

JIRSEA Issue: Vol. 22 No. 1

JIRSEA/UPM Special Issue

April 2024

ISSN 1675-6061

<http://www.seairweb.info/journal/index.aspx>

Submission Timeline

Received: 30/10/2023

Revised as per Preliminary

Review: 15/01/2024

Final Revision & Acceptance:

15/03/2024

The Relationship between Life Satisfaction, Self-esteem, Fear of Missing out (FOMO), and Social Media Addiction among University Students in Malaysia

Muhammad Asyraf Che Amat, Nurhanisah Tugiman, and Alia Sarah Asri

CITE ARTICLE: Amat, M.A.C., Tugiman, N. & Asri, A.S. (2024).

The Relationship between Life Satisfaction, Self-esteem, Fear of Missing out (FOMO) and Social Media Addiction among University Students in Malaysia, *Journal of Institutional Research South East Asia*, 22(1), 22-46



Publisher: SEAIR Secretariat

C/O Suan Dusit Rajaphat University
295 Nakhon Ratchasima Rd, Dusit, Dusit
District, Bangkok 10300, THAILAND
email:seair.info@gmail.com

<http://www.seairweb.info/>

DECLARATION: *Articles published in JIRSEA adhere to the declaration clauses that: (1) the article is entirely the researcher(s) original work and responsibility, (2) principles of honesty and integrity throughout the research process, and unless otherwise indicated and properly cited, this declaration encompasses all aspects of the article, including but not limited to text, figures, tables, data, and any accompanying material are observed, (3) there is no conflict of interest with JIRSEA in any form, (4) holding to all required JIRSEA policies of publication ethics and practices conforming to the COPE Principles of Transparency and Best Practice in Scholarly Publishing, (5) copyrights assignment to JIRSEA, whereby it is published online in an open access requirement of Creative Commons 4.0, and (6) is not funded by any party unless otherwise disclosed.*

CREATIVE COMMONS ATTRIBUTION



4.0 INTERNATIONAL LICENSE

THE RELATIONSHIP BETWEEN LIFE SATISFACTION, SELF-ESTEEM, FEAR OF MISSING OUT (FOMO) AND SOCIAL MEDIA ADDICTION AMONG UNIVERSITY STUDENTS IN MALAYSIA

Muhammad Asyraf Che Amat^{1*}, Nurhanisah Tugiman¹, Alia Sarah Asri¹

¹*Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia*

*Corresponding email: mhdasyraf@upm.edu.my

ABSTRACT

The regular use of social media carries both benefits and harmful effects on individuals, especially the youth. Post-COVID-19, the use of the Internet and social media has become the new norm to build a social network, find information more conveniently, or simply stay updated with recent events and information. This study was conducted to identify the relationship between life satisfaction, self-esteem, Fear of Missing Out, and social media addiction among university students in Malaysia. This quantitative study was conducted at five research universities in Malaysia. Four instruments were used, namely the Satisfaction with Life, Rosenberg Self-Esteem Scale, Fear of Missing Out Scale and Social Media Addiction Scale-Student Form. The research data were analyzed based on descriptive and inferential statistics. The sampling used in this research was stratified random sampling and simple random sampling. Based on the results, this study found a significant relationship between all the independent variables in this study with social media addiction. The findings can be used as a guide for authorities at university or interested parties, and it is suggested that further studies can be carried out so that the issue of social media addiction can be examined and discussed more comprehensively.

Keywords: addiction, Internet users, public university, self-satisfaction, social media use

1. Introduction

The current rate of technological advancement allows for the creation of a world without borders. Information technology facilities can be accessed and utilized by all strata, regardless of age, gender, occupation and more. The development of technology has made the use of the internet an important part of human life today (Sevinc & Tas, 2020). Based on a survey conducted by We Are Social (2022), internet users in Malaysia in January 2022 increased by 1.3% compared to 2021. There were a total of 29.55 million Malaysians using the internet at the beginning of January 2022. The convenience of the internet makes searching for information and carrying out daily activities such as communication, entertainment, work, finance, and meetings easier. Not only that, through the same study, it was found that there are a total of 30.25 million active users of social media recorded and this figure has increased by 2.3 million users, which is 8% compared to 2021. The use of social media was the second highest activity among internet users in Malaysia at the beginning of January in the year 2022, as much as 93.3%.

Among the social media applications that are often used by Malaysians are Facebook, YouTube, Instagram and Tiktok (We Are Social, 2022). Nowadays, most users can easily access social media through smartphones or tablets. Undoubtedly, social media is a platform to keep in touch with family, friends, or loved ones more easily, thus displaying its necessity in the current era. Further, Qahtan's study in 2020 stated that the use of social media demonstrates a relationship with human psychology. Individuals who use social media are more likely to be happy. This, in turn, leads to the use of social media to achieve life satisfaction for an individual. The study also stated that life satisfaction and self-esteem were determining factors for internet addiction. Despite individuals reporting satisfaction from using social media, the tendency to rely solely on social media for happiness should be explored further to confirm that the findings are genuine and not superficial or biased.

The regular use of social media is one way to deal with stress, anxiety, and depression (Cargill, 2019). With the broad knowledge and information that the Internet offers, individuals keep themselves informed about what is necessary through the latest updates, which can be both beneficial and damaging. While social media is convenient and less costly for individuals to seek information, it can also increase the sense of worry and anxiety among users, causing them to constantly update their activities on social media. According to We Are Social's (2022) survey, Malaysians spend an average of 9 hours and 10 minutes using the internet and an average of 3 hours and 2 minutes on social media. This shows that the use of the internet among Malaysians has increased significantly. Furthermore, Muhammad Rusdi et al.'s (2021) study found that students at the Malaysian Institute of Teacher Education (IPG) spend a lot of their time online, causing them to overlook important matters. This leads to Fear of Missing Out (FOMO), in which individuals have beneficial

experiences in one's absence, and is characterized by the desire to stay in touch with what others are doing (Przybylski et al., 2013).

Despite the convenience that the social media offers, concerns have been raised on the consequences of overusing or misusing it. Evident in the past studies, youths were reported to be the main users of the internet in Malaysia (Mohd Sobhi et al., 2016). The youth, according to the Selangor State Legislative Assembly (2019) in Malaysia, represents individuals between the ages of 15 to 30 years. As a significant part of future generation leaders, it is crucial for the youth to strive to become responsible and competent individuals with good inter- and intrapersonal skills. They must be smart and resourceful in utilizing the internet and social media to their advantage instead of being victims to cyber misuse. However, frequent use of social media has a serious negative impact on the new young generation, especially among university students, such as lack of communication skills, wasting time, exposure to cyberbullying, and so on (Jamiah et al., 2016). The main goal of the university, which is to educate and provide learning opportunities, networking and exposure to adult students, should also reflect its role to mitigate any consequences of social media addiction among its students who represent the youth. This study's aim therefore was to identify how life satisfaction, self-esteem and FOMO are linked with social media addiction to respond to the consistent research efforts that are needed to identify the factors associating with social media addiction. This will be important so that interventions can be designed and implemented towards improving the lifestyle and well-being of future generations.

