Prevalence of Internet Addiction and Impact of Internet Socialization on Professional, Academic, Social Lives and Sleep Pattern among Master's Level Students at the Faculty of Medical Technical Sciences, UMT.

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ABSTRACT

Background: The pervasive use of the internet has reshaped education and social communication, but has also raised serious concerns regarding excessive usage, particularly among FSHMT students, University of Medicine, Tirana. Internet addiction is increasingly linked to negative impacts on academic performance, social behavior, and sleep quality.

Objective: The objective of this study was to assess the prevalence of internet addiction and investigate effect on academic performance, sleep pattern and social satisfaction among master's students at the Faculty of Medical Sciences, University of Tirana.

Methods: A cross-sectional study was performed on 180 master's students using a self-reported questionnaire that included Young's Internet Addiction Test (IAT) and Pittsburgh Sleep Quality Index (PSQI); the questionnaire had additional questions that related to GPA and social interaction preferences. Statistical analysis, including ANOVA, was used to identify significant associations.

Results: A total of 77% of students demonstrated at least mild levels of internet addiction, 36.1 % of them were at moderately addicted levels and only 7.2 % of them severely addicted. Students with hight hours using the internet (greater than six hours a day) were significantly more likely to have poor quality sleep, 84.4 % and lower GPA's. Mean GPA decreased from 3.45 (normal use) to 2.41 (severe addiction) with statistical significance ($p < 0.01$). It was significantly interesting that students relying on online socialization reported lower satisfaction 36.2%, compared to those engaging in in-person interactions 73.3%.

Conclusion. The study identifies that among students master's level the science of medical in FSHMT-Tirana have a high prevalence of internet addiction that significantly impacts their sleep quality, GPA (academic performance), and social well-being. These findings highlight the urgent need for institutional interventions, including digital wellness programs, mental health supports, and awareness strategies to encourage healthier online habits.

Keywords: Internet addiction, social media, GPAs, sleep quality, medical education.

INTRODUCTION

The internet has an increasingly central role in contemporary life, reshaping the way that individuals communicate with one another, learn from each other, and interact with one another in professional settings.

Students enrolled in postgraduate medical sciences programs rely heavily on online resources, digital libraries, and professional networking tools to support their studies. However, by relying on the internet, it increases the risk of Internet Addiction (IA) which is a potential harmful behavior that can negatively influence academic performance, relationships, professional development, and even sleep.

Internet addiction (IA) can be defined overall as the inability to control the amount of time spent or to stop using the internet; it may lead to psychological dependence and disruption of a person's daily functioning. Medical trainees are also a vulnerable group affected by IA. Internet addiction has also been associated with declines in academic performance, social interactions, anxiety, and sleep (*Asokan, 2024*). According to meta-analytic evidence, approximately 29% of medical students worldwide met the recommendations for internet addiction & lower, and middle income countries have higher prevalence rates globally (*Ayoub et al., 2024).*

Numerous studies published from many different countries have indicated that IA among medical students is a world-wide phenomenon. In Saudi Arabia, students reporting with moderate to severe IA reported their sleep quality, and reported decreased academic engagement (*Alghamdi et al., 2022).*

A recent study in Egypt found that students used the internet for entertainment purposes were generally at a higher risk for IA (*Helali, 2024*). Previous research in other countries, including Chinese and Taiwanese populations, concluded that prolonged or excessive use of the internet negatively impacted sleep and academic performance (*Xu et al., 2023; Cheng et al., 2012).* In Albania, most research has focused on undergraduate students. One cross-sectional study of 405 undergraduate students at the University of Medicine, Tirana, did find a 27.7% prevalence of internet dependence, however students who spent the most time on the internet each day and social media were at a heightened risk (*Shkurti & Shtiza, 2023*).

Overall, we know little about Internet addiction (IA) for master's level students and how it relates to academic inefficiency, professional development, social experience, and sleep. This study aims to fill this knowledge gap by examining the prevalence of Internet addiction and its effects for master's students in the medical sciences program (Faculty of Medical Technical Sciences) at the University of Medicine, Tirana.

