

The relationship between Social Media Addiction, Academic Burnout, and Academic Performance among UKM Undergraduate Students: A preliminary study  
(*Hubungan antara Ketagihan Media Sosial, Kelesuan Akademik, dan Prestasi Akademik dalam kalangan Pelajar Sarjana Muda UKM: Satu Kajian awal*)

JIAO CAIQI\* & FAZILAH IDRIS

ABSTRACT

The main target of the survey was to identify whether the internal and external factors would affect the student's academic performance. Specifically, to investigate the relationship between social media (SM) addiction, academic burnout, and academic performance among 166 UKM Undergraduate Students. Bergen Social Media Addiction Scale (BSMAS) and Maslach Burnout Inventory – Student Survey (MBI-SS) were used to evaluate the SM addiction level and academic burnout level separately. Grade Point Average (GPA) for the latest Semester was used to measure academic performance. Findings indicated that demographic factors (Gender and Year of Study) have an insignificant relationship with SM addiction and academic burnout. Pearson Correlation denoted academic burnout was significantly correlated with SM addiction and academic performance. Sobel Test showed a significant result of Academic Burnout's mediating effect between SM addiction and academic performance, which means SM addiction level has an indirect and significant relationship with academic performance. Obviously, SM Addiction aggravates the level of academic burnout among UKM students leading them not to have a good mindset to do academic activities, which performed a drop from an academic perspective. We also perceived the mediating effect of academic burnout may enlighten scholars in the future that to focus on other entertainment like extracurricular activities to alleviate the severity of academic burnout or academic performance downturn. It is suggested universities, tertiary institutes encourage undergraduate students to use social media properly to prevent the malignant circle between SM addiction, academic burnout, and academic performance downturn.

Keywords: SM addiction, academic burnout, academic performance, undergraduate students, mediating role

ABSTRAK

Objektif utama kajian tinjauan ini adalah untuk mengenal pasti sama ada faktor dalaman dan luaran akan mempengaruhi prestasi akademik pelajar. Secara khusus, kajian ini dijalankan untuk menyiasat hubungan antara ketagihan media sosial, burnout akademik, dan prestasi akademik dalam kalangan 166 pelajar pra siswazah, UKM. Bergen Social Media Addiction Scale (BSMAS) dan Maslach Burnout Inventory – Student Survey (MBI-SS) telah digunakan untuk menilai tahap ketagihan media sosial dan kelesuan akademik secara berasingan. purata gred untuk semester terkini digunakan untuk mengukur prestasi akademik. Dapatan kajian menunjukkan faktor demografi (jantina dan tahun pengajian) mempunyai hubungan yang tidak signifikan dengan ketagihan media sosial, burnout akademik. Korelasi Pearson menunjukkan terdapat perkaitan yang signifikan di antara kelesuan akademik dengan ketagihan sosial media dan prestasi akademik. Ujian Sobel pula menunjukkan keputusan yang signifikan daripada kesan pengantaraan kelesuan akademik di antara ketagihan sosial media dan prestasi akademik, yang bermaksud tahap ketagihan sosial media mempunyai hubungan tidak langsung dan signifikan dengan prestasi akademik. Jelas sekali, ketagihan sosial media memburukkan lagi tahap kelesuan akademik dalam kalangan pelajar UKM menyebabkan mereka kurang berminat untuk melakukan aktiviti akademik, yang akhirnya menyebabkan penurunan dari aspek akademik. Adalah diharapkan kesan pengantaraan kelesuan akademik boleh menyedarkan para sarjana pada masa hadapan untuk memberi tumpuan kepada aktiviti kokurikulum bagi mengurangkan tahap kelesuan akademik atau kemerosotan prestasi akademik. Institut pengajian tinggi dicadangkan menggalakkan pelajar prasiswazah menggunakan media sosial dengan betul untuk mengelakkan hubungan yang merbahaya antara ketagihan sosial media, kelesuan akademik dan kemerosotan prestasi akademik.

Kata kunci: ketagihan media sosial, kelesuan akademik, prestasi akademik, prasiswazah, peranan pengantara

## INTRODUCTION

In the aftermath of the novel coronavirus (SARS-CoV-2) outbreak, most of the physical items have been converted to online versions. There is a growing trend of things being carried out online with numerous social media (SM) platform reaching the public stage. According to Dixon (2022), the SM penetration rate has reached an incredible 54 percent globally. He also explained, for Western Europe exclusively, the SM penetration rate occupied 79%, ranking the top among the global social media usage by region. In addition, Dixon's statistics revealed that, as of 2022, the average daily time spent on social media by internet users globally was 147 minutes, up from 145 minutes the year before.

When the web2.0 era came Darcy DiNucci (1999), the generation Y and the early generation Z have grown in an atmosphere that is full of digital information and they have been defined as "Homo Zappiens" (Veen, 2010), revealing that technology has penetrated into daily youngster's life including university students. Social media nowadays have developed into a comprehensive application with multiple functions, for example, Facebook and YouTube, which are the major social media that created a sense of community, where everyone was involved and socialized in terms of networking and collaboration in a giant group to enhance their individual cognitive value (J. Choi & Scott, 2013; Griffith, S., & Liyanage, L., 2008). Hence, Caplan (2005) indicated that individuals who lack self-presentational skills are especially likely to prefer online social interaction instead of face-to-face communication. Whiting and Williams (2013) signified ten uses and gratifications for using social media, which are social interaction, information seeking, pass time, entertainment, relaxation, communicatory utility, convenience utility, expression of opinion, information sharing, and surveillance or knowledge about others. The usages above mentioned are included under the "social media" related topic in an extensive way to refine the research perspectives on social media and its impact.