2. Literature Review

2.1. Social media addiction

Social media is a group of internet-based applications that is designed using the Web 2.0 technology and has various categories (Kaplan & Haenlein, 2010). There are six types of social media according to Kaplan and Haenlein: collaborative projects, blogs, content communities, social networking sites, virtual game worlds, and virtual social worlds. The researchers further explained that social media sites are applications that allow users to connect via email and messages. Social media is also defined by Boyd and Ellison (2008) as web-based services that enable individuals to build their profiles and traverse connections to multiple other users. Facebook is a common example of a social media site as provided in both studies.

A study in Malaysia by Mohd Sobhi et al. (2016) investigated the use of social media among the youth. Technology has nowadays progressed rapidly, which observes a digital space without borders for its youth users to improve the outreach of social media. The study shows that the youth are active users of this platform, with females being more active compared to males. WhatsApp was also reported as the application

that most users spent their time using, which was more than five hours, surpassing Facebook's use. The youth from this study also reported using social media to communicate with family members and friends, share photos and videos, get latest news and updates, and form new relationships. Social media is thus an important tool to socialize and communicate more easily among its users, however, excessive use and time spent on social media may become a concern that is worth exploring.

Addiction is defined as a desire to do, use or indulge in something repeatedly (Abdul Rashid et al., 2021; Merriam-Webster, 2022). Excessive use of social media can lead to either positive or negative consequences, meaning that social media addiction is the act of using social media continuously and repeatedly. Filyntiana et al. (2020) discussed the factors causing social media addiction towards the lifestyle of UniKL-MFI youth, with findings reporting that faster internet usage leads to improved accessibility to social media among the youth, resulting in excessive use and addiction. On the contrary, slow internet connection causes youth to feel anxious, thus exhibiting an addicted behavior toward social media use.

Abdul Rashid et al.'s (2021) study described the implications of social media addiction on young adolescents' mental health during the COVID-19 pandemic. Findings from systematic literature review suggest that the excessive use of social media can cause negative implications for the mental health of teenagers such as increased aggressive behavior, suicide, depression, and anxiety. The study, however, lacked evidence about social media's addiction in the context of Malaysian young adolescents. Sahin's (2018) study developed the "Social Media Addiction Scale-Student Form (SMAS-SF) to measure social media addiction among school and university students from various social backgrounds and academic majors in Turkey. The scale was designed after conducting a literature review, obtaining field experts' opinions, establishing validity and reliability, and administering the instrument to 998 randomly selected respondents comprising students from various schools in a city in Turkey and university students from various departments in a university in Turkey. The results of this survey reported that the scale is reliable, valid and acceptable for the targeted sample group, and allows replication of this scale in a different sample group. Further studies in the Malaysian context using this scale was deemed appropriate to provide more culturally accurate findings that focused on Malaysian university students.

2.2. Life satisfaction

Life satisfaction is an important element in human life in terms of physical and mental well-being (Adel & Ali, 2021). It is observed from individuals' evaluation of their lives in a positive manner based on their personal needs (Ibrahim & Murat, 2018). In essence, life satisfaction is a subjective assessment of a person's quality of life and has a large cognitive component. Sousa and Lyubomirsky's (2001) study found that

life satisfaction is influenced by personality and environmental factors. Personality includes genetics, while the environment refers to life circumstances and events. Individuals who felt satisfied with themselves were more likely to also feel satisfied in several aspects of their lives. Life satisfaction thus may be linked with other aspects of individuals' lives.

2.2.1. Relationship between life satisfaction and social media addiction

A study by Syed Ali et al. (2019) among Pakistani university students majoring in business discussed the factors that mediate the relationship between social media usage and life satisfaction. The most used social media platform reported among the respondents was Facebook. Findings from the structural equation modelling analysis showed that there was no direct association between social media usage and life satisfaction; however, factors such as social benefit and social overload mediated the relationship between the variables, indicating that there was an indirect relationship. Social media usage was also closely associated with social enhancement and development of interpersonal relationship, implying that students were motivated to use social media for social purposes. Thus, with the absence of social components, usage behaviors toward social media usage was not linked to life satisfaction among university students.

Similar findings were found in Marttilla et al.'s (2021) 15-month study in Finland. The quantitative study tested hypothesized a relationship between problematic social media use, loneliness, and life satisfaction. The study reported that problematic social media use was significantly associated with decreased life satisfaction among the respondents. Loneliness was also indirectly correlated to problematic social media use and life satisfaction. These findings implied that increased problematic use of social media increased loneliness and therefore decreased life satisfaction. Excessive time spent on social media was problematic and was associated with negative consequences to its users.

Sahin's (2017) study conducted at a university in Turkey examined the level of social media addiction to life satisfaction among 612 students, reporting that the more time students spend on social media, the less satisfied they felt with their lives. Adel and Ali (2021) supported this finding, further noting that non-addicts reported higher life satisfaction compared to students categorized as addicts who scored higher on the addiction scale. On the contrary, Yap & Amat (2021) study measured the level of life satisfaction with social media addiction at the time of the COVID-19 epidemic that hit Malaysia in 2021, suggesting a positive link between life satisfaction and social media usage. The results of the study found that the pandemic caused university students to use social media as a medium to connect with friends, and lecturers, find information more easily, and so on. Resorting to social media use was satisfactory for students especially if they felt that they were able to fulfill their needs through

this medium. However, problematic and excessive use of social media was linked to decreased life satisfaction, as suggested in the previous studies. As most studies reporting these findings were outside of the Malaysian context, the scope of this study will be beneficial to provide an alternative perspective to the correlation between social media addiction and life satisfaction from the Malaysian context. Thus, this study will test the following hypothesized relationship:

H₁: There is a significant relationship between life satisfaction and social media addiction among university students.

2.3. Self-esteem

Rosenberg (1965) describes and demonstrates self-esteem as individuals making a positive or negative evaluation of themselves. Individuals having self-worth and self-respect who consider themselves worthy and have meaning were more likely to have a higher self-esteem. Jamaludin Ramli (n.d) posited that self-concept is a positive or negative judgement of or an evaluation toward oneself, which was also developed from accepting others' evaluations toward themselves. Additionally, according to Abdel-Khalek (2016), individuals with high self-esteem are more happy, optimistic and highly motivated. They have lower levels of depression, anxiety, and negative moods. This is in contrary to individuals with lower self-esteem. Self-esteem describes ones' own value and worth of self, either positively or negatively (Feshbach et al., 1996). The behaviors that one shows in a day-to-day basis reflects and is a result of one's evaluation of his or herself (Mohd Fairuz & Shahizan. 2016). The extent to which individuals identify and value themselves is an important aspect of self-esteem.

