



RESEARCH PAPER

Nexus between Addiction to Mobile Phones and Sense of Loneliness among Students of Social Sciences in Sargodha, Pakistan

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ABSTRACT

This study investigates the adverse impact of excessive mobile phone use, focusing on addiction. It explores the correlation between mobile phone addiction and loneliness, particularly among social sciences students, aiming to understand how this disorder may alleviate or intensify feelings of isolation. Amid widespread mobile technology use, this study explores the connection between smartphone addiction and loneliness among social sciences students at Sargodha University, Pakistan. Utilizing a positivist framework, this quantitative study surveyed 170 students via a purposive sampling method, ensuring representation across academic levels. Data gathered through a survey questionnaire were analyzed using the Statistical Package for the Social Sciences (SPSS). Study findings highlight a strong link between smartphone addiction and heightened loneliness among students, emphasizing the impact on emotional well-being. The results of the study prompt a critical examination of the role of technology in fostering or inhibiting social interactions, emphasizing the need for tailored interventions and educational programs to cultivate healthy technology habits and mitigate the adverse effects of smartphone addiction.

KEYWORDS Sense of Loneliness, Smartphone Addiction, Social Sciences, Student Well-Being, Technology Dependence

Introduction

Smartphones are essential in fostering more connections between humans and machines. However, excessive and addictive smartphone use has been brought on by the expanding popularity of smartphone (de Bérail, Guillon, & Bungener, 2019). A smartphone is a cutting-edge cell phone gadget made to address common accessibility issues. In modern times, one touch may solve any issue (DİKEÇ, YALNIZ, BEKTAŞ, Turhan, & ÇEVİK, 2017). Because of this, they have become essential to modern life and are something that people cannot survive without. For a variety of users, including students, smartphone use offers top-notch performance and rapid access to information and entertainment (Faiz, Suroso, & Farid, 2023). Social media and entertainment are two other uses for it. People become addicted to it as a result, particularly students, and this has a negative impact on their academic performance, moral principles, and physical and mental well-being (Muzaffar, Chohdhry & Afzal, 2019; Gezgin, Hamutoglu, Sezen-Gultekin, & Ayas, 2018).

The study's participants, many of whom relied heavily on smartphones, were aware of the risks connected to radiation and mobile phones. One-fourth of the study participants reported having wrist and hand pain as a result of using smartphones, which could lead to serious physiological and physiological complications (Yaseen, Zia, Fahd, & Kanwal, 2021). The terrible state that currently permeates the entire planet transcends the regular occurrence of social, cultural, economic, and other conflicts. These were put aside to redirect attention to the pandemic crisis that is currently plaguing every nation on the planet (Abid et al., 2020). Due to confinement, people were forced to stay at home, which made electronic

communications crucial. The purpose of this study is to look at how students use their cell phones in order to determine whether addiction has developed as a result of that use and whether men and women use them differently. According to (Asghari, 2018), it makes no attempt to analyze the pandemic epidemic. The question of whether anxiety and depression separately influenced smartphone addiction was examined by (Elhai, Levine, & Hall, 2019). In a case study on Bangladeshi business students, (Kuss & Griffiths, 2017) discovered that students' academic performance was adversely impacted by growing impatience and disruptions in their daily lives.

According to (Kara, Baytemir, & Inceman-Kara, 2021), loneliness is thought to be one of the major predictors of mobile phone addiction. According to (Moretta & Buodo, 2020) excessive mobile phone use might lead to feelings of loneliness by decreasing the amount of time spent in social situations. Since in-person interactions tend to lessen people's feelings of loneliness, prolonged usage of mobile devices alters this feeling by substituting weak, virtual relationships for real ones (Shen & Wang, 2019). The study's objective is to investigate and analyze the role of smartphones in reducing loneliness among social science students. We will see how smartphones play a significant role in reducing loneliness as well as how their negative effects on students' health and academic performance.

