

Social Media Addiction and Health Promoting Lifestyle Among Students of Medical and Nonmedical Colleges

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Abstract

Background: Social media plays a crucial role in our daily lives, especially among university students. The global social media platforms and the easy access to the Internet bring about the potential for social media addiction. The concept of social media addiction is a rising problem that affects Egyptian university students physically, psychologically, socially, and mentally. **Aim of the study:** Explore the relation between social media addiction and health promoting lifestyle among students of medical and non-medical colleges. **Subjects and Methods; Design:** A cross-sectional analytic research design was carried out in this study. **Setting:** The present study was conducted at four colleges at Zagazig University. Nursing and pharmacy colleges represented medical colleges, education and commerce colleges represented non-medical colleges. **Subjects:** A stratified multi-stage sample was selected from medical and non-medical colleges (n= 480). **Tool of data collection:** Three tools were used for collecting data. Tool (I): Self-administered questionnaire. Tool (II): Social Media Addiction Scale-Student Form (SMAS-SF). Tool (III): Health Promoting Lifestyle Profile (HPLP-II) questionnaire. **Results:** 50.4% of non-medical students have a high total social media addiction compared to 37.9% of medical students. On the other hand, 77.5% of students from medical colleges have a higher total health promoting lifestyle compared to 66.2% of students from non-medical colleges. **Conclusion:** There was a statistically significant relation between virtual tolerance, virtual problems and health promoting lifestyle. More than one third of the study sample who was characterized by high virtual tolerance and problems had a low health promoting lifestyle. **Recommendations:** Design and implement preventive programs regarding optimal use of social media platforms. Moreover, conducting health education programs that address appropriate approaches of health promoting lifestyle.

Key words: Health Promoting Lifestyle, Social Media Addiction, Students of Medical, and Non-Medical Colleges.

Introduction:

Social media is becoming an increasingly important aspect of modern life and is taking up more and more space in people's daily lives. Simultaneously, as the number of active users on social media increases quickly, so does their influence in society. Social networks have started to have a significant impact on people's way of life, communication, interests, and psychology because many people now choose online connection over face-to-face communication. This could result in social media addiction ⁽¹⁾.

Social media addiction (SMA) may be referred to as online social networking addiction, problematic social media use, and compulsive social media use. SMA is defined as the compulsive usage of social media. A more specific definition of SMA would be flawed social media use with symptoms like addictive behaviors and reduced self-regulation. All definitions of SMA and its synonyms emphasize the compulsive nature of this type of social media use ⁽²⁾.

According to research on social media addiction, 210 million individuals worldwide are affected by

internet and social media addiction. Studies also indicate that things will only grow worse. While adolescents everywhere tends to use digital devices excessively ⁽³⁾. Furthermore, a study conducted in Egypt on 912 university students revealed that the prevalence of Internet addiction among students at Zagazig University was 41.5%, encompassing both at-risk internet use (37.4%) and internet addiction (4.1%). Consequently, the addiction to social media platforms has physical, psychological, social, and mental effects on Egyptian students ⁽⁴⁾.

Moreover, social media addiction is reinforced by factors like sexting, gambling, gaming, oversharing, and spending too much time on mobile devices. Adolescents can easily have unrestricted access to social media platforms because of accessibility, affordability, and the general availability of Internet connections ⁽⁵⁾.

Additionally, social media use might trigger symptoms like those of addiction. For some people, utilizing social media sites may become their one and only important activity, which could result in an obsession with the platform known as (salience). These websites offer activities that induce happy feelings or change their mood (mood modification). It takes more time and effort to participate in social networking activities to feel and think the same way as when you first started using them (tolerance) ⁽⁶⁾. Additionally, addicts also experience painful psychological and even physical symptoms when SMU is stopped (withdrawal) when personal and intrapsychic crises progress because of SMU (conflict), Addicts frequently relapse into excessive social media use after a period of abstinence (relapse) (relapse) ⁽⁷⁾.

Social media addiction might affect university students physically, psychologically, socially, and mentally. SMA may lead to a sedentary lifestyle and a decrease in daily physical activity, increasing the risk of non-communicable diseases like obesity,

diabetes, and hypertension ⁽⁸⁾. It has also been linked to numerous health problems, including headaches, carpal tunnel syndrome while using a phone or computer for extended periods of time, blurred vision and back and neck pain ⁽⁹⁾.

