Science, Education and Innovations in the Context of Modern Problems
Issue 1, Vol. 9, 2026

RESEARCH ARTICLE

The Relationship between Sleep Disorders and Internet Addiction among University Students – A Field Study in the Department of Psychology at Mouloud Mammeri University, Tizi Ouzou

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Issue web link https://imcra-az.org/archive/389-science-education-and-innovations-in-the-context-of-modern-problems-issue-1-vol-9-2026.html

Keywords Sleep disorders, Internet addiction, University Student.

Abstract

The current study aimed to uncover the relationship between internet addiction and sleep disorders among university students. The study was conducted with psychology students at Mouloud Mammeri University in Tizi Ouzou. The study also sought to verify whether statistically significant differences in internet addiction and sleep disorders exist that can be attributed to gender. A correlational descriptive methodology was adopted to answer the study questions, and the sample consisted of 80 male and female students who were selected purposefully. Two tools were used to collect data: the Internet Addiction Scale (Bouchra Ismail Ahmed, 2007) and the Sleep Disorders Scale (Anwar Hamouda Al-Banna, 2007). The study yielded the following results:

- There is a statistically significant correlation between sleep disorders and internet addiction among psychology students at Mouloud Mammeri University, Tizi Ouzou.
- There are no statistically significant differences in sleep disorders among psychology students at Mouloud Mammeri University, Tizi Ouzou, attributed to gender.
- There are no statistically significant differences in sleep disorders among psychology students at Mouloud Mammeri University, Tizi Ouzou, attributed to gender.

Citation

Lynda B. (2026). The Relationship between Sleep Disorders and Internet Addiction among University Students – A Field Study in the Department of Psychology at Mouloud Mammeri University, Tizi Ouzou.. *Science, Education and Innovations in the Context of Modern Problems*, 9(1), 1104-1113. https://doi.org/10.56334/sei/9.1.102

Received: 26.07.2025 | Accepted: 10.12.2025 | Published: 10.01.2026 (available online)

Problem statement

Contemporary life has undergone changes in many areas as the world experiences technological advancement alongside population growth and cognitive expansion. Many researchers agree that modern communication technologies, particularly the internet, have ushered in a new era of communication and interaction, providing users with numerous opportunities to access information and knowledge quickly and easily. It assists students and researchers with their projects. According to Ahmed Saleh (2002), the internet is revolutionary because it transcends time and space, facilitating the flow of information and decision-making while enabling diversification at no cost.

However, there are also numerous negative effects associated with it, the most notable of which is internet addiction, which has become widespread in society, particularly among young people. This includes university students, who are considered the future and foundation of development and progress. According to Kimberly Young, internet addiction

is characterised by spending long periods of time online without being aware of the passage of time. It results from the daily, repetitive use of the internet (Mustafa Ibrahim Ahmed Hussein, 2015, p. 6).

According to the American Association of Internet Addiction, Internet addiction occurs when an individual uses the Internet for more than 38 hours per week without a scientific purpose, with the hours spent online increasing in an attempt to satisfy psychological desires that were previously fulfilled in a shorter amount of time. This can lead to psychological and physical effects when the internet connection is interrupted (Mansour & Al-Dabobi, 2011, p. 334).

The American Psychological Association recognises internet addiction as a disorder that manifests as a compulsive psychological need resulting from dissatisfaction with internet use, and as part of other addictive behaviours. Since this concept emerged, studies and research on the topic have increased, with researchers focusing on explaining its causes and symptoms. Internet addiction has grown to become a social and psychological phenomenon spreading among individuals of various ages, particularly young people (e.g. university students). Many researchers have confirmed that 90% of internet users are young, with nearly 50% of them being addicted and developing psychological disorders (Boubaya, 2016, p. 8).

A study by Wissam Ezzat (2011) concluded that males are more likely to be addicted to the internet than females and that adolescents who are addicted to the internet are more likely to exhibit behavioural problems (Abdul Moneim, 2005, p. 93).

University students therefore spend long hours on the internet without feeling the passage of time, which can result in various emotional and behavioural disorders, such as sleep disturbances. These issues manifest as symptoms such as drowsiness, difficulty concentrating on studies and a lack of attention, all of which indicate that the student is not getting enough sleep. When these symptoms accumulate, they can lead to sleep disorders.

