

Impact of Social Media Addiction on Academic Performance in River Nile State Universities –Northern Sudan

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Abstract: Students' academic performance, in Internet era with increasing misuse of social media interfere with study habits. This study explored the effect of social media on academic performance among medical students, in three (3) River Nile State Universities in Northern Sudan. It was cross sectional study conducted on three hundred and eighty (380) medical students from April to October 2024. Participant's students from Els Sheikh Abdallah Elbadri University (EAEU) representing the largest portion (40.5%) Most students (63.4%) were aged (20 to 25) years with females comprising (57.1%) of participants. Nearly all students (96.6%) used social media primarily for non-academic purposes, and (58.9%) spent over four (4) hours daily on these non- academic sites. The majority reported that social media negatively impacted their academic Performance (62.4%) and affected their sleep (54.7%). About (75.8%) had implemented strategies to minimize social media effects on their academic and personal lives such as setting time limits or deleting certain applications.

Keywords: Social media, Addiction, Academic Performance.

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INTRODUCTION

Social media is the new reality of human life. The relatively easy access to the internet around the world has made it a primary source of information and communication. Now, people are finding more ways than ever before to connect with friends, family members, co-workers, classmates, and even new acquaintances through social media sites [1]. Social media applications and their use among students have significantly increased in recent years. Some students use the internet for academic activities, as it presents medical educators with a new model for teaching and learning activities. Some educational institutes supplement traditional learning with online monitoring with rapidly changing trends [2].

Though a small fraction of students use the internet for educational activities in a controlled way, a large percentage waste time by visiting non-educational

sites. Internet addiction is defined as the inability to stop excessive internet use, a tendency to perceive offline time as meaningless, and experiencing excessive irritation and aggression during deprivation. Users may feel unable to refrain from using the internet, leading to a waste of time and energy [3].

The German researcher and specialist in addiction, Hans Jürgen, conducted research indicating that using the internet for four (4) hours or more daily is considered addiction and is associated with stress and sleep disturbances [4].

Medical students may suffer from various psychological distress due to their challenging academic obligations. Moreover, students transitioning from high school to medical college may encounter various obstacles and risky behaviors, including addictive behaviors, depression, burnout, and anxiety. Today's medical students are future doctors who will serve

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society, if they have a social media addiction, it will hinder both their ability to perform everyday tasks and their learning process [5].

Although smartphone addiction is not yet defined in the Diagnostic and Statistical Manual (DSM-5) or in the International Classification of Diseases (ICD-11) draft. The (DSM-5) mentioned non-drug addictions, such as internet and smartphone use, as a concern warranting future inclusion [6].

In October 2020, it was found that (4.66 billion) people were active internet users, representing (59%) of the total world population. Studies in the USA reported that (5.12%) of university 2 students across different colleges suffered from internet addiction. In Asia, the prevalence was (3.7%) in India and increased to (37%) in Iraq and Malaysia [7].

In Saudi Arabia, the use of social media expanded from (7.6) million users in the year 2014 to (29.5) million in 2022. In African countries, the prevalence ranged from (5.1%) in Mauritius to (16.8%) in Kenya.

The internet penetration rate in Sudan was (30.9%) in January 2022, with (14.03) million internet users reported; this figure increased by (2.4%) from 2021 to 2022 [8].

Research among medical students at University of Khartoum found that academic performance was negatively affected by social media use. A meta-analysis on internet addiction among medical students worldwide in 2017 established that the prevalence of internet addiction among medical students was significantly higher than that of the general population [9].

A study at Tanta University in Egypt found that (51.7%) of medical students were severely addicted, compared to only (11.3%) of non-medical students [8].

Social media affects students' lives, their academic performance, and the duration of their studies. People can manage this problem on their own in various ways, such as turning off notifications, deleting certain applications, or keeping phones away while studying, if they recognize the problem early [10].

It is essential to understand how social media impacts medical students' lives and academic performance in Sudan, specifically in the River Nile state, given the noticeable impact it has on them.

This study aimed to examine the effect of internet addiction on medical students' academic performance in the three (3) universities, (Elsheikh Abdallah Elbadri University (EAEU) in Barber, Nile Valley University in Atbara, and Shendi University in

Shendi) in River Nile state- Northern Sudan in the year 2024.

MATERIAL AND METHOD

It was cross sectional study conducted on medical students in the three (3) above mentioned universities. Non-medical students and medical students that didn't use social media were excluded from this study, and participants were randomly selected. The sample size was three hundred and eighty (380).

The information was collected by using online questionnaire from April to October 2024. Data analysis was done by descriptive statistics tables, odd ratio also by using specific program and excel Microsoft then presented in the form of frequency, percentage and charts.

Test of significant of result estimated by confidence interval and p value not more than (0.05).