Furthermore, there's a growing body of evidence suggesting that youth's mental and psychological health suffers because of inappropriate usage of social and digital media technologies and social media addiction. Users' psychological health may be impacted by an excessive use of social media in their everyday lives ⁽¹⁰⁾.

According to social and emotional health, excessive use of social media has been linked in the past to several negative outcomes, including social relationship issues (e.g., damaged family relations, and Poor life satisfaction), performance problems (e.g., diminished work productivity, lower academic performance, and poor time management), and emotional problems (e.g., negative effects on emotional health and brain development) ⁽¹¹⁾.

Health promotion is the process of enabling people to increase control over their health and its determinants and thereby improve their health. The primary purpose of health promotion is to improve health by modifying people's health-related behaviors ⁽¹²⁾. Additionally, a health-promoting lifestyle is an important determining factor of health status. and is recognized as a key factor for the maintenance and improvement of health. Modifiable health behaviors such as eating habits, physical activity, and smoking are the most important factors in the development of chronic diseases ⁽¹³⁾.

The six components of health-promoting behaviors include health responsibility, physical activity, nutrition, spiritual development, interpersonal relations, and stress management ⁽¹⁴⁾.

Extensive studies have indicated that participation in unhealthy activities increases an individual's susceptibility to adverse health consequences. Conversely, leading a healthy lifestyle reduces the likelihood of disease and mortality while maintaining or increasing a person's degree of wellbeing and self-actualization⁽¹⁵⁾.

Therefore, staying healthy is essential to living a healthy life and carrying out daily tasks as a human. The focus of health care today is shifting from treating diseases to preventative medicine and health promotion. A healthy life is mostly dependent on consistent, balanced health promotion⁽¹⁶⁾.

Community Health Nurse plays an important role as a health educator by increasing awareness among the students about the benefits and dangerous effects of technology addiction, Also Advise students to control their online use⁽¹⁷⁾. Moreover, CHN helps in prevention, early detection and management of behavioral problems such as SMA in adolescent students⁽¹⁸⁾. Also, CHN collaborates with psychologists, psychiatrists, and other healthcare providers to develop comprehensive care plans for individuals dealing with social media addiction⁽¹⁹⁾.

Significance of the study:

Social media sites and applications are widely used by students. They spend a lot of their time on these sites as a part of their daily lives. Studies revealed that among the various age groups of students, university students are among the most using social networking⁽²⁰⁾. University students are at a critical stage of their lives, they tend to adopt unhealthy behaviors. These behaviors can adversely impact their health⁽²¹⁾. Since the students in the future will be responsible for managing different sectors of the country and will play a role in changing the other health-promoting behavior of other strata of the society, it is important to consider their health-promoting lifestyles by

providing facilities and eliminating the shortcomings⁽²²⁾.

Aim of the study:

The aim of the study was: To explore the relation between social media addiction and health promoting lifestyle among students of medical and non-medical colleges.

Research objectives:

- Determine prevalence of social media addiction among study sample.
- Identify the difference between students of medical and non-medical colleges regarding social media addiction.
- Determine prevalence of health promoting lifestyle among study sample.
- Identify the difference between students of medical and non-medical colleges regarding health promoting lifestyle.
- Explore the relation between social media addiction and health promoting lifestyle among students of medical and non-medical colleges.

Subjects and Method:

Research Design:

A cross-sectional analytic research design was used.

Study Setting:

The present study was conducted at four colleges at Zagazig University. Nursing and pharmacy colleges represented medical colleges, education and commerce colleges represented non-medical colleges.

Study Subjects:

A stratified multi-stage sample was selected from medical and non-medical colleges (n= 480). Represented by 120 students from each college, distributed equally according to the four academic years, from the academic year 2022-2023.

Tools for data collection:

Three tools were used to collect necessary data.

