

A cross-sectional study on prevalence of obesity and Internet addiction disorder among medical students in a tertiary care establishment at Indore

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ABSTRACT

Background: India is a country where 270 million people are below poverty line, yet 30 million of men and women are overweight. Younger generation is falling prey to addictive behavior to devices, and Internet addiction has become a major public health issue. **Objective:** This cross-sectional study intends to estimate the prevalence of obesity and Internet addiction disorder among Medicos in a Tertiary Care Establishment at Indore. **Materials and Methods:** A sample of 400 medical students were selected by simple random sampling. Prevalence of obesity was judged by measurement of body mass index and waist circumference. Young's 20-item Internet addiction test was administered to find out the prevalence of Internet addiction among Medicos. **Results:** This study revealed that 31% of students were either overweight or obese, while 85% were addicted to the Internet either mildly, moderately, or severely. 65% of the overweight Medicos were also found to be addicted to the Internet. Obesity patterns showed a higher female predisposition (61%) among the medicos identified as obese. **Conclusion:** The results highlight that not only obesity is a burning problem among medical students but also Internet addiction and dependence are also very high among them.


KEY WORDS: Over-weight; Obesity; Internet Addiction; Medical Students

INTRODUCTION

The initiation of computers and Internet has led to a series of vivid changes and developments in the ways of generating, storing, and sharing knowledge. Too much of computers and the Internet create physical, mental, and social problems. Although it is not recognized as a standard definition, Internet addiction is defined as experiencing physical, mental, and social problems because of Internet and computer overuse. Internet addiction has a negative impact on workplace relations, interaction with friends, academic life, and family life. Internet addicts spend most of their life in front of the computer passing time with e-mails, chatting, discussion

forums, and online games. In a sense, we can say that Internet addicts move their social lives into the Internet environment. Today, problematic Internet use and Internet addiction appear to be social issues that should be addressed without delay. In this regard, students, adolescents, and young adults constitute the largest target group.^[1-5] India is now the third most obese country after the US and China.

Adolescents are more vulnerable to Internet addiction than adults, and the social performance, psychology, and lifestyle habits of Internet addicts can be affected by this addiction.^[6] Numerous cross-sectional studies have shown that Internet addiction has an adverse effect on several lifestyle-related factors in adolescents; it can result in irregular dietary habits, extended periods of time spent on the Internet,^[7] physical inactivity, short duration of sleep,^[8] and increased use of alcohol and tobacco.^[9,10] Some studies have reported that the change in lifestyle-related factors caused by heavy Internet use could have an adverse impact on the growth and development of Internet addicts.^[7,8]

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It has been found that there exists an association between overweight babies becoming overweight adults and prevalence of diabetes, cardiovascular diseases, colon cancer, and geriatric problems leading to 3.9% of years of life lost and 3.8% of disability-adjusted life year's worldwide.^[11]

Prevalence of obesity in India is up to 50% in Women and 32% among men in the upper strata of society.^[12] Lack of activities, techno-savvied lifestyle, spending most time on gadgets, and having junk food with disturbed sleep pattern contribute to rise in obesity among the youth.

In modern day life, the Internet is a widely used tool known to foster addictive behavior and threatens to develop into a major public health issue in the near future. In the past, people reported to have an Internet addiction disorder were stereotyped as young, introverted, socially awkward, computer-oriented males. While this stereotype may have been true in the past, the availability of computers and the increased ease of access to the Internet are quickly challenging this notion. As a result, problematic Internet use can be found in any age group, social class, racial or ethnic group, level of education and income, and gender.

College students are, especially, vulnerable to developing a dependence on the Internet, more than most other segments of the society.^[13]

Numerous studies have showed associations between Internet addiction and mental health problems, such as depression and psychiatric symptoms, among adolescents. However, information on the effects of Internet addiction and its relation with obesity of adolescents is limited, justifying the need of such studies. Medical students are the budding doctors of the Nation. Hence, if they are aware of their nutritional status and healthy/unhealthy lifestyles, they can modify their unhealthy lifestyles as well as they can be able to motivate general population.

Objectives

The objectives of this study are as follows:

1. To find the prevalence of obesity and Internet addiction among medics of Index Medical College, Hospital and Research Centre (IMCHRC), Indore.
2. To find the association between obesity and Internet addiction among medics of IMCHRC, Indore.
3. To suggest proper corrective measures and create awareness among the obese and the Internet addict.

MATERIALS AND METHODS

It was a cross-sectional study carried between the period from 1st and 30th November 2017 at IMCHRC, Indore, Madhya Pradesh.

The main objective of the study is to find the prevalence of obesity and Internet addiction along with association between obesity and Internet addiction among medical students to suggest proper corrective measures and create awareness among the obese and the Internet addict.