Chowdhury et al. (2020) conducted a study to investigate the impact of social media usage on the academic performance of university students. The sample consisted of 250 students from the University of Science and Technology in Bangladesh. The results indicated that excessive internet use for non-academic purposes, such as playing video games, shopping and entertainment, negatively affects performance. This led to a decline in study habits, reduced readiness for exams, delays in submitting assignments, absences from lectures and, in some cases, academic dismissal due to poor performance resulting from excessive internet use for non-study purposes. The study recommended achieving a balance between internet use and study time to enhance academic performance.

Furthermore, research by Anderson (1998) and Young & Rogers (2001) has revealed various detrimental effects of internet addiction, including social isolation, detachment from reality, and reduced sleep, which can lead to fatigue, stress, loss of appetite, diminished self-esteem, reduced self-efficacy, withdrawal from studies, negative thinking, and depression (Al-Mrawani, 2016, p. 8).

Given the human need for adequate rest to reduce daily life pressures, sleep disorders appear to be among the most widespread psychological disturbances resulting from Internet addiction.

Sleep disorders are common among university students, especially since they are in an academic phase that requires adequate sleep for attention, focus and overall health in order to achieve a proper education — especially since this stage determines their future. Students who spend late nights scrolling through the internet do not get the necessary amount of sleep and naturally try to compensate for this deficiency at inappropriate times and places for sleeping. Irregular sleep hours lead to an imbalance in the chemicals that occur naturally during sleep and wakefulness. Failure to fulfil daily sleep needs has a negative impact on both physical and mental health, and excessive sleeping has the same effect (Al-Zaki, 2004, p. 297).

Sarhan Walid (2007) states that sleep disorders are widespread, with some individuals sleeping excessively and others suffering from insomnia. These disorders are often accompanied by phenomena such as sleep talking, sleepwalking and night terrors, and are closely related to mental health disorders.

Furthermore, a study by Galithe (2010) found that the risk of sleep disorders among university students varies by gender and age. The study sample consisted of 1,845 male and female university students, and the results showed that 27% were at risk of sleep disorders. These students reported insufficient sleep and variability between weekdays and weekends, which affected their academic performance.

Meanwhile, Mubarak's (2005) study aimed to investigate the prevalence of sleep disorders and their relationship to certain personality dimensions among university students in Suhag. The study sample included 139 students, and the findings indicated that females often experience more insomnia than males, while excessive sleeping is more prevalent among males (Gomaa, S. Y., 2000, p. 141).

These studies show that young people are more susceptible to psychological disorders, particularly sleep disorders resulting from excessive internet use. The university stage is a period during which students continue to discover their identities and explore their personalities by fulfilling their various needs, while also filling their leisure time with activities that fill the gaps between lectures. This gives them the opportunity to spend more time online without a specific goal. Kimberly Young (1966) found that over half of university students reported a decline in academic performance due to Internet addiction, alongside many other risks and harms, including sleep disturbances.

Several studies have addressed this topic, including Soumia Boubaya's (2016) study, titled 'Internet Addiction and Its Relation to Sleep Disorders Among a Group of University Youth', which aimed to reveal the relationship between the degree of internet addiction and the emergence of sleep disorders. The study concluded that there was a statistically significant relationship between the level of internet addiction and the severity of sleep disorders in the sample group. Similarly, Adila Ghanimi's (2011) study confirmed a statistically significant correlation between internet addiction and sleep behaviour.

Moreover, Abdul Wahab Amani's (2014) study highlighted a variety of negative consequences of internet addiction, including sleep disorders resulting from a lack of night-time sleep. The study also found that a significant proportion of university students were addicted to the internet.

During this period, students are discovering their identities and learning about their personalities, and social media sites can facilitate this process. The current educational landscape, which increasingly relies on social media, has led students to become addicted to using these sites to satisfy their educational and other needs. Through interactions with students, the researcher observed that they spend long hours on social media without a specific purpose. This affects their social relationships and academic performance and leads to various disorders, including sleep disturbances (Abdul Wahab Amani, 2014).

