

Analysis of Internet Addiction Indicators among Students in the Department of Statistics, Faculty of Mathematics and Natural Sciences, Universitas Negeri Makassar

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Abstract

The rapid development of information and communication technology has led to a significant increase in internet usage, particularly among university students. However, excessive and uncontrolled internet use can result in internet addiction, which can have detrimental effects on academic performance and overall well-being. This study aims to investigate the signs of internet addiction among students in the Statistics Study Program, Faculty of Mathematics and Natural Sciences (MIPA), Universitas Negeri Makassar (UNM). The study employed a survey method with a questionnaire completed by 204 students from the Statistics Study Program at UNM. The questionnaire included 20 questions covering various indicators of internet addiction, such as loss of control, using the internet as an emotional escape, satisfaction with internet use, preoccupation, academic impact, and difficulty in controlling internet use. The results indicate that a significant proportion of the surveyed students exhibit signs of internet addiction. Many respondents reported difficulties in regulating their internet use time, a tendency to use the internet as an emotional escape, and a high level of satisfaction and emotional dependence on online activities. Additionally, some students experienced negative impacts on their academic performance, such as decreased focus, delayed task completion, and disrupted sleep patterns due to excessive internet use. The findings emphasize the need for preventive measures and appropriate interventions to help students in the Statistics Study Program, UNM, manage their internet use in a healthier and more productive manner, thereby mitigating the adverse effects of internet addiction on their academic and overall well-being. Recommendations for future research include longitudinal studies, analyses based on demographic characteristics, qualitative explorations, instrument development, and multidisciplinary collaborations to further understand and address this issue.

Keywords: internet addiction, university students, academic performance, intervention, prevention

1. Introduction

Over the past decade, advancements in information and communication technology have significantly transformed the way people live worldwide, particularly with the increasing use of the internet (Caplan, 2003; Chou et al., 2005). The internet has now become an integral part of various aspects of daily life, including among university students. As a population heavily reliant on technology, students are one of the groups most vulnerable to internet addiction (Young, 1998; Caplan, 2003).

Recent data indicate that the prevalence of internet addiction among students is relatively high, ranging from 1.5% to 8.2% (Cheng & Li, 2014). In Indonesia, a national survey conducted in 2020 found that approximately 2.8% of the country's internet users were at risk of internet addiction, with the majority being teenagers and university students (APJII, 2020). This phenomenon warrants particular attention given the negative impacts that internet addiction can have on students.

Internet addiction among university students can significantly affect their academic performance. Numerous studies have shown that excessive and uncontrolled internet use can lead to a decline in academic achievement (Junco, 2012; Tonioni et al., 2012). This decline is attributed to several factors, including reduced focus and concentration during

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study sessions, delays in completing assignments and academic obligations, and disrupted sleep patterns, all of which can impair learning capabilities.

Furthermore, internet addiction can lead students to neglect other essential activities, such as attending lectures, participating in class discussions, and completing assignments to the best of their ability (Rosen et al., 2013). As a result, students addicted to the internet are more likely to have lower GPAs and struggle to graduate on time.

Additionally, the campus environment, which is rich in academic activities and requires constant internet connectivity, can serve as a risk factor that increases students' vulnerability to internet addiction (Chou et al., 2005; Caplan, 2003). Students frequently use the internet for academic purposes, such as finding references, completing assignments, and communicating with professors or peers. However, without proper self-control, this reliance on the internet can evolve into a dependency that disrupts their academic lives.

Internet addiction among students can also negatively impact other aspects of their lives, including social relationships, mental health, and overall well-being (Kuss & Griffiths, 2011; Spada, 2014). Students addicted to the internet often neglect face-to-face interactions with friends and family and experience a decline in their quality of life. Ultimately, these effects can hinder their personal and social development during their studies.

Although internet addiction has become an increasingly prominent research topic, our understanding of this phenomenon among university students remains incomplete. There are ongoing debates among experts regarding the definition, diagnostic criteria, and classification of internet addiction as a mental disorder (Király et al., 2015; Brand et al., 2014). Moreover, previous studies have primarily focused on the prevalence and general impacts of internet addiction, with limited exploration of its specific dynamics among students.

This study aims to investigate the signs of internet addiction among university students using various indicators, with a particular focus on its academic impact. A comprehensive understanding of this phenomenon is expected to provide a foundation for developing effective interventions to help students manage their internet use in a healthy and productive manner, while also preventing the negative consequences of addiction, especially on their academic performance.

2. Research Methods

This study employed a survey method to collect data on signs of internet addiction among students in the Department of Statistics, Faculty of Mathematics and Natural Sciences, Universitas Negeri Makassar. A quantitative approach was applied to analyze the data obtained through questionnaires.

A total of 204 students participated in the research. The sampling technique used was purposive sampling, with the criterion that respondents had to be active students currently enrolled in the semester under study.

Data were collected by distributing online questionnaires to respondents. The primary instrument in this study was a questionnaire consisting of 20 questions using a 6-point Likert scale: Rarely, Sometimes, Often, Very Often, Always, and Never. The questions addressed various indicators of internet addiction, including: (1) loss of control over time spent on the internet, (2) using the internet as an emotional escape, (3) satisfaction and emotional dependency on online activities, (4) excessive preoccupation with the internet, (5) negative impacts on academic performance, and (6) difficulty in controlling internet use.