Alongside technology development, social media addiction, or the so-called problematic usage of social media has been extended due to the traits of easy access and pervasiveness in the public (Hou et al., 2019). According to the Use and Gratification Theory (UGT), people are proactive to select the content on the media that fulfill their specific individual needs (Katz, E., et al., 1973). Dienlin et al., (2017) indicated that communicating via social media sites can have a mainly reinforcing effect to enhance life satisfaction. Yet, many of us remain "online" 24\*7, the actual

behavior of "Fear of Missing Out" (FOMO), refers to the excessive engagement of SM (Alutaybi et al., 2020; Przybylski et al., 2013; Shah Nawaz & Rehman, 2020). Students mostly utilize social media during their free time for entertainment even when they are unable to regulate their smartphone use, which might result in smartphone addiction or SM addiction concurrent with the prosperous development of technology (Cha & Seo, 2018).

Social media like Facebook and others have gained popularity on a global scale, but as more people use them, a condition known as social media fatigue or burnout is becoming more common (Han, 2018; Liu & Ma, 2020). A status of emotional weariness, a propensity for depersonalization, and a sense of poor personal performance was used to define the term "burnout" (Lin & Huang, 2014; Maslach et al., 2001; Yang, 2004). According to Yang (2004), who continues to extend the concept in the context of students, "student burnout" or "academic burnout" employs course pressure, course load, or other psychological elements as a prerequisite to exhibiting a state of emotional exhaustion, a tendency to depersonalize, and a sense of poor personal accomplishment. According to previous studies, academic burnout happens when students are subjected to circumstances that endure for a long time and seem to be physically and emotionally draining (Schaufeli et al., 2002; Shih, 2012). In this context, SM addiction and academic burnout may either directly or indirectly affect students' academic performance (Al-Menayes, 2015), the higher year of study would cause more severe academic burnout, and even the gender may show differences in SM addiction level.

In summary, the objectives of this survey are to:

- i. Identify the relationships between SM addiction, academic burnout, and academic performance among UKM undergraduate students.
- ii. Identify the mediating role of academic burnout between SM addiction and academic performance.
- iii. Measure the level of SM addiction and academic burnout between male and female samples.
- iv. Measure the level of SM addiction and academic burnout between different years of study.

### SM Addiction and Academic Performance

Social media offers people various functions in order to fulfill people's needs. However, different personalities

would result in different behaviors. For example, extroverted people are investigated to have more friends and larger social networks than introverted people (Amichai-Hamburger & Vinitzky, 2010). The extrovert may spend more time on Facebook, obsessively checking their profile to see how many "likes" their most recent post achieved (J. Al-Menayes, 2015). On the other hand, social media like Instagram effectively attract users to build up their self-profile in the public space and may prove to be an addictive medium (J. Al-Menayes, 2015; Sholeh & Rusdi, 2019). Social anxiety fuels social media addiction. Fear of Missing Out is one of the explanations for Social Media Addiction.

SM addiction is similar to Ivan Goldberg's Internet Addiction Disorder was established in 1995. And the disorder's sub-categories include excessive time spent on social media sites or other websites, ardent and irrational passion for games, inordinate time spent on websites, and online shopping mania. However, the internet and social media in general are not a source of addiction solely on their own. Addiction to social media is defined as the excessive usage of social media to the point where it starts to disrupt one's every day, social, and working life (Murat Kirik, 2015). That is, Kirik further clarified people found a sense of satisfaction on social media and anticipated to find new fulfillment in it would lead to addiction. Upadhayay and Guragain (2017) interviewed some students based on the topic of "addiction", and some students mentioned that overuse of the internet leads to insufficient amounts of sleep and affected their concentration levels in the classroom during lectures may result in low academic performance (Rathakrishnan et al., 2021). It fits with the previous results conducted by several scholars that SM addiction is negatively related to academic performance (Busalim, 2019; Ndubuaku et al., 2020; Foroughi, B. et al., 2022). According to the Public services commission of Malaysia (n.d.), the Cumulative Grade Point Average (CGPA) is recognized as the evaluation system of the university graduate's knowledge, while the Grade Point Average (GPA) stands for the grade students achieved for each semester, with marks from each subject multiplied and divided by the credit hours taken. However, in this paper, we will concentrate on university students who are still striving to achieve their bachelor's degree. As a result, we examine the academic performance of the target audience using the GPA for the latest semester to obtain the most immediate and recent feedback. More than this, many articles have offered support that social media addiction has a significant relationship with academic performance. And this topic has continuously been followed and it also has the future values to explore more (Hou et al., 2019; Upadhayay & Guragain, 2017). Hence, we hypothesize:

H1: SM Addiction has a significant relationship with academic performance.

### SM Addiction and Academic Burnout

Herbert Freudenberger first proposed the concept of "burnout" in the 1970s, and this theory has been widely adopted in the learning and working perspective (Samra, 2018). Maslach and Jackson (1981) developed the Maslach Burnout Inventory (MBI) contributing to assessing the hierarchy of people's daily burnout, especially for individuals who do "People-work" and the like. The scale contained three subscales, Emotional Exhaustion, Personal Accomplishment, and Depersonalization respectively. The scale and its variations offer an excellent and credible inventory for relevant studies. However, when it faces the student, which occupied the academic burnout aspect, referring to the modified version adapted by Schaufeli et al. (2002) recognized by numerous authors. Accordingly, categories of academic burnout were divided into three categories: Exhaustion, Cynicism, and Professional Efficacy. Based on Hadžibajramović et al. (2020)'s Burnout Assessment Tool (BAT), burnout was characterized as a state of overwhelming, particularly when a person is extremely exhausted and has a declining capacity to control their cognitive and emotional processes. This self-defense mechanism enables people to temporarily forget about the problems they encounter at work or school. Social media, like Facebook, has a significant potential for addiction because it provides a particularly accessible and economical opportunity to escape the reality that is suited to "self-escape theory" (Baumeister, 1989; Tomaszek & Muchacka-Cymerman, 2021; Walburg et al., 2016). This point may call back to the introduction, which extended by use and gratification theory, burnout and demand fulfillment illustrating the effects orientating from totally different directions, which means burnout interrelated to the SM addiction instead of a one-way effect. The systematic review by Rosales-Ricardo et al. (2021) reported that 30.9% of cases of academic efficacy related to burnout syndrome were generally admitted. Currently, ample surveys conducted showing that the malignant effect of social media addiction has been discovered positively related to burnout (Han et al., 2020; Salmela-Aro et al., 2017; Walburg et al., 2016). In an extensive way, social media addiction and smartphone addiction are interrelated with each other, so it is suitable mentioning the results of smartphone addiction to reflect the results of social media addiction (Sözbilir & Dursun, 2018; Tunc-Aksan & Evin, 2019). Yet, the literature by Purnomo et al. (2020) has less consistency in specifying the significant relationship between smartphone addiction