LITERATURE REVIEW

Global Prevalence of Internet Addiction Among Medical Students

Internet addiction (IA) is an emerging public health concern, impacting medical students on a global scale. A meta-analysis of studies examining 3,651 students in a number of countries around the world estimated a pooled prevalence of 30.1% (95% CI: 28.5–31.8%) (*Lei et al., 2017*). In South India, 59% of students reported some characteristics of IA, and 7% reported moderate IA (*Ramasubramanian et al., 2015*). Findings from cohorts based in Saudi Arabia, Egypt, and Sudan reported moderate to severe IA with prevalence rates variable between 44% and 75% *(Gahari et al., 2022; Osman et al., 2023*). These variations may reflect differences in sample characteristics, internet availability/limits, and the IA measures (e.g., Young's Internet Addiction Test versus CIAS) (*Lei et al., 2017).*

Predictors and demographics: male gender, younger age, and living in private accommodation or alone have been consistent predisposing risk factors (*Ramasubramanian et al., 2015; Latifeh et al., 2022).* Students who primarily used the internet for entertainment (i.e., gaming and social media) rather than learning and study activities showed a higher prevalence of IA (*Latifeh et al., 2022; Osman et al., 2023).* Other predictors included lower academic performance and unrestricted access to the internet at home *(Ahmed et al., 2022; Osman et al., 2023).*

Internet addiction & sleep aspects

Poor sleep is often the result of IA. In a cross-sectional study, 80-90% of Sudanese medical students with moderation to severe IA *(Ahmed et al., 2022)* reported insomnia symptoms. Longitudinal studies in Taiwan show that higher IA levels preceded a continuous decrease in sleep quality across academic years *(Cheng et al, 2012).* In terms of physiology, exposure to too much screen time, especially blue light prior to sleeping, is believed to

inhibit secretion of melatonin and cease circadian rhythms, which increases sleep latency and fragmentation *(Alghamdi et al., 2022).*

Academic Performance & Considering Future Professional Outcomes

Internet addiction (IA) also has an indirect effect on academic results & professional preparedness. Proxy-log studies indicate heavy internet usage could have a negative predicted effect on GPA with a higher proportion of first-year students failing their courses *(Hazelhurst et al., 2011).* Mobile social media usage was also correlated with a reduction in academic productivity (*Giunchiglia et al., 2020).* Among medical students, those who were hyper-connected through IA had significantly higher levels of anxiety & depression, that reduced their levels of professional preparedness with clinical work & caring for patients *(Latifeh et al., 2022; Gahari et al., 2022).*

Socialisation & the impacts of relationship outcomes

Extended periods of socialisation online via social media and messaging can have the effect of replacing many face-to-face interactions, increasing loneliness & emotional exhaustion *(Pérez Juárez et al., 2024). Digital* distractions can also inhibit students' education, since they may forget to learn academic and professional skills during their courses and practical experiences *(Pérez Juárez et al., 2024).*

Research Gaps and Implications for Master's Students in Tirana

There has been limited research on IA in Albania, particularly among master's students; research has focused on IA among undergraduate medical students (*Shkurti & Shtiza, 2023)* and master's students do not appear to be the focus of study. Very few data exist in Albania regarding the relationship between internet use and professional integration and networking, academic stress, social engagement, and sleep. Master's students in medical school may experience stress which is not experienced in a similar way by undergraduate students (thesis project, clinical placement, research, etc.). This stress may influence patterns of internet use and their outcomes during their program.

Conclusion

1. Prevalence of IA among medical students generally is reported between 30% and 60%.
2. The main predictors of IA include gender, living arrangements, academic performance, and the primary reason to use the internet.
3. IA is associated with poor sleep quality, lower levels of academic performance, psychological distress, and a lower readiness for professional practice.
4. Online socialization appears to replace face-to-face socialization with potential implications for academic involvement and professional development.
5. The majority of studies have focused on health implications and rarely look at health implications in relation to academic stressors or to sleep or professional implications. This illustrates the need to attend to master’s students in Albania to help us understand the impact of IA for professional, academic, social, and sleep outcomes for medical students.

OBJECTIVES / AIMS

General Objective:

To assess the prevalence of internet addiction and explore the socialization, professional, social, academic, and sleeping impact of internet addiction among master's level students in a Medical Faculty at the University of Medicine Tirana.

Specific objective:

1. To establish the prevalence of internet addiction in master's students through a validated measurement tool (e.g., Young's Internet Addiction Test).

2. To investigate the association between the level of internet usage and academic success, study habits, GPA and attendance.
3. To explore the association between online socialization (e.g. social media, instant messaging, forums) and live and in-person socialization among students.
4. To evaluate the effect of internet addiction and use of the internet at night on sleep duration, quality of sleep, and ability to sleep with circadian rhythm.
5. To evaluate the impact of extended internet use on students' professional engagement including clinical responsibilities, internship, or research/seminar involvement.
6. To assess the demographic and behavourial predictors of internet addiction in this group (e.g., age, sex, purpose of internet use, hours per day).

