

ORIGINAL ARTICLE

THE ASSOCIATION OF SOCIAL MEDIA USAGE AND ACADEMIC PERFORMANCE AMONG MEDICAL STUDENTS IN UNIVERSITY OF CYBERJAYA

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ABSTRACT

Social media is a broad description of numerous network tools and technologies that accentuate the social qualities of the Internet as a communication and cooperation tool. The prevalence of social media platforms and accessible Internet access contribute to the possibility of social media addiction, which is a growing issue among the younger generation users. This research was carried out to investigate the association of social media usage and the academic performance among medical students in University of Cyberjaya. The study was conducted among 239 medical undergraduates from Year 1 through 5 using an online validated questionnaire. Students were asked regarding their sociodemographic factors, social media platform used the most and hours spent daily, social media addiction, and their academic performance. Correlation analysis was done using the Pearson's correlation test. Instagram has a large majority of 162 users, or 67.8% of the total responses. 60.7% of the sample, claimed to spend 6 to 8 hours per day on social media. All the participants were found to be moderately addicted to social media based on the addiction score. There is a positive correlation between the number of hours spent using social media each day and academic achievement, but the result was statistically insignificant. Similarly, there is a favourable link between social media addiction and academic performance, however the association was not statistically significant. There is no connection between the number of hours spent using social media each day, social media addiction, and academic achievement among the population of students.

Keywords: Social media; social media addiction; academic performance; medical students

INTRODUCTION

According to previous studies, social media is an online platform that allow people to create social networks or social relationships with others that have similar personal or professional interests, hobbies, backgrounds, or real-life connections¹. Social networking has become a global phenomenon that has extended to practically every corner of the globe. Because of its ease of use, speed and reach, social media is changing the public discourse in society, and setting trends and agenda in topics that range from the environment and politics to technology and the entertainment industry². According to statistical data, there are currently more than 4 billion social network users throughout the world. It is predicted to go up to 6 billion people in the year 2027. In addition, as of January 2023, Facebook was found to be the most popular social network worldwide³. However, the prevalence of social media platforms and accessible Internet access contribute to the possibility of social media addiction, which is a growing issue especially among the younger generation users. It is probable that social media addiction adds to low self-esteem, which leads to poor mental health and academic performance⁴. Aside from the benefits afforded by the younger generation's ability to consume new media swiftly and access new technologies, it has also begun to produce negative usage behaviours⁵.

Therefore, understanding the origins and effects of social media addiction is critical. Social media addiction is a word used to describe a scenario in which a person spends too much time on social media (e.g., Facebook, Twitter, Instagram) to the point where it interferes with other elements of his or her daily life, such as education, employment, or relationships with others⁶. Many students have become addicted to the use of social media sites as they use it for various purposes on a regular basis. Spending excessive time on social networking sites can divert the concentration and shift focus from the particular task⁷. As a result of its expanding popularity, there is a growing worry about the effects of social media use on students' academic performance. In this regard, this research was carried out to investigate the association of social media usage and the academic performance among medical students in University of Cyberjaya. The objectives of the study include to assess the students' preferred social networking sites, to determine the hours spent on social media daily, and to investigate the association between time spent on social media and social media addiction with their academic performance.

METHODS

This study was conducted among 239 Year 1-5 medical students at University of Cyberjaya from

the main campus and Muar campus. Accessibility to both locations was done through online means. In order to be part of the survey, they should be using and be familiar with at least one type of social media site. The sample size was achieved by using the Fisher's formula and p value from a similar study done previously. The sampling technique used was convenience sampling. Convenience sampling was chosen as our team collected the data during the pandemic era. As such, respondents were recruited by sending them the online questionnaire through various platforms such as WhatsApp, Facebook, and Instagram. The participation was completely voluntary and required the students to provide their consent before proceeding to answer the survey. No personal information was asked throughout the questionnaire to respect and maintain the privacy of the participants. Ethical approval was obtained from the University of Cyberjaya Research Ethics Review Committee (CRERC) [UOC/CRERC/ER/428].