2.3.1. Relationship between self-esteem and social media addiction

Some studies have found that the use of social media contributes to low levels of self-esteem. This is because when an individual spends more time on social media, they will compare themselves with others regularly and at the same time make themselves feel inferior and unprivileged (Muqaddas et al., 2017). Most teenagers spend time and update their activities on social media. They also keep updated with the latest developments simply because they do not want to miss out and further satisfy their hearts (Shazli Ezzat, 2021). Social media use has evolved into a means for individuals to stay informed and updated. On the contrary, however, the social, economic, or physical disparities that are displayed online can make people feel dissatisfied with their lives, which reduces their self-esteem and makes them desire for a life that may not be authentic or realistic.

A study by Helen et al. (2021) among 211 medical students in Indonesia discussed the relationship between narcissism, self-esteem, and social media addiction. The Rosenberg Self-Esteem Scale (RSES) was translated to the Indonesian language and

used to measure self-esteem. The findings reported that there was a significant relationship between self-esteem and social media addiction and that respondents who spent more than four hours on social media were more likely to experience social media addiction. Individuals who had lower self-esteem experienced behavioral and communication-related issues and desired to avoid social relations. Social media became a place for them to hide and avoid interacting directly with others. The anonymity element of social media may also allow individuals to build a positive identity and give them confidence to build relationships more comfortably compared to the physical setting.

Contrary to these studies, Marengo et al. (2021) challenges the link between self-esteem and social media addition, highlighting the relationship between active Facebook use, received likes, self-esteem, and happiness. The sociometer theory proposed by Valkenburg et al. (2006) was utilized in this study to look at how positive acceptance from others can increase self-esteem and happiness among active Italian users of Facebook. Findings from this study reported that received likes from Facebook increased self-esteem, which in turn made the users feel happier. As a result of these benefits, users would feel encouraged to return to use social media applications such as Facebook, which reflects the link between increased dependence or addiction to social media use and self-esteem. Thus, this study will test the following hypothesized relationship between the two variables:

H₂: There is a significant relationship between self-esteem and social media addiction among university students.

2.4. Fear of missing out (FOMO)

Fear of missing out, or FOMO, is characterized by a pervasive concern that others may have beneficial experiences in one's absence and a desire to keep in touch with what others are doing (Przybylski et al., 2013). Introduced in 2004, FOMO is a term related to the social networking sites phenomenon, as applications emerged from the Internet.

Internet use is driven by impulsive actions that involve feelings of restlessness or anxiety, causing a strong urge to be online (Rafiza et al., 2019). This describes FOMO, in which individuals experience anxiety when not using the internet for fear of not being up-to-date. Rafiza et al.'s (2019) pilot study among university members in a Malaysian private university similarly suggested that FOMO involved feeling anxious and worry when not using the internet. The possible negative consequences of FOMO include inappropriate use of social media applications such as Facebook, WhatsApp, Twitter, and Instagram, which disrupts working, sleeping, eating, and leisure hours. The study also reported that 20% of the respondents were likely to demonstrate characteristics of FOMO, with the scale used through items such as "I feel uneasy when I do not know what my friend's plans are" and "When I have an

interesting experience, it is important that I share it with others” (after translation). The scale that was designed and used in the study was in the Malay language.

FOMO is characterized by the tendency to keep in touch with what other people are doing. Failing to do so may induce anxiety as they feel a sense of social exclusion. This is according to a review study by Gupta and Sharma (2021), who explored the negatives consequences of FOMO behaviors toward day-to-day productivity and overall psychological and physical health. The study discussed that FOMO is a global phenomenon that coincides with the rapid growth of technology in the last two decades. Although FOMO may begin with distorted perspectives where individuals do not wish to be left out of rewarding experiences, it is reinforced by constant and compulsive checking and responsiveness to social networking sites. The temporary rewarding feelings experienced by engaging in social media establishes a vicious cycle of constantly checking social media, which may further lead to excessive use.

2.4.1. Relationship between FOMO and social media addiction

It is suggested that constant use and checking of social media due to fear of being socially excluded fuels excessive use or addiction to social media. A study among university students in China by Li et al. (2022) investigated FOMO, smartphone addiction, and social networking sites use and found that there were positive associations between these variables. The study used network analysis to test this relationship. It was inferred by the authors that social media sites had become a significant part of the university students’ daily life to facilitate interpersonal relationships, entertainment use, and for work- or study-related matters. Nonetheless, increased dependence and use of social media may lead to FOMO as individuals grew concerned and feared that they may be missing out of crucial information or communication with others. The increased time spent using smartphone and social networking sites (e.g., QQ, WeChat, and Weibo) may cause difficulties in abstaining impulsive thoughts and behaviors, causing negative consequences such as reduced academic and work productivity and compromised interpersonal relationships.

Tandon et al. (2021) discussed the negative implications of FOMO in terms of social media use. The public UK survey study targeting young adults aged between 18 to 25 years reported positive associations between FOMO, social fatigue, online social comparison and media, or passive online stalkers. Social media users who demonstrated FOMO behaviors were found to be more likely to spend their time online and thus were more susceptible to feeling overwhelmed by media information, social comparison, and envy. They constantly checked and tracked updates of their social media connections, causing more pressures to keep up with what is new, thus increasing their engagement with social media and causing unhealthy behaviors and

life habits. Individuals who demonstrated FOMO behaviors spent time on social media often excessively, which caused issues such as social anxiety, poor sleep habits, reduced attention span for work and study, and a sedentary lifestyle (Gupta and Sharma (2021). Despite these negative consequences, however, a vicious cycle of anxiety from being socially excluded and continuous social media checking to reduce the said feelings often persisted, which exacerbates FOMO and addiction to social media use. These findings thus warrant a localized study to test the extent of this relationship among university students who often benefit from using the social media on a daily basis. The following hypothesized relationship was thus tested in this study:

H₃: There is a significant relationship between life satisfaction and social media addiction among university students.

2.5. Problem statement and research objective

Given the increasing reliance on Artificial Intelligence (AI) and Information and Technology (IT) for daily tasks, it is critical to regularly raise awareness and implement interventions to reduce the risk of problematic social media use, particularly among university students who are active users of social media applications and who will ultimately go on to become future leaders. Previous research has reported a connection between social media addiction, life satisfaction, self-esteem, and FOMO; however, a localized study exploring this relationship among the young generation group is still scarce. Thus, this study aims to further explore this relationship in the Malaysian context.

The general objective of the study is to determine the relationship between life satisfaction, self-esteem, fear of missing out (FOMO), and social media addiction. The specific objectives of this study are as follows:

1. To identify the relationship between life satisfaction and social media addiction among university students.
2. To identify the relationship between self-esteem and social media addiction among university students.
3. To identify the relationship between fear of missing out (FOMO) and social media addiction among university students.