The data obtained from the questionnaires were analyzed descriptively to identify signs of internet addiction among Statistics Program students at UNM. The analysis included frequency distributions, percentages, and response patterns for each measured indicator of internet addiction.

3. Results and Discussion

This study aims to investigate signs of internet addiction among respondents through various indicators. The findings are presented in Table 1.

According to the survey results, most respondents access the internet using devices such as smartphones, laptops, and tablets. There is a strong tendency to use the internet at home or in public Wi-Fi hotspot areas. This indicates that the internet has become an inseparable part of daily life, both at home and elsewhere (Chou et al., 2005; Spada, 2014).

Table 1. Distribution of Responses per Question Related to Internet Addiction

No	Question	Indicator	Rarely	Sometimes	Often	Very Often	Always	Never
1	I access the internet for longer than the time I planned	Loss of Control	12.3%	38.7%	26.5%	11.8%	9.3%	1.5%
2	I divert the problems I face by accessing the internet	Using the Internet as an Emotional Escape	12.7%	27.5%	33.8%	13.2%	7.8%	4.9%
3	I feel satisfied when I can access the internet	Satisfaction with Internet Use	4.4%	19.1%	43.1%	15.7%	16.2%	1.5%
4	I imagine what new things might happen on the internet while doing other activities	Preoccupation with the Internet	28.9%	27.9%	21.1%	6.8%	3.9%	11.3%
5	People around me remind me not to access the internet too often	Social Attention	17.6%	21.6%	20.6%	15.2%	16.2%	8.8%
6	My assignment/exam scores decline due to accessing the internet too often	Academic Impact	32.4%	28.9%	9.3%	1.4%	2.0%	26.0%
7	I take the time to open the internet while doing other activities	Multitasking	19.1%	38.2%	25.0%	7.8%	5.4%	4.4%
8	I have tried to reduce the time for accessing the internet, but failed	Difficulty Controlling Use	21.6%	30.9%	25.5%	10.8%	4.4%	6.8%
9	I am surprised by myself because of the amount of time I spend on the internet	Awareness of Excessive Use	17.2%	24.5%	29.4%	12.3%	9.8%	6.8%
10	My campus/home assignments are hindered due to accessing the internet too often	Academic Impact	30.4%	30.4%	11.8%	3.9%	2.5%	21.1%
11	I plan when I will access the internet again while doing other activities	Low Self-Control	20.6%	36.8%	21.6%	6.4%	6.9%	7.8%
12	I think that life without the internet will feel empty and boring	Emotional Dependence	16.2%	26.0%	29.9%	11.3%	12.3%	4.4%
13	I feel irritated if someone disturbs me when I am engrossed in accessing the internet	Impact on Social Relationships	31.4%	25.0%	10.8%	5.4%	2.9%	24.5%
14	I stay up too late at night because of accessing the internet	Sleep Disturbance	22.5%	35.3%	20.6%	5.4%	10.8%	5.4%
15	I feel that my internet usage time has increased significantly	Increase in Use	21.1%	32.8%	24.0%	10.8%	6.9%	4.4%
16	I remind myself: "just a	Low Self-	14.7%	28.4%	27.9%	13.7%	10.8%	4.4%

No	Question	Indicator	Rarely	Sometimes	Often	Very Often	Always	Never
	little more" when I am engrossed in accessing the internet	Control						
17	I try to stop using the internet, but fail	Difficulty Controlling Use	22.1%	30.4%	21.6%	8.8%	6.9%	10.3%
18	I hide from my close ones how much time I spend on the internet	Concealing Behavior	27.5%	17.6%	11.8%	4.9%	5.9%	32.4%
19	I prefer to access the internet rather than go out with friends/family	Neglecting Social Relationships	31.4%	18.1%	7.8%	3.4%	2.5%	36.8%
20	I feel anxious when I cannot access the internet	Withdrawal Symptoms	30.4%	28.4%	13.2%	7.8%	6.9%	13.2%

Based on Table 1, respondents' internet usage is dominated by activities such as social media, online shopping, and video streaming. Social media use is the primary reason, highlighting that many individuals are engaged in social activities on platforms such as Facebook, Instagram, and Twitter. Additionally, many respondents use the internet for work or academic purposes, showing that the internet also serves as a productivity tool (Chou et al., 2005; Király et al., 2015).

The study reveals that most respondents (76.3%) frequently exceed the time they planned to spend on the internet, indicating difficulties in managing their usage time. This aligns with previous research identifying loss of control as a core symptom of internet addiction (Young, 1998; Griffiths, 2000).

Furthermore, a significant portion of respondents (54.8%) frequently or very frequently use the internet as a means to escape from problems, reflecting maladaptive patterns. Using the internet as a coping mechanism for negative emotions is well-documented in studies on internet addiction (Caplan, 2010; Davis, 2001). Moreover, 74.9% of respondents reported feeling satisfied when accessing the internet, indicating high emotional dependency. Research has shown that strong positive feelings associated with internet use are a key indicator of addiction (Young, 1998; Griffiths, 2000).

