



Compulsive Internet usage and social isolation among university students in Malaysia: Internet abuse

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ABSTRACT

The purpose of this study was to investigate the relationships between Internet usage, social isolation, and Internet addiction among university students. The study used a quantitative method and questionnaires to measure the 'problems of using the Internet', 'patterns of Internet usage', 'social isolation', and 'Internet addiction'. The study included 440 students from the University Putra Malaysia, chosen using a stratified random sampling method. The majority of the respondents were single (93.20%) and aged between 23 to 40 years old. The study found a significant relationship between 'problems of using the Internet, social isolation, and Internet addiction'. However, there was no statistically significant relationship between the patterns of using the Internet and social isolation. The t-test result showed that no significant mean differences were found among marital status, field of study, social isolation, and Internet addiction. Implication of the study discussed.

Keywords: Internet usage, social isolation, Internet abuse, Internet addiction

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INTRODUCTION

The Internet has become an essential part of modern life, with many people using it for various reasons every day. Fast Internet speeds are now available in many places, and new concerns have arisen with the advancement of technology (Bakken et al., 2009; McCormick et al., 2019). These concerns include Internet and computer addiction, compulsive Internet and computer usage, problems of using the Internet, and pathological Internet usage (Liu & Potenza, 2007; Maroma et al., 2019). Social isolation has also become a growing issue, with modern man becoming increasingly isolated due to the reduction of core networks and similar relations (Hampton et al., 2011). The term social isolation refers to the availability of social contacts or frequency of contact with social network members (Courtin & Knapp, 2017). This study aims to answer the following research questions:

RQ1. Is there any statistically significant effect of Internet usage problem on Internet addiction and social isolation?

RQ2. Is there any statistically significant effect between Internet usage patterns, social isolation, and Internet addiction?

Moreover, the following hypotheses are suggested to study the potential relationships among the variables of Internet usage, Internet addiction, and social isolation:

H1. There is a relationship between marital status, social isolation, and Internet addiction.

H2. There is a relationship between the field of study, Internet addiction, and social isolation.

LITERATURE REVIEW

Pattern of Using Internet & Internet Addiction

According to the literature, the Internet plays a significant role in the academic and social life of university students in many countries (Ceyhan, 2008; de Zúñiga & Chen, 2019; Kirschner & Karpinski, 2010). Understanding Internet use patterns can be helpful in comprehending how young people use this modern tool. Kheirkhah et al. (2010) conducted a study in which participants reported the hours they spent surfing the Internet in a week, including the number of hours spent online for different purposes such as entertainment, hobby, business, and academic. The researchers concluded that, on average, the subjects spent 10.31 hours online during a whole week. The dependent group spent 14.42 hours online on average, while the non-dependent group used the Internet for almost nine hours during a week, revealing that dependent Internet users were approximately using the Internet five

hours more than the control group. The results also confirmed a statistically significant mean difference between two groups of study.

Müller (2020) reported that, on average, Malaysian people spent 7.57 hours surfing the net per week. Watching TV programs online holds the second position with 2.59 hours. Using social media, listening to music, and playing games are respectively among the popular online activities in 2019. The literature also suggests that excessive Internet use can lead to impairments of real-life relationships, social isolation, and psychological and physical problems such as anxiety and depression. Dependence on the communicative features of the Internet is commonly linked to a lack of real-life social support and feelings of social isolation or loneliness, which all contribute to the development of Internet addiction.

Azmi et al. (2019) conducted a study to measure the frequency of Internet addiction among 178 eleven-year-old Malaysian primary school students and their parents using the validated Malay version of the Internet addiction test (MVIAT). The results revealed that 23.00% of the school kids and 15.70% of their parents were addicted to the Internet. The amount of Internet usage proved to be much higher during the holidays among the schoolers. A significantly positive correlation was found between MVIAT scores of parents and their children. The literature suggests that excessive Internet use can lead to impairments of real-life relationships, social isolation, and psychological and physical problems such as anxiety and depression. Dependence on the communicative features of the Internet is commonly linked to a lack of real-life social support and feelings of social isolation or loneliness, which all contribute to the development of Internet addiction (Kheirkhah et al., 2010; Müller, 2020).