Hence, the study will solve the following research questions:

1. Is there a relationship between life satisfaction and social media addiction among university students?
2. Is there a relationship between self-esteem and social media addiction among university students?

3. Is there a relationship between fear of missing out (FOMO) and social media addiction among university students?

3. Methodology

3.1. Research framework

Figure 1 shows the research framework linking all the variables in this study. The relationships between the independent variables (life satisfaction and self-esteem) and the dependent variable (social media addiction) were explored using the correlation test to determine whether the relationship was significant as well as the direction of the relationship.

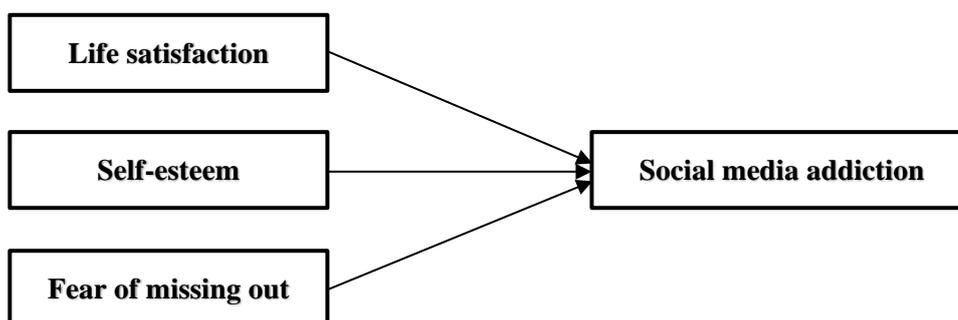


Figure 1: Research framework linking tested variables

3.2. Research Design

The research study employed a quantitative approach using the correlational method. This study was in line with the purpose to test the correlation between four variables, namely life satisfaction, self-esteem, FOMO, and social media addiction among students at selected Malaysian research universities: Universiti Malaya (UM), Universiti Putra Malaysia (UPM), Universiti Kebangsaan Malaysia (UKM), Universiti Sains Malaysia (USM) and University of Technology Malaysia (UTM). Descriptive and inferential analyses were applied to test the data.

3.3. Population and Sampling

The population of this study was 97,733 students at five research universities in Malaysia. These universities were chosen to participate in the sample selection based on the available facilities and resources that they could provide for the convenience of their students' learning and lifestyle. Given the focus of the current study to investigate social media addictions among university students, it is reasonable for the researchers to choose universities that provide adequate tools applicable for the students in obtaining information, participating in virtual classroom activities, and maintaining communication and social network.

The stratified random sampling was used to select the respondents, in which 383 students participated in the study. The Cochran sampling formula (1977) was used to determine the sample size based on the targeted population, while the Yamane's formula (1967) was used to determine the appropriate number of respondents for each university, or stratum. Table 1 presents the sample size required for each strata.

Table 1: Sample size required from each research university (strata)

University (strata)	Total number of students	Sample size required
Universiti Malaya (UM)	18,297	72
Universiti Putra Malaysia (UPM)	17,233	68
Universiti Kebangsaan Malaysian (UKM)	18,661	73
Universiti Sains Malaysia (USM)	22,623	88
Universiti Teknologi Malaysia (UTM)	20,919	82
Total	97,733	383

A simple random sampling technique was carried out to select respondents from each university, allowing each respondent an equal chance to be selected.

3.4. Research Instrument

Questionnaires were distributed to the respondents, which consisted of five parts. Part A of the questionnaire contained the demographic information, inquiring respondents' gender, age, year of study, and university. Part B consisted of items related to the life satisfaction scale, Part C consisted of items related to self-esteem, Part D was on FOMO, and Part E consisted of items related to social media addiction.

3.4.1. The Satisfaction with Life Scale (SwLS)

The Satisfaction with Life Scale (SwLS) was developed by Diener et al. in 1985. The Yap & Amat (2021) study among Malaysian university students reported high Cronbach Alpha value (0.81). This scale was adapted to improve its relevance with the current sample group, thus, it was translated into the Malay language from English. This scale was used to measure the level of satisfaction with an individual's life and contained five (5) items based on a 7-point Likert scale. Respondents needed to rate from a scale of 1 (strongly disagree) to 7 (strongly agree). Life satisfaction was measured through the total score obtained from the 5 items specified. Scoring for the level of life satisfaction was classified into seven categories from "very dissatisfied", "dissatisfied", "a little dissatisfied", "neutral", "a little satisfied", "satisfied", and "very satisfied".

3.4.2. Rosenberg Self-Esteem Scale (RSES)

The RSES instrument was used to measure self-esteem among the respondents. This instrument was introduced by Morris Rosenberg in 1965 and contains 10 items. This scale has been widely used in studies related to self-esteem, and was translated into various languages such as Bengali (Akhter & Ferdous, 2019). The RSES has high validity in examining self-esteem (Hagborg, 1993). In this study, the researcher used the Rosenberg Self-Esteem Scale-Malay Version, which had been previously used for a sample of public university students (Ferlis & Mohd Mizan, 2017). The respondents rated themselves from a scale of 1 (strongly disagree) to 5 (strongly agree). The scale included six positive items and four negative items with a higher score indicating a higher level of self-esteem. The score was classified into three categories: low, moderate and high.

3.4.3. Fear of Missing Out Scale (FoMOS)

The Fear of Missing Out Scale (FoMOS) was used in this study from Rafiza et al. (2019), with the purpose of identifying the fear and anxiety experienced by respondents as a result of their involvement with the use of social media. This instrument was previously used within the Malaysian sample group of private university students by Rafiza et al., thus making it appropriate for use in this study. It contained 10 items and was measured using a 5-point Likert scale ranging from 1 (not at all true of me) to 5 (very true of me). The combined score of all items were categorized into two levels: low and high. A higher score indicated a high level of FOMO.

3.4.4. Social Media Addiction Scale – Student Form (SMAS-SF)

The level of social media addiction among students was measured using the Social Media Addiction Scale (SMAS) by Sahin (2018). It was developed specifically to identify social media addiction among university students. The scale was translated from English to Malay language using the back-to-back translation procedure and validation by two counseling experts. This was to ensure that the scale could be used and allowed students to answer more accurately. The SMAS-SF consisted of 29 items and used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). All items in the scale were positive items and were evaluated using a scale of "1=strongly disagree", "2=disagree", "3=neither agree nor disagree", "4=agree" and "5=strongly agree". The highest score was 145 and the lowest score was 29, with higher scores indicating higher levels of addiction to social media.

