A Cross-Sectional Study on the Effects of Social Media on Academic Performance Among Medical Students in University of Cyberjaya

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Abstract

This study aims to explore the impact of social media on medical students' academic performance at the University of Cyberjaya. In particular, it looks into the effect of gender on social media usage habits, the association between social media addiction and academic performance, and the relationship between time spent on social media and grades. 267 medical students from the University of Cyberjaya were included in this cross-sectional study; the students were chosen at convenience. An online survey was used to gather data, and it was shared with contacts that were stored on social media sites. Social media usage, sociodemographic information, and the possibility of developing a social media addiction were all included in the questionnaire. Descriptive statistics and ANOVA tests were used to analyse the responses in order to compare academic performance across time. To compare academic achievement with social media usage, the responses were subjected to descriptive statistics and ANOVA testing. According to the research, social media use and academic achievement are significantly correlated. Research suggests that an excessive amount of social media use may interfere with study time and academic attention, since there is a positive correlation between social media usage and poor academic performance. Furthermore, variations in the ways that gender affects academic performance were noted in social media usage. The findings underscore the necessity of enhancing time management skills and raising awareness about the possible negative effects of social media on academic achievement.

CHAPTER 1: INTRODUCTION

1.1 Background of Research

It is obvious that the Internet has become ingrained in people's lives in the modern era. It is hard to imagine a young man not spending at least one hour a day on social media and skimming the headlines. Current events and fashion trends must be kept up to date due to the realities of modern life. However, what effect does this pattern have on the academic achievement of the pupils?

The emergence of social media platforms such as Facebook, YouTube, and Twitter divided our reality into virtual and physical domains. Social media refers to online technology platforms that facilitate local and worldwide human connections. It is utilised to promote social interactions. In addition to allowing us to read books, see images, listen to music, and do a lot more, they allow us to connect with one another across continents. Our lives have been greatly simplified and strengthened by social networking.

Searching for friends, students make a variety of connections, chat with a wide range of people and select

groups representing a range of identities, learn a great deal, share stories, and engage in discussions about topics that are significant to them. Social network users are therefore primarily from the younger generation. Students may not always possess the media literacy skills necessary to analyse, analyse, and evaluate new information sources and draw well-informed decisions about its worth and potential uses. Social media usage has grown, with Facebook, Twitter, MySpace, LinkedIn, Google, Skype, and mobile devices currently being the most popular platforms. Facebook accounts let people communicate with each other. Facebook user profiles enable users to exchange information, create and sustain relationships, and inspire others to join a community as online social networks among college students to gain traction. Throughout the past several years, there has been a rise in the use of social media for communication with college students (Martinez-Aleman & Wartman, 2009). On Twitter, student social contacts have grown. It is applied to enhance thought and communication. Attendance in a seminar where weekly tweets about subjects covered in class are mandatory for graduate students. The use of social media has expanded with the emergence of smartphones. It gives users the ability to quickly visit multiple social networking sites with a few clicks. Students are greatly impacted by these social media platforms, and various studies have examined them with varying degrees of success. There is conflicting research regarding the effects of social media on students' academic performance. Some studies suggest that social media actually hinders learning and the development of communication skills.

According to our research, there is a correlation between the amount of time spent on social media and the risk of becoming addicted to it. The p-value for this correlation is <0.001, which is less than 0.05 and indicates that there is a relationship between the two variables. The p-value of 0.021 indicates that there is a relationship between the amount of time students spend on social media and their academic achievement, according to the study's analysis of the correlation between the two variables. Consequently, the null hypothesis was disproved. Whereas, for the study of identifying the relationship between gender and time spent in social media, the p-value for the relationship between gender and time spent in social media is 0.06 which is higher than 0.05, therefore we are unable to reject the null hypothesis.