and academic burnout. They found out the coefficient of correlation between smartphone addiction and academic burnout was insignificantly related using Bivariate Correlations Analysis. Although the existing works of literature examined the correlation between the two scales, the relationships between subscales (components) defined by BSMAS (e.g., Saliency; Andreassen et al., 2017; Griffiths, 2005) and MBI-SS (e.g., Exhaustion, Cynicism, and Professional Efficacy; Schaufeli et al., 2002) remain required to investigate.

Hence, we hypothesize:

H2: SM addiction has a significant relationship with the academic burnout.

H3: Saliency has a significant relationship between Academic Burnout and its components (Exhaustion, Cynicism, and Professional Efficacy).

#### Academic Burnout and Academic performance

For years, the concept of burnout has expanded. Typically, from occupational perspectives to the academic perspective. For example, some surveys concentrated on the relationship between Academic Burnout and Academic Performance (i.e., Academic achievements). Academic performance and academic burnout were further found to be negatively associated by Usán Supervía and Salavera Bordás (2020), implying a link between high levels of burnout and poor academic performance. More specifically, a recent statistical analysis by Burr and Beck Dallaghan (2019) for year 1 and year 2 students represents a significant correlation with the variables of emotional exhaustion ( $r=-0.576$ ), cynicism ( $r=-0.497$ ), and professional efficacy ( $r= 0.535$ ). This indicates that academic performance has a negative relationship with emotional exhaustion and cynicism, but it tested positively with professional efficacy. So, the finding also explains why low academic performance would occur as academic burnout increases to a certain extent.

On the other hand, students who frequently suffer from symptoms of burnout will be unable and reluctant to put out effort into their studies. As a result, this lack of willingness may hinder academic success accordingly (Madigan & Curran, 2021). Having said that, there is no evidence for the time those “exhaustion” students spend for the study is less than their fellows who have a high proficiency capability to learn; instead, they gained less output with the same input because of academic burnout (Galbraith & Merrill, 2015). In this context, Galbraith and Merrill (2015) remarked that MBI could predict poor academic performance well.

To date, the mediating effect of Academic Burnout has received scant attention in existing discussions.

Hence, we hypothesize:

H4: Academic Burnout has a significant relationship with Academic Performance.

H5: UKM students’ Academic Burnout mediates the relationships between SM addiction and Academic performance.

#### Demographic Factors and SM addiction

Even though Azizi et al. (2019) recently measured the level of students demonstrated relatively the same as the medium level. The majority of studies with regard to SM addiction levels between male and female students generally concluded that male students had a mean social networking addiction that was greater than female students and that this difference was statistically significant (Alnjadat et al., 2019; Chaudhari, B., 2015; Masthi, N. R. et al., 2018; Upadhayay & Guragain, 2017).

Conversely, the results found women are more likely to engage in Facebook subjectively as well as treat Facebook as an integral part of life than men, and also it is easy to perceive the number of Facebook friends showed a considerable trend toward significance in favor of females. (Biernatowska et al., 2017) Since addiction differs on demographic criteria such as gender, and year of study, some types of addiction are more likely to be identified in specific groups of society than others, based on the social control theory. (Sadock, B. J., 2007) As Ponnusamy et al. suggested in 2020, future studies may test the relationship in other universities. Studies should also take into account gender to examine whether male or female are more prone to suffer from the adverse effects of social media (e.g., Instagram; Foroughi, B. et al., 2022).

Hence, we hypothesize:

H6: SM addiction has a significant relationship with Gender.

H7: SM addiction has a significant relationship with the Year of Study.

#### Demographic Factors and Academic Burnout

In a giant interest to target and control the factors to discover the correlations on academic burnout, findings that the year of study and gender may also affect academic burnout, notably for cynicism and emotional

exhaustion part (Kilic et al., 2021). The findings of Kilic further pointed out that women broadly demonstrated higher academic burnout features than men, especially scored higher in emotional exhaustion. In contrast, recently, Yu and Chae (2020) signified the average score of male students for cynicism was higher than that of the female. The results turned out male students would be more likely to drop out or quit their academics at an earlier time than female students owing to their severe academic burnout experience. Besides, it is worth mentioning that Yu and Chae also found that academic burnout differs dramatically from the year of study ( $F=365$ ,  $p<0.05$ ), even though the result reveals that the first-year students have higher levels of academic burnout than the fourth year's students from the perspective of emotional exhaustion and cynicism.

With the previous empirical knowledge, we hypothesize:

H8: Academic Burnout has a significant relationship with Gender.

H9: Academic Burnout has a significant relationship with Year of Study.

## METHOD

This study used a cross-sectional design. The research sample consisted of 166 undergraduate students at the National University of Malaysia (UKM). The questionnaire is the main data-gathering instrument in this research. In this paper, a 26-item of questionnaire (see Appendix) via Google Forms was adopted. In the whole questionnaire, the "Likert 5-point Scale" was adopted to qualify the extent of respondents' perceptions toward the specific topic.

There are three parts to the questionnaire: respondent demographic, Bergen Social Media Addiction Scale (BSMAS), and Maslach Burnout Inventory- Student Survey (MBI-SS). The first part is to determine the basic information and identity of the respondents, while the other two are to evaluate the level of social media addiction as well as the level of academic burnout of students respectively. The questionnaire was distributed in September 2022 via three multipurpose smartphone applications (i.e., WeChat, WhatsApp, and Telegram).