The sample was chosen from the undergraduates and postgraduates of IMCHRC by Simple Random Sampling. The study includes 400 students both male and female. Inclusion criteria were postgraduate and undergraduate students of M.B.B.S course willing to participate. Exclusion criteria were students not willing to participate. Oral questionnaire was designed, and interview technique was used to collect data. Internet addiction test (IAT) developed by Dr. Kimberly Young was chosen and used. IAT is reliable and valid measure of addictive use of the Internet.^[14] It consists of 20 items that measure mild, moderate, and severe level of Internet addiction. Body mass index (BMI) and waist circumference of each student was taken to calculate obesity. SPSS 20.0 was used to calculate data on MS Excel-2010 Sheet. Chi-square test was applied.

RESULTS

Among 400 participants, 23% were 1st year, 27% 2nd year, 9% 3rd year, and 4% final year students. 22% of participants were internees and 15% postgraduate residents.

125 students were found to be overweight (including the obese). Among the obese, 61% were female and 39% were male. Hence, among the total participants, 22.75% were overweight while 8.5% of medics were obese.

Gender is one of the biological factors affecting the weight status. Our study demonstrated that BMI was affected by gender as it had a higher female predisposition unlike a study conducted in Kolkata, which did not have a significant difference.^[15]

IAT indicated that 61 students were not addicted, while 270 were mildly, 64 were moderately, and 5 were severely addicted.

22% were consuming chocolates, cold drinks, or ice creams on every second or 3rd day followed by 31% weekly. 65% of respondents were consuming tea or coffee on daily basis. 23% were taking meals in canteens of hotels on daily basis followed by 22% weekly. 11% were taking non-vegetarian meals on daily basis followed by 13% on every 2nd day and 19% weekly. Watching television or movies while having meals was practiced by 20% of students regularly, followed by 19% on every 2nd day. 17% of medics were skipping breakfast daily, 33% every 2nd or 3rd day and 20% weekly. Skipping breakfast was a common practice as cited in other studies as well.^[16,17] Major meals were skipped by 8% students daily, 18% on every 2nd or 3rd day 21%

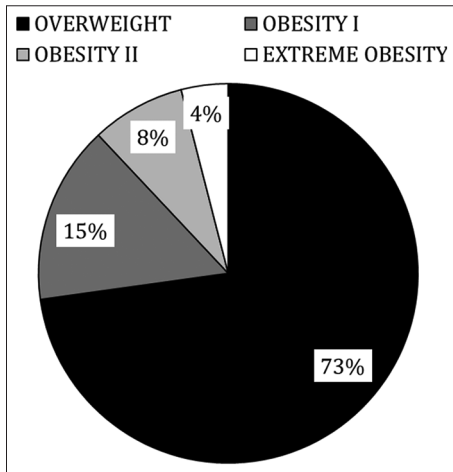


Figure 1: Distribution of students with body mass index above normal range

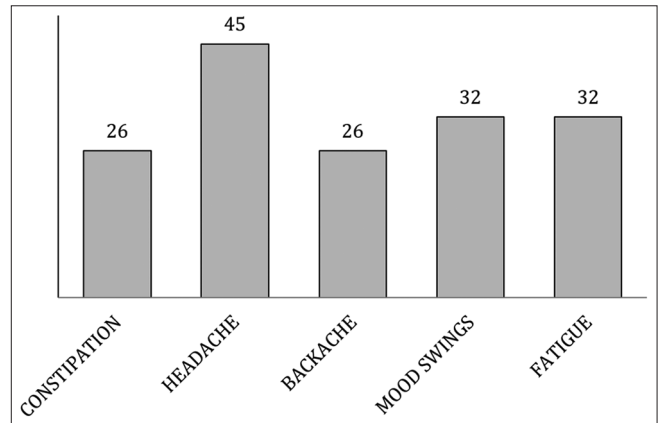


Figure 4: Health problems among these obese students who are also addicted to the Internet