Tool I: self-administered questionnaire: It consists of two parts as follows:

- **Part (1): Personal characteristics of the student** such as age, gender, marital status, etc., and relevant family characteristics, in addition to certain academic characteristics as college, year, academic achievement and GPA, etc.
- **Part (2): Characteristics and details of social media usage**, such as name of social media sites, aim, daily usage time, and perception of the drawbacks related to the use of social media, and the effect of social media on promoting health.

Tool II: Social Media Addiction Scale-Student Form (SMAS-SF): This tool was developed by **Sahin** ⁽²³⁾, to determine the social media addiction levels of high school and university students. It consists of 29 items categorized into four subscales. These are virtual tolerance (item 1-5), virtual communication (item 6-14), virtual problem (item 15-23) and virtual information (item 24-29).

Scoring system:

The responses are on a five-point Likert type scale from “strongly disagree” to “strongly agree,” scored from one to five, respectively. The scores of the items of each subscale and of the total scale are summed-up for a total ranging from 29 to 145, so that a higher score indicates more addiction. For categorical presentation, the addiction status is classified as no addiction (29-51 points), little dependent (52-74 points), moderately dependent (75-97 points), highly dependent (98-120 points), and very highly dependent (121-145 points). For dichotomous analysis, a score less than 75 is considered “not social media addict” and mean score of moderately dependent is considered as “social media addict”. The scale has documented validity and reliability ⁽²³⁾.

Tool III: Health Promoting Lifestyle Profile (HPLP-II) questionnaire: This tool was originally developed by **Walker et al.** ⁽²⁴⁾ to evaluate health-promoting behaviors associated with a healthy lifestyle. The scale consists of 52 items, categorized into 6 subscales: health responsibility (9 items), physical activity (8 items), nutrition (9 items), spiritual development (9 items), interpersonal relationships (9 items) and stress management (8 items).

Scoring system:

The responses are on a 4-point Likert type scale “never, sometimes, often, routinely,” scored from one to four, respectively. The scores of the items of each subscale and of the total scale are summed-up so that a higher score indicates that the respondent has more positive healthy lifestyle behaviors, and the cut off was done at 60% or more. The scale has documented validity and reliability ⁽²⁴⁾.

Content validity and reliability:

The tool was revised by a panel of 3 experts from the department of community health medicine and the pediatric nursing who conducted content validity of all the items of the tool for relevance, clarity, comprehensiveness and understandability. All recommended modifications were performed. Tool II: Social Media Addiction Scale - Student Form (SMAS-SF) was translated into Arabic using translate-back-translate technique to ensure their original validity. Reliability was measured by using the Cronbach's Alpha Coefficient factor test to determine the internal consistency of each scale and all were satisfactory, for social media addiction scale (0.863), and Health promoting lifestyles scale (0.906).

Field work:

After securing the official approvals for conducting the study, the researcher met with the deans of the selected colleges to explain the aim of the study and the data collection procedure, and to determine the

suitable time to collect data. The researcher obtained the distribution of sections and their places in each academic year from student affairs, followed by meeting with instructors of the randomly chosen sections. The researcher explained to them the aim of the study, the researcher asked them to randomly choose 30 students from the students' attendance list.

The chosen students were asked to remain in their places after the section ended, the researcher informed the students about the aim of the study and the criteria for inclusion and exclusion. Those willing to participate were asked to provide informed consent verbally. The data collection form was handed to recruited students to fill them in. The needed time required to fill out questionnaires for each section ranged from 30 to 45 minutes. The researcher stayed with the students to answer any specific questions that arose during completing the data. The researcher checked it for their completeness. The researcher went to the selected colleges 3 days per week from 11 AM to 2 PM. The field work was carried out within approximately a month and a half, starting from the mid of April 2023 to the end of May 2023.

Pilot study:

A pilot study was carried out on a sample of 48 university students, approximately 10% of the calculated total sample size. The aim was to test the clarity and applicability of the data collection forms and to estimate the time needed for filling them in. The pilot sample was excluded from the main study sample, since there was no modification in the tool of data collection.

Administrative and Ethical considerations:

The study was approved by the ethics committee and dean of the Faculty of Nursing, Zagazig University. Then, a letter containing the aim of the study was directed from the Faculty of Nursing to the selected four colleges' deans requesting their approval and

cooperation for data collection. Consent was established with the completion of the questionnaires. Also, verbal explanation of the nature and aim of the study had been explained to students included in the study sample. Likewise, oral consent was received from each participant in the study after explaining the purpose of the study. Students were given an opportunity to refuse or to participate, and they were assured that the information would be used confidentially for research purposes only.

