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Original Research Article

Lifestyle behaviour of future medical professionals in a tertiary care institute in north-eastern India: a cross-sectional descriptive study

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ABSTRACT

Background: The incidences of some non communicable diseases like diabetes mellitus, obesity, hypertension and cardiovascular diseases have been rising in the country since last few decades due to the unhealthy lifestyle of the people. Researches conducted among medical and nursing students shown that even though they are aware about the consequences of practicing unhealthy lifestyle but still they do not follow the suggested guidelines for healthy lifestyle. To assess lifestyle behaviour related to dietary pattern, physical activity, substance use, sleep, stress management, among MBBS and nursing students. NEIGRIHMS, a tertiary care institute in the capital city of the north-eastern state of Meghalaya, Shillong.
Methods: A cross-sectional study was conducted among 313 participants by using a pre-tested self-administered questionnaire. The data was analyzed using the software Statistical package for social sciences (SPSS) 21 version.
Results: In this study, 189 (60.4%) students reported sedentary activity of spending ≥2 hours per day on phone, tablets, laptops, television, computers, etc and majority of them (59.7% and 57.2%) use the gadgets for social and whatsapp messaging respectively. Only 18 (5.8%) participants had reported regular physical activity (5 times a week) when asked about the previous month.
Conclusions: Sedentary lifestyle, lack of any physical activity, use of gadgets like mobiles, laptops, etc for activities like social media, Whatsapp, unhealthy eating habits were found to be prevalent among the medical students.

Keywords: Lifestyle, Sedentary, Non communicable diseases, Hypertension, Obesity, Metabolic diseases

INTRODUCTION

India, the second populous country in the world, is facing the double burden of communicable and lifestyle diseases.[1] As per World Health Organization (WHO) report, approximately 60% of contributing factors to health and quality of life of individuals are concerned with lifestyle practices.[2] Healthy lifestyle is a way that includes physical activity, balanced diet, stress management and avoidance of substances use.[3] The incidences of some non communicable diseases like hypertension, obesity, diabetes mellitus, and cardiovascular diseases have been rising in the country since few decades due to the unhealthy lifestyle of the people.[4]

Studies have documented that few NCDs have started presenting among the younger population.1 During the transition phase from school to college, students face certain difficulties which include getting acclimatized to new surroundings, deciding on the future perspectives and changes in lifestyle.[5] The unhealthy lifestyle habits which are introduced during young adulthood tends to persist in later life which can increase the risk of several chronic diseases.[6] Researches conducted among medical

and nursing students shown that even though they are aware about the consequences of practicing unhealthy lifestyle but still they do not follow the suggested guidelines for healthy lifestyle.[7] Several factors such as mental stress, performance anxiety in a competitive academic environment, depression, peer pressure, etc may be responsible for initiation of unhealthy behaviours in medical students.[6]

A healthy lifestyle of medical students would facilitate reduction of their own health risks and are more likely to promote similar behaviours in their patients.[8] Various research works were carried out in United States of America and European countries to investigate the lifestyle behaviours of college students specially their diet; physical activity, and sleep pattern that helped in forming further guidelines to promote healthy behaviors.[9-11] There is limited literature on lifestyle behaviours among future health care professionals especially in north-eastern part of India. So the present study was conducted to assess lifestyle behaviour related to dietary pattern, physical activity, substance use, sleep, stress management, among MBBS and nursing students in a tertiary care centre in the capital city of the north-eastern state of Meghalaya.

METHODS

This cross-sectional descriptive study was done among the undergraduate medical students (MBBS and Nursing) to assess their lifestyle behaviour related to dietary pattern, physical activity, substance use, sleep, stress management, in North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), a tertiary care institute situated in Shillong, the capital city of the north-eastern state, Meghalaya from March to April 2021.

Those students who gave consent to participate in the study were included and those who could not be contacted even after three consecutive visits were excluded from the study. Sampling was not done as it was intended to cover the whole of the study population.