CHAPTER 2: LITERATURE REVIEW

With billions of users using its services daily, the internet is a global network of interconnected computer systems. Millions of local to global private, public, academic, corporate, and government networks are included in it, linked via a variety of wireless, optical, and electronic networking technologies. The advancement of media technology has had a significant impact on how people communicate on a daily basis today. The number of young people using social media is rising constantly, and students are using it more and more frequently. It serves as a means of communication both on and off campus with peers.

Various specialists have carried out several investigations to ascertain the impact of social media usage on students' scholastic achievement. Using technology, such as the internet, can have a positive or negative effect on students' academic progress, according to Choney (2010), MehMood & Taswir (2013), Kist (2008), Jacobsen & Forste (2011). During the second semester of the 2013–14 academic year, a sample of Koforidua Polytechnic students participated in the study. Answers to questions about how long they spent on social media included 1001 respondents (66.3%) who said they spent between thirty minutes and an hour, 485 respondents (32.2%) who said they spent between two and three hours, and 22 respondents (1.5%) who said they spent between four and five hours. A high positive correlation is observed between the independent variable (time spent) and the dependent variable (academic performance) at the 0.01

significance level. The correlation is significant. This suggests that increased social media use has an impact on high academic achievement.

Mensah & Nizam (2016) carried out research to ascertain the impact of social media use on students' academic performance in Malaysian Tertiary Institutions. The sample selected through the use of a practical sampling technique consisted of 102 students from Erican College. A number of criteria were considered, including the student's academic performance, health concerns, interpersonal relationships, security concerns, and the suitability and duration of the time spent. A descriptive research methodology was employed in this study. We evaluated the collected data using description means and regression. Student academic achievement is correlated with four independent factors, according to Pearson's correlation coefficients.

Mensah and Nizam's study found that social media platforms significantly influenced students' academic performance in Malaysian postsecondary institutions. From first semester students to final year students, the respondents are different. A student's academic performance is more significantly impacted by time appropriateness and health addiction than by any of the other five variables used in the study. The rationale behind this is that an individual's success or failure is based on their capacity to manage their time well. Time appropriateness has a negative and significant impact on social media platforms and students' academic achievement, as evidenced by the negative beta (-0.303) and less than 0.05 p-value (0.000). Students who have trouble managing their time are therefore more susceptible to the negative impacts of social media. In the same way, children who are addicted to social media sites wind up skipping meals, which has an adverse effect on their health.

In 2021 , Sana Ali et al, conducted a quantitative research to study the gender discrepancies concerning social media usage and its impacts on students' academic performance, among 152 students from 4 private sector educational institutions in Rawalpindi and Islamabad, revealed that the social media have a positive impact on students' academic performance, and its usage pattern differs between teenage boys and girls.

Mazman and Usluel from Turkey, in 2011 investigated gender differences in Facebook usage among 870 users, mostly university students aged 18-25. Using an online survey, they identified four main purposes: maintaining existing relationships, making new relationships, academic usage, and following specific agendas. The study found that females primarily use Facebook for maintaining relationships, academic purposes, and following the agenda, while males are more inclined to use it for making new connections. These findings highlight distinct gender-based patterns in social network usage, with women focusing on existing social ties and men on expanding their social circles.

Owusu-Acheaw and Larson (2014) studied the relationship between social media and academic performance among students of Koforidua Polytechnic, in Ghana. Their study revealed a high prevalence of social media use, with most students owning smartphones, having internet access, and being familiar with various platforms, particularly Facebook. However, the research identified a potential downside. Students reported spending a significant amount of time, ranging from 30 minutes to 3 hours daily, on social media. This social media engagement, according to the study, correlated with lower academic performance. While the study doesn't delve into the reasons behind this correlation, it suggests that excessive social media use might be detrimental to academic success.

Despite the fact that social media is now acknowledged as a valuable educational tool, research shows that students still primarily use platforms like Facebook for leisure, to kill time, to reconnect with old friends, and to make new ones (Ellison, 2007). According to a study from Ohio State University, college students who use Facebook get lower marks and spend less time studying than their peers who do not use these

popular social networking sites (Kalpidou, 2011). 29 students in the Ericson (2011) study said in response to an open-ended question that socially interactive technology keeps them from studying. The obsession with making new friends online and conversing about inconsequential topics has squandered time that should have been dedicated to study, academic research, and innovation. Therefore, most students' academic performance deteriorates.