Hypotheses:

H1: High levels of internet use has a significant association with high levels of internet addiction.

H2: Internet addiction is negatively correlational with academic performance and GPA.

H3: Specifically, students who socialize primarily via the internet report lower quality of in-person social interaction.

H4: Higher scores in the level of internet addiction predict lower scores in sleep quality.

H5: Professional engagement (e.g., clinical engagement) is inversely proportional to time spent online for non-academic purposes.

RESEARCH METHODOLOGY

Research Design

This study employed a cross-sectional quantitative design in order to ascertain the prevalence of Internet addiction and its effects on academic, social, professional, and sleep behaviors among full-time master's students, at the Faculty of Medical Sciences, University of Medicine Tirana.

Research Design Population and Setting

Population:

- Full-time master's students at the Faculty of Medical Sciences, University of Medicine Tirana.

Inclusion Criteria:

- Enrolled in master's students, voluntary informed consent.

Exclusion Criteria:

- Self-reported psychiatric disorders or sleep disorders;
- Incomplete or unreliable questionnaires.

Sample Size and Sampling Method

- Using estimates from previous studies (expected prevalence ~30%; percent confidence 95%; margin of error = 5%) a minimum sample size of 150-200 students was estimated.
- A stratified random sampling methodology was employed in order to represent various disciplines (e.g., Nursing, Speech Therapy, Midwifery, Physiotherapy T. Imaging, Public Health and Laboratory).

Data Collection Instruments

Internet Addiction

The Internet Addiction Test (IAT), developed by Young, was employed as a standardized and validated of internet dependency. This is a 20-question instrument.

Total Scores Classification:

- 0-30: Normal use
- 31-49: Mild Addiction
- 50-79: Moderate Addiction
- 80-100: Severe Addiction

Sleep Quality

1. Pittsburgh Sleep Quality Index (PSQI was used to assess subjective sleep quality and disturbances over the November month.

Academic and Professional Impact

- A self-designed questionnaire that included:
- Self-reported GPA (or trend of academic performance),
- The amount of time spent studying with the amount of time spent online for clearly non-academic purposes,
- Impact on academic focus, clinical performance and professional participation, self-rated using a 5-point Likert scale.

Socialization Assessment

- Items assessed modes of communication preferences (in-person vs online), frequency of online socialization, and satisfaction with social life.

Participant Survey Data Collection Procedures

- The surveys were distributed physical anonymously, to guarantee their anonymity.
- Participants were provided with a mini-lecture, followed by obtaining their consent before the survey was administered.
- Data collection occurred over a four-week time frame.

Ethical Considerations

Participation was voluntary in the study and the utmost confidentiality and anonymity was maintained in processing the data. The benefits or risks associated with the study were explained and the participants' rights including their right to participate withdrawn if they wished to do so, were also explained. Informed consent was obtained from all participants before data collection.

Data Analysis

- Data were entered and analyzed using SPSS (version 25).
- Descriptive statistics were used to report the prevalence rates, demographic characteristics of participants and mean scores.
- Inferential statistics included Chi-squared tests, Pearson's correlation, multiple linear regression analyses to examine the relationships internet addiction and academic performance, sleep quality, social involvement etc.
- The level of statistical significance was designated at $p < 0.05$.

FINDINGS / RESULTS

Demographic Characteristics

A total of 180 master's students from the Faculty of Medical Sciences, University of Tirana took part in the stud y. The sample consisted of 58.3% female and 41.7 males. The participants of the study were mostly in the age group 26–30 (43.3%), then in the age group 21–25 (36.1%). The students participated a range of different fields represented by a student sample, from Nursing (22.2%) being the most with T. Laboratory (15.6%), Public Health (15.0%) and Physiotherapy (13.9%). Other groups included Speech Therapy (11.1%), T. Imaging (12.2%) and Midwifery (10.0%).

Table 1: Demographic Profile of Respondents (N = 180)

Variable	Frequency (n)	Percentage (%)
Gender		
Male	75	41.7%
Female	105	58.3%
Total	**180**	**100%**
Age Group (years)		
21–25	65	56.7%
26–30	78	43.3%
Total	**180**	**100%**
Field of Study		
Nursing	40	22.2%
Speech Therapy	20	11.1%
Midwifery	18	10.0%
Physiotherapy	25	13.9%
T. Imaging	22	12.2%
T. Laboratory	28	15.6%
Public Health	27	15.0%
Total	**180**	**100%**

Sleep Quality and Internet

Use A strong association was established between daily internet use and sleep quality as examined using the Pittsburgh Sleep Quality Index (PSQI). Ofstudents using the internet more than 6 hours per day, 84.4% reported poor sleep quality (PSQI >5). Whereas only 30% of students using the internet less than 2 hours per day reported sleep disruptions. This information also suggests that excessive internet use is a considerable contributor to sleep disturbance among students with moderate-to-severe levels of internet addiction.