Thus, the aim of our current study is to shed light on one of the most prevalent disorders among university students, which has become a concern for many scholars and social and psychological researchers: specifically, internet addiction and its relationship with sleep disorders among university students. We have therefore posed the following questions:

Is there a statistically significant relationship between internet addiction and sleep disorders among psychology students at Mouloud Mammeri University in Tizi Ouzou?

Are there statistically significant differences in internet addiction among psychology students at Mouloud Mammeri University, Tizi Ouzou, attributed to gender?

Are there statistically significant differences in sleep disorders among psychology students at Mouloud Mammeri University, Tizi Ouzou, attributed to gender?

2. Research hypotheses:

There is a statistically significant relationship between sleep disorders and internet addiction among psychology students at Mouloud Mammeri University, Tizi Ouzou.

There are statistically significant differences in internet addiction among psychology students at Mouloud Mammeri University, Tizi Ouzou, which can be attributed to gender.

There are statistically significant differences in sleep disorders among psychology students at Mouloud Mammeri University, Tizi Ouzou, attributed to gender.

3. Importance of the study:

The significance of the current study lies in the following:

- enriching the scientific field with new knowledge about Internet addiction and its relation to sleep disorders;

Understanding the impact of excessive internet use on the physical and mental health of university students.

- Providing students with support to help them overcome internet addiction and use the internet positively and beneficially.

- Discovering ways to manage sleep disorders and reduce their prevalence.

4. Objectives of the study:

To determine whether there is a statistically significant relationship between sleep disorders and internet addiction among psychology students at Mouloud Mammeri University, Tizi Ouzou.

To ascertain whether there are statistically significant differences in internet addiction among psychology students at Mouloud Mammeri University, Tizi Ouzou, attributed to gender.

- To investigate whether there is a statistically significant relationship between sleep disorders and gender among psychology students at Mouloud Mammeri University, Tizi Ouzou.

5. Definition of study concepts:

The study includes the following key concepts:

5.1 Internet addiction:

This term describes individuals who spend excessive hours on the internet, becoming isolated from friends and family, neglecting their responsibilities and altering their perception of the world around them (Ben Cha'lal, 2018). For the purposes of this study, internet addiction is defined as the total score obtained by an individual in the study sample on the Internet Addiction Scale.

5.2 Sleep disorders

This term refers to a condition that causes a person to sleep for longer or shorter than desired, or to experience significant difficulties affecting the sleep process. For the purposes of this study, sleep disorders are defined as the total score obtained by an individual in the study sample on the Sleep Disorders Scale (Anwar Hamouda Al-Banna, 2007).

5.3 University student

A university student is defined as an individual studying psychology at Mouloud Mammeri University, Tizi Ouzou, who is addicted to the internet and suffers from sleep disturbances.

To present accurate final results for any study, it is essential to understand the methodological procedures followed to achieve them. This includes the validity of the steps taken in the study, from the approach adopted and the definition and selection of the sample, to the selection of appropriate research and measurement tools characterised by validity and reliability, and the use of appropriate statistical methods. All these procedures enable the researcher to reach scientifically valuable results.

1. Exploratory study:

The exploratory study is one of the most important steps for researchers in applied fields of research or field studies. Its aim is to collect information regarding the phenomenon under investigation and ensure the availability of individuals to constitute the research sample. It also aims to ensure the suitability of the tools used and adjust the study's variables accordingly. Additionally, the exploratory study aims to test and refine the study tools to allow for their objective use after validating and ensuring their reliability (Abdel Rahman Al-Eisawi, 1984, p. 16).

1.2 Objectives of the Exploratory Study:

- To familiarise oneself with the field of study and the challenges faced.
- To ascertain the existence of the study sample, consisting of university students.
- Ensure the appropriateness and clarity of the measurement instructions for the study sample.
- Engaging with the members of the study sample to acquire field interaction skills.
- Recalculating the psychometric properties of the study tools (the Internet Addiction Scale and the Sleep Disorders Scale).

2.2 Procedures of the Exploratory Study:

The procedures of the exploratory study include the following steps:

2.1 Exploratory Study Sample:

2.1.1 The size of the exploratory sample consisted of approximately 20 male and female students from the psychology department, representing different specializations, to investigate the actual existence of the phenomenon and to assess the suitability of the scale for the sample members in terms of understanding the questions and their relevance to measuring the phenomenon under study.

