

Self-efficacy and internet addiction among university students “Field study at University of Batna 1”

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Received: 11/04/2024 ; Accepted: 13/09/2024 ; Published: 01/10/2024

Abstract:

The purpose of this study is to determine the relationship between self-efficacy and internet addiction among university students, to identify differences in internet addiction levels according to gender, and to determine the levels of internet addiction among university students. The study was conducted by randomly selecting university students¹ from Batna University. The study reached the following conclusions: There is no statistically significant relationship between self-efficacy and internet addiction among university students. Also, there is no statistically significant difference in internet addiction among university students according to gender (male/female), which ultimately indicates a high level of addiction. Internet addiction among university students

Keywords: Self-efficacy; Internet addiction; university students.

Introduction & Problematic:

University students occupy an important place in society, as they are the backbone of the nation and its pillar, the force upon which society relies for its survival, a strong foundation for social development, progress, prosperity, and reconstruction. This is supported by studies and topics that have discussed the subject. Colleges in particular, and universities in general, are educational institutions that play a significant role in educating young people, instilling in them proper habits and behaviors, as well as helping them develop important aspects of their personality such as self-reliance, taking responsibility in life, and striving to improve their character while achieving comprehensive balance across all aspects of life. This enhances the levels of self-efficacy in individuals; a key theoretical and scientific concept in modern psychology developed by Bandura, known as self-efficacy, which revolves around an individual's judgment of their ability to perform certain behaviors.

It is not just a general feeling, but an evaluation by the individual of what they can do, at what level, and to what extent they can persevere and handle complex situations, disregard difficulties, and resist failure. Self-efficacy helps individuals face the pressures they encounter in different stages of their life.

With the advancement of science and technology, population explosion, and the knowledge boom in contemporary life, many changes have occurred. Many researchers agree that modern communication technologies, particularly the internet, have opened a new era of communication and interaction between individuals and the vast amount of information and knowledge it offers its users. However, on the other hand, there are concerns about the negative physical, psychological, social, and cultural effects it may have. Since the largest group using this technology is the youth, who represent the future and are the backbone of the world's progress and production, it becomes necessary to study the phenomenon of internet addiction and understand its various effects, especially concerning the addiction of young people to the internet, as they are the most frequent users of this technology.

Therefore, it is crucial to study and understand the phenomenon of internet addiction globally and its various effects, especially on self-efficacy. This study aims to clarify the nature of the relationship between self-efficacy and internet addiction among university students, as well as to understand the differences in the level of internet addiction according to gender (male/female) among university students.

In light of the above, the study seeks to answer the following questions: What is the nature of the relationship between self-efficacy and internet addiction among university students? Are there statistically significant differences in internet addiction among university students according to gender? What is the percentage of internet addiction among university students?

1. Study Hypotheses:

- There is no statistically significant correlation between self-efficacy and internet addiction among university students.
- There are statistically significant differences in internet addiction among a sample of university students attributed to the gender variable (male/female).
- A high level of internet addiction is expected among a sample of university students.

2. Importance of the Study:

This study addresses internet addiction as a modern phenomenon, investigating its effect on the self-efficacy of youth, particularly university students. As internet usage continues to rise, its harmful effects are becoming more visible, leading to the emergence of a new type of addiction.

3. Definition of Concepts:

- **Operational definition of self-efficacy:** It refers to the score that university students obtain based on their responses to the self-efficacy scale used in this study.
- **Operational definition of internet addiction:** It refers to the total responses of university students on the internet addiction scale across its various dimensions.

➤ **Theoretical Framework:**

4. Self-Efficacy:

A set of judgments that express individuals' beliefs about their ability to perform certain behaviors, as well as their degree of resilience and perseverance in dealing with difficult and complex situations and challenges. It is reflected in the form of self-confidence, competence, control over life's pressures, avoidance of conventional situations, flexibility in facing failure, and persistence in achieving success. (Al-Tatraoui, 2000, p. 55).

4.1 Characteristics of Self-Efficacy:

According to Bandura, individuals with high self-efficacy possess certain general traits that reflect their strong belief in their own abilities, resulting from a notable level of self-confidence and a strong sense of responsibility. They excel in social interactions and have unparalleled ambition, as they constantly set challenging goals and strive to achieve them. Optimism characterizes their outlook on all matters, which grants them the necessary flexibility to cope and perform under pressure. On the other hand, individuals with low self-efficacy lack confidence in their abilities, including a tendency to approach difficult tasks with hesitation. Their ambitions are not very high as they focus their energy on their weaknesses and magnify the challenges involved, leading to a loss of focus on productive outcomes and, consequently, suffering from depression.