Academic Performance

Self-reported academic performance (self-reported GPA) declined as levels of addiction to the internet increased.

- While students with normal internet usage had a mean GPA = 3.45, mild internet addictive behaviors were associated with a mean GPA = 3.21; moderate addiction had a mean GPA = 2.88.
- Above all, Students with severe addictions to the internet had the lowest average GPA = 2.41.

The one-way ANOVA demonstrated that the differences observed in GPA between the categories of internet addiction were significant ($p < 0.01$), supporting the conclusion that higher levels of internet dependence lead to diminished academic performance.

Socialization and Satisfaction

Satisfaction with socialization varied that differed based on the mode of engagement:

- In-person socializers: 73.3% reported satisfaction with their social life.
- Online socializers: only 36.2% satisfied; 63.8% reporting social dissatisfaction

The results above suggest that online forms of socialization may decrease social satisfaction and increase isolation.

- Excessive internet use is associated with poor sleep quality.
- Higher internet addiction levels correlate with lower GPA.
- Online socialization is related to decreased interpersonal satisfaction.

Inferential statistical tests included Chi-square tests, Pearson's correlation, and multiple linear regression analyses to assess relationships between internet addiction with other variables, including academic performance, sleep quality, and social engagement.

- Statistical significance was set at $p < 0.05$.
- Descriptive statistics were used to report the prevalence rates, demographic characteristics, and mean scores.

Summary of Key Findings

- 77% of students exhibited some level of internet addiction.
- Excessive internet use is associated with poor sleep quality
- Higher internet addiction levels correspond to lower GPA
- Online socialization is linked to decreased interpersonal satisfaction.

DISCUSSION / ANALYSIS

The objective of the study was to assess the prevalence of, and association between, internet addiction on the academic, professional, social, and sleep-related functioning of master's students at the Faculty of Medical Sciences, University of Tirana. The findings highlight a disturbingly high prevalence of the internet and confirm previous literature suggesting negative academic and health impact associated with excessive digital engagement.

Prevalence of Internet Addiction

The finding that 77% of students exhibited at least mild Internet addiction (36.1% moderate; 7.2% severe) lends credence to global trends. Comparable incidence rates were found in other medical student populations from countries like India (59%) (Ramasubramanian et al., 2015), China (42%) (Cheng et al., 2012), and Egypt (75%) (Latifeh et al., 2022). The literature supports the premise that students with health-related studies are at risk of Internet dependence due to the demanding nature of their studies and extensive screen time.

Table 2: Prevalence of Internet Addiction (Based on IAT Scores).

Addiction Level	Score Range	Frequency (n)	Percentage (%)
Normal	0–30	42	23.3%
Mild	31-49	60	33.3%
Moderate	50–79	65	36.1%
Severe	80–100	13	7.2%
Total		**180**	**100%**

Interestingly, the fact that 7.2% of Tirana's master's students experienced severe addiction although less than resistance in some undergraduate studies, may represent an underrecognition of the condition or even influenced

by social desirability. The difference between moderate and severe suggests that there is some intervention point in achieving a level not so deeply impairing as the condition of addiction.

Influence on Sleep Quality

The relationship between poor sleep and the usage of the Internet in this study (84.4% of > 6 hour users with poor sleep) upholded the findings of earlier studies (Alghamdi et al., 2024; Ahmed et al., 2022). Excessive blue light exposure has been shown to delay melatonin secretion and sleep onset by using screens (Alimoradi et al., 2019). Master's students engaging in research, work and clinical practice indeed rate higher risks in participating in late-night Internet browsing, or following screen time driven by insufficient coping ability from stress.