3.4.5. Reliability of the instruments

Reliability was used to show internal stability and consistency by measuring the Cronbach's alpha value. Values that exceed .60 are often used to measure and confirm the reliability of an instrument, while an instrument that has a value of less than .60 is considered low in its reliability to measure the tested constructs. The reliability of the SwLS instrument was .87 after 2 months of retesting (test-retest) (Diener et al., 1985). Similarly, the reliability of RSES showed a high value (Ferlis & Mohd Mizan, 2017). As for the SMAS-SF instrument, it showed high reliability through Peer Correlation, Sperman-Brown Formula, Guttman Split-Half reliability coefficient, and Cronbach's alpha reliability formula (Sahin, 2018). Lastly, FoMOS reported a Cronbach's alpha value of .90. Additionally, Yap Jing and Muhammad Asyraf's (2021) study conducted for three months among 30 respondents showed Cronbach's alpha values of .78, .811, and 0.96 for SwLS, RSES, and SMAS-SF respectively. All four instruments thus showed high reliability.

3.5. Data Collection Procedure and Analysis

Questionnaires were used to obtain information and research data from the respondents. They were distributed via Google Form to respondents who were undergraduate students at the five selected Malaysian research universities. Prior to data collection, an application for permission to conduct research in each university was made. The contact information of the undergraduate students in each university were obtained. The researchers distributed the Google Form link to all students who fit the study's criterion through phone applications such as WhatsApp and Telegram and via students' emails. The data obtained from the distribution of the questionnaire was transferred for the data analysis process using the Statistical Package for the Social Science (SPSS) version 25.0 software. Descriptive and inferential analysis were carried out respectively to find out the frequency, mean, standard deviation and percentage and identify the relationship between the study variables using the Pearson correlation test.

4. Findings

4.1. Demographic of respondents and descriptive findings

The descriptive analysis revealed the distribution of the respondents based on gender, age, years of study, and university (Table 2). A total of 383 respondents successfully participated in the study, in which the majority were females (62.1%) and 145 respondents who were male (37.9%). They involved mostly those aged between 22 and 24 years (52.5%), followed by 35.7% aged between 19 until 21 years, and 45 (11.6%) aged between 25 and 28 years old. In terms of year of study, most were third-

year students (26.4%), followed by second-year students (24.5%), fourth-year students (22.5%), first-year students (20.1%) and fifth-year students (6.5%). Finally, with respect to the university, the respondents were distributed almost evenly between their universities of origin, with 23% of respondents from Universiti Sains Malaysia (USM), followed by 21.4% from Universiti Teknologi Malaysia (UTM), 19.1% from Universiti Kebangsaan Malaysia (UKM), 18.8% from Universiti Malaya (UM), and 17.8% Universiti Putra Malaysia (UPM).

Table 2: Distribution of Respondents Based on Gender, Age, Years of Study and University

Category	Frequency	Percentage (%)
Gender		
Male	145	37.9
Female	238	62.1
Age		
19 – 21 years old	137	35.7
22 – 24 years old	201	52.5
25 – 28 years old	45	11.8
Year of Study		
Year 1	77	20.1
Year 2	94	24.5
Year 3	101	26.4
Year 4	86	22.5
Year 5	25	6.5
University		
Universiti Kebangsaan Malaysia (UKM)	73	19.1
Universiti Malaya (UM)	72	18.8
Universiti Putra Malaysia (UPM)	68	17.8
Universiti Sains Malaysia (USM)	88	23.0
Universiti Teknologi Malaysia (UTM)	82	21.4

Table 3 shows the results of the study using descriptive analysis that reported the levels of social media addiction, life satisfaction, self-esteem and FOMO among the students at research universities in Malaysia. Most respondents reported high social media addiction, satisfied life, moderate self-esteem level, and high anxiety or FOMO. These findings indicated that the majority of the respondents were addicted to the use of social media. They reported that they felt satisfied with their lives, but their self-esteem level was at most moderate with more than one third having low self-esteem. They also had high fears or concern and anxiety about missing out on trends and what their peers perceived as trendy.

Table 3: Level of social media addiction, life satisfaction, self-esteem and fear of missing out (FOMO)

Variable	Level	Frequency	Percentage (%)
Social Media Addiction			
	Low	8	2.1
	Moderate	67	17.5
	High	184	48.0
	Very high	124	32.4
Life Satisfaction			
	Very dissatisfied	4	1.0
	Dissatisfied	8	2.1
	A little dissatisfied	12	3.1
	Neutral	6	1.6
	A little satisfied	55	14.4
	Satisfied	217	56.7
	Very satisfied	81	21.1
Self-Esteem			
	Low	149	38.9
	Moderate	209	53.6
	High	23	6.0
Fear of Missing Out			
	Low	75	19.6
	High	308	80.4

4.2. Relationship between life satisfaction, self-esteem, fear of missing out (FOMO) and social media addiction

The Pearson correlation analysis showed that all variables showed a significant relationship with social media addiction among university students in Malaysia (Table 4), indicating that hypotheses 1 through 3 were accepted. There was a positive relationship between life satisfaction and social media addiction ($r = 0.539, p < 0.05$), indicating that students who had high life satisfaction tended to demonstrate higher levels of social media addiction and vice versa. Self-esteem reported a significant negative relationship with social media addiction ($r = -0.515, p < 0.05$), showing that high self-esteem among students was associated with low social media addiction and vice versa. Finally, FOMO reported a significant and positive relationship with social media addiction ($r = 0.633, p < 0.05$), which implied that students who had FOMO tended to have higher levels of social media addiction and vice versa.

Table 4: Correlation coefficient between life satisfaction, self-esteem, fear of missing out (FOMO) and social media addiction

Independent variables	Social media addiction		
	r	Sig	Correlation interpretation
Life satisfaction	.539**	.000	Significant and positive relationship that is moderate
Self-esteem	-.515**	.000	Significant and negative relationship that is moderate
Fear of Missing Out (FOMO)	.633**	.000	Significant and positive relationship that is moderate

Note: r = correlation coefficient

5. Discussion

This study showed that life satisfaction, self-esteem and FOMO correlated significantly with social media addiction among the university students in Malaysia. The majority of the students also indicated that they were satisfied with their lives, but reported high levels of social media addiction, moderate self-esteem level, and a significant fear or concern of missing out. Based on the demographic distribution, the students were at most 28 years old, with most aged between 22 and 24 years old, demonstrating that the internet and social media use are prevalent among the younger generation and that social media habits have a substantial link with their self-esteem, life satisfaction, and psychological state. The high levels of social media addiction reported indicated longer than average time spent on social media among university students, which was possible due to the growing reliance toward social media that may have inadvertently increased the likelihood for frequent and problematic use.