2.1.2 The second exploratory sample comprised 80 male and female psychology students from various specialisms, with the aim of re-evaluating the psychometric properties (reliability) of the two scales.

2.1.3 Implementation phase: This phase involved distributing the Internet Addiction Scale and the Sleep Disorders Scale to 80 individuals from the sample in order to calculate their psychometric properties (validity and reliability).

3. Main study:

3.1 Study method: We adopted the descriptive analytical method, which relies on accurately and objectively describing and analysing the phenomenon under study. According to Robert, descriptive research goes beyond merely describing the phenomenon of interest, involving a degree of change in the data. This means attempting to link description with comparison and interpretation, which aids understanding of the phenomena and prediction of their occurrence. Accordingly, we describe the facts, analyse the data, interpret the relationships between them and derive conclusions (Ben Cha'lal, 2018, p. 154).

3.2 Research population: Our study population consists of psychology students at Mouloud Mammeri University, Tizi Ouzou.

3.3 Sample size: The sample for the main study comprised 80 students, chosen through purposive sampling.

3.4 Sample characteristics:

3.4.1 Demographic distribution of the sample: gender and specialisation.

Table 1 shows the size of the main study sample according to gender.

Gender	Number	Frequency
Females	40	50%
Males	40	50%
Total	80	100%

This table shows how many people in the main study sample are male or female. The sample consists of 40 females and 40 males, accounting for 50% of each gender.

Table 2 shows the individuals in the main study sample according to their area of specialisation.

Specialisation	Number	Frequency
Second Year Psychology	20	25%
School Psychology	20	25%
Clinical Psychology	20	25%
Organisational and Work Psychology	20	25%

It shows the frequency of individuals in the main study sample according to specialisation. 25% of the sample was selected from each of the following areas: second-year psychology, school psychology, clinical psychology and industrial/organisational psychology.

4.5 Study limits:

Location of the study: The study was conducted in the Department of Psychology at Mouloud Mammeri University, Tizi Ouzou.

- Time of the study: The main study was conducted over two months (February and March) of the 2024–25 academic year, from 12 February to 13 March.

4. Study tools:

Two tools were used in the study:

4.1 Internet Addiction Scale by Bouchra Ismail Ahmed (2007). The scale consists of 56 items distributed across six dimensions:

- Control or Salience
- Mood Modification
- Tolerance
- Withdrawal symptoms
- Conflict

Relapse

Table 3 illustrates the distribution of items in the Internet Addiction Scale across its dimensions.

Dimension Number	Dimensions	Items:
1	Control and dominance	1, 7, 13, 19, 25, 31, 37, 43, 49
2	Mood modification	4, 10, 16, 22, 28, 34, 40, 46
3	Tolerance	2, 8, 14, 20, 26, 32, 38, 44
4	Withdrawal symptoms	3, 9, 15, 21, 27, 33, 39, 45, 51
5	Conflict	5, 11, 17, 23, 29, 35, 41, 47, 53
6	Relapse	6, 12, 18, 24, 30, 36, 42, 48, 54, 55, 56

4.1.2 Scoring method:

Students should place an X next to the answer that applies to them from among the three options. Each item receives a score as follows:

Table 4 illustrates the scoring method for the Internet Addiction Scale items.

Alternatives	Applies to me completely	Applies to some extent	Does not apply
Degree	3	2	1

4.1.3 Psychometric properties of the scale:

These are among the most important indicators for ensuring the validity of psychological and educational measurement tools, as they calculate validity and reliability.

A. Validity of the Scale:

Table 5 illustrates the discriminative validity of the Internet Addiction Scale.

Groups	Number	Mean	Standard Deviation	T	sig
Upper	8	126،25	10،52	10،042	0،000
Lower	8	83،75	5،70		

The statistical significance value of 0.000 indicates statistical significance. Thus, the scale effectively differentiates between low and high values, indicating strong validity.

B. Reliability of the Scale

The reliability of the scale in the current study:

We recalculated the reliability of the Internet Addiction Scale using a sample of 80 male and female psychology students. The results are as follows, calculated using Cronbach's alpha formula.