There are more than 17,000 UKM undergraduate students and the respondents from UKM Telegram, WeChat, and WhatsApp are more than 10,000. A simple random sampling method was used by giving an opportunity to all UKM undergraduate

students online in Telegram, WeChat, and WhatsApp to answer and only 166 people agreed to participate in this study. Faul et al. (2007) recommended using the G\*Power 3.1.9.2 software to conduct a statistical power analysis for social and behavioral sciences. Hence, according to Krejcie and Morgan (1970), for a population over 17000, the number of samples must exceed 375 people, however, the analysis for this study still continues because the sample count is taken using the G\*Power 3.1.9.2 application. By using a multiple linear regression test by setting a statistical power of 0.80 (Cohen, 1969), the effect size is medium ( $f=0.15$ ) and significant ( $p<0.05$ ) with 3 predictor factors only requiring a sample size of 100 respondents. Therefore, the total sample of 166 people is sufficient to answer the objectives of the study.

After the collection section, the data from the Google Forms was extracted, and analysed with IBM SPSS Statistics 26, a powerful statistical software platform, to test the reliability of the entire questionnaire; using Pearson Correlation Coefficient to test the correlation coefficient between the factors we targeted (i.e., SM addiction, academic burnout, and demographic factors) as shown in Table 2; to obtain the descriptive information (e.g., Mean, Standard Deviation, etc.) shown in Table 3; more specifically utilize Pearson Correlation Coefficient to test the correlation coefficient between SM addiction, academic burnout and their components as shown in Table 4; Regression Analysis as shown in Table 5.

The data is normally distributed according to the basis of statistical theory introduced in the Central Limit Theorem (CLT) which decides the number of samples ( $n\geq 30$ ) is a large amount of data in a random sample where the larger the value of  $n$ , then the CLT estimate will be more exact or closer to normal data distribution. Pereira (2016) states that the CLT theory is the determination of a distribution that approximates normal data depending on the frequency of the data samples collected randomly. Therefore, this study is appropriate to use SPSS software. Additionally, the Mediation Analysis was applied as a theoretical model and Sobel test calculated on [quantpsy.org](http://quantpsy.org) to measure the mediation effect.

### Respondent Demographic

Respondent demographic as the first part of the questionnaire includes gender, nationality, year of study, faculty, and GPA for the latest semester (to evaluate the academic performance).

The situation of SM addiction and academic burnout in the National University of Malaysia (UKM),

especially for the students who are in their career of striving for a bachelor's degree was observed. Compared to the Master students and Ph.D. students, undergraduate students have a greater amount, and they would have more diversifying identities and backgrounds resulting in a more comprehensive research, which is the reason

TABLE 1. Respondent Demographics

		N (Frequency)	Percent (%)
Gender	Female	105	63.3
	Male	61	36.7
Nationality	Chinese	61	36.7
	Indian	5	3.0
	Indonesian	2	1.2
	Malaysian	98	59.0
Faculty	CITRA (Faculty of Citra)	17	10.2
	FEP (Faculty of Economics and Management)	100	60.2
	FKAB (Faculty of Engineering and Built Environment)	1	.6
	FPEND (Faculty of Education)	6	3.6
	FPER (Faculty of Medicine)	1	.6
	FPI (Faculty of Islamic Studies)	5	3.0
	FSK (Faculty of Health Sciences)	2	1.2
	FSSK (Faculty of Science and Humanities)	16	9.6
	FST (Faculty of Science and Technology)	15	9.0
	FTSM (Faculty of Science Technology and Information)	2	1.2
	FUU (Faculty of Law)	0	0
	FARMASI (Faculty of Pharmacy)	0	0
	FPERG (Faculty of Dentistry)	0	0
Other Faculties/ Institutes	1	.6	
Year of study	First Year	84	50.6
	Second Year	54	32.5
	Third Year	23	13.9
	Fourth Year	5	3.0
GPA for the Latest Semester	<= 2.50	2	1.2
	2.51-3.00	18	10.8
	3.01-3.5	51	30.7
	3.51-4.00	95	57.2

why students from a public university were selected.

Besides, the topic has a very narrow scope for respondents. As a pilot study, 166 respondents as research sample was collected, these statistics covered almost all types of students with different demographic. Having said that, the lack of statistics still contained flaws and limitations with the respondent shortage in the survey that guide the future study should have a larger scale. Sample participants (N= 166) are required to submit the questionnaire by the deadline. The majority of students are female with 105 respondents occupying over half of the total sample (63.3%). In the aspect of the year of study, the freshmen (n= 84, women= 54) took up slightly over half, which is 50.6%, followed by 54 students of sophomore (32.5%; n= 54, women= 30); and junior and senior represent the third year (n= 23, women= 16) and the fourth year (n= 5, women= 5) students occupied 13.9% and 3% respondents respectively. Yet, the statistics collected have limitations, for example, the quota of gender, nationality, faculty, year of study, and the GPA for the latest semester are not balanced and fixed, which means the components of the options do not divide the data equally. This situation is owing as soon as we spread the online questionnaire to the official university group, there were numerous students with different demographic factors who may view the questionnaire and fill in it, so the quota is to be randomly assigned.

## MEASURES

### Bergen Social Media Addiction Scale (BSMAS)

To measure the level of social media addiction, the Bergen Social Media Addiction Scale (BSMAS) developed by Andreassen et al. in 2017 was adopted in this paper. The BSMAS was validated and made modifications from the Bergen Facebook Addiction Scale changing the word “Facebook” into “Social Media” (Andreassen et al., 2012; Andreassen et al., 2016). It consists of 6 items divided into 6 subscales (Griffiths, 2005; Andreassen et al., 2016): salience (e.g., . . . spent a lot of time thinking about social media or planned use of social media?), tolerance (e.g., . . . felt an urge to use social media more and more?), mood modification (e.g., . . . used social media to forget about personal problems?), relapse (e.g., . . . tried to cut down on the use of social media without success?), withdrawal (e.g., . . . become restless or troubled if you have been prohibited from using social media?), and conflict (e.g., . . . used social media so much that it has had a negative impact on your job/studies?). All items are scored on the following scale by Likert five-point scale: ‘1’ (Very

Rarely), ‘2’ (Rarely), ‘3’ (Sometimes), ‘4’ (Often), and ‘5’ (Very Often). The internal consistency was tested as “reliable” in the article presented by Andreassen et al. (2017) testing the Cronbach’s  $\alpha$  equals to 0.88. In this survey, Cronbach’s alpha has been examined to evaluate the reliability of the questionnaire and the results showed to be “adequate” ( $\alpha=.809$ ; Taber, 2018). The full scale has been attached to Appendix A.