The questionnaire comprised of four sections as follow: (A) Sociodemographic factors; (B) Type of social media platform used the most and hours spent on it daily; (C) Social media addiction; and (D) Academic performance. The Social Media Addiction Questionnaire (SMAQ) was used to determine the addictiveness of the participants towards social media sites. It is a validated 8-item questionnaire derived from the Facebook Intrusion Questionnaire (FIQ) as shown in below table. It was scored based on a seven-point Likert scale ranging from "Strongly disagree" to "Strongly agree". The social media addiction score was utilized to determine the extent of addictiveness. A low level of addiction is considered with a score of less than 7, moderate level with the score of 8-50, and high level if the score is >51. Statistical analysis was done using SPSS version 20.0. Descriptive and inferential analysis was used to interpret the data. Cronbach's alpha coefficient was used to test the reliability of the actual data. Pearson correlation was used to find out the association of different variables.

Table 1: 8-item social media addiction questionnaire (SMAQ)

Section	Item
Social media addiction (SMAQ)	I often think of social media when I'm not using it.
	I often use social media for no particular reason.
	Arguments have arisen with others because of my social media use.
	I interrupt whatever else I'm doing when I feel the need to access social media.
	I feel connected to others when I use social media.
	I lose track of how much I am using social media.
	The thought of not being able to access social media makes me feel distressed.
	I have been unable to reduce my social media use.

RESULTS

Cronbach's alpha coefficient was used to test the reliability of the questionnaire. The overall Cronbach's alpha value of 0.743 confirmed the questionnaire's suitability for data collection.

Demographic data:

The study set out to look into how different demographic factors were distributed across the respondents. A total of 239 participants, ranging in age from 19 to 33, took part in the study. The demographic characteristics of our respondents are shown in Table 2. Majority of the respondents (70.3%) were between the ages of 19 and 23. The study's gender distribution was nearly equal, with 56.9% (n=136) female participants and 43.1% (n=103) male participants. Chinese made up 16.3% (n=39) of the sample, followed by Indians at 43.1% (n=103) and Malays at 39.3% (n=94). 1.3 percent (n=3) of the respondents fell into the "Other" group. 98.7% (n=236) of the respondents were Malaysian citizens, making up the great bulk of the sample. 53.6% (n=128) of the responders, or

the largest group, were students in year 4, who made up the majority. The next group was made up of 15.5% (n=37) Year 2 pupils, 14.2% (n=34) Year 5 students, 10.9% (n=26) Year 3 students, and the smallest group was made up of 5.9% (n=14) Year 1 students. Finally, the respondents' household monthly income was divided into three groups: B40 (RM4849 and below), M40 (RM4850 to RM10959), and T20 (RM10960 and above). The M40 group accounted for the bulk of responders (53.6%) (n=128), closely followed by the T20 group (43.1%) (n=103). The B40 category had the fewest percentage of respondents (3.3%, n=8).

Use of social media platforms:

The social media preferred the most by our participants is showed in Figure 1. Instagram has a large majority of 162 users, or 67.8% of the total responses, with Twitter and Snapchat falling into second and third place respectively.

Hours spent on social media daily:

Figure 2 shows that most participants, or 60.7% of the sample, claimed to spend 6 to 8 hours per day

on social media. This statistic indicates that a sizeable percentage of the respondents spend a lot of time on social media platforms, maybe participating in a variety of online activities or networking for extended periods of time.

Social media addiction score:

The results of our data have been depicted in Figure 3 that all of the participants (n=239) were moderately addicted to social media, with the lowest score of 9 and highest score of 49.

Academic performance:

The results presented in Figure 4 provides an insight into the current academic performance of respondents in the university, based on their CGPA (Cumulative Grade Point Average) and GPA (Grade Point Average) scores. In Figure 4, it shows that majority of respondents, constituting 50.2%, fall within the range of 2.5 to 2.74 for their CGPA, suggesting a moderate level of academic achievement. As for their GPA, 50.2% of respondents fall within the GPA range of 2.5 to 2.74, aligning with the proportions seen in the CGPA distribution and suggesting consistency in performance across these categories.