Statistical analysis:

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and means and standard deviations and medians for quantitative variables. This latter serves to indicate the dispersion of the variable data points around the median. The Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Qualitative categorical variables were compared using chi-square test. Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. To identify the independent predictors of social media addiction and health promoting lifestyle scores, multiple linear regression analysis was used and analysis of variance for the full regression models was done. Statistical significance was considered at p -value <0.05 .

Results:

Table (1): Shows that 50.2% of the students were aged 21+ years old, with Mean \pm S.D equal 20.5 \pm 1.4. As for gender, 72.3% were females, and 66.2% were from rural areas. Additionally, 96.9% of students were currently single, and 87.1% had sufficient family income.

Table (2): Shows that an equal percentage (25%) of the study sample

was from pharmacy, nursing, education, and commerce colleges. As for the school year, an equal percentage (25%) of students was distributed according to four academic years, about one third of study sample's grade ranged from fair to good (34%).

Table (3): Shows that the descending order of social media used among studied sample was WhatsApp (92.3%), then Facebook (87.9%), then Instagram (66.3%), then Messenger (65.6%).

Table (4): Shows that 90.8% of students were using social media for entertainment. As for duration hours 36.0% were using social media for an average of 4-6 hours daily.

Table (5): Shows that almost all the study sample (99.8%) reported health hazards of social media use. The highest health hazards mentioned were headache (68.3%), then visual problems (60.8%) while the lowest ones were stress and tension (37.7%), then depression (45.8%).

Table (6): Shows that almost all study sample (99.2%) reported positive effects of social media use. The highest positive effect mentioned was public health awareness (73.3%), while the lowest one was general information (14%).

Table (7): Displays comparison of social media addiction between students in medical and non-medical colleges. It is noticed that the only statistically significant differences were in virtual tolerance ($p=0.004$) and total social media addiction ($p=0.006$). It shows that 73.3% of students from non-medical colleges have high virtual tolerance compared to 60.8% of medical students. Additionally, 50.4% of non-medical students have a high total social media addiction compared to 37.9% of medical students.

Table (8): Displays comparison of health promoting lifestyles between students in medical and non-medical colleges. It shows that statistically

significant differences were found in health responsibility ($p=0.002$), nutrition ($p=0.006$), and total health promoting lifestyle ($p=0.006$). It is obvious that 71.2% of students from medical colleges have higher health responsibility compared to 57.5% of non-medical students, 74.6% of students from medical colleges have higher nutrition compared to 62.9% of students from non-medical colleges. Additionally, 77.5% of students from medical colleges have higher total health promoting lifestyle compared to 66.2% of students from non-medical colleges.

Table (9): Shows that there was a statistically significant relation between virtual tolerance, virtual problem and health promoting lifestyle. More than one third of the study sample who was characterized by high virtual tolerance (31.7%) and problem (36.2%) had a low health promoting lifestyle.

Table (10): Indicates that hours on net, No. of side effects were a statistically significant positive predictors of social media addiction score. Conversely, the school year, GPA was statistically significant independent negative predictors of social media addiction score.

Table (11): Indicates that urban residence, No. of benefits, medical schools were statistically significant positive predictors of health promoting lifestyle score. Conversely, female gender, married students, hours on net, No. of side effects were a statistically significant independent negative predictor of health promoting lifestyle score.

Discussion:

Nowadays social media plays a crucial role in our daily lives especially among university students who consume a lot of their time on social media platforms both during the day and at night⁽²⁰⁾.

Concerning comparing social media addiction among students of medical and non-medical colleges,

the current study results revealed that social media addiction was higher among non-medical students than their medical peers. This might be attributed to time availability and nature of the study as non-medical students may have more free time compared to medical students due to differences in academic workload and schedules. This additional time could lead to increased social media usage and, consequently, higher addiction levels.