Haque et al. (2016) conducted a study to investigate the relationship between Internet addiction and information-seeking behavior among postgraduate students. The study found that Internet addiction was significantly related to people's ethnicity and having holidays, but not correlated with surfing the Internet for the purpose of finding information. Additionally, students from different school years exhibited different behaviors concerning Internet addiction, with statistically significant differences between MVIAT scores of students from year 1 to year 5. The study highlights the importance of understanding the factors that contribute to Internet addiction among students, which can inform interventions to prevent and treat this issue.

Internet Addiction

According to Hoeg and Parisi (2019) together with Soule et al. (2003), there are five main groups of Internet addiction:

1. Cyber sexual/cyber porn addiction (addiction to +18 chat rooms)
2. Cyber relationship addiction (addiction to making online friends)
3. Internet compulsion (uncontrollable gambling, shopping, etc.)
4. Information overload (uncontrollable searching in the web)
5. Computer addiction (uncontrollable behavior in playing games or programming)

Cheng et al. (2019) conducted a study to investigate the characteristics of Facebook users who find the platform difficult to use. The study found that such users are mostly younger males who are experiencing an important challenge in their lives. They spend long hours online, particularly at night, checking profiles rather than

following news feeds. Additionally, they prefer to text their friends more often and are more likely to deactivate their account for the purpose of managing their time more efficiently. Furthermore, they are probably being exposed to social media or phone addiction contents. The study highlights the importance of understanding the factors that contribute to problematic Facebook use, which can inform interventions to prevent and treat this issue.

The Internet has advantages, but it also poses challenges such as financial issues and mental health problems, including anxiety, depression, and pathological addiction (Anandi & Gududur, 2018; D'Souza et al., 2018). Studies have shown that Malay students have the highest mean scores of Internet addiction, followed by Indian and Chinese students (Haque et al., 2019). According to Haque et al. (2019), age and gender play a role, with 20-year-old male medical students having the highest mean score. Religion was not found to have a statistically significant effect on Internet addiction. It is important to address this issue and develop strategies to promote a healthy relationship with the Internet, especially among young people who are more vulnerable to its negative effects.

The COVID-19 pandemic and lockdown have led to a significant increase in Internet usage, with many people working online and seeking information about the disease through search engines (Khodabakhsh et al., 2021). According to Dong et al. (2020), studies have shown a significant relationship between Internet addiction and the amount and purpose of Internet usage, poor quality of sleep, anxiety, depression, and excessive stress (Tortella-Feliu et al., 2019). The pandemic has also resulted in problematic Internet use and increased escapism, which is linked to Internet addiction. Pew Research Center (2009) surveys have found that the Internet has been essential or important to the majority of Americans during the pandemic (Cheng & Li, 2014).

The entertaining nature of the Internet has led many young people to prefer the virtual world over the real world, resulting in problematic Internet use and addiction (Masaeli & Farhadi, 2021). Online games provide users with autonomy and excitement, which can contribute to addiction (Adachi & Willoughby, 2017). Studies have shown that Internet addiction is pervasive among Asian nations, with a prevalence of 7.10%, and is six times greater in medical students compared to the general public (Ching et al., 2017; Zhang et al., 2018). The COVID-19 pandemic has exacerbated this issue, with 83.50% of medical students engaging in excessive Internet use (Ching et al., 2017). Internet gaming disorders (IGDs) are more prevalent among Asian countries than European ones (Mihara & Higuchi, 2017), with 52.80% of Malaysian undergraduate students having a high score on a valid IGD test (Jaafar et al., 2021).

Social Isolation

Social isolation, as delineated by Hämmig (2019), manifests as a reluctance to engage in communication and a disinterest in interpersonal interactions, culminating in a dearth of social affiliations and companionships. This characterization aligns with the description offered by Flowers et al. (2017), who view social isolation as a deficit in establishing meaningful connections with fellow individuals. Notably, findings from Cigna (2018) research reveal a disconcerting trend, wherein a substantial proportion of participants between the ages of 18 and 22 recorded elevated loneliness scores, a pattern that persists among individuals aged 23 to 27. Conversely, older adults, aged 72 and above, displayed the lowest scores on these loneliness assessments, with a mere

38.60% registering high levels of loneliness. Williams and Braun (2019) underscore the ubiquitous nature of social isolation, emphasizing its prevalence across diverse life stages.