Ethical Consideration

The research conducted after approval by community medicine department. Consent, obtained from each participants after they know the goal of the study. They informed that their participation is totally voluntary and withdrawal is allowed any time they want. Data will be handled by high degree of confidentiality at all stages of the study.

RESULTS

The study surveyed three hundred and eighty (380) students from three (3) universities: Elsheikh Abdallah Elbadri University (EAEU), University (40.5%), Nile Valley University (31.8%), and Shendi University (27.6%). Among the students aged, mostly (63.4%) between (20 and 25) years, with a mean age of approximately (23.14) years; (15.3%) are younger than (20) years, and (21.3%) are older than (25) years. The gender distribution showed (57.1%) female and (42.9%) male students. Regarding their year of study, (35.0%) are in their 5th year, followed by (17.4 %) in their 4th year, (13.9%) in their 3rd year, (13.4%) in their 6th year, (12.4%) in their 2nd year, and (7.9%) in their 1st year. More than half of the students (51.1%) come from families with an income greater than (200) SDG, while (37.4%) have a family income between (100) and (200) SDG, and (11.6%) fall within the (50-100) SDG range. Almost all students (96.6%) use social media, with Facebook being the most popular platform (34.2%), followed by WhatsApp (22.9%) and TikTok (15.3%). A majority (58.9%) spent more than four (4) hours daily on social media, with two-thirds (66.8%) using it for non-academic purposes, mainly for chatting (27.9%), watching films (22.4%), and entertainment/music (20.3%). More than half (54.7%) reported that social media affects their sleep pattern, while (62.4%) believed it negatively impacted their academic performance. In their last academic assessment, most students (35.8%) received a "Good" rating, followed by "Very Good"

(26.1%), "Pass" (19.2%), "Excellent" (15.8%), and (3.2%) failed. A significant majority (75.8%) have implemented solutions to mitigate the negative effects of social media, such as determining the time spent (23.4%) and deleting social media sites (21.1%).

Among the three (3) Universities studied, the highest number of social media users was at Elsheikh Abdallah Elbadri University (EAEU); (147) students, followed by Nile Valley University (120) students and Shendi University (100) students. The Chi-Square test showed no significant association between University and social media usage (Pearson Chi-Square = 3.626, $p = 0.163$). However, a significant association was found between the university and the preferred social media site (Pearson Chi-Square = 24.210, $p = 0.019$).

Students aged (20 - 25) years spent more than four (4) hours on social media compared to other age groups, and a significant association between age group and time spent on social media was found (Pearson Chi-Square = 8.967, $p = 0.011$). In contrast, there was no significant association between age and the primary use of social media (Pearson Chi-Square = 0.460, $p = 0.794$) or the impact of social media on sleep (Pearson Chi-Square = 3.856, $p = 0.145$).

As regard gender, (137) females and (100) males reported that social media affects their academic performance, but the Chi-Square test indicated no significant association (Pearson Chi-Square = 0.126, $p = 0.722$). Similarly, there was no significant difference in social media usage between genders (Pearson Chi-Square = 0.741, $p = 0.389$) or in the preferred social media site (Pearson Chi-Square = 5.556, $p = 0.475$). The majority reported that social media affects their health, but no significant association was found between gender and health impact (Pearson Chi-Square = 4.261, $p = 0.372$). Regarding the year of study, no significant association was found with social media usage (Pearson Chi-Square = 7.300, $p = 0.199$) or the impact on academic performance (Pearson Chi-Square = 6.528, $p = 0.258$). However, a significant association was found between year of study and the primary use of social media (Pearson Chi-Square = 17.932, $p = 0.003$). There was no significant association between family income and the most used social media site (Pearson Chi-Square = 13.650, $p = 0.324$) or the amount of time spent on social media (Pearson Chi-Square = 2.662, $p = 0.264$). A significant relationship was found between students' last academic assessment and time spent on social media (Pearson Chi-Square = 41.962, $p < 0.001$) as well as the primary use of social media (Pearson Chi-Square = 24.572, $p < 0.001$).

However, there was no significant association found between last academic assessment and solutions for managing social media use (Pearson Chi-Square = 7.721, $p = 0.102$). A significant association was found between social media use and whether students had

solutions to mitigate its impact (Pearson Chi-Square = 30.491, $p < 0.001$), and a significant association was also noted between last academic assessment and specific solutions used to manage social media (Pearson Chi-Square = 36.905, $p = 0.012$).

DISCUSSION

In this study the total of participants is (380), among them (96%) were used social media, (4 %) were not used it. Among participant using social media, (58.9 %) of them spend more than four (4) hours and (41.1%) spend less. It was found that (66.8%) use internet for other purpose and (33.2%) for academic purposes. The effect of social media addiction on sleeping was (54.7%) reported effect, while (45.3%) reported no effect. Regarding impact on health (26.3%) reported headache, (24.3%) stress, (13.9%) reported sight effect, and only (25.3%) reported it didn't affect their health.