In 2014, the study conducted by Josan D. Tamayo and Giselle Sacha G. dela Cruz on the Relationship of social media usage to the academic performance of the Bachelor of Science in Information Technology Students of Centro Escolar University-Malolos, used a quantitative descriptive design to examine how social media affects students' grades. They analysed data from 138 students, divided by year and gender, to see how often they used social media and how it related to their academic performance. The study found that most students (55.7%) used social media frequently. It also showed that students who used social media a lot tended to have lower grades, suggesting that heavy social media use might harm academic performance.

A study by Emeka & Nyeche(2016), on the impact of internet usage on academic performance among the undergraduate students of University of Abuja, Nigeria revealed that 117(59%) users agree that they use the internet to aid research. It also revealed that the internet is being used to access current information, preparation for examinations, assignments and communication between students and lecturers, evidencing that the internet has a great influence on their academics.

A cross-sectional study on impacts of social media usage on students' academic performance conducted in 2017 among the undergraduate students from TATI university college at Kemaman, Terengganu, to test the correlation of social media usage and academic performance. The results revealed r=0.076, p=<0.05 and there was no significant relationship between the two variables.

A cross-sectional survey was done on implications of social media addiction on academic performance among generation Z student-athletes during COVID-19 lockdown. The study was conducted in 2021 among the student-athletes, residing in Universiti Kebangsaan Malaysia located in Bangi, Selangor, to test the impact of social media addiction on academic performance. The Simple Linear Regression test revealed a significance value of p=0.048 and concluded that the social media addiction had a significant contribution to student-athletes academic performance.

CHAPTER 3: MATERIAL AND METHODS

3.1 Study Design

This study involves cross sectional study of the sample from participant completed questionnaires to observe the participants' exposure to social media and the negative or positive outcomes in their academic performance simultaneously. The participants of the study were selected from current medical students of University of Cyberjaya, fulfilling the study's inclusion criteria.

3.2 Reference Population

The reference population includes medical students of University of Cyberjaya.

3.3 Source Population/Sample Population

Sample population includes all medical students of University of Cyberjaya participating in the questionnaire.

3.4 Study Participants

This study is targeted towards the medical students of University of Cyberjaya.

Inclusion criteria:

- Full time medical students of University of Cyberjaya
- 18 years old and above
- Able to understand English

Exclusion criteria:

- Students from other courses
- Students from other Universities
- Students under 18 years of age
- Not able to understand English

3.5 Sample size

The sample size will be calculated using this formula:

Sample Size n = N * [Z2 * p * (1-p)/e2] / [N – 1 + (Z2 * p * (1-p)/e2] where,

- N = Population size,
- Z = Critical value of the normal distribution at the required confidence level,
- p = Sample proportion,
- e = Margin of error

Calculated sample size

The sample size would be **267** respondents, with the sample population as 873 (resourced from the administrative staff), critical value as 1.96 at 95% confidence level, sample proportion at 0.5 to arrive at the largest size possible and the margin of error at 0.05.

3.6 Sampling Method

Convenience sampling. The survey was conducted via convenience sampling through the networks of the researchers by dissemination of questionnaires through Email and WhatsApp.

3.7 Data Collection

It will be carried out using an online questionnaire. A Google Form questionnaire will be distributed through our social media platforms and saved contacts. The respondents' answers will be automatically saved into the Google Form system.

The questionnaire is attached in Appendix A. The objective and purpose of the survey will be explained to the respondents in the Respondent's Information Sheet (Appendix B), which will be the first page of the Google Form. The respondents will need to click 'Agree' after reading the consent form to show that they agree to participate in the study.