The study variables were age, sex, stream, year of study whereas the outcome variables were lifestyle behaviour related to dietary pattern, physical activity, substance use, sleep, stress management. A self-administered pre-tested questionnaire was used for data collection which consisted of two sections, Section A with questions on demographic characteristics of the participant, and Section B which included questions on lifestyle behaviour related to dietary pattern, physical activity, substance use, sleep, stress management.

The questionnaires were distributed among the participants and after 15–20 minutes were again collected back. Data collected were checked for completeness and consistency. Data were entered in IBM SPSS version 21 for Windows (IBM Inc. Armonk, New York, USA) and were summarized by using descriptive statistics like percentages, mean.

The participants were assured about their anonymity. Identifiers like names were masked and informed verbal consent were obtained from the respondents. Data were accessible only to the investigators.

RESULTS

Table 1 shows the general profile of the participants. Majority of the participants were females (77.3%) and MBBS students (53.7%), belonged to second year (30%) followed by first year (29.4%), were Hindus (42.9%) followed by Christians (40.7%). Out of the total participants, 6.4% were having pre-existing ailments.

Table 1: Socio-demographic profile of the participants (n=313).

Socio-demographic profile	No. of participants n (%)
Gender	
Male	71 (22.7)
Female	242 (77.3)
Stream	
MBBS	145 (46.3)
Nursing	168 (53.7)
Year of study	
1st year	92 (29.4)
2nd year	94 (30)
3rd year	73 (23.3)
4th year	45 (14.4)
Internship	9 (2.9)
Religion	
Christian	127 (40.7)
Hindu	134 (42.9)
Muslim	29 (9.3)
Others*	22 (7.1)
Any known medical conditions	
Yes	20 (6.4)
No	293 (93.6)

*include Buddhism, Jainism, etc

Table 2 shows responses on lifestyle behaviour related to sleep, dietary pattern, physical activity, substance use, stress management. Almost half (56.5%) of the participants used to sleep average of 6-8 hours; use of mobiles before sleeping (33.5%) was the commonest response for reasons for disturbed sleep. Regarding diet, only 3.5% of participants consume fruits and vegetables daily, majority (61.7%) rarely consume any carbonated drinks, more than half (57.5%) of participants consume average 1-2 litres of water everyday, very less participants (6.1%) consume fast food daily. When asked about physical activity for the last month, majority (48.9%) of the participants did not have any kind of

activities, only 12.8% and 5.8% of participants used to do exercise for ≥30mins and 5 times a week respectively, which is according to WHO recommendations of having ≥30mins moderate workout atleast 5 times a week.

Table 2: Responses on lifestyle behaviour.

Lifestyle behaviour	Responses
I. Sleep	
1. Average sleep period (hrs per day)	**N (%)**
<6	111 (35.5)
≥6	202 (64.5)
2. Time taken to fall asleep after turning off lights	
<15 min	155 (49.5)
15-30 mins	86 (27.5)
>30 mins	72 (23)
3. Reasons of having disturbed sleep	
Do not have disturbed sleep	139 (44.4)
Use of mobile	105 (33.5)
Academic pressure	24 (7.7)
Stress	35 (11.2)
Others*	10 (3.2)
4. Self rated sleep	
Excellent	54 (17.3)
Good	149 (47.6)
Fair	88 (28.1)
Poor	22 (7)
5. Daytime sleepiness	
Always	39 (12.5)
Most of times (≥4times/week)	84 (26.8)
Sometimes (1-3 times/week)	167 (53.4)
Never	23 (7.3)
II. Diet	
1. Skip breakfast	
Everyday	10 (3.2)
Most of times	41 (13.1)
Sometimes	74 (23.8)
Rarely	186 (59.8)
2. Consumption offast foods	
Everyday	19 (6.1)
Most of times	72 (23)
Sometimes	151 (48.2)
Rarely	71 (22.7)
3. Consumption of water per day	
<1 litre	70 (22.4)
1-2 litre	180 (57.5)
2-3 litre	59 (18.8)
≥4 litre	4 (1.3)
4. Consumption of fruits and vegetables	
Everyday	11 (3.5)
Most of times	51 (16.3)
Sometimes	136 (43.5)
Rarely	115 (36.7)
5. Consumption of carbonated drinks	
Everyday	3 (1)
Most of times	20 (6.4)
Sometimes	97 (31)

Continued.