5. Internet Addiction:

It refers to a state of pathological or compulsive use of information networks, resulting in clinical disorders characterized by withdrawal symptoms or a range of physical, psychological, and social symptoms inferred from certain manifestations. This indicates that internet addiction and its effects can disrupt every aspect of an individual's life, similar to alcohol addiction. (Charlton, 2002, p. 344)

1.5. Diagnostic Criteria for Internet Addiction According to Young:

Young stated that at least five symptoms must be present to determine whether a person is suffering from this addiction (similar to pathological gambling). It should be noted that the internet addiction rate (5 out of 8 symptoms) requires the presence of at least five of the following symptoms: obsession with the internet (such as constantly thinking about previous internet use or anticipating the next period of internet use), the need for longer periods of time to achieve satisfaction, repeated unsuccessful attempts to control or reduce internet use, frustration when trying to cut back or stop using the internet, risking the loss of relationships, jobs, educational opportunities, and important tasks due to internet use, and using the internet to escape difficulties or to relieve a bad mood (such as helplessness, guilt, anxiety, and depression). (Zidan, 2008, p. 47)

➤ **Fieldwork**

6. Study Methodology:

In this study, we relied on the descriptive method, which is defined as a systematic form of scientific analysis and interpretation that quantitatively describes and depicts a particular phenomenon or problem through the collection, classification, analysis, and application of detailed research. (Sami, 2000, p. 324)

7. Study Sample and Its Characteristics:

The study sample consists of a group of university students from Batna 1 University, selected randomly. The total number of participants was 60 students from various disciplines and different age groups (ranging from 18 to 30 years old). They were divided based on the preliminary data they provided related to internet addiction into two groups: 12 students who were non-addicted (using the internet for less than 5 hours) and 48 students who were addicted to internet use (using the internet for more than 5 hours).

8. Tools Used in the Study:

8.1. Self-Efficacy Scale:

In this study, we relied on the General Self-Efficacy Scale, translated by Amani Abdel Maqoud and Samira Mohamed Shend (2001), and adapted to the Algerian environment by Heddan Ibtissam (2015). The scale consists of 21 items, rated on a 4-point scale: strongly agree, somewhat agree, somewhat disagree, and strongly disagree, with scores of (1, 2, 3, 4) assigned accordingly. The scoring is reversed for negatively worded items. The minimum theoretical score for the questionnaire is (21), and the maximum score is 84.

❖ **The psychometric properties were recalculated by the two researchers in the current study.**

- **Discriminant validity (extreme group comparison validity):**

To verify the discriminant validity of the total score, it was applied to a sample of 60 individuals. After quantifying the responses and ranking the obtained scores in descending order, a comparison was made between the two extreme groups. The results are shown in the following table:

Table 01: Illustrates the extreme group comparison validity for the Self-Efficacy Questionnaire.

Data	No of participants	Arithmetic Mean	Standard Deviation	T-calculated	T-tabulated	Statistical Significance
Upper Group	30	69,70	4,61	10,35	2,02	Significant at degrees of freedom
Lower Group	30	53,25	5,40			

Source: Prepared by the researcher

- **Reliability of the Perceived Self-Efficacy Questionnaire:**

To ensure the reliability of the Perceived Self-Efficacy Questionnaire, the researchers calculated reliability using Cronbach's Alpha for internal consistency. Cronbach's Alpha (α) is considered one of the most important measures of reliability and internal consistency for tests composed of composite scores. Cronbach's Alpha links the reliability of the test to the consistency of its items. The reliability of the Perceived Self-Efficacy Scale was calculated using this method (Cronbach's Alpha), and the result is shown in the following table:

Table 02: Illustrates the reliability coefficient of the Self-Efficacy Questionnaire using Cronbach's Alpha.