The respondents will then answer the questions in the questionnaire section (Appendix C) once they entered their email address. Their email addresses are obtained so we can update our intervention program later. They will have to submit the form once they have answered all the required questions which will be automatically recorded via Google Form system and will be exported into Excel to be further analyzed.

3.8 Research Tool

The questions that will be asked in this survey can be divided into 2 parts, which are the sociodemographic data and questions regarding social media usage.

- **Sociodemographic data**

It consists of socio-demographic information of the participants which are age, gender, and year of medical school.

- **Social Media usage**

It consists of two sets of questions.

- **General Data**

In this set of questions, the questions are the average time spent on social media daily and types of social media that the respondent uses. Other than that, CGPA for the latest semester is asked to illustrate their academic performance recently.

- **Risk of Addiction towards social media**

In this set of questions, the respondents will be self-rating themselves on "strongly disagree", "disagree", "weakly disagree", "weakly agree", "agree", "strongly agree". The answer for each question has their own score from 1, strongly disagree to 6, strongly agree. After that, the total score of each question will be then assessed. The higher the score, the greater the risk of addiction.

3.9 Data Analysis

After collecting the data, it will be checked for any duplication, incorrect data and incomplete data before being analyzed by using Jeffrey's Amazing Statistics Program (JASP) version 0.16.2 data analysis software.

Descriptive statistics will be applied to describe the data. The type of social media app will be the in frequency table. ANOVA test will be used to compare the academic performance of the respondents by categorising the latest GPA and time spent on social media daily. The data will be considered statistically significant when the p-value is <0.05.

CHAPTER 4: RESULTS

Table 4.1: Presentation of Demographic Data.

Questions	Frequency	Percent (%)
Sex		
Male	100	37.4%
Female	167	62.5%
Age		
18-19 years	36	13.5%
20 years ≥	231	86.5%
Year of Medical School		
Year 1	63	23.6%
Year 2	41	15.4%
Year 3	52	19.5%
Year 4	84	31.5%

Year 5	27	10.1%

Table 4.2: General Data

Questions	n	%
Which social media platform do you use?		
Instagram	248	92.9%
Twitter	163	61.0 %
Tiktok	206	77.2%
Facebook	80	30.0%
Snapchat	107	40.1%
Youtube	234	87.6%
Whatsapp	182	68.2%
Others: Twitch	1	0.4%
Others: Linkedin	1	0.4%
Others: Discord	1	0.4%
What was your GPA last semester ?		
Below 2.5	6	2.2%
2.5-3.0	57	21.3%
3.01-3.5	109	40.8%
3.51-3.75	53	19.9%
3.76-4.0	42	15.7%
How long do you spend on social media per day?		
30 minutes - 1 hour	4	1.5%
1 - 2 hours	34	12.7%
2 - 3 hours	62	23.2%
3 - 4 hours	74	27.7%

4 - 5 hours	38	14.2%
More than 5 hours	55	20.6%

Figure 4.1: Barchart of Social Media Applications Used

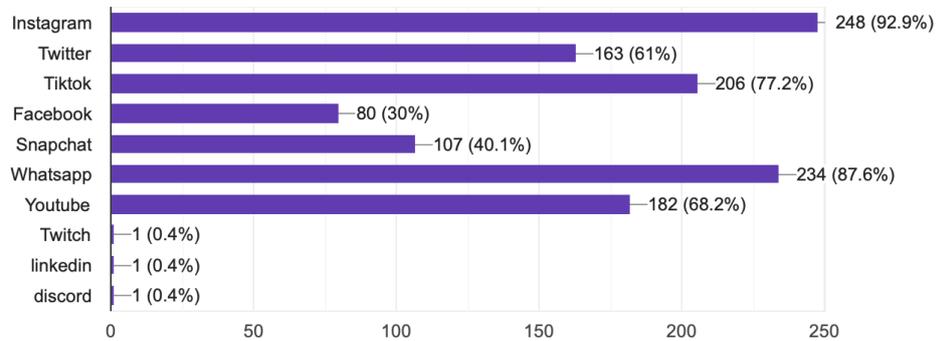**Table 4.3: Risk of Addiction towards Social Media**