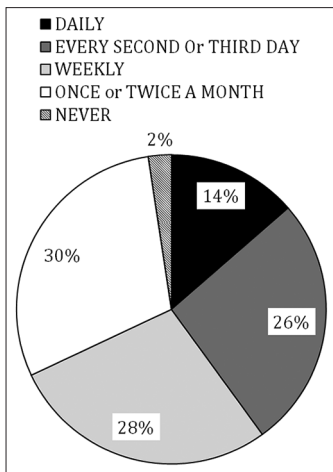


Figure 2: Consumption of junk food

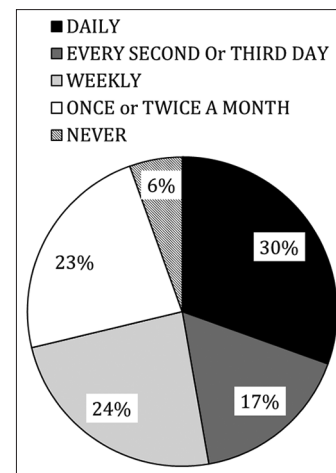


Figure 5: Consumption of ready to eat food

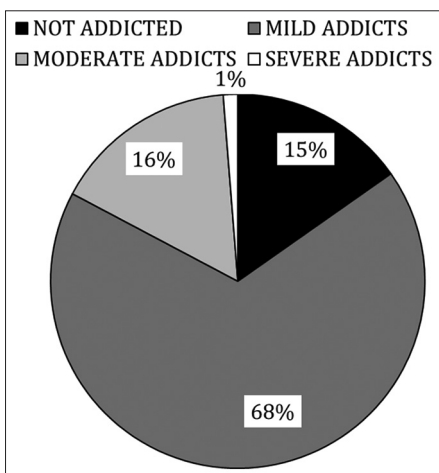


Figure 3: Internet addiction test Young's score

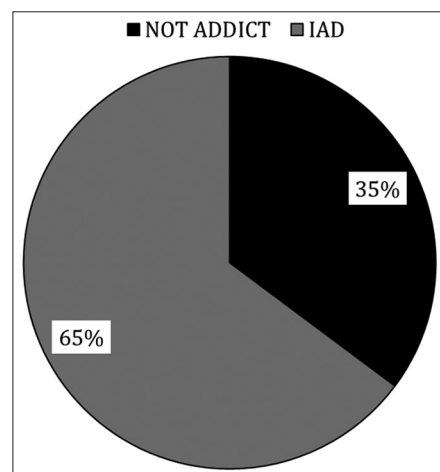


Figure 6: Association between obesity and Internet addiction disorder

weekly. Postprandial sweets were commonly consumed by 70% of students. Fondness for fast food was found among 76% while 46% students were compelled to eat fast food.

73% of the students examined were suffering from chronic constipation and 38% from chronic headache. Backache

problems in 21% while 31% complained about mood swings, and among 25% students, fatigue was a general complaint.

Chronic illnesses noticed in 10% of students. Frustration was high in 23%, while 12% had insomnia. 49% wanted to change

their current lifestyle. Alcohol consumption was prevalent in 33%, while 32% were regular smokers.

50% of students used to do physical activities such as yoga, gym, and sports. Among them, 65% were involved in sports, 60% in gym, 45% in yoga, and 32% in walking. 84% used to sleep for 8 h daily.

Among the 125 overweight and obese students, the onset of obesity in 35 started after joining MBBS course.

35 female medicos had waist circumference more than 87 cm while only 8 males had more than 102 cm.

81 of the 125 students were found to be mildly, moderately, or severely addicted to the Internet. The association between obesity and Internet addiction was found to be significant by Chi-square test, with $P < 0.05$.

DISCUSSION

A study conducted among medical students of Kanchipuram district reveals similar observation, where the prevalence of overweight medicos was found to be 24.3% and obese 8.6%.^[16] A study conducted in Central Delhi opined that 4.4% of medicos were obese while 30.4% were overweight. In Delhi, the general prevalence of obesity is 33.4% in urban women and 21.3% in men.^[17,18]

In a study conducted in a South Indian medical college, positive association is observed between self-reported rate of eating and current BMI among healthy young adult men and women, i.e., current BMI steadily increased with increase in the rate of eating. Examination-related stress and overeating have been a proven cause in the rapid development of obesity.^[19]

The study conducted at Kanchipuram district reveals that the waist circumference among females was very high implying that the risk of metabolic syndrome is high among females when compared to males, and this is similar to the results observed in the present study.^[16] However, our result is not similar to the findings of a study conducted in Kolkata among 278 undergraduate medical students, where the ultimate prevalence of obese and overweight was found to be 28% and 20%, respectively, however, having almost equal gender predisposition.^[15]

Internet addiction is a subset of a broader “technology addiction.” A meta-analysis study (2014) of 80 reports across 31 countries suggests that prevalence of Internet addiction varies considerably among countries and is inversely related to the quality of life.^[20]

CONCLUSION

A significant association was observed between obesity and Internet addiction. However, other aspects of lifestyle such as

stress, overeating, irregular sleep patterns, and alcohol were common factors observed among obese individuals. Most of the students are using the Internet for studies or surfing for study materials, but clearly in excess, which falls under addiction.

Diversion of attention is needed as an intervention for motivating them to healthy lifestyle or eating habits. Students should be encouraged also to continue sports, yoga, and physical exercise and to lead a healthy lifestyle. College should appoint mentors from the faculty available and allot 15 or 20 students per mentor, and these seniors should guide the young students how to handle the pressure of pursuing M.B.B.S course. Stress, emotional disturbances, junk eating, and addiction should all be checked and monitored. Good work culture should be developed to promote a healthy atmosphere in the college. Food provided in the college canteen should be of adequate standard, providing all the necessary nutrients to the students.

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