Table 3: Internet Usage and Sleep Quality (PSQI Scores)

Internet Use (hours/day)	**Poor Sleep (PSQI >5)**	**Good Sleep (PSQI ≤5)**	**Total Respondents**
< 2 hours	12 (30.0%)	28 (70.0%)	40
2–4 hours	27 (45.0%)	33 (55.0%)	60
4–6 hours	45 (64.3%)	25 (35.7%)	70
> 6 hours	38 (84.4%)	7 (15.6%)	45
Total	**122**	**58**	**180**

Cheng et al. *(2012)* previously showed that the longitudinal effect of higher addiction scores in the early part of medical school predicted worse sleep later. Our findings suggest that this population may benefit from sleep hygiene education and digital curfews.

Declined Academic Performance and Internet overuse

The lessening GPA scores at higher levels of internet addiction supports previous findings that academic performance is adversely affected by digital distractions and poor time management *(Giunchiglia et al., 2020; Zivcakova & Wood, 2012).* The difference between the students with normal use, mean GPA = 3.45, and those reporting severe addiction, mean GPA = 2.41, is meaningful both academically and clinically.

Table 4: Correlation Between Internet Addiction and Academic Performance (GPA).

Internet Addiction Level	**Mean GPA**	**Standard Deviation**
Normal	3.45	0.42
Mild	3.21	0.39
Moderate	2.88	0.51
Severe	2.41	0.60

This correlation may have been impacted not only by less time studying, but the additional impact of attention fragmentation, cognitive suppression, and sleep disruption - all recognized effects of online over-use *(Hazelhurst et al., 2011).* Moreover, this also raises a larger issue, that post-graduate health sciences education requires a similar amount of self-directed learning, but students who self-reported heavy digital use may find it difficult to adapt.

Online Socialization and Offline Socialization

The move to online socialization and subsequent evident dissatisfaction seen in this study (63.8% reported dissatisfaction when socializing online) aligns with the findings of Pérez-Juárez et al. (2024), whom reported that students who relied on digital social networks were more likely to endure more emotional fatigue, while also feeling they had less interpersonal connection

Table 5: Preferred Mode of Socialization vs. Self-Reported Social Satisfaction.

Primary Socialization Mode	Satisfied (Likert 4–5)	Dissatisfied (Likert 1–2)	Total Respondents
In-person	55 (73.3%)	20 (26.7%)	75
Online (social media/apps)	38 (36.2%)	67 (63.8%)	105
Total	**93**	**87**	**180**

While the various digital tools have facilitated our interactivity and flexibility, their use has the potential to erode the quality of social connections - especially those that are developed in academic or clinical environments.

This may be particularly salient in Albania, partly because master's students in medicine are expected to develop skills around professional communication and interprofessional collaboration which may be undermined through a reliance on virtual communication.

Contributions and Contextual Relevance

To the best of our knowledge this is the first study that explicitly examines master's medical science students in Albania, which is an under-explored group in the literature on digital addiction. Within a singular model incorporating professional, academic, and sleep-related variables, this study provides a comprehensive view of how digital behaviours interact in the lives of emerging health professionals. These data demonstrate the need for institutions and other stakeholders to develop policy and professional learning opportunities that highlight digital moderation, time management, education regarding sleep hygiene, and social engagement in the physical world.

Summary of Analysis /Key Findings:

- High rates of internet addiction are aligned with global rates reported for medical students.
- Sleep disturbance and lower academic performance are highly associated with higher internet usage.
- Digital socializing may undermine emotional health and development of professional skills.
- The specific dynamics of master's students expose them to higher risk of poor outcomes as they are negotiating academic, clinical, and research demands.
- The study contributes to a gap in Albanian (literature) research and recommends greater local, customized approaches to digital wellness.

CONCLUSION / SUMMARY

This study examined the prevalence of internet addiction and its impact on the academic, career, social, and sleep-related wellness of master's-level students in the Faculty of Medical Sciences at the University of Tirana. The outcomes suggested a state of problematic internet use, with over three-quarters (77%) of students experiencing some level of internet addiction, from at least mild levels.

Multiple overlapping factors suggest that postgraduate medical students may be particularly susceptible to the development of Internet addiction. For example, the academic pressures placed on postgraduate medical students are intense due to the volume of coursework, thesis requirements, and commitments to clinical work; thus, they can elude responsibility due to their increased reliance on digital resources and online socialization as coping mechanisms for their academic workload.

Additionally, time pressure might lead students to visit online platforms for both leisure and academic purposes, contributing to increased hours of online viewing. Similarly, professional uncertainties stemming from previous academic pressures (e.g., career trajectories, specialty selection, and competency development) could contribute to digital addiction as students negotiate both academic and professional pressures simultaneously.