I will check my social media notifications as soon as I receive them		
Strongly Disagree	8	3.0%
Disagree	30	11.2%
Weakly Disagree	28	10.5%
Weakly Agree	62	23.2%
Agree	99	37.1%
Strongly Agree	40	15.0%
I will check my social media notifications right after waking up from sleep		
Strongly Disagree	6	2.2%
Disagree	33	12.4%
Weakly Disagree	27	10.1%
Weakly Agree	52	19.5%
Agree	101	37.8%

Strongly Agree	48	18.0%
I will check my phone for social media notifications even during classes .		
Strongly Disagree	14	5.2%
Disagree	43	16.1%
Weakly Disagree	31	11.6%
Weakly Agree	75	28.1%
Agree	84	31.5%
Strongly Agree	20	7.5%
I will constantly check my phone so as not to miss out on social media updates from groups/those I follow/followers		
Strongly Disagree	24	9.0%
Disagree	54	20.2%
Weakly Disagree	45	16.9%
Weakly Agree	58	21.7%
Agree	66	24.7%
Strongly Agree	20	7.5%
Cannot imagine living without social media		
Strongly Disagree	26	9.7%
Disagree	47	17.6%
Weakly Disagree	50	18.7%
Weakly Agree	59	22.1%
Agree	56	21.0%

Strongly Agree	29	10.9%

I prefer spending time on social media when alone.		
Strongly Disagree	12	4.5%
Disagree	27	10.1%
Weakly Disagree	26	9.7%
Weakly Agree	52	19.5%
Agree	99	37.1%
Strongly Agree	51	19.1%

I will feel that life will be very less interesting without social media.		
Strongly Disagree	31	11.6%
Disagree	36	13.5%
Weakly Disagree	39	14.6%
Weakly Agree	55	20.6%
Agree	75	28.1%
Strongly Agree	31	11.6%

Prefer communication with friends and family through social media		
Strongly Disagree	25	9.4%
Disagree	58	21.7%
Weakly Disagree	56	21.0%
Weakly Agree	50	18.7%
Agree	52	19.5%
Strongly Agree	26	9.7%

I feel my online friends on social media are more interesting and captivating than those offline .		
Strongly Disagree	67	25.1%
Disagree	70	26.2%
Weakly Disagree	43	16.1%
Weakly Agree	37	13.9%
Agree	37	13.9%
Strongly Agree	13	4.9%
I feel my online personality in the world of social media to be more popular compared to that offline.		
Strongly Disagree	53	19.9%
Disagree	54	20.2%
Weakly Disagree	54	20.2%
Weakly Agree	49	18.4%
Agree	48	18.0%
Strongly Agree	9	3.4%
Often think that I should shorten my time spent on social media		
Strongly Disagree	1	0.4%
Disagree	10	3.7%
Weakly Disagree	23	8.6%
Weakly Agree	46	17.2%
Agree	106	39.7%
Strongly Agree	81	30.3%
I feel that I am increasingly spending more and more time on social media.		

Strongly Disagree	9	3.4%
Disagree	16	6.0%
Weakly Disagree	32	12.0%
Weakly Agree	73	27.3%
Agree	88	33.0%
Strongly Agree	49	18.4%
I feel unhappy and annoyed when not connected to social media.		
Strongly Disagree	38	14.2%
Disagree	68	25.7%
Weakly Disagree	56	21.0%
Weakly Agree	56	21.0%
Agree	37	13.9%
Strongly Agree	12	4.5%
Feel anxious and stressed on getting less than expected likes for a social media post like a picture or video		
Strongly Disagree	87	32.6%
Disagree	59	22.1%
Weakly Disagree	28	10.5%
Weakly Agree	41	15.4%
Agree	36	13.5%
Strongly Agree	16	6.0%
I feel that my academic performance and productively suffers due to excessive social media usage .		
Strongly Disagree	19	7.1%
Disagree	48	18.0%
Weakly Disagree	42	15.7%