Social isolation, as noted by Pew Research Center (2009), weakens social bonds and reduces people's connections to various societal issues. The U.S. Department of Labor (2016) reports that many people are becoming less inclined to join social groups and participate in voluntary activities, increasing the risk of social isolation and related health problems. However, research by Holt-Lunstad (2017) shows that positive social connections can significantly improve health and reduce the risk of early death by almost half.

Moreover, numerous previous studies have confirmed the positive correlation between excessive use of social media, such as Facebook, and mental health disorders like depression and anxiety. In other words, prolonged Internet use has a negative relationship with the general health condition of individuals (Khodabakhsh et al., 2021; Marino et al., 2017; Shakya & Christakis, 2017; Toker & Baturay, 2016). For example, the amount of time spent on social media has been found to have a positive relationship with depression symptoms in high schoolers from Central Serbia (Pantic et al., 2012), and young adults in the United States (Lin et al., 2016). Additionally, certain aspects of using social media have been identified as reasons for poor academic achievement (Al-Menayes, 2015; Junco, 2012).

Kim et al. (2009) found that unhealthy and lonely people face problems in communication in their real everyday life, which leads to difficulty managing their Internet usage and ultimately more Internet usage to evade reality and its increasing problems. As a result, such socially isolated people take refuge from their problems in their favorite Internet activity. Bakken et al. (2009) confirmed that most Internet addicts and at-risk Internet users use the Internet as a solution to evade their social problems or distress.

Huang et al. (2014) found that loneliness predicted problematic Internet use over time, and problematic Internet use predicted loneliness over time. Pontes and Griffiths (2014) found that Internet addiction and loneliness are significantly correlated among children and adolescents in the education setting. The current research suggests that one of the major motives driving individuals' Internet use is to relieve psychosocial problems like loneliness and depression, but individuals who were lonely or did not have good social skills could develop strong compulsive Internet use behaviors resulting in negative life outcomes instead of relieving their original problems (Bakken et al., 2009).

Marital Status, Field of Study, & Internet Addiction

Marital status can greatly influence the issue of Internet addiction. Being single or married is a significant element in relation to loneliness, as singlehood is regarded as a loneliness risk factor, particularly for widowed men, according to Dahlberg et al. (2015) and Menec et al. (2019) also found that widowed men experience side effects of loneliness four times more than married men, emphasizing the great effect of losing a partner. Losing one's wife could lead to a lack of interest in social interactions, as men are more prone to social isolation compared to women because their circle of connections is smaller, according to Menec et al. (2019). Research on loneliness argues that it is both the quality and quantity of social connections that are important, as having fewer relationships than desired, as well as when the intimacy from established relationships is not realized, lead to negative effects on older persons' wellbeing (Martin-Matthews, 2011). Married elders are

the least lonely group, while never-married elders come thereafter, better than widowed, divorced, and separated elders (Kislev, 2022).

Marital status has been studied in relation to Internet addiction. Kheirkhah et al. (2010) found a positive correlation between marital status and Internet addiction. However, Bakken et al. (2009) found no significant correlation between the amount of Internet usage and marital status. Abdel-Salam et al. (2019) concluded that variables such as age, degree, education, marital status, income, and mothers' level of literacy do not correlate with Internet addiction. Similarly, Haque et al. (2016) found no meaningful relationship between IA and marital status. Oguz and Cakir (2014) contended that the level of loneliness among the participants of their study, who were teacher candidates, do not reveal a significant correlation with variables of marital status, age, job, and online activities. However, married teacher candidates were found to be more addicted to the Internet compared to single ones. These findings suggest that the relationship between marital status and Internet addiction is complex and may depend on other factors.

Sally (2006) suggests that demographic factors such as age, gender, urban life, education level, and financial status may be important factors to consider in understanding problematic Internet use. However, further research is needed to better understand the complex relationship between these factors and Internet addiction. Sepehrian and Lotfi (2011) observed that severe Internet addiction affected 16.36% of Urmia students, and 20.90% were placed in the endangered group. The researchers found that male students were more vulnerable to severe Internet addiction than female students, and technical and foundation science students were more susceptible to severe Internet addiction than art and humanities students. They concluded that gender, major, and anxiety level were significant predictors of being vulnerable to Internet addiction.

Uses & Gratification Theory

The uses and gratifications theory (U&G), originally formulated in the 1940s, is a media theory that seeks to understand how individuals utilize media to fulfill their needs and discern the personal motivations behind their media consumption behaviors (Blumler & Katz, 1974). According to this theoretical framework, media consumers are self-aware of their intentions and beliefs, actively selecting specific media platforms to attain gratification (Papacharissi & Rubin, 2010).