In the same vein, a study conducted by **Hasan et al.** ⁽²⁵⁾ in Iraq indicated that there are statistically significant differences that were found between students from medical and non-medical colleges regarding social media addiction. SMA was higher among students from non-medical colleges than their medical peers. Similarly, **Kumar et al.** ⁽²⁶⁾ in India revealed that social media addiction was more in students from non-medical colleges as compared to students from medical colleges and most medical students were normal users.

This is in contrary with **Sonia et al.** ⁽²⁷⁾ in India found that social media addiction was more in students from medical colleges as compared to students from non-medical colleges. The same finding was obtained from the study conducted in Egypt by **Shehata and Abdeldaim** ⁽²⁸⁾ revealed that the medical students were severe Internet addicts more than the non-medical ones with statistically significant difference between them.

This difference might be attributed to university life of medical students may be stressful due to academic pressure, social media provides an avenue for escapism, allowing medical students to temporarily distract themselves from their responsibilities and stressors. This escapism can become addictive, as students turn to social media as a coping mechanism to alleviate negative emotions and anxiety.

Concerning comparing health promoting lifestyle among students of medical and non-medical colleges, students from medical colleges have higher health responsibility, nutrition, and total health promoting lifestyle compared to students from non-medical colleges. This might be attributed to medical students undergoing extensive training in health sciences and preventive medicine. This comprehensive education equips them with a deeper understanding of the importance of healthy behaviors and fosters a sense of responsibility towards their own health. They may receive specific instruction on nutrition, and other health-promoting behaviors, which can lead to greater awareness and adherence.

In the same context, **Chao** ⁽²⁹⁾ in Taiwan found that medical students had better health conception and health-promoting lifestyle profiles compared to non-medical students. Similarly, **Almutairi et al.** ⁽¹³⁾ in Saudi Arabia indicated that students in medical colleges may have a higher level of health responsibility, awareness and engagement in health-promoting behaviors compared to students in non-medical colleges.

Likewise, **Mansorian et al.** ⁽³⁰⁾ in Iran showed that the lifestyle of medical college students was better than that of non-medical students. Similarly, **Can et al.** ⁽³¹⁾ in Turkey indicated that the medical students had better health-promoting lifestyle than non-medical students and health responsibility in medical students was significantly higher than that of non-medical students.

Additionally, **Pasha et al.** ⁽²²⁾ in Iran showed that medical students have a better lifestyle compared to the other disciplines. On the same way, **Mehdizadeh et al.** ⁽³²⁾ in Iran revealed a significant difference was observed between medical and nonmedical groups regarding health responsibility. In other words, health responsibility

was higher in medical students compared to non-medical students.

On the contrary, **Shaban et al.** ⁽³³⁾ in Iran revealed that no significant difference between the health-promoting behaviors among medical and non-medical students of the University of Tehran. This might be attributed to the homogeneity of the sample. As the study population consists of students from similar socio-demographic backgrounds and lifestyles, it may minimize variations in health promoting behaviors between the two groups.

Concerning predictors affecting social media addiction, the current study results clarified that hours on net, No. of side effects were a statistically significant positive predictors of social media addiction score. This might be attributed to spending more time online can offer instant gratification through likes, comments, and interactions, creating a cycle of seeking pleasure and avoiding discomfort leading to social media addiction. Moreover, spending excessive amounts of time on social media platforms can lead to an increased number of side effects such as eye strain, headaches, neck and back pain, and depression.

On the same vein a study conducted by **Shanshal et al.** ⁽³⁴⁾ in Iraq presented that using social media for more than 4 hours was found to be one of predictors for social media addiction. The longer time the students spend on social media, the higher possibility of addiction to social media. Likewise, **Parlak and Başkale** ⁽³⁵⁾ in Turkey stated that increasing hours spent on social media is significantly related to social media addiction. Also, **Afacan and Ozbek** ⁽³⁶⁾ in Turkey showed that the students' usage of social media addiction increases as the internet usage period of the students increases. Additionally, **Sheinov** ⁽¹⁾ in India shows that social media addiction is associated with a range of negative consequences and increasing number of side effects,

including physical health problems, and mental disorders.