Weakly Agree	68	25.5%
Agree	68	25.5%
Strongly Agree	22	8.2%

I feel that I am wasting my time on social media .		
Strongly Disagree	3	1.1%
Disagree	28	10.5%
Weakly Disagree	32	12.0%
Weakly Agree	62	23.2%
Agree	82	30.7%
Strongly Agree	60	22.5%

Feel tired and lack adequate sleep from excessive social media use		
Strongly Disagree	29	10.9%
Disagree	47	17.6%
Weakly Disagree	33	12.4%
Weakly Agree	60	22.5%
Agree	62	23.2%
Strongly Agree	36	13.5%

I see social media as an escape from the real world.		
Strongly Disagree	22	8.2%
Disagree	36	13.5%
Weakly Disagree	34	12.7%
Weakly Agree	63	23.6%
Agree	72	27.0%
Strongly Agree	40	15.0%

I will compulsively check for social media notifications even in places where it is dangerous to do so like driving or crossing the street .		

Strongly Disagree	74	27.7%
Disagree	70	26.2%
Weakly Disagree	33	12.3%
Weakly Agree	40	15.0%
Agree	35	13.1%
Strongly Agree	15	5.6%
Reading other people's posts on social media makes me envious and feel that I am missing out on things		
Strongly Disagree	47	17.6%
Disagree	55	20.6%
Weakly Disagree	42	15.7%
Weakly Agree	61	22.8%
Agree	44	16.5%
Strongly Agree	18	6.7%

Table 4.4: Interpretation of Data for Correlation between Time spent on Social Media and Risk of Addictiveness

Time Spent on Social Media	Risk of Addictiveness Score		
	Total (n = 267)	**Mean (SD)**	**P Value**
30 Minutes -1 Hour	4	68 (9.8)	
1 - 2 Hours	34	59.3 (17.7)	
2 - 3 Hours	62	73.3 (17.0)	< 0.001
3 - 4 Hours	74	76.5 (13.4)	
4 - 5 Hours	38	74.6 (19.5)	

More than 5 Hours	55	79.0 (15.0)	

SD: Standard Deviation

The results show that there is correlation between time spent on social media and risk of addictiveness with a p-value of <0.001.

Table 4.5: Interpretation of Data for Correlation between Time Spent on Social Media and Student's Academic Performa

Variable						Total	X^2 (df)	P value
Time Spent	GPA (last semester) n(%)							
	Below Than 2.5	2.5 - 3.0	3.01 - 3.5	3.51 - 3.75	3.76 - 4.0			
30 Minutes - 1 Hour	0 (0%)	0 (0%)	3 (75%)	1 (25%)	0 (0%)	4 (100%)		
1 - 2 Hours	0 (0%)	6 (17.7%)	14 (41.2%)	7 (20.6%)	7 (20.6%)	34 (100%)		
2 - 3 Hours	1 (1.4%)	21 (339%)	21 (33.9%)	10 (16.1%)	9 (14.5%)	62 (100%)		
3 - 4 Hours	0 (0%)	12 (16.22)	35 (47.3)	19 (25.7%)	8 (10.8%)	74 (100%)	34.8 (20)	0.021
4 - 5 Hours	1 (2.6%)	3 (7.9%)	16 (42.1%)	12 (31.6%)	6 (15.8%)	38 (100%)		
More than 5 Hours	4 (7.3%)	15 (27.3%)	20 (36.4%)	4 (7.3%)	12 (21.8%)	55 (100%)		

df: Degree of Freedom , X^2: Chi Square Value

The results show that there is correlation between time spent on social media and student's academic performance with a p-value of 0.021. The chi square value is 34.83 while the degree of freedom is 20.