5.1. Relationship between Life Satisfaction and Social Media Addiction

The positive and significant relationship between life satisfaction and social media addiction reported indicated that higher life satisfaction among the students in the participated research universities was linked to higher levels of social media addiction. Although this contradicts Sahin's (2017) and Adel and Ali's (2021) study that reported negative associations between these variables, it supports Yap & Amat (2021) post COVID-19 study, suggesting that social media use increases with more time spent indoors and the satisfaction felt from being able to socialize. When reflecting on Marziah et al.'s (2018) description of life satisfaction, it involves one's evaluation of life, which includes appreciation, confidence, gratitude and recognition;

if these are fulfilled, one will continue to be in a positive state. Essentially, when students' basic needs, health, and social relationships are met, they achieve self-satisfaction (Rogowska et al., 2021). The positive use of social media to facilitate maintaining interpersonal relationships, meet new friends, and expand students' social environment suggest that students' needs are met, which further improved their satisfaction towards life. It seemed that among the youth, satisfaction towards life was associated with increased use of social media as its use had become necessary as a medium to build relationships, find social support, enjoy entertainment, and find information in a manner that is more effective and convenient (Ali Raza et al., 2020; Filyntiana et al., 2020).

This finding, however, raises questionable issues, as despite using social media above than the average time spent, students found that they were highly satisfied with their lives and on the contrary, decreased use led them to feel unsatisfied. Hence, it is a valid argument as to whether the students felt truly happy and satisfied with their life overall with the higher social media use or whether it involved only a part of their life. If one puts high values in social life and entertainment, it is not surprising that frequent use of social media fulfilled their social needs. Being away from the social media, however, would invite negative feelings and discomfort; they may feel dissatisfied with life because their social needs are not met, which can cause emotional issues such as depression and anxiety.

5.2. Relationship between Self-Esteem and Social Media Addiction

The significant relationship between self-esteem and social media addiction shows that students with high self-esteem have low social media addiction and vice versa. Often, via social media, individuals flaunt their wealth or seemingly perfect lifestyle for others to see. Individuals who access social media may witness social comparisons and disparity, making them feel inferior and resort to comparing themselves to privilege that they observed others as having (Muqaddas et al., 2017). This continues if one spends more time online or on social media, which will be detrimental to the development of their self-esteem. The use of social media as a hiding place from direct social interaction is also a result of low self-esteem, which affects the behavior of an individual (Helen et al., 2021).

This finding supports Helen et al. (2021) through the RSES scale, who noted a negative relationship between self-esteem and social media addiction among university students pursuing the medical profession. The anonymity element of the social media setting may encourage higher use and reliance toward social media among lower self-esteem individuals. Nonetheless, Marengo et al. (2021) contradicted this finding and suggested that active Facebook use and more likes received from Facebook improved self-esteem, further suggesting that the social media features provided some benefits for individuals looking to form a social

identity and relationships.

5.3. Relationship between Fear of Missing Out and Social Media Addiction

The reported positive relationship between FOMO and addiction to social media became evident as social media use is prevalent and contributes significantly to the lifestyle of the young generation. Individuals who suffer from FOMO constantly monitored what others are doing and in turn, this caused them to use social media regularly. This was evident as the use of social media was convenient to get the latest information and meet ones' social needs. One can easily feel inferior if they feel left out of something, which can be particularly true for the youth who are still seeking to identify their place in the society. This finding supports Li et al.'s (2022) study which found a positive association between FOMO and social media addiction, inferring that social media has become a crucial part of the university students' life for social, entertainment, work and academic purposes.

While social media is beneficial for individuals to acquire knowledge, excessive and unnecessary social media use can cause students to easily feel overwhelmed with the information provided to them, which may lead to adverse effect such as anxiety. These findings raise questions on whether constant social media use causes negative consequences, thus permitting future studies to further investigate the influence of social media use on the general well-being and life satisfaction of the young generation. Nonetheless, it should be highlighted that the current study utilized sample among only selected research university students in Malaysia and sub-groups such as the students' study specializations and social backgrounds were not included in the study's analysis. This permits replication of future studies using more group-specific samples, which is discussed further in the limitation section.

6. Implications of the Study

Despite the rising discussion on how social media can be problematic, it is a fair argument that the use of technology is convenient and has grown more significant in our daily lives. However, it is important to know what threats the internet and social media can bring by understanding the variables linked to problematic social media use. In an effort to adjust to the advancement of technology applications in aspects of the human's life and improve the general lifestyle, it is suggested that the physical and online setting must be in balance. For example, the hybrid mode of classroom activities is a good strategy to respond to the growth and increased dependence toward technology use in academic and work-related matters. This calls for the attention of lecturers, instructors and university program providers to continue improving the design of classroom activities so that they fully utilize the benefits of digital applications without sacrificing the crucial role of physical classroom

activities and meetings in building social togetherness and interdependencies.

The findings of this study implicate the need for the university management and counselling unit to acknowledge the importance of social involvement and life happiness among university students. Improved and continued intervention strategies are necessary for university students, with the target to control and manage screen time, increase awareness about consequences of excessive social media use, and encourage better lifestyle. Interventions must be designed to provide an alternative method of using social media to socialize and for university students to achieve life satisfaction while managing reasonable social media use.

Gupta and Sharma (2021) suggested that individuals with certain personality traits, for instance, individuals with social anxiety and low self-confidence, are more susceptible to FOMO and social media addiction. The satisfaction that these individuals feel from their time spent online often encourages them to use social media even more, as current findings reported. The vicious cycle from feeling satisfied and increased social media use may lead to problematic behaviors, addiction, and an impaired lifestyle. Hence, proactive actions from authoritative parties at students' respective faculty or university residential colleagues are necessary when implementing intervention plans for students' psychological wellness. Awareness programs should be organized consistently with the goal to educate and provide exposure to students on healthy social media use, better time management, and positive self-esteem. Psychological screening is also suggested to detect students who struggle with self-esteem that is related to various life aspects such as social, family, financial and physical. Maintaining a good psychological health is vital so that students can focus on striving in their academics and adjust well in the workforce.

Additionally, through all courses taken by university students, it is important that positive social, emotional, and physical values are addressed. It is suggested that the university provides an education program specially designed to mitigate problematic social media use and make it mandatory for university students at the beginning of the semester. By designing an interactive course or workshop, focus may be directed to increasing awareness of social media issues and introducing students to the community and university resources available for them to seek professional help and support. This could be an effective strategy to curb and screen for psychological and social media addiction issues early during the students' academic years. The counseling and guidance division can also play a crucial role in leading this program.

Overall, a change in the society as a whole is possible if these strategies are standardized among the universities in Malaysia. The role of the Ministry of

Education Malaysian is also crucial for this matter. The young generation are gems that need to be carefully polished and guided with opportunities and space for them to grow as competent, resourceful, and healthy adults. A gap in the strategies and efforts spent to curb social media addiction issues may hamper the goal of developing an advanced future generation that values traditional values while also responding proactively to advancement.