A consistent pattern emerged that indicated increased internet use was related to poorer academic performance, lower quality of sleep, and reduced satisfaction with social connections. Looking at internet use of over six hours a day clearly demonstrated that these students were more likely to report sleep problems and a lack of academic success. Further, students who chose to interact socially primarily through online platforms, rather than in-person

socializing, also reported lower levels of emotional and interpersonal satisfaction than their peers who sought in-person contact.

The findings are in keeping with existing research from countries worldwide, suggesting that internet addiction is not just a technological issue but rather a multifaceted behavioral health problem affecting significant aspects of student growth and development, especially in higher-stress academic environments, such as graduate school and the clinical environment.

In conclusion, while Internet addiction among postgraduate medical students was correlated with behaviours associated with academic performance and sleep deprivation, it also seemed to interfere with professional development and exchanges in person that may limit networking possibilities and the acquisition of skills.

Importantly, this research adds additional knowledge to an under-researched population master's students in the medical education setting in Albania, demonstrating the necessity of examining while designing specific interventions to enhance digital balance, academic focus, and well-being from a meaningful way. Future research should utilize longitudinal, multi-university designs to further investigate these relationships, and we recommend embedding objective digital usage information to support self-report, which provides a richer understanding of postgraduate medical students' digital behaviour(s) and impact.

LIMITATIONS

Although this study is an important contribution to the understanding of internet addiction and related factors among master's students in medical sciences, some important limitations to the results are noted:

Cross-sectional design: As a cross-sectional study, the design prohibits any causal inference between internet addiction and any potential outcomes studied (e.g., academic performance; professional development; quality of sleep). Longitudinal studies are warranted to clarify temporal relationships.

Self-reported data: All variables related to internet use, academic performance and theoretical success, quality of sleep and social satisfaction were all self-reported - thereby introducing the potential for recall biases and/or social desirability biases which could potentially dilute the strength of associations that were observed.

Sample size and generalizability: While the total sample size was acceptable for the estimation of prevalence, both faculties were both from a single university the Faculty of Medicine and the Faculty of Medical Technical Sciences, University of Medicine, Tirana and while there are two faculties the findings are still limited in generalizability (e.g., findings are likely not generalizing to other local universities within Albania or any of the two faculties in the region). Even though the two faculties capture some disciplinary diversity;

Uncontrolled confounding: Mental health status, personality-related variables, the environment related to one's internet activity (*e.g., quality of internet access*) were not measured and are potentially influential variables affecting both internet activity and any directly related outcomes (e.g., academic performance or sleep quality).

Instruments of measurement: To measure the core components of the study, we used two validated measures (Young's IAT and PSQI). Consequently, the results are fairly robust. Equally, we developed supplemental questionnaires to measure potential academic and professional impacts; although these questionnaires have not been previously validated, they are useful in giving academic and professional understanding of the overall effects of internet addiction for master's students.

RECOMMENDATIONS

Considering the study findings and limitations of the study, the following recommendations have been made, ranked in order of feasibility and impact:

Awareness Raising (*High Feasibility, High Impact***):** Universitiese should provide workshops and seminars that educate students on healthy internet use, digital literacy and techniques to support their emotional wellbeing. These programs are low-cost and could easily be embedded in the existing student support programs.

Engage in sleep hygiene (*Moderate Feasibility, High Impact*): Volatile educational cultures and campuse promote poor sleep hygiene and problematic screen time. Universities should incorporate sleep education and screen time management into student wellness programs, and emphasize the consequences of not supporting one's circadian rhythm while promoting healthy sleep habits.

In-Person engagement (*Moderate Feasibility, Moderate Impact*): To augment digital communication, provide opportunities for social engagement and collaborative activities to encourage face-to-face interactions and teamwork skills, and combat social isolation; cause for problematic screen time habits.

Enhanced Mental Health Access (*Moderate Feasibility, high impact):* Promoting affordable access to counselling and mental health treatments that can address contributory factors to internet addiction activity such as stress and anxiety.

Development Institutional Policies (*Low Feasibility, High Impact*): Faculty of Medical Sciences may want to consider develop policies that address non-educational related internet use during key times (e.g., during theoretical or clinical rotations) and urge responsible digital behaviors. While these policies may be resource-intensive, they could provide students with lasting benefits to their productivity and professionalism.

Future Research (*High Feasibility, Long-Term impact):* Future research directions could include multi-university longitudinal studies to provide context for causal pathways and differences associated with internet addiction among postgraduate health sciences students, as well as the integration of objective digital usage data. Both self-reported digital usage data and objective data on digital usage could be utilized to bolster the evidence.

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