Correlation analysis between hours spent on social media daily, social media addiction and academic performance:

The study sought to determine the connection between a group of students' academic success and the number of hours they spend each day on social media, as well as the prevalence of social media addiction. Table 3 shows the results of the correlation analysis. The association between these variables was investigated by using Pearson correlation. The findings revealed a very slender positive link (correlation coefficient of 0.08) between the number of hours spent using social media each day and academic achievement (GPA). The p-value of 0.896 ($p > 0.01$) demonstrates that this link was not statistically significant. This leads to the conclusion that there is insufficient evidence to draw any significant conclusions about the association between the number of hours spent using social media each day and academic achievement (GPA). Similarly, academic achievement as evaluated by CGPA was discovered, with a correlation coefficient of 0.071 and a non-significant p-value of 0.276. As for the relationship between social media addiction and academic achievement, the findings showed a marginally favourable link (correlation coefficient of 0.067) between social media addiction and academic performance (GPA). Similar to the earlier analysis, this association was not statistically significant, as shown by the p-value of 0.299 ($p > 0.01$). The conclusion that follows is that there is no conclusive relationship between social media addiction and academic performance (GPA). As well, the relationship between social media addiction and CGPA-based academic achievement was looked at. With a correlation

coefficient of 0.077, the results revealed a little stronger positive connection, but as the p-value of 0.235 ($p > 0.01$) demonstrates, this correlation was not statistically significant.

DISCUSSION

Our findings revealed that majority of the students fell into the category of 19-23 years old (70.3%). This implies that a big number of them represent Generation Z, so the question of the prevalence of social media addiction seems to be rational. There have been studies conducted in the recent years that gave attention to the impact of social media usage among the younger generation. For instance, a study was carried out among 415 students from State University of New York in Oneonta. It was found that 7 out of 10 students acknowledged to being addicted to the Internet, with over two-thirds believing they were addicted to social media. These findings could have a big impact on counselling and intervention for parents, educators, and policymakers⁸. Another recent study was conducted in Pune, India to provide insights into social media usage among Generation Z and Generation Y, as well as to analyse utilisation of social media aspects such as socialisation, information, etc. According to the research, Gen Z uses social media more than Gen Y for education, entertainment, shopping, and socialisation, but both generations use social media equally for information searching⁹. On that account, it can be said that social media usage and addiction among the younger generation is an important issue to explore as they are the pillars of the future and makers of tomorrow.

Our study also found that all of the participants (n=239) were moderately addicted to social networking sites. Another study utilized the similar score to evaluate the level of social media addiction among 91 student-athletes from a public university in Malaysia¹⁰. In contrast to our findings, their results showed that 39.6% of them were moderately addicted to social media, while 60.4% were highly addicted¹⁰. On the whole, it is implied that the severity of social media addiction among the medical students of our study is lesser, and they might have a better balance in devoting time to other important areas of life.

Moreover, we found that although there was a positive correlation coefficient, the p-value ($p > 0.01$) showed that there was no significant correlation between time spent on social media with the GPA of the students. Similarly, we obtained a nonsignificant p-value for the association of hours spent on social networking sites with the CGPA of students. In another study corresponding to ours, it also attempted to investigate the association between students' social media usage period, and their academic success (CGPA). The correlation test revealed that there were no statistically significant variations in

Table 2: Demographic information of the participants.

Variable	Category	Frequency	Percent (%)
Age of respondent	19-23 years old	168	70.3
	24-28 years old	70	29.3
	29-33 years old	1	0.4
Gender of respondent	Male	103	43.1
	Female	136	56.9
Ethnicity of respondent	Malay	94	39.3
	Chinese	39	16.3
	Indian	103	43.1
	Other	3	1.3
Nationality of respondent	Malaysian	236	98.7
	Non-Malaysian	3	1.3
Educational level of respondent	Year 1	14	5.9
	Year 2	37	15.5
	Year 3	26	10.9
	Year 4	128	53.6
	Year 5	34	14.2
Household monthly income	B40 (<RM4849)	8	3.3
	M40 (RM4850-RM10959)	128	53.6
	T20 (>RM10960)	103	43.1

Table 3: Correlation analysis between hours spent on social media daily, social media addiction and academic performance.