Instrument	Number of Items	Alpha Coefficient (α)
Self-Efficacy Scale	21	0.77

Source: Prepared by the researcher

We observe from the previous table that the reliability coefficient of the Perceived Self-Efficacy Questionnaire, calculated using the internal consistency method according to Cronbach's Alpha formula, was ($\alpha = 0.77$), which is a significant value at the (0.05) significance level. This confirms that the questionnaire has a good level of reliability. Based on the aforementioned validity and reliability results, we can rely on the Perceived Self-Efficacy Questionnaire in the current study.

8.2 Internet Addiction Scale:

In this study, the researchers used the scale developed by Bushra Ismail Ahmed Arnout (2007), which includes the following dimensions: salience (10 items), mood modification (10 items), tolerance (8 items), withdrawal symptoms (9 items), conflict (8 items), and relapse (10 items). These dimensions are defined as follows:

- **Salience:** Refers to how internet-related activities become the most significant and important aspect of an individual's life, dominating their thoughts, feelings, excessive preoccupation, cognitive distortions, social behavior disruption, and desire to engage in the activity.
- **Mood Modification:** Refers to the subjective experience an individual feels as a result of engaging in internet-related behavior.
- **Tolerance:** An increase in the amount of internet usage to achieve the same pleasure or comfort that was previously obtained with less usage.
- **Withdrawal Symptoms:** The psychological and physiological effects that occur when internet usage is reduced or stopped.
- **Conflict:** Refers to the conflicts between the individual and themselves, between internet use and other activities, or between the individual and their environment.
- **Relapse:** The desire to return, for example, by increasing usage to avoid stopping, and the desire to use the internet again to avoid the effects of the period of non-use. (Hossam, 2016, p. 344).

❖ Psychometric Properties:

- **Validity of the Questionnaire:**

The validity of this scale was also calculated using the extreme group comparison method. The scores were ranked in descending order, and then 27% was taken from both extremes of the scale, corresponding to the 8 highest scores and 8 lowest scores. The comparison between them was made using the T-test for statistical significance. The result is then interpreted according to two possible cases as follows:

Table 03: T-test Results for the Internet Addiction Scale

Sample	Lower Group n = 08		Upper Group n = 08		T-Value	Significance Level
	Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation		
Internet Addiction Scale	74,12	6,57	74,1250	8,22	-12,98	Significant at 0.01

Source: Prepared by the researcher

It is clear from the table that the "T" values are statistically significant at the 0.01 significance level, indicating that the scale has the ability to distinguish between the two groups in terms of the quantitative score of the scale. This is one of the indicators that demonstrates the validity of the scale.

- **Reliability of the Scale:**

Using Cronbach's Alpha coefficient, this formula was used to calculate the internal consistency reliability of the scale as a whole. Cronbach's Alpha coefficient was calculated, and the results were as follows:

Table 04: Cronbach's Alpha Coefficient Value for the Scale

Scale	Cronbach's Alpha Coefficient
Internet Addiction	0,95

Source: Prepared by the researcher

It is clear from the table that the reliability coefficient for the Internet Addiction Scale, calculated using Cronbach's Alpha, reached 0.95, which is an acceptable value. This indicates that the scale has an acceptable level of reliability.

9. Purpose and Discussion of Results:

9.1. Presentation and Discussion of the First Hypothesis:

The first hypothesis states, "There is no statistically significant correlation between self-efficacy and internet addiction among university students." To test this, the Pearson correlation coefficient was calculated between the scores of the sample participants on the Self-Efficacy Scale and the Internet Addiction Scale. The following table shows the results of the correlation coefficients between the two scales:

Table 05: Presentation of the Results of the First Hypothesis

Variables	Correlation Coefficient	Significance Level
Self-Efficacy Internet Addiction	-0,030399	0,824
18,58	18,58	18,58
11,14	11,14	11,14

Source: Prepared by the researcher

From the results of the table, we observe that the calculated correlation coefficient is low and negative, with the calculated "r" value being negative and not statistically significant among the university youth sample. This indicates an inverse relationship that is not statistically significant between the scores of the Self-Efficacy Scale and the Internet Addiction Scale among the study sample. This can be attributed to the fact that the internet provides access to information and knowledge, increasing understanding, especially for university students, by offering abundant information. Students can easily find scientific facts and concepts through the use of technology, which assists them in the educational process. Therefore, their level of self-efficacy is not affected.