### Maslach Burnout Inventory- Student Survey (MBI-SS)

Academic Burnout was assessed using the MBI-SS that was introduced by Schaufeli et al. in the year 2002 originally with a 16-items and a 7-point Likert Scale. Yet, in this survey, the MBI-SS has been adapted into 15 items with a 5-point Likert Scale ranging from ‘1’ (Never) to ‘5’ (Always) which constitute three subscales. (See Appendix B): Exhaustion (EX; 5 items, e.g., I feel emotionally drained by my studies.), Cynicism (CY; 4 items, e.g., I have become less interested in my studies since my enrollment at the university.), and Efficacy (EF; 6 items, e.g., I can effectively solve the problems that arise in my studies.). It is worth mentioning that the subscale “Efficacy” is a reverse-scored scale (denoted as rEF; Schaufeli et al., 2002).

## Statistical Analysis

The quantitative research method is used in this research. Descriptive Statistics, Pearson Correlation Coefficient, Linear Regression, Mediation Analysis and Sobel Test were performed utilizing IBM SPSS Statistics 26. The research model proposed was adapted from Li et al. (2019) based on the casual steps approach elaborated by Baron & Kenny (1986) and boot-strap method from Preacher et al. (2007) as presented in Figure 1. In Table 2, we code 1 for students who have GPA below 2.50 ( $\leq 2.50$ ), 2 for “2.51-3.00”, 3 for “3.01-3.50”, and 4 for “3.51-4.00” from an academic performance perspective. As for gender, we code 0 for “Male” and 1 for “Female” (This also suits Demographic Variables).

## RESULTS AND DISCUSSION

### Reliability

According to Taber (2018), the results overall from .58 to .97 deemed as satisfactory; different hierarchies lump as adequate (.64 to .85), reliable (.84 to .90), strong (.91 to .93), excellent (.93 to .94). In this survey, Cronbach’s alpha for SM Addiction part (BSMAS) has been examined to evaluate the reliability of the questionnaire and the results showed to be “adequate” ( $\alpha=.809$ ; Taber,



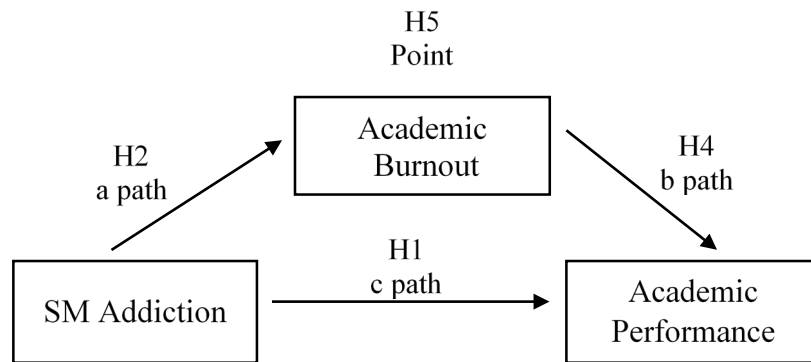


FIGURE 1. The theoretical model for H1, H2, H4, H5. H= Hypothesis.

2018) Spearman-Brown Coefficient Correlation was also conducted, the results of it including Equal Length and Unequal Length model both showed the figure of .794 for the 6-item scale. Concurrent with the Guttman split-half coefficients for BSMAS was .786. Therefore, the results above explained the BSMAS in this research had satisfactory reliability.

For the Academic Burnout part (MBI-SS scale) in this survey, Cronbach's alpha has also been tested, the results for reliability statistics demonstrated to be .936, which means the alpha values were elaborated as "excellent" (Taber, 2018). Also, for each subscale, EX, CY, and rEF, the alpha value presented .905, .925, and .930 separately. Therefore, both subscales and the entire scales are tested as "excellent". Through Spearman's correlation coefficient, we perceived Equal Length (.730) and Unequal Length (.731), which are interpreted as "strong" (Statstutor, n.d.). Alongside with the Guttman Split-Half Coefficient illustrated equals .727. Overall, the reliability statistics for the MBI-SS scale after adaptation had a satisfactory result.

### Descriptive

Throughout the descriptive graph (Table 3), we perceived that the means of total score between Gender of SM Addiction are relatively the same (Male = 20.38, Female = 20.31), however, the results of male students have a very slight index higher than Female students. So, the same situation as it happens on the Academic Burnout scale (Male = 45.33, Female = 45.25). From the Year of Study, the third-year figure presented the minimum score in the level of SM Addiction [Mean (Third Year) = 19.04] and the Fourth-year figure presented the highest [Mean (Fourth Year) = 22.60]. Yet, the first-year figure identified as the lowest score

in the level of Academic Burnout [Mean (First Year) = 44.52] while Fourth Year occupied the highest [Mean (Fourth Year) = 51.20].

### Correlation Analysis

Table 2 demonstrated the relationship between demographic factors and SM Addiction, Academic Burnout respectively, the relationship between Academic Performance and SM Addiction, Academic Burnout respectively. We code 0 for "Male" and 1 for "Female"; besides, we code 1 to 4 for the first year to fourth year students. To be specific, for SM addiction level, the relationship between Gender and SM Addiction showed insignificant in the test [ $r(166) = .011, p = .892$ ]; the relationship between Year of Study and SM Addiction has the same result [ $r(166) = -.001, p = .990$ ]. For Academic Burnout scale, it has an insignificant negative level with Gender [ $r(166) = -.003, p = .969$ ], it has an insignificant positive relationship Year of Study [ $r(166) = .071, p = .360$ ] as well. Therefore, according to the p-value shown, it is clear to see that we reject H6, H7, H8, and H9.