U&G theory has been extensively applied to investigate the rationales for engaging with various media forms, including but not limited to the Internet, Facebook, WeChat, Twitter, social virtual worlds, smartphones, and social networking games (Li et al., 2015). U&G theory encompasses five core concepts: active audience, social and psychological origins, strong motives for media use, expectancy (potential gratifications), and gratifications (Chen & Kim, 2013).

Papacharissi and Mendelson (2011), for instance, leveraged U&G theory to explore the motivations behind people's use of Facebook, identifying nine primary purposes for which individuals access the platform: to integrate Facebook into their daily routines, seek relaxation, share information, acquire new information, temporarily escape from problems, enhance job-related skills, forge new friendships, find companionship, and engage in social communication (Kircaburun et al., 2020; Punyanunt-Carter et al., 2017). Similarly, Gadekar et al. (2012) conducted a study on academic use of Facebook, pinpointing five gratification motives: building relationships, seeking

entertainment, searching for information, self-expression, and establishing social identity (Punyanunt-Carter et al., 2017).

Moreover, research by De Oliveira and Huertas (2015) elucidated the elements that positively influence users' satisfaction on Facebook, encompassing subjective norms, cultural and social identity, adherence to group standards, enjoyment, and interpersonal relationships (Punyanunt-Carter et al., 2017).

Studies rooted in U&G theory also propose a link between the motivations for media use and the potential for Internet addiction (Chae et al., 2018). Each gratification category entails various facets: content gratification comprises self-documentation, information sharing, and self-expression, while social gratification encompasses social interaction (Dhir et al., 2019). The sense of gratification pertains to leisure and time utilization, hedonic gratification relates to enjoyment and fantasy, social gratification involves social presence and interaction, and utilitarian gratification is closely tied to achieving specific goals (Chae et al., 2018). Additionally, investigations have scrutinized the impact of task performance on metacognitive experiences and the correlation between task performance and metacognitive experiences in problem-solving scenarios (Dhir et al., 2019). **Figure 1** shows relationship between Internet usage, social isolation, and Internet addition.

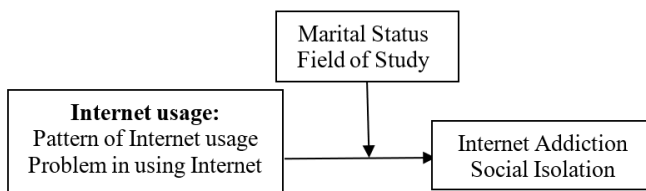


Figure 1. Relationship between Internet usage, social isolation, & Internet addition (Source: Authors)

METHODOLOGY

Participants

The study utilized questionnaires as primary method of data collection. Questionnaires were distributed among local male and female university students between the ages of 17 and 40, with simple random sampling used to select participants from 16 faculties at University Putra Malaysia. We employed stratified testing to determine the sample size, with data collected from 440 students. Questionnaire addressed topics such as problems of using the Internet, patterns of using the Internet, social isolation, and Internet addiction, as well as demographic information such as marital status, age, and field of study.

Based on the Malaysia definition of youth the age of the participants is between 18 to 40 years old (Daruis et al., 2008). The students older than 40 years old were deleted from the analysis. Furthermore, 32.30% of the respondents were male and 67.70% were female. Students participated from the following faculties: agriculture (10.70%), biotechnology and bimolecular science (2.00%), computer science and information technology (3.20%), design and architecture (3.40%), economic (8.90%), education (2.30%), engineering (4.50%), environment (1.10%), food science (4.10%), forestry (2.30%), graduate study management (5.00%), human ecology (7.30%), medicine (8.90%), modern languages and communication (9.10%), science (25.70%), and veterinary (1.60%). Most of the respondents were single 93.20% and just 6.80% were married.

Measurement

To measure the relationship between Internet usage as an independent variable, Internet addiction and social isolation as dependent variables among students, the study used 57 questions. The "problems in using the Internet" variable was measured by 12 items on a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree," with the data coded from one to five for analysis.

Patterns of Internet usage were measured by five items on a 5-point Likert scale, addressing years of Internet usage, frequency of Internet usage per week, hours spent online per week, location of Internet usage, and search engine usage. These variables were operationalized as ordinal measurements.