7. Conclusion

As is known, social media is a convenient tool to seek information quickly. Consequently, this causes university students, which makes up the young generation today, to show a high dependence on social media. This quantitative study found that life satisfaction, self-esteem, and FOMO are significantly linked to social media addiction among university students at five selected research universities in Malaysia. Pearson's correlation analysis reported positive correlations between the independence variables—life satisfaction and FOMO—and social media addiction. Self-esteem correlated negatively with social media addiction. Improper control or excessive use of social media may cause university students to exhibit addictive behaviors. The inability to limit the use of social media will further cause them to use social media excessively; thus, there is a possibility that they will experience life dissatisfaction, making them feel socially excluded and affecting their self-esteem. This study discussed the implication of these findings toward various parties and stakeholders, including the university counselling unit and university course and training providers. The limitations of this study were discussed, which include suggesting more group-specific sample studies and utilizing the regression analysis.

8. Limitations of Study and Recommendations for Future Study

While this study identified the demography of the students, the data was not tested to identify how social backgrounds such as gender, age, and ethnicity differed in their life satisfaction, self-esteem, FOMO, and social media addiction levels. Future studies should explore whether students' social media addiction and the associating variables differ significantly according to these demographic backgrounds. Such findings will facilitate in designing more gender-, age- or ethnic-specific interventions for the culturally diverse university students. It is also suggested that the replication of the study consider how university students' social background and the amount of time they spend on social media could potentially moderate the relationships between the variables. Although the current study has provided ample evidence to support the relationship between the variables, the extent to which the independent variables—life satisfaction, self-esteem, and FOMO—contribute to social media addiction among the university students warrants future investigations. This will be beneficial to improve understanding of the relationship linking these

variables.

Additionally, despite providing significant and reliable findings, the sampling frame of the current study includes randomly selected university students from five Malaysian research universities, regardless of their academic levels and specializations. Hence, suggestions are provided for future researchers to narrow the scope of the sample study to the respective sub-groups, encouraging more group-specific sample studies to minimize bias and improve the generalizability of the research findings. This will be vital in facilitating the development of intervention strategies that are more group-specific. A qualitative approach using focus-group interviews will also be useful for a more in-depth investigation on the link between the variables and to identify additional factors that may contribute to social media addiction among the university students.

References

Adel, E. & Ali, A. M. (2021). The correlation between social media addiction and life satisfaction among university students. *Journal of Hunan University (Natural Sciences)*, 48(9), 216.

Abdel-Khalek, A.M. (2016). *Introduction to the psychology of self-esteem*. Nova Science Publishers, Inc.

Abdul Rashid, A. A., Faizal, K. & Nor Hamizah, R. (2021). Implikasi ketagihan media sosial terhadap kesihatan mental remaja semasa pandemik covid-19. *Journal of Social Sciences and Humanities*.

Akhter, M. S., & Ferdous, R. (2019). Reliability and validity of the Rosenberg self-esteem scale among university students of Bangladesh. *International Journal of Society Systems Science*, 11, 35. <https://doi.org/10.1504/IJSSS.2019.098195>

Ali Raza, S., Wasim, Q., Nida, S., Muhammad, A.Q., Shahzad, Q., & Ramsha, A. (2020). Drivers of intensive Facebook usage among university students: An implications of U&G and TPB theories. *Technology in Society*. <https://doi.org/10.1016/j.techsoc.2020.101331>

Boyd, D. M. & Ellison, N. B. (2008). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*. <https://doi.org/10.1111/j.1083-6101.2007.00393>

Bum, C. H., & Jeon, I. K. (2016). Structural relationships between students social support and self-esteem, depression and happiness. *Social Behavior and Personality*. 44(11), 14. <https://doi.org/10.2224/sbp.2016.44.11.1761>

Cargill, M. (2019). The relationship between social media addiction anxiety, the fear of missing out and interpersonal problems.

Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson Education, Inc.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75.

Ferlis, B., & Mohd Mizan, M. A. (2017). Penerokaan analisis faktor dan tahap kebolehpercayaan ketekalan dalaman alat ukur rosenberg self-esteem scale (RSES)-versi bahasa melayu bagi sampel pelajar universiti awam [An exploration of factor analysis and reliability levels of the internal consistency of the Rosenberg Self-Esteem Scale (RSES)-Malay version for a sample of public university students]. *Simposium Psikologi dan Kesihatan Sosial-I 2017 Kota Kinabalu, Sabah*.

Feshbach, N., Tharinger, D. J., Lambert, N. M., Bricklin, P. M., Johnson, N. F., Oakland, T. D., Paster, V. S., & Sanchez, W. (1996). Education reform: Challenges for psychology and psychologists. *Professional Psychology: Research and Practice*, 27(1), 24–33. <https://doi.org/10.1037/0735-7028.27.1.24>

Filyntiana, T. A., Zurinah, T., Jalaludin, A. M., & Ahmad, R. M. Y. (2020). Ketagihan penggunaan media sosial terhadap gaya hidup belia [Social media use addiction towards youth lifestyle]. *Journal of Social Sciences and Humanities*.

Gupta, M. & Sharma, A. (2021). Fear of missing out: A brief overview of origin, theoretical underpinnings and relationship with mental health. *World Journal of Clinical Cases*. <https://dx.doi.org/10.12998/wjcc.v9.i19.4881>

Hagborg, W. J. (1993). The Rosenberg Self-Esteem Scale and Harter's Self-Perception Profile for Adolescents: A concurrent validity study. *Psychology in the Schools*, 30(2), 132–136. [https://doi.org/10.1002/1520-6807\(199304\)30:2<132::AID-PITS2310300205>3.0.CO;2-Z](https://doi.org/10.1002/1520-6807(199304)30:2<132::AID-PITS2310300205>3.0.CO;2-Z)

Helen. S., Suryani, E., Astiarani, Y., & Felicia, K. (2021). Relationship between narcissism, self-esteem and social media addiction in preclinical medical students. *Althea Medical Journal*. <https://doi.org/10.15850/amj.v8n1.2097>

İbrahim, T., & Murat, İ. (2018). An examination of meaning in life, satisfaction with life, self-concept and locus of control among teachers. *Journal of Education and Training Studies*, 6(1), 21-31. <https://doi.org/10.11114/jets.v6i1.2773>

Jamaludin, R. (n.d). Pengertian konsep sendiri [Definition of self-esteem]. <http://eprints.utm.my/id/eprint/10353/1/bab6.pdf>

Jamiah, M., Mohd Rezal, H., Aizan Sofia, A., Nurul Nabila, M. I., Fazilah, I., Salasiah Hanin, H., Noordeyana, T., Arena, C. K., Norul Huda, S., Salina, N., & Nor Jana, S. (2016). Penggunaan dan implikasi media sosial terhadap remaja generasi z [The use and implications of social media on generation z teenagers]. *International Conference on Social and Economic Development*.