The current study also clarified that, the school year, GPA were statistically significant independent negative predictors of social media addiction score. This might be attributed to students who have higher **GPA**s who may have developed better time management skills. They might allocate their time more efficiently, dedicating less time to social media and more time to academic pursuits. Additionally, as students advance through **school years**, they may develop better self-regulation skills and become more aware of the potential negative consequences of excessive social media use, leading to reduced addiction.

These results agreed with **Alshanjiti et al.** ⁽³⁷⁾ in Saudi Arabia showed that students with excellent GPAs are less likely to be addicted to social media networks. This was supported by **Al-Menayes** ⁽³⁸⁾ in Kuwait and show that heavy social media usage is positively related to lower GPA. Similarly, **Al-Yafi and El-Masri** ⁽³⁹⁾ conducted a study on Qatari students showed that Grade Point Average (GPA) was lower among students who were addicted to social networking compared to other students. On the same way **Khan and Ahmed** ⁽⁴⁰⁾ in Pakistan revealed that Facebook addiction among undergraduates was quite high along with disturbing effects on student's academics resulting in lower GPAs.

In the same vein a study conducted by **Karayigit and Parlade** ⁽⁴¹⁾ in United States revealed that students at higher school years are less likely to experience social media addiction than younger students. Similar results were found by **Bagley et al.** ⁽⁴²⁾ in United States showed that younger people are far more likely to show signs of social media addiction. On the same way, **Abbasi** ⁽⁴³⁾ conducted a study in United States and founds that age is negatively related with social media addiction.

On the contrary **Afacan and Ozbek** ⁽³⁶⁾ in Turkey showed that there was no statistically significant difference in social media addiction status of students according to **school year** variable. This might be attributed to students in different school years who might be at similar developmental stages in terms of their social media habits and behaviors. The attraction of social media tends to be consistent across different academic school years.

Concerning predictors affecting health promoting lifestyle, the current study results clarified that urban residence, and medical colleges were statistically significant positive predictors of health promoting lifestyle score. This might be attributed to **Urban areas** typically have better access to healthcare facilities, including hospitals, and clinics. This access makes it easier for urban students to seek medical attention, preventive care, and health education. Also, more recreational facilities such as parks, gyms, sports clubs, and walking paths. These facilities encourage physical activity.

As well as medical students have firsthand exposure to patients with various health conditions, witnessing the consequences of poor lifestyle choices. This exposure motivates them to prioritize their own health and adopt preventive measures to avoid similar outcomes.

These results agreed with **Ghosh et al.** ⁽⁴⁴⁾ in India highlights that urban students exhibit higher health consciousness, self-consciousness, mental health orientation, and health responsibility than rural students. Similarly, **Boraita et al.** ⁽⁴⁵⁾ in Spain reported that urban resident students tend to have a higher health-promoting lifestyle than their rural counterparts especially in physical activity. Additionally, **Al-Qahtani** ⁽⁴⁶⁾ in Saudi Arabia revealed that the medical students showed better health responsibility, spiritual growth, and interpersonal relation practices

compared to the non-medical students.

According to the present study results, female gender, married students, and hours on net, were a statistically significant independent negative predictor of health promoting lifestyle score. This might be attributed to that in Egyptian culture; traditional gender roles may place a greater emphasis on **female's** caregiving responsibilities and domestic duties. It also tends to keep females in their homes, not going out to exercise, or other health-promoting activities.

Moreover, **Married** individuals, especially women, often juggle multiple responsibilities, including work, childcare, and household management. Balancing these responsibilities can be challenging and may leave little time for exercise, healthy eating, or other health-promoting activities. Also, **increased hours spent on the internet** may detract from health-promoting lifestyle behaviors through various mechanisms, including sedentary behavior, disrupted sleep patterns, unhealthy eating habits, and mental health impacts.

In the same vein a study conducted by **Musić et al.** ⁽⁴⁷⁾ in Croatia revealed that **female** students reported lower spiritual growth and stress management than male students. Similarly, **Lee and Loke** ⁽⁴⁸⁾ in Hong Kong, China stated that female students reported lower engagement in physical activity domain than male students. This was supported by **Burke and Mccarthy** ⁽⁴⁹⁾ in Ireland revealed that female students reported lower engagement in physical activity than male students.