The 21st century is an age of technology as well as globalization everyone do they're mostly working on their smartphone to reduce their time as well as in Pakistan smartphone addiction is too much high which are creating a sense of loneliness among youth so we take Sargodha city to do our research and see what is the relationship between smartphone addiction and sense of loneliness among social sciences students and what they are facing will using too much mobile phone in their life. We will give suggestions to control and handle this situation.

Literature Review

The proliferation of mobile phones has become an integral aspect of contemporary student life, with an increasing number of individuals relying on these devices for communication, entertainment, and information access (Elhai et al., 2019). While mobile phones offer numerous benefits, concerns have emerged regarding the potential nexus between addiction to these devices and the sense of loneliness experienced by students, particularly those studying in social sciences disciplines (Kanat, 2019).

Mobile phone addiction, often characterized by excessive and compulsive use of smartphones, has garnered significant attention in recent years. Various definitions and measurement scales have been proposed to assess the extent of mobile phone addiction among individuals (Kuss & Griffiths, 2017; Li, Zhan, Zhou, & Gao, 2021; Mei et al., 2023). These metrics often encompass factors such as the frequency of use, the intensity of usage patterns, and the psychological dependence on mobile devices. Studies consistently highlight the rising prevalence of mobile phone addiction among college students, prompting a closer examination of its potential consequences, including its association with feelings of loneliness (Wegmann, Oberst, Stodt, & Brand, 2017).

The prevalence of mobile phone addiction among social science students is a crucial aspect to consider. Research findings indicate that students majoring in social sciences may be particularly vulnerable to mobile phone addiction due to the nature of their academic pursuits (Mei et al., 2023; Moretta & Buodo, 2020; Reissmann, Hauser, Stollberg, Kaunzinger, & Lange, 2018). The demands of social science studies, often involving extensive research and analysis, may lead students to seek refuge in their smartphones as a means of stress relief or procrastination. This overreliance on mobile devices may inadvertently contribute to a sense of isolation and detachment from the immediate social environment, laying the foundation for the emergence of loneliness (Ivanova et al., 2020). Research on loneliness among social science students indicates that factors such as

academic stress, the competitive nature of the field, and the transition to college life can contribute to feelings of isolation. In the context of mobile phone addiction, loneliness may manifest as a consequence of excessive screen time, virtual socialization replacing face-to-face interactions, and the erosion of genuine interpersonal connections (Abid et al., 2020).

The relationship between addiction to mobile phones and the sense of loneliness is a bidirectional one. On one hand, individuals prone to loneliness may turn to mobile phones as a coping mechanism, seeking solace in virtual interactions and online communities (Shen & Wang, 2019). On the other hand, excessive mobile phone use may exacerbate feelings of loneliness by fostering a sense of disconnection from the immediate physical environment and diminishing the quality of face-to-face interactions (Gao, Liu, & Li, 2017). The literature also sheds light on potential mitigating factors and interventions. Strategies such as digital detox programs, mindfulness-based interventions, and educational campaigns promoting healthy mobile phone usage have shown promise in reducing mobile phone addiction and mitigating loneliness among students (Asghari, 2018; Csibi, Griffiths, Cook, Demetrovics, & Szabo, 2018; de Bérail et al., 2019). Additionally, fostering a supportive academic environment that encourages meaningful social interactions and emphasizes the importance of balancing online and offline socialization can contribute to the overall well-being of social science students (Faiz et al., 2023).

Hypothesis

H₀₁ There is no significant relationship between smartphone addiction and a sense of loneliness among students.