The results exported of the Pearson Correlation Analyses attaches in Table 4. As we predicted, the SM Addiction level indeed has a moderate positive relationship with the level of Academic Burnout [ $r(166) = .437, p = .000$ ] at the significance level. It signified the higher SM Addiction level students have, the more severe their Academic Burnout level would be with them. However, to be more detailed, Salience has an insignificant relationship with overall Academic Burnout, Cynicism, Reversed Professional Efficacy, and Exhaustion. Consequently, we fail to reject H2, but we reject H3.



Table 2. Pearson Correlation Coefficient <sup>a</sup> between SM addiction, academic burnout and demographic factors

		1	2	3	4	5
1 GPA for the latest semester	Pearson Correlation	1	-	-	-	-
	Sig. (2-tailed)		.690	-	-	-
2 Gender	Pearson Correlation	.031	1	-	-	-
	Sig. (2-tailed)	.690		-	-	-
3 Year of Study	Pearson Correlation	.024	.065	1	-	-
	Sig. (2-tailed)	.755	.406		-	-
4 SM Addiction	Pearson Correlation	-.006	.011	-.001	1	-
	Sig. (2-tailed)	.936	.892	.990		-
5 Academic Burnout	Pearson Correlation	-.252**	-.003	.071	.437**	1
	Sig. (2-tailed)	.001	.969	.360	.000	

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

a. Listwise N=166

### Regression Analysis

We code GPA into four hierarchies (“ $\leq 2.50$ ” = 1, “2.51-3.00” = 2, “3.01-3.50” = 3, “3.51-4.00” = 4) as the transformation index of Academic Performance. Results explained Standardized Coefficient beta for a-path, b-path, c-path are .437, -.252, -.006. Specifically, the relationship between SM Addiction and Academic Burnout (H2) ( $\beta = .437$ ,  $t = 6.223$ ,  $p = .000$ ). This result explained that UKM students were addicted to social media, which results in their burnout in academics. Academic Burnout and Academic Performance (H4) are also tested as significant correlated ( $p = .001$ ). However, since the p-value of the c-path is .936, the relationship between SM Addiction and Academic Performance (H1) is not significantly identified. That is, we reject the null hypothesis of H2 and H4, but we reject H1.

### Mediation Analysis and Sobel Test

According to the Figure 1. In the theoretical model, we construct the mediation analysis. Based on Table 5. Results of the Regression Analysis showed the

Unstandardized Coefficient and Std. Error for a-path, b-path, c-path are 1.123 (.180), -.015 (.004), -.001 (.012) separately. Furthermore, we attach the correlation coefficient number of gender and year of study to SM addiction and academic burnout. Also, in order to find out the mediating effect of Academic Burnout on the entire model, Sobel Test (Table 6) was performed (Baron & Kenny, 1986; Sobel, 1982; Goodman, 1960; MacKinnon et al., 1995). The test was examined for Test Statistic, Std. Error, and p-value by calculator established on [quantpsy.org](http://quantpsy.org) (n.d.). The result indicates p-value equals .0013 (less than 0.05) Thus, the indirect relationship between SM Addiction and Academic Performance via Academic Burnout is statistically significant. Then, simply multiply the Unstandardized Coefficient Beta by a \* b, and we get -.0168 presented in Figure 2. In short, Academic Burnout among UKM students mediates the relationship between SM Addiction and Academic Performance, and the higher the SM Addiction level is, the lower the Academic Performance would be.

TABLE 3. Descriptive

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
SM	Gender	166	20.38	4.908	.381	19.63	21.13	7	30
Addiction	Male	61	20.31	4.794	.614	19.08	21.54	10	30
	Female	105	20.42	4.996	.488	19.45	21.39	7	30
	Year of Study	166	20.38	4.908	.381	19.63	21.13	7	30
	First Year	84	20.29	4.340	.474	19.34	21.23	10	30
	Second Year	54	20.89	5.507	.749	19.39	22.39	7	30
	Third Year	23	19.04	5.261	1.097	16.77	21.32	10	30
	Fourth Year	5	22.60	5.367	2.400	15.94	29.26	14	28
Academic	Gender	166	45.28	12.611	.979	43.34	47.21	15	75
Burnout	Male	61	45.33	13.654	1.748	41.83	48.82	15	75
	Female	105	45.25	12.031	1.174	42.92	47.58	18	75
	Year of Study	166	45.28	12.611	.979	43.34	47.21	15	75
	First Year	84	44.52	12.436	1.357	41.82	47.22	15	75
	Second Year	54	45.91	12.743	1.734	42.43	49.39	15	75
	Third Year	23	45.26	12.599	2.627	39.81	50.71	19	63
	Fourth Year	5	51.20	16.270	7.276	31.00	71.40	30	74

## DISCUSSION

In this preliminary study, we intended to identify the relationship between SM Addiction, Academic Burnout, and Academic performance among UKM undergraduate students. Like the work by Mugahed Al rahmi et al. (2014), a study also chose the scope of students at one Malaysian university as the audiences, indicating the use of social media, to some extent, resulting in students' academic performance decline. They did, however, clarify some particular uses of social media. As a result of their interactions with others, engagement, perceived usability, and perceived

ease of use, students' performances would vary (p. 210). Social media use for interacting with fellows and supervisors positively and significantly promotes learning satisfaction as well as academic performance. Owing to the fact that these kinds of interactions would promote the experience and notably for collaborative studying (p. 216). Yet, academic performance is a result of multi-dimensional causes, SM addiction may affect the level of depression, self-esteem and sleep quality, etc. leading to an academic performance downturn (Baturay & Toker, 2017; Busalim, 2019; Dongke & Sannusi, 2021). So as main findings of this study showed in the following contents. SM Addiction has a positive association with Academic Burnout (H2),