Internet addiction was measured by 19 items on a 5-point Likert scale ranging from "not at all" to "always", being measured by interval scale. Internet addiction mostly included "stay online more than intended", "lose your sleep", "grade decrease at school", "feel moody and depressed when you are offline". Range of scores for this dimension was from 19 to 95. If a student had high score in the Internet addiction dimension, it meant that she had a high risk of addiction to the Internet.

Social isolation was measured by 19 items using 5-point Likert scale ranging from "strongly agree" to "strongly disagree". Most of the items asked about "pretend to be someone else", "prefer to communicate online", "share intimate online", and "anonymity". Demographic of the respondents were measured by the two items of marital status and field of study. This study is part of project measuring the impact of Internet usage on negative and positive youth development among university students in Malaysia.

Data Analysis

The study used statistical package for social science to analyze the data and employed descriptive and inferential statistics to determine the relationship among the variables. Descriptive analysis was used to determine the 'problems of using the Internet', 'patterns of Internet usage', 'social isolation', and 'Internet addiction', while demographic information was interpreted using frequency, percentage, mean, and standard deviation.

Inferential analysis was employed for the correlation analysis of the relationships among patterns of using Internet, problems in using Internet, social isolation, and Internet addiction. t-test was applied to measure the mean differences between field of study and marital status, social isolation, and Internet addiction. A pilot study was conducted to measure the validity and reliability of the questionnaires, which were distributed among 30 students. The results of Cronbach's alpha showed that the reliability of the instrument was higher than 0.70, with Cronbach's alpha values of 0.70 for problems of using Internet, 0.960 for Internet addiction dimension, and 0.823 for social isolation. Before analyzing the data, all the data were subjected to the normality test, which showed that the data was normal.

RESULTS

Problems in Internet Usage

The study found that the most common complaint about problems of using the Internet was slow connection (mean [M]=3.58, standard deviation [SD]=0.96), followed by "overload information on the Internet" (M=3.50, SD=0.91) and "it takes too long to view or download

pages” (M=3.44, SD=0.92). The least common complaint was “Internet is too complicated to use” (M=2.28, SD=0.91). These findings are consistent with previous research on information overload, which has shown that people often struggle to cope with the constant streams of messages and images that they encounter online.

Patterns of Internet Usage

The study included participants from three major races, including Malay, Chinese, and Indian. More females than males completed the survey, with 67.00% of the respondents being female and 33.00% male. The majority of the participants (44.50%) had been using the Internet for five to eight years, while 28.20% had been using it for nine to 12 years. Respondents with more than 16 years of Internet usage constituted the smallest part of the sample. The majority of the students used the Internet less than 10 times per week (87.00%), followed by 11 to 20 times a week (9.30%). 63.00% of the respondents used the Internet for less than 23 hours per week, while 22.70% used it for 24 to 43 hours per week, and 9.30% used it for 44 to 63 hours per week. 40.00% of the respondents used the Internet at the university, and 35.00% used it in hostels and dormitories. Almost all of the students (96.40%) used Google as their default search engine.

Internet Addiction

The study found that the most common indicators of Internet addiction among the participants were staying online longer than intended (M=3.50, SD=1.17) and saying “just a few more minutes” when online (M=3.28, SD=1.10). The least common indicators were feeling depressed, moody, or nervous when offline and feeling annoyed or snapping at someone who bothers them while online, with mean scores of (M=2.48, SD=1.03) and (M=2.45, SD=1.11), respectively. These findings are consistent with previous research on Internet addiction, which has shown that compulsive Internet use can lead to negative outcomes such as social isolation and addiction.

Social Isolation

According to the students’ responses, the most important mean belonged to the item “I have pretended to be somebody of the opposite sex while online” (M=3.24, SD=1.04), indicating a significant level of engagement in online role-playing. This was followed by “I feel less connected interpersonally when I communicate online” (M=3.10, SD=1.11), suggesting a potential negative impact on students’ social relationships. The last mean, based on the responses of the students, was “Most of my friends I know from online” and “Going online has made it easier for me to make friends” (M=2.19), indicating that students are increasingly relying on online platforms for social interactions. Additionally, the item “I prefer telephoning to communicating online” had a relatively low mean (M=2.06, SD=1.05), suggesting that students generally prefer online communication over traditional phone calls.