Table 4.6: Interpretation of Data for Correlation between Time Spent on Social Media and Gender

Gender	Time Spent on Social Media			
	Total (n = 267)	Mean (SD)	Difference between means	P Value
Male	100	3.82 (1.43)	0.324	0.06
Female	167	4.144 (1.31)		

SD: Standard Deviation

The results show that there is no correlation between time spent on social media and gender with a p-value of 0.06. Null hypothesis is accepted.

CHAPTER 5: DISCUSSION

The impact of social media on academic achievement among University of Cyberjaya students is examined in this study. It primarily focuses on three topics: the correlation between time spent on social media and risk of addictiveness towards it, correlation between time spent in social media and student's academic performance and the relationship between gender and time spent in social media. Understanding the manner in which modern digital habits impact academic achievement requires an understanding of these processes, which our data shed light on.

5.1 Correlation between Time Spent on Social Media and Risk of Addictiveness Towards Social Media

One of the important findings from our study is that there is a strong correlation between time spent on social media, specifically time spent on social media and risk of addictiveness towards it. Our results shows a total of 4 students with a mean of 68 (SD=9.76) spent 30 minutes to 1 hour, 34 students with a mean of 59.32 (SD=17.74) spent 1 to 2 hours, 62 students with a mean of 73.26 (SD=17.02) spent 2 to 3 hours, 74 students with a mean of 76.51 (SD=13.43) spent 3 to 4 hours, 38 students with a mean of 74.55 (SD=19.49) spent 4 to 5 hours while 55 students with a mean of 79.04 (SD=14.99) devoted several hours to social media use. The association between the amount of time spent on social media and the chance of developing an addiction to it is indicated by the p-value of <0.001, which is less than 0.05 and indicates that there is a relationship between the two.

This finding aligns with the broader body of literature that highlights the addictive potential of social media platforms. Kuss and Griffiths (2011) review the psychological literature and discuss how social networking can lead to addictive behaviours, significantly impacting various aspects of life, including academic performance. In a similar vein, Al-Menayes (2015) discovered a connection between students' symptoms of addiction and their level of social media use. These research validate our findings that longer social media usage is associated with an increased risk of addiction.

Our results also resonate with the concept of "problematic social media use," which is characterised by an excessive preoccupation with social media, leading to significant impairment or distress. This behaviour often parallels substance addiction, where individuals exhibit withdrawal symptoms, tolerance, and a lack

of control over their usage. The high addiction scores among heavy users in our study indicate that similar mechanisms might be at play in social media addiction, necessitating interventions aimed at reducing excessive use and promoting healthier digital habits.

Furthermore, the design features of social media platforms contribute to their addictive nature. The use of notifications, likes, and other forms of social reinforcement can create a feedback loop that encourages continuous engagement (Andreassen, 2015). By comprehending these principles, tools and techniques to assist students in better managing their usage of social media can be developed.

In conclusion, the correlation between time spent on social media and addiction risk is evident, with higher time spent leading to greater addiction risk. This underscores the need for interventions that address psychological and social factors, alongside the development of tools to help manage social media engagement more effectively.

5.2 Correlation between Time Spent in Social Media and Student's Academic Performance

Based on the p-value of 0.021, chi square value of 34.83, and degree of freedom of 20, the study demonstrated a correlation between the amount of time students spend on social media and their academic achievement.

These results are in line with earlier studies that showed the detrimental effects of excessive social media use on academic performance. Junco (2012) found that excessive Facebook use was associated with lower GPAs, as it diverts time away from academic activities. Similarly, Liu, Li, and Zhang (2017) highlighted that self-regulation plays a mediating role in the impact of social media on academic performance. Students who manage their time effectively and regulate their social media use can mitigate some of the negative effects on their academic outcomes.

There are various reasons why social media has a negative effect on academic achievement. The first significant problem is time displacement, whereby social media use takes up time that could be spent studying or engaging in other academic pursuits. Second, social media conversations and notifications can disrupt study sessions, which lowers focus and productivity. This is a major source of distraction. Third, the content consumed on social media may not always be educational and can lead to cognitive overload, reducing the mental resources available for academic tasks.