Table 6 illustrates the reliability of the Internet Addiction Scale.

Number of items	Cronbach's alpha
56	0.788

This result indicates high reliability for the scale.

4.2 Sleep Disorders Scale

Developed by Anwar Hamouda Al-Banna (2007), this 35-item scale is specifically designed to measure sleep disorders, particularly among students. The items are distributed across two domains:
First Domain: Sleep Disorder Disorders, which includes three dimensions:
- Insomnia disorder dimension: items 1–2–3–4–5–6–7–8–9–10
- Hypersomnia disorder dimension: items 11, 12, 13, 14, 15 and 16.
- Sleep-wake schedule disorder dimension: items 17, 18, 19, 20, 21, 22, 23.
Second Domain: Associated Sleep Disorders, which includes the following dimensions:
- Disturbing Dreams and Nightmares Disorder Dimension: Items 24–29
- Sleepwalking Disorder: Items 31, 32 and 33
- Sleep-Talking Disorder Dimension: Items 34–35

4.2.1 Scoring the scale

Students respond to the statements by marking an X on one of the three options provided for each statement: applies to a limited degree, applies to a moderate degree or applies to a high degree.
Table 7 represents the scoring method for the Sleep Disorders Scale.

Alternatives	Applies to a limited extent	Applies to a moderate extent	Applies to a high extent
Degree	1	2	3

4.2.3 Psychometric properties of the scale:

A. Validity of the Scale:

Table 8 illustrates the discriminative validity of the Sleep Disorders Scale.

Groups	Number	Mean	Standard Deviation	T	sig
Upper	8	88.62	7.38	11.219	0.000
Lower	8	52.12	5.48		

The statistical significance value of 0.000 indicates that the results are statistically significant. Thus, the scale effectively differentiates between low and high values, indicating its strong validity.

B. Reliability of the Scale

The reliability of the scale in the current study:
We recalculated the reliability of the scale on a sample of 80 male and female psychology students.
Table 9 illustrates the reliability of the Sleep Disorders Scale.

Number of items	Cronbach's alpha
35	0.835

As can be seen from the table, the Cronbach's alpha coefficient reached a value of 0.835, indicating high reliability for the scale.

5. Statistical methods used:

The study data were analysed using a variety of statistical operations and methods, including both parametric and non-parametric statistics. The following is an overview of these operations and methods:

Data processing procedures for computer analysis

The statistical analysis was conducted using SPSS, a software application for the humanities and social sciences. The data were organised and processed according to the computer system, and the key variables were coded for analysis. The following statistical procedures were used with SPSS:
- percentage calculations to determine sample frequencies by gender.

- Mean and standard deviation calculations for the Internet Addiction and Sleep Disorders scale scores among psychology students at Mouloud Mammeri University.
- Cronbach's alpha coefficient to assess the reliability of the internet addiction and sleep disorders scales.
- The Pearson correlation coefficient was used to find the correlation values between internet addiction and sleep disorders.
- A t-test was used to calculate differences in internet addiction and sleep disorders based on gender.

6. Presentation and analysis of study results:

6.1 Presentation and analysis of the first hypothesis results

The hypothesis states that there is a statistically significant correlation between sleep disorders and internet addiction among psychology students at Mouloud Mammeri University, Tizi Ouzou.

Table 10 illustrates the relationship between internet addiction and sleep disorders.

Sample size	Hypothesis variables	Pearson correlation coefficient	Statistical significance	Established significance	Statistical decision
80	Internet addiction	0،523	0،000	0،01	Statistically significant
	sleep disorders				

As can be seen from the table, the Pearson correlation coefficient is 0.523 and the significance value is 0.000, which is less than the established significance level of 0.01. This indicates a statistically significant correlation between internet addiction and sleep disorders among university students, meaning that as the level of internet addiction increases, so does the degree of sleep disorders among psychology students.

6.2 Presentation and analysis of the results of the second hypothesis:

Table 11 illustrates the results of the T-test for differences in internet addiction between genders among psychology students at Mouloud Mammeri University.