Additionally, a study conducted by **Mehri et al.** ⁽⁵⁰⁾ in Sabzevar, Iran indicates that **marital status** can influence the promotion of health. It was found that there was an increased risk of being overweight or obese among married students. On the contrary, **Gilan et al.** ⁽⁵¹⁾ in

Kermanshah, Iran showed that married students had a higher mean HPLP-II score than single ones. Also, **Braithwaite et al.** ⁽⁵²⁾ in United States indicated that married students experienced greater health promotion and well-being than single college students. This difference might be attributed to accountability and being in a committed relationship like marriage can urge maintaining healthy habits especially in the presence of children.

In the same vein **Alley et al.** ⁽⁵³⁾ In Australia also found a link between Increased hours spent on social media and increased sitting time, which is associated with a range of health issues. Similarly, **Gupta et al.** ⁽⁵⁴⁾ in India reported that as the duration on social media increased, the health-related troubles increased, and it can be a negative predictor of a health-promoting lifestyle.

Conclusion:

Based on the results of the present study, it could be concluded that social media addiction was higher among non-medical students than medical ones. Moreover, non-medical students were characterized by higher virtual tolerance than their medical peers. On the other hand, total health promoting lifestyle, nutrition, and health responsibility were higher among medical college students than their non-medical peers. The current study also showed that there was a statistically significant relation between virtual tolerance, virtual problem and health promoting lifestyle. More than one third of the study sample who were characterized by high virtual tolerance and problem had a low health promoting lifestyle.

Recommendations:

In view of the main results of the study the following recommendations were derived and suggested:

- Preventive programs regarding optimal use of social media platforms.
- Health education programs that address appropriate approaches of health promoting lifestyles.
- Further research to study factors affecting social media addiction and health promoting lifestyle.
- Replicate the study on a large scale and in other settings to permit for generalization of results.

Table (1): demographic characteristics of students in the study sample (n=480)

Demographic characteristics	Frequency	Percent
Age:		
<21	239	49.8
21+	241	50.2
Range	18-24	
Mean±SD	20.5±1.4	
Median	21.0	
Gender:		
Male	133	27.7
Female	347	72.3
Residence:		
Rural	318	66.2
Urban	162	33.8
Marital status:		
Single	465	96.9
Married	15	3.1
Family income:		
Insufficient	62	12.9
Sufficient	418	87.1

Table (2): Academic characteristics of students in the study sample (n=480)

Academic characteristics	Frequency	Percent
College:		
Pharmacy	120	25.0
Nursing	120	25.0
Education	120	25.0
Commerce	120	25.0
School year:		
1	120	25.0
2	120	25.0
3	120	25.0
4	120	25.0
Grade:		
Fair	22	4.6
Good	141	29.4
Very good	222	46.2
Excellent	95	19.8

Table (3): Use of social media types among students in the study sample (n=480)

Use of social media types	Frequency	Percent
Social media used:[@]		
Facebook	422	87.9
WhatsApp	443	92.3
Messenger	315	65.6
Instagram	318	66.3
Link.Net	53	11.0
Others:		
Twitter	16	3.3
Telegram	26	5.4
U-tube	5	1.0
Snapchat	5	1.0
Tik-Tok	20	4.2
others	32	6.7

Table (4): Use of social media objectives and duration among students in the study sample (n=480)

Use of social media objectives and duration	Frequency	Percent
Use objectives:[@]		
Entertainment	436	90.8
Study	318	66.3
Work	41	8.5
Other (communication, news)	20	4.1
Duration (hours):		
<2	34	7.1
2-4	109	22.7
4-6	173	36.0
>6	164	34.2

Table (5): Health hazards (negative effects) of social media use as reported by students in the study sample (n=480)

Health hazards	Frequency	Percent
Health hazards:[@]		
Headache	328	68.3
Neck/back pain	247	51.5
Visual problems	292	60.8
Stress and tension	181	37.7
Depression	220	45.8
Overall health hazards:		
No	1	.2
Yes	479	99.8
No. of health hazards mentioned:		
Range		0-6
Mean±SD		2.7±1.5
Median		2.0

Table (6): Positive effects (benefits) of social media use as reported by students in the study sample (n=480)