Mean Difference Between Marital Status, Internet Addiction, & Social Isolation

H1. There is relationship between marital status, social isolation and Internet addiction.

The study used an independent t-test to compare Internet addiction levels between married and single students. The results showed no significant difference in Internet addiction between the two groups, and this lack of difference also applied to social isolation (see **Table 1**).

Therefore, the initial hypothesis (**H1**) was not supported. These findings are consistent with previous research indicating that being married does not necessarily prevent Internet addiction. However, other studies have suggested that marital problems can contribute to Internet addiction and affect family life negatively.

Table 1. t-test between marital status & Internet addiction & social isolation (n=440)

Marital status	Internet addiction			Social isolation		
	Mean	t	p	Mean	t	p
Married	49.9000	1.377	0.169	49.7333	0.468	0.640
Single	53.4390			48.6390		

Note. *p<.05

Relationships Among Problems in Using Internet, Patterns of Internet Usage, Internet Addiction, & Social Isolation

RQ1. What is the effect of problems of using Internet on Internet addiction and social isolation?

RQ2. Are there any relationships between patterns of using Internet, social isolation and Internet addition?

Results showed that there was a significant relationship between problems using the Internet and Internet addiction (r=0.125, p<0.05). Secondly, there was also a significant relationship between Internet usage problem and social isolation (r=0.150, p<0.05). This means that having trouble with Internet can lead to both Internet addiction and feeling socially isolated among students. But how students generally use Internet did not show any significant relationship with Internet addiction or social isolation (p>0.05) (**Table 2**).

Table 2. Pearson correlation between IVs and DVs (n=440)

Variables	Internet addiction		Social isolation	
	r	p	r	p
Problems in using Internet	0.125**	0.001	0.150**	0.002
Pattern of Internet usage				
Years of using	0.055	0.246	-0.002	0.965
Frequency of Internet usage	0.084	0.078	0.010	0.841

Note. *p<0.05 & **p<0.01

Mean Differences Between Field of Study, Internet Addiction, & Social Isolation

H2. There is relationship between field of study, Internet addiction and social isolation.

The results of the t-test revealed that the mean differences between fields of study based on the science and social science field, social isolation, and Internet addiction were not significant (**Table 3**). Therefore, the relationship between field of study, Internet addiction and social isolation was denied, and the hypothesis **H2** was rejected. This suggests that the choice of field of study does not significantly influence Internet addiction or social isolation among students.

Table 3. Mean differences between field of study, Internet addiction, & social isolation (n=440)

Field of study	Internet addiction			Social isolation		
	Mean	t	p	Mean	t	p
Science	54.3830	1.208	0.228	52.5940	0.178	0.240
Social science	48.0255			49.6241		

DISCUSSION & CONCLUSIONS

The current investigation had four main findings. The first finding revealed a significant and positive relationship between the problem of using the Internet, social isolation, and Internet addiction.

The second finding showed that there is no significant association between patterns of using the Internet, social isolation, and Internet addiction. The third finding indicated that there is no statistically significant relationship between marital status, social isolation, and Internet addiction. Lastly, the fourth finding showed that there is no relationship between field of study, social isolation, and Internet addiction. These findings are consistent with previous studies that have shown a link between Internet addiction and loneliness. Additionally, other studies have found that Internet addiction has increased in Malaysia and during the COVID-19 pandemic. The findings suggest that adequate social support should be provided to address the feelings of isolation and prevent Internet addiction.

The first main finding of the study on Internet addiction and social isolation revealed that students experienced social isolation, with the highest mean score pertaining to pretending to be somebody of the opposite sex while online, followed by feeling less connected interpersonally when communicating online. The lowest mean scores were for most friends being known online, going online making it easier to make friends, and preferring telephone communication to online communication. This finding is consistent with Cigna (2018) study, which found that almost half of adults aged 18-22 scored high on the loneliness test. Bakken et al. (2009) also reported that the majority of Internet addicts and at-risk Internet users used the Internet as a way of escaping their social problems or distress.