TABLE 4. Pearson Correlation Coefficient<sup>b</sup> between SM addiction, academic burnout, and their components

		Std.												
		Mean	Deviation	1	1.1	1.2	1.3	1.4	1.5	1,6	2	2.1	2.2	2.3
1 SM Addiction	Pearson Correlation Sig. (2-tailed)	20.38	4.908	1	-	-	-	-	-	-	-	-	-	-
1.1 Salience	Pearson Correlation Sig. (2-tailed)	3.81	1.026	.631**	1	-	-	-	-	-	-	-	-	-
1.2 Craving/Tolerance	Pearson Correlation Sig. (2-tailed)	3.69	.978	.713**	.489**	1	-	-	-	-	-	-	-	-
1.3 Mood Modification	Pearson Correlation Sig. (2-tailed)	3.57	1.157	.719**	.256**	.447**	1	-	-	-	-	-	-	-
1.4 Relapse/Loss of Control	Pearson Correlation Sig. (2-tailed)	3.24	1.161	.715**	.365**	.345**	.498**	1	-	-	-	-	-	-
1.5 Withdrawal	Pearson Correlation Sig. (2-tailed)	3.05	1.225	.816**	.485**	.524**	.460**	.465**	1	-	-	-	-	-
1.6 Conflict/Functional Impairment	Pearson Correlation Sig. (2-tailed)	3.03	1.286	.702**	.216**	.359**	.412**	.381**	.545**	1	-	-	-	-
2 Academic Burnout	Pearson Correlation Sig. (2-tailed)	45.28	12.611	.437**	-.009	.294**	.394**	.351**	.347**	.450**	1	-	-	-
2.1 Exhaustion	Pearson Correlation Sig. (2-tailed)	16.43	4.799	.384**	.016	.292**	.332**	.359**	.258**	.363**	.827**	1	-	-
2.2 Cynicism	Pearson Correlation Sig. (2-tailed)	11.33	4.306	.404**	-.010	.235**	.377**	.372**	.268**	.442**	.874**	.728**	1	-
2.3 Reversed Professional Efficacy	Pearson Correlation Sig. (2-tailed)	17.52	5.975	.323**	-.024	.216**	.293**	.185*	.332**	.339**	.817**	.417**	.540**	1

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

\* . Correlation is significant at the 0.05 level (2-tailed).

b. Listwise N=166

and Academic Burnout has a significant negative relationship with Academic Performance (H4), consistent with the principal opinions (Usán Supervía & Salavera Bordás, 2020; Walburg et al., 2016). Even if SM Addiction was examined has no significant direct effect on Academic Performance in the present study, it has an indirect impact on Academic Performance that Academic Burnout mediates. One spends more time

on social media, and more academic burnout would be brought out. The more Academic Burnout, the lower the Academic Performance would be. Therefore, it is a model mediated by Academic Burnout. It demonstrated concurrently the time sacrificed used on social media may originally spend on academic work. (Al-Menayes, 2015).

On the other hand, under the SM Addiction

TABLE 5. Results of the Regression Analysis of a-path, b-path, and c-path

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
Academic burnout	SM addiction	1.123	.180	.437	6.223	.000
Academic performance	Academic burnout	-.015	.004	-.252	-3.338	.001
Academic performance	SM addiction	-.001	.012	-.006	-.080	.936
Academic performance	SM addiction	.019	.013	.129	1.537	.126
	Academic burnout	-.018	.005	-.308	-3.686	.000

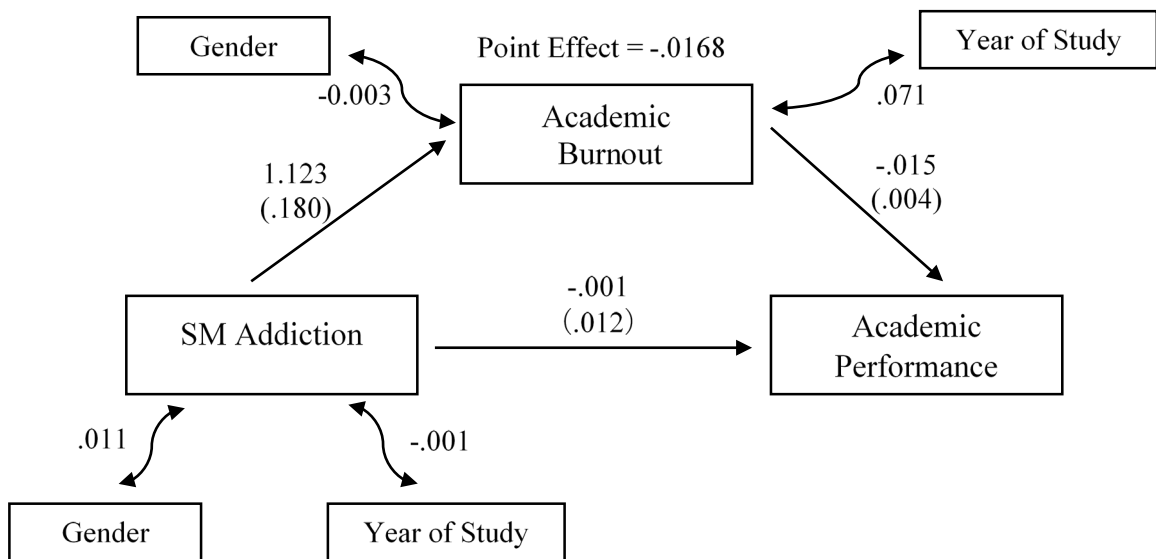


FIGURE 2. Mediation Analysis Results (Point-effect)

TABLE 6. Sobel Test for Academic Burnout’s Mediation Effect

Input		Test Statistic	Std. Error	p-value
a = 1.123	Sobel Test	-3.21408228	0.005241	0.00130862
b = -.015				
Sa =.180				
Sb = .004				



scale (BSMAS), we fail to reject the null hypothesis of salience, the phenomenon that the severity personally of using social media has relationships with overall Academic Burnout, Exhaustion, Cynicism, and Reversed Professional Efficacy equal to zero. Therefore, comparing the significant level of SM Addiction as well as Academic Burnout, we assume that Academic Burnout could be a predictor of academic performance instead of SM Addiction.