Positive effects	Frequency	Percent
Positive effects:[@]		
Sporting programs	184	38.3
Nutrition programs	145	30.2
Digital clinics	105	21.9
Public health awareness	352	73.3
general information	67	14
Total positive effects:		
None	4	0.8
Yes	476	99.2
Range		0-6
Mean±SD		2.4±1.4
Median		2.0

Table (7): Comparison of social media addiction between students in medical and non-medical colleges

Social media addiction	Type of college				X ² test	p-value
	Non-medical		Medical			
	No.	%	No.	%		
Virtual tolerance:						
High	176	73.3	146	60.8		
Low	64	26.7	94	39.2	8.49	0.004*
Virtual communication:						
High	102	42.5	85	35.4		
Low	138	57.5	155	64.6	2.53	0.11
Virtual problem:						
High	96	40.0	81	33.8		
Low	144	60.0	159	66.2	2.01	0.16
Virtual information:						
High	158	65.8	152	63.3		
Low	82	34.2	88	36.7	0.33	0.57
Total social media addiction:						
High	121	50.4	91	37.9		
Low	119	49.6	149	62.1	7.60	0.006*

Table (8): Comparison of health promoting lifestyles between students in medical and non-medical colleges

Health promoting lifestyles	Type of college				X ² test	p-value
	Non-medical		Medical			
	No.	%	No.	%		
Health responsibility:						
High	138	57.5	171	71.2		
Low	102	42.5	69	28.8	9.89	0.002*
Physical activity:						
High	55	22.9	66	27.5		
Low	185	77.1	174	72.5	1.34	0.25
Nutrition:						
High	151	62.9	179	74.6		
Low	89	37.1	61	25.4	7.60	0.006*
Spiritual development:						
High	183	76.2	197	82.1		
Low	57	23.8	43	17.9	2.48	0.12
Interpersonal relations:						
High	171	71.2	186	77.5		
Low	69	28.8	54	22.5	2.46	0.12
Stress management:						
High	134	55.8	150	62.5		
Low	106	44.2	90	37.5	2.21	0.14
Total health promoting lifestyle:						
High	159	66.2	186	77.5		
Low	81	33.8	54	22.5	7.51	0.006*

Table (9): Relations between students' social media addiction and their health promoting lifestyle

Social media addiction	Health promoting lifestyle				X ² test	p-value
	High		Low			
	No.	%	No.	%		
Virtual tolerance:						
High	220	68.3	102	31.7	6.11	0.01*
Low	125	79.1	33	20.9		
Virtual communication:						
High	135	72.2	52	27.8	0.02	0.90
Low	210	71.7	83	28.3		
Virtual problem:						
High	113	63.8	64	36.2	8.95	0.003*
Low	232	76.6	71	23.4		
Virtual information:						
High	224	72.3	86	27.7	0.64	0.80
Low	121	71.2	49	28.8		
Total social media addiction:						
High	143	67.5	69	32.5	3.67	0.06
Low	202	75.4	66	24.6		

Table (10): Best fitting multiple linear regression model for the social media addiction score

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	56.42	3.18		17.731	0.000	50.17	62.67
School year	-1.01	0.44	-0.09	-2.267	0.024	-1.88	-0.13
GPA	-2.55	0.62	-0.17	-4.082	0.000	-3.78	-1.32
Hours on net	4.16	0.56	0.32	7.453	0.000	3.06	5.25
No. of side effects	0.68	0.34	0.09	1.995	0.047	0.01	1.36

Table (11): Best fitting multiple linear regression model for the health promoting lifestyle score

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	73.70	3.72		19.828	0.000	66.40	81.01
Female gender	-2.64	0.98	-0.12	-2.706	0.007	-4.56	-0.72
Urban residence	1.83	0.92	0.09	1.987	0.047	0.02	3.64
Married	-4.93	2.50	-0.09	-1.976	0.049	-9.84	-0.03
Hours on net	-0.99	0.50	-0.09	-1.992	0.047	-1.97	-0.01
No. of side effects	-0.86	0.31	-0.13	-2.799	0.005	-1.46	-0.26
No. of benefits	1.32	0.33	0.18	3.990	0.000	0.67	1.97
Medical schools	1.81	0.88	0.09	2.064	0.040	0.09	3.53

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