Gender	Sample	Mean	Standard Deviation	t Value	sig Value	Established Significance	Decision
Males	40	74.95	16.01	0.351	0.727	0.05	Not statistically significant.
Females	40	76.17	15.21				

The T-test value is 0.876 and the significance value (sig) is 0.384, which is greater than the established significance level of 0.05. Therefore, there are no statistically significant differences in the level of internet addiction among psychology students at Mouloud Mammeri University in Tizi Ouzou based on gender.

6.3 Presentation and analysis of the results of the third hypothesis:

Table 11 illustrates the results of the T-test for sleep disorders among psychology students at Mouloud Mammeri University, categorised by gender.

The T-test value is 0.351 and the significance value (sig) is 0.727, which is greater than the established significance level of 0.05. Therefore, there are no statistically significant differences in sleep disorders among psychology students based on gender.

7. Interpretation and discussion of results in light of previous studies:

7.1 Interpretation and discussion of the first hypothesis in light of previous studies

The first hypothesis clearly indicates that university students who use the internet excessively suffer from sleep disorders due to their prolonged and irrational use of the internet at all times, including at night. This leads them to neglect their sleeping hours. They remain constantly engaged online, relying on the internet for nearly everything, including entertainment and communication. New technologies enable students to interact with the internet as if it were a person. Many students use these technologies to escape reality and express their thoughts, ultimately resulting in sleep disorders due to reduced sleep duration.

These results are consistent with previous studies, such as the study by Azabla et al. (2013) which found a significant correlation between internet addiction and sleep disorders among university students, and the study by Azrouk Al-Batul (2019) which showed a significant relationship between internet addiction and sleep disorders among university students. Furthermore, Matmati Ibrahim and Touchechiyat Nadia's (2022) study also revealed a significant correlation between internet addiction and sleep disorder severity among university students.

7.2 Interpretation and discussion of the results of the second hypothesis in light of previous studies:

The results of the current study are consistent with those of Pawlak-Craig (2002), who found no statistically significant differences in internet addiction between males and females. Similarly, Mazgrani and Hamri's (2020) study concluded that there were no statistically significant differences in social media addiction between males and females. Furthermore, Azrouk's (2020) study also found no significant gender-based differences in internet addiction.

However, these findings contrast with those of Tabas and Malak (2021), who noted gender differences in favour of males regarding internet addiction, as well as with Hamdi's (2015) study, which revealed statistically significant differences in internet addiction favouring males.

According to the researchers, the absence of significant differences in internet addiction between male and female university students may be attributed to the necessity of internet use for obtaining information related to their studies or for forming relationships and seeking entertainment. Both genders find ample opportunities to pursue their interests and preferences in the virtual world, particularly during this critical developmental stage, and they share similar age-related and psychological characteristics, as well as facing the same demands and experiencing the same psychological, behavioural and cognitive repercussions during this period.

Furthermore, this result could be linked to shared socialisation practices within families and the widespread notion of equal opportunities and gender equality in rights and responsibilities. This is influenced by foreign cultural invasion and exposure to other cultures. Significant engagement with the internet and access to the virtual world, regardless of gender, reflects a desire to fulfil personal aspirations and a curiosity and interest in all things new. Additionally, they find a space in this world where they can express their thoughts and opinions freely and comfortably.

7.3 Interpretation and Discussion of the Results of the Third Hypothesis in Light of Previous Studies:

The results of the current study align with those of Faiza Belkhir (2022), who found that psychological disorders, including sleep disorders, do not vary significantly between male and female students at Ahmed Zabana University in Relizane. Similarly, the study by Rabii Tasnim and Manal Wali (2022), conducted on students at Mohamed Boudiaf University in M'sila, showed no statistically significant differences in the level of sleep disorders between the sexes. Additionally, the study by Sarah Hamri (2023) indicated that sleep disorders do not differ by gender, even though they are related to other behaviors like Internet addiction.

These findings contrast with those of Abdelhamid and Aouarbi (2024), who conducted a study on a sample of students from October 6 University in Egypt. Their study found that females suffer from sleep disorders at a higher rate than males, and that sleep disorders clearly impact academic achievement. Massoudan's (2020) study at Mohamed Boudiaf University in Algeria examined cases of sleep disorders, particularly insomnia, among female students due to internet addiction, highlighting the influence of psychological and environmental factors on women's sleep. Furthermore, Bouam and Ma'arouf's (2018) study confirmed differences in sleep duration between males and females among university students from a chronological perspective.