When considering academic performance (62.4%) of students reported that social media had no effect on academic performance, and (33.6 %) reported negative impact on their academic performance.

The study carried out in of eastern part of India in the year 2019 regarding to using social media two third of participants reported positive impact on their academic performance.

Other study in Iranian students there was a negative and significant relationship between the overall use of social networks and their academic performance Türkkan Öztürk Kaygusuz, *et al.*, conducted a study in Turkey aimed to investigate internet addiction of medical faculty students and related factors.

Young Internet Addiction Test mean score was found to be 29.92 ± 16.33 . (19.4%) of the students (79) people were possible addicts and (3%)- (12) people were addicts, therefore it suggested that internet addiction among the Medical Faculty students was found to be low.

Another study done in Tana University College in Egypt between Egyptian and Malaysian students report that significant negative correlation was found between internet addiction and students public health Rasha Ali *et al.*, conducted a study aimed to identify the prevalence of internet addiction and associated factors among medical students in Sohag University.

In the year 2017 and her findings showed that the prevalence of internet addiction was (47.7%).

Ismael Salamah Albursan *et al.*, conducted a study on students from Jordan Saudi Arabia Yemen and Sudan aimed to measure effect of smartphone addiction.

They found significant differences between the Jordania with Jordanians displaying higher smartphone addiction. The Sudanese displayed higher smartphone

addiction than the Yemenis, and the Saudis higher than the Sudanese or the Yemeni. It also suggested that females displayed greater smartphone addiction than males.

Imade Idubor conducted a study in Nigeria university aim to Investigating social media usage addiction levels among undergraduates in University of Ibadan, High level of social media addiction was also established among the undergraduates.

Another study in Saudi Arabia university in the year 2023 conducted by mansour Alfaya etal to identify prevalence and determination of social media addiction among medical students and the preference was (55.2%) With the Mean score (16.6%) of students' academic performance was negative associated with social media.

Safaa M Elzoghpy *et al.*, conducted a study in Egypt Universities aimed to identify the correlation survey among undergraduate medical students (57.6%) suffering from addiction Another study carried in the University of Khartoum revealed that the prevalence of face book and other social networks uses was (93%), (96.1%) of users using it for academic purpose and (11.3%) users sometimes are the prevalence of negative effect absent from academic activities because of using social networks.

Another study conducted in University of Khartoum in the year 2021 by abdalla abbas mohammed etal to identify social media network and fear of missing out among medical students. Data was collected from the participants using a structured self-administered questionnaire that involved the social networking intensity (SNI) scale and fear of missing out (FOMO) scale.

Moderate positive correlation between social networking intensity and fear of missing out was found ($p\text{-value} < 0.01$). Of the total participants; (51) participants (15.4%) experienced low SNI and low FOMO. Another (78) participants (23.6%) had moderate SNI and moderate FOMO and only (16) Participants (4.8%) showed high SNI and high FOMO. There were no significant differences in SNI or FOMO scores among the different socio-demographic variables, except for the SNI score which was positively correlated to the monthly income.

Salih Boushra *et al.*, conducted a study in Omdurman Islamic University aimed to measure effect of internet addiction on academic performance of medical students. It pointed out that Social media was the leading platform for internet use purposes (88%), mean internet addiction score was 47.7; most of the respondents (55.8%) fit into the moderate-level addiction.

Khalid O Mohammed *et al.*, in the other study in Sudan in the year 2024 found that the prevalence of internet addiction was (75.5%) -(n= 232). The addiction levels were as follows: mild, (39.7%) - (n= 122); moderate, (33.2%) -(n= 102); and severe, (2.6%) -(n= 8).

Mohammed Hammad Jaber *et al.*, conducted a study on Sudanese medical students in the year 2012, aimed to measure the Influence Smartphones addiction on mental health and sleep quality among medical students. (67.6%) of participants exhibiting high levels of addiction.

Amel Eltayeb *et al.*, conducted a study in Nile University in Khartoum in the year 2024, aimed to evaluation of social life and academic achievements in Nile University-Sudan Medical Sciences Students'. The findings of the study indicate that students' social lives and academic performance can be negatively impacted by using the internet and social media.

CONCLUSION

This study found moderate impact of social media addiction among medical students at three (3) River Nile State universities and most of them using social media for non academic purposes. There is negative impact of social media on students' academic performance and health.

Recommendations

1. Raising awareness and promoting healthier internet usage is recommended.
2. Healthcare professionals should be aware of potential benefits of designing and implementing health of patients, it required to educate students on limiting counseling programs.
3. Medical schools should provide educational program on sleeping
4. Medical school should offer and encourage other physical and academic supporting activities such as sports and scientific societies and clubs.

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