Based on the results, which indicate that there is no significant correlation between self-efficacy and internet addiction, it is important to note that this result alone is not enough to definitively judge the existence or absence of a correlation. The result may be attributed to the sample size or its characteristics, such as their academic specialization, which may have influenced the outcome. The internet is one of the most significant global technological phenomena, and its widespread development has increased the number of users, especially among young people, making it a central part of their lives, if not the most important aspect, distancing them from real-life activities.

Moreover, the intensive use of the internet by university students for study purposes, and particularly for seeking information, shifts the focus from the skills an individual possesses to their ability to overcome challenges related to a particular task or situation. The heavy reliance on the internet by individuals for various purposes may provide them with a sense of security and guidance in achieving their goals, offering sensory satisfaction, self-fulfillment, and communication with others—things that may not be achievable in traditional social environments. Through communication and interaction on the internet, individuals may find a way to achieve self-fulfillment and build a sense of competence that enhances their self-esteem. This virtual connection with others can give them confidence in their ability to succeed and interact effectively. Excessive dependence on the internet may serve as a form of compensation and a means of overcoming personal deficiencies, providing an outlet for expressing emotions and connecting with others.

9.2 Presentation and Discussion of the Second Hypothesis:

The second hypothesis states, "There are statistically significant differences in internet addiction among a sample of university students attributed to the gender variable (male/female)." To test this hypothesis, the researchers calculated the "T" value between the mean scores of the university student sample on the Internet Addiction Scale. The results are presented in the following table:

Table 06: Presentation of the Results of the Second Hypothesis

Internet Addiction	Mean	Standard Deviation	Degrees of Freedom	T-Value	Degrees of Freedom
Males	96,92	21,627	54	0,984	0.329
Females	90,86	18,119			

Source: Prepared by the researcher

This result can be explained by the fact that both male and female students share similar characteristics and intellectual proximity, as well as the behaviors imposed by their age group. Additionally, they live in a shared and common environment, even if their social, cultural, and economic domains differ. The unified goal between males and females, which is academic success and excellence, can be leveraged in their studies. Therefore, all students, regardless of gender, can be assisted in benefiting from the use of the internet.

9.3. Presentation and Discussion of the Third Hypothesis:

The third hypothesis states, "There is a high level of internet addiction among a sample of university students."

Table 07: Presentation of the Results of the Third Hypothesis

	Duration of Internet Use			
	Less than 5 hours		More than 5 hours	
	Mean	Percentage	Mean	Percentage
Internet Addiction	76	%21,43	97	% 78.57

Source: Prepared by the researcher

The percentages indicate that 78.57% of students use the internet for more than five hours, which aligns with the general context of the internet being one of the technological innovations of our time.

It has opened a new era in human communication and interaction. Regarding the impact on the personalities of students who use the internet, it is consistent with the nature of individuals who have reached a stage of maturity and stability in many aspects. Students most affected are those who experience boredom, loneliness, and social anxiety, as all individuals in the sample rely on the internet to develop their social, scientific, technical, and academic skills to an extent that makes it indispensable.

Students who use the internet and need significant time to fulfill their needs do so due to the ease of access to information, its low cost, and the increasing popularity of the internet. This makes reading and writing online easier and more convenient, sometimes even replacing traditional media. This need is shared by all students, whether they are high or low internet users. The internet not only meets the informational needs of its users but also provides a strong social connection between users worldwide.

Conclusion and Recommendations:

The internet, like any other human activity, can provide individuals with enjoyment, importance, and productivity. Therefore, we cannot fully understand the issue of internet addiction without gaining complete awareness of the unique aspects of personal online behavior. This research is an attempt to explore and examine certain aspects of the phenomenon of internet addiction in Algerian society. Consequently, future studies in this field should be directed toward understanding the characteristics of internet users that may lead to addiction. The uses and gratifications model might be one of the best approaches for this purpose. Moreover, studying this phenomenon could serve as a foundation for developing a new theory tailored to the nature of our societies and the motives behind our internet usage.

Based on this, we propose several recommendations regarding both phenomena:

Identifying students addicted to the internet who suffer from low self-esteem and lack of social communication skills.

Developing counseling and treatment programs for internet-addicted students of both genders who struggle with social interaction and low self-esteem. These programs should help them learn self-regulation techniques to reduce the time wasted negatively on the internet.

Educating families about the negative effects of the internet, which can negatively impact family, social, and familial environments.

Providing recommendations for programs aimed at building self-confidence to reduce symptoms of internet addiction among university students.

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