Compared to the pre-clinical students, the academic burnout level among UKM undergraduate students did not show any stepwise progress which is upward or downward. For pre-clinical students in the previous survey, medical school students may have a quiz or test right after a major subject is taught. (Yu & Chae, 2020) Hence, it seemed the result of academic burnout turns out to be related to the curriculum set, major requirements, and the like.

The aforementioned discussions are linked to how academic performance deteriorated via SM addiction and academic burnout from various perspectives. The survey findings had a wide range of ramifications. Social media use by students is permissible, but excessive use should be avoided. Because some students are unaware that social media addiction is a slow infiltration into their life, students could devise tactics regarding the duration of SM usage and the extent to which they would spend their working hours reading social media. In terms of pedagogy, professors or lecturers can also help their students use social media appropriately. Parents, professors, and even the student groups themselves should keep an eye out for one another and encourage one another to face reality rather than succumb to the escapist mechanism. In a nutshell, severe burnout brought on by SM Addiction would undoubtedly have an impact on a person's academic career, professional career, national development, national talent recruitment, and social-economic development, even when at the level of the individual, family, school, society, or even the entire nation (Li et al., 2019).

## CONCLUSION

There are various restrictions that could prevent the current study's dominant feature. The study was planned as a cross-sectional survey. Longitudinal data collection should be taken into consideration for upcoming research. In addition, the ratio of sample respondents is not balanced. For example, the sample has largely given as 2:1 with female to male; most of the respondents are from Economics and Management

faculty, which took up almost two-thirds of the total sample; and also students from some specific faculties (e.g., Faculty of Law, Faculty of Pharmacy, and Faculty of Dentistry) which have not been collected may distort the results by exhibiting different variations and biases. If there is an irregular distribution that could bias the results, a fixed quota (1:1) should be utilized for data collection for dyadic questions and the balanced figures with all other demographic factors when collecting it.

Due to the fact that the different personality traits of students, the way social media serves students today are also with many different purposes. In the study, we focused on the effects that general social media had on the public rather than mentioning any particular social media. As a result, the findings might not apply to all social media with their specific functions and usages. Social media sites may be used by some students even for academic objectives. Therefore, researchers may benefit from developing a model of the use of various social media features and their effects on university students.

As for the impact social media has brought to students' academic performance, four GPA hierarchies were adopted to assess it. Since the criteria is not comprehensive, many other factors should also be considered in addition to GPA for the latest semester (e.g., awards, published papers, intelligent property, etc.)

Therefore, researchers in the future may compare the Academic Burnout level in different faculties or majors, certainly with the fixed quota of the faculty factor. Because of the various characteristics of courses, students may reveal different results on Academic Burnout. Also, Academic Burnout and Academic Performance downturn are not only caused by only one factor (i.e., SM Addiction in this study). University students have a lot of options for entertainment such as extracurricular activities to alleviate their stress or the burnout level for students. Scholars may also try to focus on the mediating effect of extracurricular activities between SM Addiction and Academic Performance, or between SM Addiction and Academic Burnout.

Overall, UKM students' SM Addiction level affects their Academic Performance to some extent. Students should take some remedial action, for example, to get support from others. Students are recommended to do some extracurricular activities on campus with other students socializing offline instead of escaping reality on the internet or relying on social media for entertainment.

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## APPENDIX A

### Bergen Social Media Addiction Scale (BSMAS)

Instruction: Below you find some questions about your relationship to and use of social media (Facebook, Twitter, Instagram, and the like). Choose the response alternative for each question that best describes you.

All items are scored on the following scale: '1' (Very Rarely), '2' (Rarely), '3' (Sometimes), '4' (Often), '5' (Very Often)

- i. . . . spent a lot of time thinking about social



- media or planned use of social media?<sup>1</sup>
- ii. . . . felt an urge to use social media more and more?<sup>2</sup>
- iii. . . . used social media to forget about personal problems?<sup>3</sup>
- iv. . . . tried to cut down on the use of social media without success?<sup>4</sup>
- v. . . . become restless or troubled if you have been prohibited from using social media?<sup>5</sup>
- vi. . . . used social media so much that it has had a negative impact on your job/studies?<sup>6</sup>

Note. Griffiths, M. D. (2005). A components model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10, 191–7.

## APPENDIX B

### Maslach Burnout Inventory- Student Survey (MBI-SS)

#### *Exhaustion*

- i. I feel emotionally drained by my studies.
- ii. I feel used up at the end of a day at university.
- iii. I feel tired when I get up in the morning and I have to face another day at the university.
- iv. Studying or attending a class is really a strain

for me.

- v. I feel burned out from my studies.

#### *Cynicism*

- i. I have become less interested in my studies since my enrollment at the university.
- ii. I have become less enthusiastic about my studies.
- iii. I have become more cynical about the potential usefulness of my studies.
- iv. I doubt the significance of my studies

#### *Professional Efficacy*

- i. I can effectively solve the problems that arise in my studies.
- ii. I believe that I make an effective contribution to the classes that I attend.
- iii. In my opinion, I am a good student.
- iv. I feel stimulated when I achieve my study goals.
- v. I have learned many interesting things during the course of my studies.
- vi. During class I feel confident that I am effective in getting things done.

Jiao Caiqi\*

Faculty of Economics and Management,  
Universiti Kebangsaan Malaysia (UKM)  
43600 Bangi, Selangor, Malaysia.

Fazilah Idris  
School of Liberal Studies  
(Pusat Pengajian Sains Citra)  
Universiti Kebangsaan Malaysia (UKM)  
43600 Bangi, Selangor, Malaysia.

\*Pengarang untuk surat menyurat; e-mel: geoffreyjiao@gmail.com

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