Variable		Hours spent on social media daily		
Measure		Pearson Correlation Coefficient	Sig. (2-tailed) (P-value)	Results
Academic performance (GPA)	performance	0.008	0.896	Rejected
Academic performance (CGPA)	performance	0.071	0.276	Rejected

** . Correlation is significant at the 0.01 level (2-tailed).

Variable		Social media addiction		
Measure		Pearson Correlation Coefficient	Sig. (2-tailed) (P-value)	Results
Academic performance (GPA)	performance	0.067	0.299	Rejected
Academic performance (CGPA)	performance	0.077	0.235	Rejected

** . Correlation is significant at the 0.01 level (2-tailed).

academic performance across students' usage periods at 0.05¹¹. This raises the possibility of

the younger generation utilizing social media for purposes that benefit their educational life.

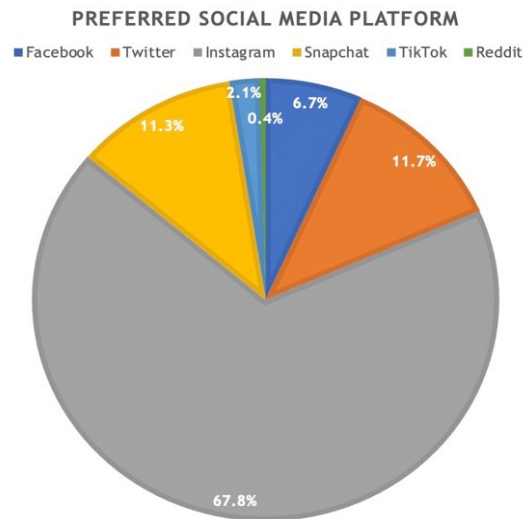


Figure 1: Preferred social media platform of the students

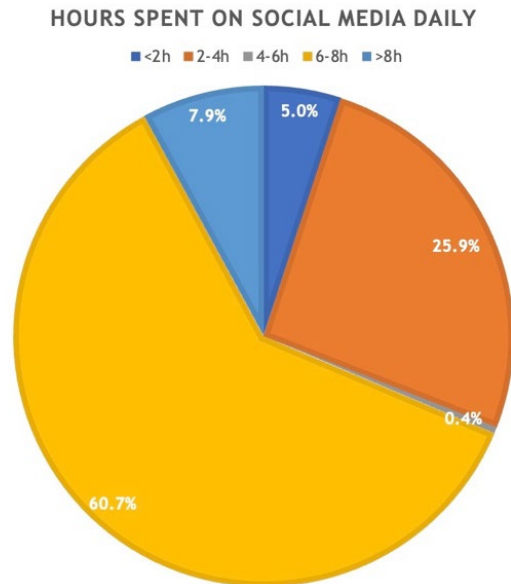


Figure 2: Time spent on social media daily by the students

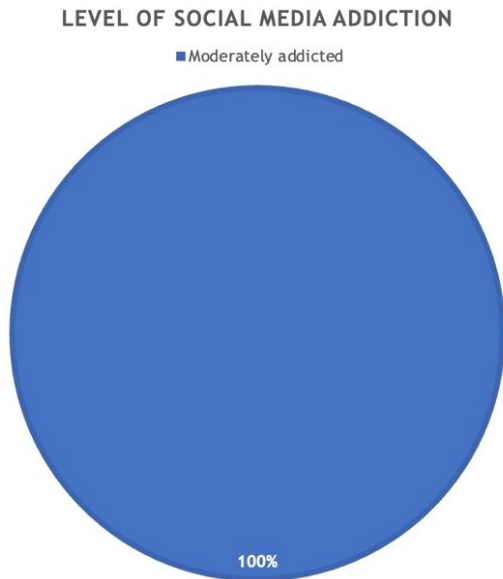


Figure 3: Level of social media addiction among the students

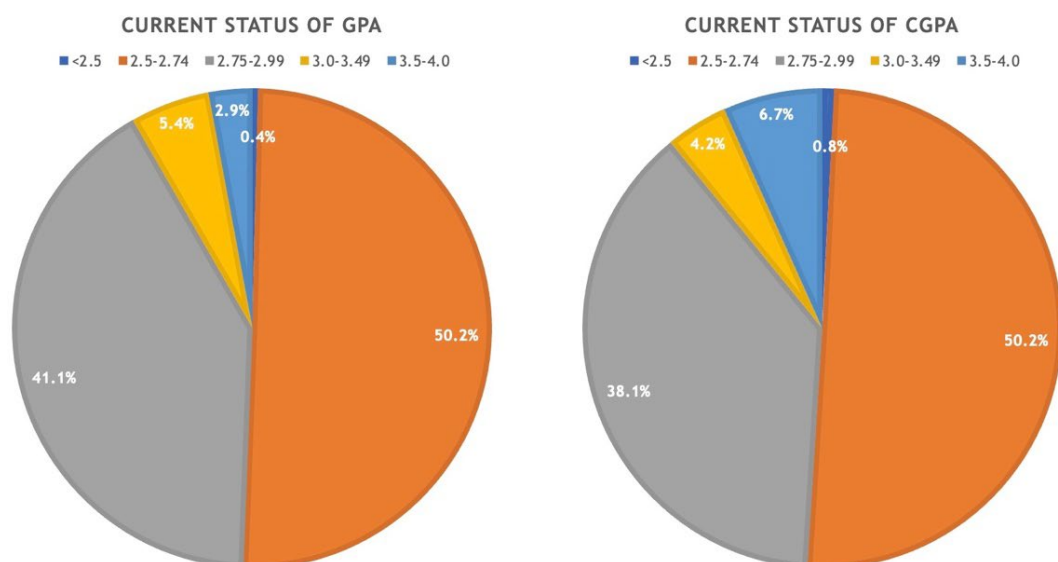


Figure 4: Current CGPA and GPA of the students

Lastly, we found that the relationship between social media addiction and GPA of students is not statistically significant. It was also concluded that there is no connection between social media addiction and CGPA. Similarly, a study was carried out among 141 nursing students in Selangor, where there was no significant difference between social media addiction and academic performance with a p value of 0.830 ($p > 0.05$)¹². This shows that although many students are addicted to social media to a certain extent, it does not negatively impact their studies. There is a possibility that they utilize social media to help themselves academically or they are able to create a healthy balance between their study and leisure time.

CONCLUSION

The study's findings imply that there is no connection between the number of hours spent using social media each day, social media addiction, and academic achievement among the population of students that was the subject of the study. The weak connections found suggest that factors other than social media use influence academic achievement more strongly than previously thought. It is crucial to remember that these results are unique to the sample and study context and might not apply to other groups. It could be necessary to conduct more research to delve into the intricate relationships between social media, academic achievement, and potential influencing factors.

There are a few limitations in the study, firstly, since this is a self-reported questionnaire, we faced a limitation where it is subject to response bias as participants may over-report their activity or under-report which may lead to outliers. Since the respondents were obtained through convenient sampling, there is space for bias in

selecting the participants. Other than that, the study population is also restricted and it could not represent a larger population of medical students in the country. In order to improve the research, further studies can be conducted where the study is conducted face to face. Besides that, a larger population can be used as a sample space such as obtaining respondents from medical students of different universities in Malaysia. All in all, the results obtained are unique to the sample and study context and might not apply to other groups. It could be necessary to conduct more research to delve into the intricate relationships between social media, academic achievement, and potential influencing factors.

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Conflict of interest

There was no conflict of interest.

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