Lifestyle behaviour	Responses
Rarely	193 (61.7)
III. Physical activity	
1. Time spent in exercises per day (min)	
<30	84 (26.8)
≥30	40 (12.8)
Not at all	189 (60.4)
2. Last month, how often participated in some kind of physical activity	
5 times per week	18 (5.8)
3-4 times per week	57 (18.2)
1-2 times per week	85 (27.2)
Not at all	153 (48.9)
3. Type of exercises usually done (multiple answers)	
Aerobic	43 (13.7)
Brisk walking	236 (77)
Running/jogging	64 (20.4)
Others**	31 (9.9)
4. Self reported version of being physically inactive	
Yes	119 (38)
No	194 (62)
5. Activities which are liked to be done in spare time (multiple answers)	
Mobile games	54 (17.3)
Physical activity	43 (13.7)
Reading novels	51 (16.3)
Social media	157 (50.2)
Internet browsing	144 (46)
Others¥	59 (18.8)
IV. Phone/gadget usage	
1. Average time spent each day on gadgets (hours)	
<1/2	4 (1.3)
½-1	36 (11.5)
1-2	84 (26.8)
>2	189 (60.4)
2. Type of activities done using phone/gadgets	
Social media	187 (59.7)
Whatsapp messaging	179 (57.2)
Mobile games	63 (20.1)
Internet browsing	174 (55.6)
Studies	125 (39.9)
3. Symptoms experienced after using gadgets	
Eyeache/watery eyes	104 (33.2)
Headache	94 (30)
Others$^{\phi}$	13 (4.2)
V. Substance use	
1. Drink alcohol	
Yes	40 (12.7)
No	273 (87.3)
2. Frequency of intake of alcohol	
Daily	3 (1)
Most of times in a week	3 (1)
Sometimes in a week	5 (1.6)
Occasionally	18 (5.8)
Rarely	11 (3.5)
Haven't taken yet	273 (87.2)

Continued.

Lifestyle behaviour	Responses
3. Time of starting to take alcohol	
Before admission to medical stream	19 (6.1)
After admission to medical stream	21 (6.7)
4. Smoke cigarettes/bidhis	
Yes	19 (6.0)
No	294 (94.0)
5. Frequency of smoking	
Daily	6 (1.9)
Most of times in a week	1 (0.3)
Sometimes in a week	2 (0.6)
Occasionally	7 (2.2)
Rarely	3 (1)
Haven't smoke yet	294 (93.9)
6. Chew tobacco in any form	
Yes	7 (2.2)
No	306 (97.8)
7. Frequency of tobacco usage	
Daily	3 (1)
Sometimes in a week	1(0.3)
Occasionally	1(0.3)
Rarely	2 (0.6)
Haven't smoke yet	306 (97.8)
VI. Stress management	
1. Have you been worrying about everyday problems?	
Yes	142 (45.4)
No	171 (54.6)
2. What makes you stressed?	
Study	263 (84)
Family	61 (19.5)
Relationships	59 (18.8)
Financial crisis	4 (1.3)
3. How do you relieve your stress?	
Physical activity/outdoor games	38 (12.1)
Spend time with friends and family	141 (45)
Listening to music	180 (57.5)
Eating	67 (21.4)
Others[£]	59 (18.8)

*includes insomnia, external noises, acidity problems. ** includes yoga, gym, sports. ¥ includes playing musical instruments, drawing, talk with friends. ɸ includes backache, dizziness, nausea. [£] includes reading novels, praying, watching movies, etc.

Half of the participants (50.2%) likes to be engaged in social media during spare time followed by internet browsing (46%). Regarding usage of gadgets, >1 hour is spent by majority of the participants (87.2%), most of them (59.7%) utilise the gadgets for social media (Facebook, Instagram, etc) followed by Whatsapp messaging (57.2%).