Kaplan, A. & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social-Media. *Business Horizons*, 53, 59-68. <https://doi.org/10.1016/j.bushor.2009.09.003>

Kemp, S. (2022). *Digital 2022: Malaysia*. DataReportal – Global Digital Insights. <https://datareportal.com/reports/digital-2022-malaysia>

Khan, N. A., Khan, A. N., & Moin, M. F. (2021). Self-regulation and social media addiction: A multi-wave data analysis in China. *Technology in Society*. 64. <https://doi.org/10.1016/j.techsoc.2021.101527>

Li, L., Niu, Z., Mei, S. & Griffiths, M. D., (2022). A network analysis approach to the relationship between fear of missing out (FoMO), smartphone addiction and social networking site use among a sample of Chinese university students. *Computers in Human Behavior*, 128. <https://doi.org/10.1016/j.chb.2021.107086>

López-Ortega, M., Torres-Castro, S., & Rosas-Carrasco, O. (2016). Psychometric properties of the Satisfaction with Life Scale (SWLS): secondary analysis of the Mexican Health and Aging Study. *Health Qual Life Outcomes*, 14, 170. <https://doi.org/10.1186/s12955-016-0573-9>

Marengo, D., Montag, C. Sindermann, C, Elhai, J. D. & Settani, M. (2021). Examining the links between active Facebook use, received likes, self-esteem and happiness: A study using objective social media data. *Telematics and Informations*, 58. <https://doi.org/10.1016/j.tele.2020.101523>

Marttila, E., Koivula, A. & Rasanen, P. (2021). Does excessive social media use decrease subjective well-being? A longitudinal analysis of the relationship between problematic use, loneliness and life satisfaction. *Telematics and Informatics*. <https://doi.org/10.1016/j.tele.2020.101556>

Marziah, S., Sar, N., Hoesni, S. N., & Shafurdin, N. (2019). Relationship between role conflict, social support and emotional wellbeing among dual-role women in Lembah Klang. *Jurnal Sultan Alauddin Sulaiman Shah*, 5(2), 77-88.

Mohd Fairuz, J. & Shahizan, H. (2016). Kajian penghargaan sendiri dan kepuasan hidup pelajar [A study of students' self-esteem and life satisfaction]. *Jurnal Psikologi Malaysia*. <http://journalarticle.ukm.my/10093/1/214-883-1-PB.pdf>

Mohd Sobhi, I., Awan, I., Bakri, M., Azahar, K., Shariffah, M., & Norati'qah, T. (2016). Belia dan penggunaan media sosial [Youth and social media use]. *Malaysian Journal of Youth Studies*. <http://iyres.gov.my/images/MJYS/2016/MJYS%2015%20Final-151-167.pdf>

- Muhammad Rusdi, A. M., Zul, A. Y., Aznida, A., & Nurhijrah, Z. (2021). Kajian menyeluruh ketagihan internet dalam kalangan pelajar pusat pengajian tinggi awam di Malaysia [Comprehensive study of Internet addiction among students of public universities in Malaysia]. *Journal of Information System and Technology Management (JISTM)*. <http://www.jistm.com/PDF/JISTM-2021-22-09-18.pdf>
- Muqaddas, J., Soomro, S. A., & Ahmad, N. (2017). Impact of social media on self-esteem. *European Scientific Journal*. <http://dx.doi.org/10.19044/esj.2017.v13n23p329>
- Przybylski, A. K., Murayama, K., DeHaan, C. R. & Gladwell. W. (2013). Motivational, emotional and behavioral correlates of fear of missing out. *Computers in Human Behavior*. <http://dx.doi.org/10.1016/j.chb.2013.02.014>
- Qahtan, M. (2020). Association between social media addiction and life satisfaction among university student. *Indian Journal of Public Health Research and Development*, 11, 2507-2512. <https://doi.org/10.37506/v11/i2/2020/ijphrd/195213>
- Rafiza, K., Siti Azrehan, A., Noor Fadzilah, A. R. (2019). Kajian Rintis: Kelaziman dan Akibat Mengalami FOMO di Kalangan Warga KUIS [A pilot study: Prevalence and consequences of experiencing FOMO among KUIS community]. *5th International Conference on Information Technology and Society*. <http://fstm.kuis.edu.my/myjict/wp-content/uploads/2019/12/MJV4-I2-3-pp.54-65.pdf>
- Rogowska, A.M., Ochnik, D., Kuśnierz, C. et al. (2021). Satisfaction with life among university students from nine countries: Cross-national study during the first wave of COVID-19 pandemic. *BMC Public Health* 21, <https://doi.org/10.1186/s12889-021-12288-1>
- Rosenberg, M. (1965). *Rosenberg Self-Esteem Scale (RSES)* [Database record]. APA PsycTests.
- Şahin, C. (2017). The Predictive Level of Social Media Addiction for Life Satisfaction: A Study on University Students. *TOJET: The Turkish Online Journal of Educational Technology*, 6(4), 120-125
- Sahin. C. (2018). Social Media Addiction Scale – Student Form: The Reliability and Validity Study. *TOJET: The Turkish Online Journal of Educational Technology*.
- Siti Marziah, Z., Ba'yah, N.A.K., Nasrudin, S. & Khaidzir, I. (2015). Peramal kepuasan hidup wanita melayu pertengahan umur bekerjaya di Hulu Langat, Selangor [Predictors of life satisfaction of middle-aged Malay women working in Hulu Langat, Selangor]. *Akademika*. 45-53.

Sousa, L., & Lyubomirsky, S. (2001). Life satisfaction. In J. Worell (Ed.), *Encyclopedia of women and gender: Sex similarities and differences and the impact of society on gender* (pp. 667-676). Academic Press.

Syed Ali, R., Wasim, Q., Bushra, U. & Komal, A. K. (2019). Influence of social networking sites on life satisfaction among university students: a mediating role of social benefit and social overload. *Health Education*. <https://doi.org/10.1108/HE-07-2019-0034>

Tandon, A., Dhir, A., Talwar, S., Kaur, P. & Mantymaki, M. (2021). Dark consequences of social media-induced fear of missing out (FoMO): Social media stalking, comparisons and fatigue. *Technological Forecasting & Social Change*. <https://doi.org/10.1016/j.techfore.2021.120931>

Valkenburg, P. M., Peter, J., Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *CyberPsychology & Behavior*, 9(5), 584–590.

We Are Social (2022, January 26). Digital 2022: Another year of bumper growth. <https://wearesocial.com/uk/blog/2022/01/digital-2022-another-year-of-bumper-growth-2/>

Yap, J. X., & Amat, M. A. C. (2021). The gender differences in the relationships between self-esteem and life satisfaction with social media addiction among university students. *Asian Social Science*, 17(11), 1-48.