The second main finding of the study identified the most important items based on mean scores in the term "Internet addiction." The item with the highest mean score was "how often do you find that you stay on-line longer than you intended," followed by "how often do you find yourself saying 'just a few more minutes' when on-line." The last two mean scores pertained to "how often do you feel depressed, moody or nervous when you are off-line, which goes away once you are back on-line" and "how often do you snap, yell, or act annoyed if someone bothers you while you are on-line" respectively. These findings suggest that students in the study exhibited symptoms of being addicted to the Internet, which is consistent with Young's (1998, p. 238) study on Internet addiction. The results of this study are also consistent with the findings of Guan et al. (2012) and Haque et al. (2019) who reported an increase in Internet addiction in Malaysia. Additionally, Dong et al. (2020) and Ismail et al. (2021) pointed out that addiction to the Internet has dramatically increased during the COVID-19 pandemic. Jaafar et al. (2021) also detected that IGD is highly pervasive among Malaysian undergraduate students.

The third main finding of the study highlights the most common complaints about problems of using the Internet. The findings reveal that 'slow connection' was the most common complaint, followed by 'overload information on the Internet' and 'it takes too long to view or download pages'. The least common complaint was 'Internet is too complicated to use'. These results are consistent with the findings of Waters (2005), who identified information overload as one of the types of Internet addiction. It is worth noting that the phenomenon of information overload has been a concern since the 1970s, and it has been suggested that the advent of the Internet has only exacerbated this

problem. While most Americans are comfortable with their abilities to cope with information flows in their day-to-day lives, those who are more likely to feel information overload have less technology and are poorer, less well-educated, and older. Additionally, digital overload can lead to negative consequences like irritability, difficulty sleeping, depression, anxiety, and high blood pressure.

The fourth main finding of the study reports the patterns of Internet usage among the respondents. Almost half of the respondents have used the Internet for five to eight years, followed by the second group who used the Internet for nine to 12 years. The majority of the respondents used the Internet less than 10 times per week, followed by 11 to 20 times a week. 63.00% used the Internet less than 23 hours per week, while 22.70% of the respondents used it from 24 to 43 hours per week, and 9.30% used it between 44 and 63 hours per week. Students mostly used the Internet at the university, and the majority of them chose Google as their default search engine. These findings are consistent with the Breakthrough Youth Research Archives (2003) study, which found an increase in the rate of Internet addiction. Additionally, other studies have found that dependent Internet users used the Internet almost 5 hours more than the control group (Kheirkhah et al., 2010), typical Malaysian users spent 7.57 hours online on average per week (Müller, 2020) and there is a significant correlation between ethnicity, Internet addiction, and having holidays (Azmi et al., 2019). However, it is important to note that the study did not investigate the patterns of Internet usage in other countries or cultures, and further research is needed to understand the patterns of Internet usage in different contexts.

The fifth finding of the study revealed that there were no significant mean differences between marital status and Internet addiction. This result is not consistent with the findings of Bakken et al. (2009) and Kheirkhah et al. (2010), who found a relationship between marital status and Internet addiction. However, Dahlberg et al. (2015), Kheirkhah et al. (2010), Menec et al. (2019), and Sally (2006) identified marital status as a key factor in relation to loneliness. On the other hand, Abdel-Salam et al. (2019), Bakken et al. (2009), Haque et al. (2016), and Oguz and Cakir (2014) found no relationship between marital status and Internet addiction.

Sixth, the study found no significant mean differences between fields of study such as social science and science, social isolation, and Internet addiction. These results are consistent with the findings of Abdel-Salam et al. (2019) and Sally (2006), who confirmed that there is no relationship between field of study and social isolation. However, the current results are not consistent with the study of Sepehrian and Lotfi (2011), who found that critical Internet addicts outnumbered in technical and science faculty compared to the faculty of art and humanities. Similarly, Ching et al. (2017) and Zhang et al. (2018) reported increasing cases of Internet addiction among medical students during the COVID-19 pandemic (Zhang et al., 2018).

Limitations & Recommendations

The present study was conducted in one university, so the results cannot be generalized to all universities in Malaysia. In addition, this study was carried out in the state of Selangor, therefore we cannot generalize the findings to the other provinces in Malaysia. For better understanding, it would be beneficial to conduct this research among other groups in society, such as housewives, secondary school students, and company employees, to obtain more comprehensive perspectives on the problems of Internet use and social isolation. It is also

recommended to carry out the survey in other provinces in Malaysia to ensure a more representative sample. Lastly, using a mixed method approach, combining quantitative and qualitative methods, is suggested to other researchers for obtaining more comprehensive results.

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