Out of the total participants, 12.7%, 6% and 2.2% give positive responses for intake of alcohol, smoking and chewing tobacco like gutkha, pan masala, etc respectively. Only 1%, 1.9% and 1% of total participants gives responses on daily intake of alcohol, smoking and chewing tobacco.

DISCUSSION

Lifestyle behaviours during teenage or young adulthood may have an effect on diseases related to lifestyle in the future. Primordial prevention basically targets the unhealthy lifestyle in young age, thereby preventing lifestyle related diseases in adulthood. This study provides an idea regarding unhealthy lifestyle practices among future health care professionals so that they can avoid those practices themselves and set an example to the patients and promote adopting healthy lifestyle practices.

Out of 313 students in the present study, only 3.5% participants had reported daily intake of fruits for last

week which is very much less compared to study conducted by Kulkarni done in Central India.[1] In the present study, 23% and 6.4% participants reported frequent consumption of fast foods and carbonated drinks (pepsi, coca cola, thumbs up, etc) respectively. In another study conducted in Delhi, reported frequent consumption of carbonated drinks and fast food among 23.7% and 32% students respectively. Paul et al reported of 91.3% prevalence of consumption of fast food among medical students in South India which was much more than the present study.[12]

In the present study, only 18 (5.8%) participants had reported regular physical activity (5 times a week) when asked about the previous month. This was much less than findings of the other studies conducted in Delhi, Karachi and Bareilly.[13-15] The reason behind the contrast in findings may be because the present study defined regular physical activity according to the WHO recommendations of physical activity but for the rest of the studies were self reported. The self reported version of being physically inactive was given by 119 (38%) students which was very similar to the findings of Kulkarni1 and Paul et al.[12] In our study, 189 (60.4%) students reported sedentary activity of spending ≥2 hours per day on phone, tablets, laptops, television, computers, etc and majority of them (59.7% and 57.2%) use the gadgets for social and whatsapp messaging respectively. Watery eyes (33.2%) and headache (30%) were the common consequences faced by the students after using the gadgets like mobiles, laptops, etc.

In the present study, 19 (6%) students had reported of smoking cigarettes or bidhis, and among them, 6 (1.9%) used to smoke daily, while 3 (1%) students were daily tobacco chewers in form of gutkha, pan masala, etc and 3 (1%) report of daily intake of alcohol while 18 (5.8%) students were occasional users. The findings for substance use were less compared to studies done in other parts of the country.[12,13,15,16]

When asked about sleep quality in this study, 111 (35.5%) students reported of less than 6 hours of average sleep duration per day, almost half (49.5%) took less than 15 minutes to fall asleep after turning off lights and less than half students (47.6%) self rated their sleep as good, whereas use of mobiles before sleep (33.5%) and stress (11.2%) were the common answers given for reasons of having disturbed sleep.

Difficulty to concentrate, feeling depressed, worrying and sleeplessness were major effects due to stress shown by studies done by Dahlin et al and Sajwani et al.[17,18] Regarding stress when asked, their academic performance and hectic schedule were the main factors which make them stressed out the most. Similar findings were seen in study done by Sundas.[19]

A study conducted in Spain had recommended campaigns based on nutritional education that included promotion of physical activity practices in the student group of population.[20]

This study had few limitations as the answers were self reported, so some students might have given socially desirable answers and another factor was limitation to recall.

CONCLUSION

In this study, sedentary lifestyle, lack of any physical activity, use of gadgets like mobiles, laptops, etc for activities like social media, Whatsapp were found to be prevalent among the medical students. Even though the medical students are well aware about the consequences of adopting unhealthy lifestyle behaviour, they still do not follow the suggested guidelines for health lifestyle. Regular workshops regarding implementation of healthy life style habits will be helpful and will have positive effect on them. Appropriate preventive strategies should also be developed to avoid irrational use of internet.

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