Other findings show that approximately 31.8% of respondents often or very often imagine new things on the internet while performing other activities, suggesting persistent preoccupation with the internet. This tendency may indicate attention disorders and distraction associated with internet addiction (Davis, 2001; Caplan, 2003). Meanwhile, 53.4% of respondents are frequently reminded by those around them to reduce their internet usage. Social concerns about excessive internet use can indicate underlying issues, consistent with studies on the social impacts of internet addiction (Caplan, 2003; Young, 1998).

Although the majority of respondents (58.4%) did not feel that the internet disrupted their academic performance, a small proportion (18.2%) reported frequent to constant disruptions. Negative impacts on academics are among the commonly reported symptoms of addiction (Tonioni et al., 2012). Furthermore, a large majority (70.4%) often use the internet during other activities, which may reduce efficiency. Studies suggest that simultaneous internet use and other tasks can harm productivity and performance (Junco, 2012; Rosen et al., 2014).

Approximately 41.7% of respondents frequently fail to reduce their internet usage, indicating dependency that is difficult to control. The inability to regulate or reduce internet use, despite the desire to do so, is a primary symptom of internet addiction (Tonioni et al., 2012; Kuss & Griffiths, 2011). Moreover, most respondents are aware of their excessive internet usage but have yet to take decisive steps to reduce it. Awareness of problematic usage is often the first step in overcoming addiction (Young, 1998; Davis, 2001).

The findings indicate signs of internet addiction among most respondents, as reflected in symptoms such as loss of control, using the internet as an emotional escape, high satisfaction when accessing the internet, excessive preoccupation, and difficulty in controlling usage. These results are consistent with previous research on the characteristics and impacts of internet addiction (Young, 1998; Davis, 2001; Caplan, 2010). The implications of these findings highlight the need for preventive measures and appropriate interventions to address internet addiction among respondents.

The results of this study underscore the significance of internet addiction among respondents, reflected in various indicators such as loss of control, emotional dependence, and excessive preoccupation. These findings emphasize the importance of further research and interventions to address this issue in the population.

One important recommendation is to conduct longitudinal studies to observe the development of internet addiction symptoms among respondents over a longer period. This approach would allow for the identification of behavioral changes, impacts, and contributing factors in a more comprehensive manner (Kuss & Griffiths, 2011; Tonioni et al., 2012). Additionally, analyses based on respondents' demographic characteristics, such as age, gender, and background, could yield deeper insights into groups more vulnerable to internet addiction (Caplan, 2003; Young, 1998).

Qualitative research, such as in-depth interviews or case studies, could also be conducted to gain a more nuanced understanding of the experiences and processes leading to internet addiction among respondents. This approach could uncover the psychological dynamics, social contexts, and other factors contributing to addiction, providing a foundation for more tailored interventions (Davis, 2001; Caplan, 2010).

Regarding interventions, further research is needed to develop and test programs that can help respondents address signs of internet addiction. Interventions may include education, self-management training, counseling, or other approaches tailored to respondents' needs. Collaborative efforts among researchers, mental health practitioners, technology experts, and other stakeholders can produce more comprehensive understanding and interventions (Junco, 2012; Rosen et al., 2014).

Moreover, developing more comprehensive and contextually valid measurement tools for internet addiction is a critical recommendation. This would improve the accuracy of identifying addiction symptoms among respondents, allowing for more targeted interventions (Beard & Wolf, 2001; Widyanto & Griffiths, 2006).

Further studies should also explore the neuropsychological and neural imaging aspects of internet addiction. Brand et al. (2014) proposed theoretical models and reviewed findings in this area, offering new insights into the biological mechanisms underlying internet addiction.

Additionally, future research should examine conceptual issues and controversies surrounding the classification of internet addiction as a mental disorder. As discussed in the review by Király et al. (2015), debates about diagnostic criteria and nosology of internet addiction in official diagnostic manuals (such as DSM-5) continue and require further exploration.

These research and intervention efforts are expected to broaden our understanding of internet addiction among respondents and develop effective strategies to help them manage their internet use in a healthy and productive manner while preventing negative consequences. Multidisciplinary studies involving various stakeholders are key to producing comprehensive solutions for addressing internet addiction issues.

4. Conclusion

The findings of this study reveal significant signs of internet addiction among the respondents. Most respondents reported difficulties in managing their internet usage time, a tendency to use the internet as an emotional escape, and emotional satisfaction and dependency on online activities. Additionally, other symptoms were identified, including excessive preoccupation with the internet, negative impacts on academic performance, and difficulty in controlling internet use.

These findings underscore the importance of preventive measures and appropriate interventions to help respondents manage their internet use in a healthier and more productive manner. Recommendations for future research include longitudinal studies, analyses based on demographic characteristics, qualitative explorations, the development of measurement instruments, and cross-disciplinary collaboration. The implementation of these efforts is expected to enhance understanding of internet addiction and produce comprehensive solutions to address this issue.

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