The absence of significant differences in the current study may be attributed to the similarity of the psychological and social conditions experienced by university students, regardless of gender. All students face similar academic pressures, such as stress about exams, pressure to perform well, and anxiety about future careers, all of which directly affect sleep quality and stability. Additionally, the university lifestyle, characterised by frequent late nights, low physical activity and continuous electronic device use at night, is common among both sexes and contributes to similar levels of sleep disorder.

These results reinforce the findings of previous studies which indicated that gender differences in this context are no longer as pronounced as they once were in different life stages or environments. This could be partially attributed to cultural and social changes that have narrowed behavioural and psychological differences between males and females, particularly in university settings. Thus, the findings suggest that sleep disorders among university students are a common phenomenon influenced by shared factors rather than gender.

Summary of results:

The current study aimed to investigate the relationship between sleep disorders and internet addiction among university students, as these are two of the most common problems among this demographic. Using a descriptive methodology, the study administered the Sleep Disorders Scale for University Students by Anwar Hamouda Al-Banna (2007) and the Internet Addiction Scale by Bouchra Ismail Ahmed (2007) to 80 male and female psychology students at Mouloud Mammeri University, Tizi Ouzou. Relying on the Statistical Package for the Social Sciences (SPSS) for data analysis, the study found that internet addiction significantly affects sleep disorders among psychology students at Mouloud Mammeri University. There is a statistically significant correlation between the two variables. The study also revealed no statistically

significant differences in internet addiction between females and males, nor any gender differences in terms of sleep disorders.

Conclusion:

Despite the applications and conveniences offered by internet technology, it is also associated with many problems, including internet addiction and the psychological issues and disorders that accompany it.

In light of the analysis and discussion in this study, it is clear that there is a strong and significant relationship between internet addiction and sleep disorders among university students. This relationship has become more prominent and clearer as reliance on digital media in daily life has increased and dependence on artificial intelligence has grown. Furthermore, students' use of smart devices, particularly in the evening and at night, directly impacts sleep quality, delaying sleep onset and interrupting rest periods. This has a negative effect on psychological and cognitive performance during the day. This, in turn, affects their academic and social lives, as well as their daily rhythm (biological clock), leading to problems such as insomnia, anxiety, and depression.

This reality presents new challenges for individuals and communities, particularly in light of the substantial growth in internet usage for educational, professional, and social communication purposes. Therefore, interacting with technology has become an essential part of students' lives rather than an optional extra.

Based on the results of our study, we can make several recommendations:

1. Provide and disseminate mental healthcare services in educational institutions to help people of all ages mitigate this phenomenon early on.
2. Investigating the relationship between internet addiction and certain psychological variables (e.g. self-concept, self-esteem, achievement motivation and life satisfaction) among different demographic groups.
3. Studying the family climate and its relationship to internet addiction among Algerian youth.
4. Strengthening and coordinating efforts among all social partners, including state institutions, the media and parents, to combat this phenomenon.
5. Developing and adapting educational programmes to fit the specificities of Algerian society that contribute to the psychological and intellectual development of children and adolescents, while keeping up with global developments.
6. Conducting field studies to determine the prevalence of this phenomenon in Algerian society.

Ethical Considerations

This study was conducted in accordance with internationally accepted ethical standards for research involving human participants. Prior to data collection, participants were informed of the purpose and objectives of the study, and their voluntary participation was clearly emphasized. Informed consent was obtained from all participants, with assurance that they could withdraw from the study at any stage without any negative consequences. Confidentiality and anonymity were strictly maintained; no personal identifiers were collected, and all data were used exclusively for scientific research purposes. The study procedures respected participants' psychological well-being and complied with the ethical principles of respect, beneficence, and non-maleficence applicable to psychological research within university settings.

Acknowledgements

The author expresses sincere gratitude to the students of the Department of Psychology at Mouloud Mammeri University of Tizi Ouzou who voluntarily participated in this study. Appreciation is also extended to the academic and administrative staff of the department for their cooperation and facilitation of the research process.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of Interest

The author declares that there is no conflict of interest regarding the publication of this paper.

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