Another important aspect is the potential for social media to contribute to procrastination. Meier, Reinecke, and Meltzer (2016) found that frequent social media use is associated with higher levels of procrastination, which can further negatively impact academic performance. Therefore, strategies to manage social media use must also address procrastination behaviours.

In summary, there is clear evidence linking social media use to poor academic achievement, especially when it is excessive. Effective time management and mindful engagement are essential strategies to mitigate these negative outcomes, promoting a more balanced approach to social media use.

5.3 Relationship between Gender and Time Spent in Social Media

Based on our study, the relationship between gender and time spent in social media, the mean value for male respondents is 3.82 with standard deviation of 1.43 while the mean value for female respondents is 4.144 with standard deviation of 1.31. The null hypothesis cannot be rejected since the p-value for the association between gender and the amount of time spent on social media is 0.06, which is more than 0.05. Taking all information together, we may conclude that there is no correlation between gender and social media usage.

These results disagree with some previous studies but agree with some of them. For example, Smith and Anderson (2018) found that women use social media platforms more regularly than men do,

going on for an extra ten minutes a day on average. Gender may not be a reliable indicator of social media usage patterns on its own, as the small variation in time spent that our study found did not approach statistical significance.

However, our research align with a study by Tifferet and Vilnai-Yavetz (2014) investigated gender differences in Facebook usage and found that while there were differences in the types of activities men and women engaged in, the overall time spent on the platform did not significantly differ between genders . This confirms our conclusion that gender has no discernible impact on the duration of time devoted to social media.

Comparably, Junco's (2012) study examined the links between social media use and academic achievement and discovered no gender disparities in the amount of time spent on Facebook, Twitter, and other social media platforms. Junco's findings further reinforce the idea that while social media usage patterns may vary in terms of content and purpose, the overall time investment remains comparable across genders.

Our study's lack of an important link between gender and the amount of time spent on social media raises the possibility that other variables may be more important in influencing social media usage patterns. Future research should explore these factors, which might include personality traits, academic stress, social support systems, and individual coping mechanisms. Additionally, examining the role of specific social media platforms and their design features could provide further insights into user engagement patterns.

In summary, our research revealed no discernible correlation between gender and the amount of time medical students at the University of Cyberjaya spend on social media. Gender does not impact how much time students spend on social media, as evidenced by the non-statistically significant variations in the average usage times of male and female students. These findings encourage further exploration into the nuanced factors influencing social media usage beyond gender, promoting a more holistic understanding of digital behaviours in contemporary society.

CHAPTER 6: CONCLUSION, LIMITATION AND RECOMMENDATION
6.1 Conclusion
In conclusion, the study demonstrates a significant correlation between time spent on social media and the risk of addictiveness among the medical students of University of Cyberjaya. There is a notable relationship between the time spent on social media and students' academic performance, suggesting that excessive social media use may adversely affect academic outcomes. However, the influence of gender on social media usage was not found to be statistically significant.

6.2 Limitations and Recommendations
● **Sample size and representation:** The study was conducted solely on medical students at the University of Cyberjaya. Hence, The sample size, while sufficient for this study, may not represent the broader population of students in different fields or at different institutions. A broader representation encompassing students from various academic disciplines, socioeconomic backgrounds would enhance the generalizability of findings and offer insights into the nuanced impacts of social media across different demographic groups.

● **Self-reported data:** The reliance on self-reported data for both social media usage and academic performance introduces the possibility of response bias. Participants may underreport or overreport their social media usage and academic performance due to social desirability. To mitigate this

limitation, future research efforts could incorporate objective measures, such as digital tracking tools or academic records, to supplement self-reported data.

● **Confounding variables:** The study did not account for other external factors that could influence academic performance, such as mental health, individual personality traits, coping mechanisms, socio-economic status, or extracurricular activities. A more comprehensive approach by controlling for relevant confounding factors and examining their potential interactions with social media usage is suggested.

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