sense, laughter is regarded as the best medicine, and certainly, there is substance in this proverb.

Need to cultivate and nurture hobbies: Hobbies are important destressing activities and are essential to stay in a positive frame of mind. It is revealed in our study that around one fifth of both boys and girls reported having lost interest in the hobbies. The common reasons thereof were non-availability of time or considering hobbies as waste of time.

Work-play balance; It's valuable to strike a balance between studies and play or any other form of entertainment. Ignoring entertainment for studies would certainly make one's life dull. By sidelining play and entertainment, students ignore their health and general well-being. Health is critical even to perform optimally in academics¹². Organized games, sports, or other performing arts serve as mediums of healthy entertainment. Students need to remember that studying is just one activity of life.

CONCLUSION

Considering the findings related to different pointers of physical, emotional and mental wellbeing, as observed in the present study, and in light of the stressful environment that medical students face, it is necessary to develop institutional level programs that focus on holistic health approach. There are various lifestyle related factors that should be corrected in time. If left unaddressed, these issues will result into increasing physical, emotional and mental disorders among medical students. Programs having components like physical exercises, meditation, stress management etc should be made an integral part of the curriculum in medical colleges. Besides, there are certain soft skills, for example, the ability to communicate effectively, are critical in medical profession. Hence, a comprehensive strategy to address all areas as stated above should be integrated into the institutional strategic plan. It should be implemented across all medical colleges as a mandatory activity.

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