Theoretical Framework

The theoretical framework for the relationship between addiction to mobile phones and the sense of loneliness among students in the social sciences encompasses several key theoretical perspectives and conceptual lenses (Wegmann et al., 2017). One prominent framework guiding this study is the Social Cognitive Theory, which emphasizes the reciprocal interactions between individual behavior, personal factors, and the social environment. According to this theory, individuals' technological behaviors, including smartphone usage, are shaped by their perceptions, beliefs, and self-efficacy in managing technology use (Alinejad, Parizad, Yarmohammadi, & Radfar, 2022). Within the academic context, students' perceptions of social connectedness and their self-regulatory skills in managing smartphone use may influence their susceptibility to smartphone addiction and subsequent feelings of loneliness (Kanat, 2019).

Moreover, the Uses and Gratifications Theory provides a lens to understand the underlying motivations and gratifications associated with mobile phone usage among students (Gao et al., 2017). According to this framework, individuals actively select and use media, including smartphones, to fulfill specific needs, such as social interaction, entertainment, and information seeking. The study considers how students' motivations for using mobile phones, such as maintaining social connections and accessing information, may impact their levels of smartphone addiction and, subsequently, their feelings of loneliness within the social sciences academic environment (Kim, Cho, & Kim, 2017).

Furthermore, the Social Exchange Theory offers insights into the dynamics of social relationships and the costs and rewards associated with interpersonal interactions. Within the context of smartphone addiction and loneliness, this theory highlights the importance of social support and the quality of social exchanges in mitigating feelings of isolation and loneliness (Reissmann et al., 2018). The study examines how students' reliance on mobile phones for social interaction and the potential trade-offs between virtual and face-to-face interactions may influence their perceptions of loneliness within the social sciences department.

The theoretical framework also incorporates elements of the Transactional Model of Stress and Coping, which underscores the dynamic interplay between environmental stressors, individuals' cognitive appraisals, and coping strategies (Csibi et al., 2018). Within the context of smartphone addiction and loneliness, this model provides insights into how students' perceptions of academic stress, coupled with their coping mechanisms, may influence their reliance on mobile phones as a coping mechanism, potentially exacerbating their feelings of social isolation and loneliness (Elhai et al., 2019).

By integrating these theoretical perspectives, the study aims to provide a comprehensive understanding of the multifaceted relationship between smartphone addiction and the sense of loneliness among students in the social sciences, offering valuable insights for the development of targeted interventions and educational initiatives to promote healthy technology use and foster a supportive academic environment (Ivanova et al., 2020).

Conceptual Framework

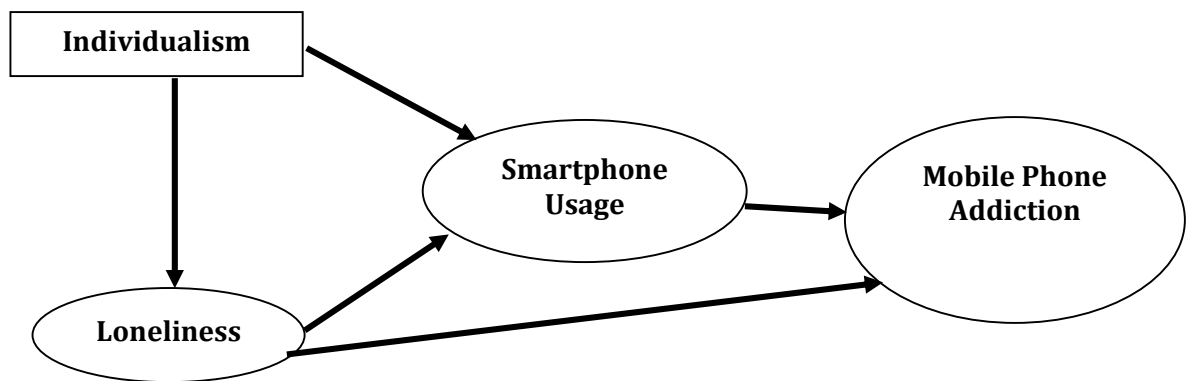


Figure 1: Conceptual Framework (Jiang, Li, & Shypenka, 2018)

Material and Methods

The present study employed a quantitative methodology grounded in the philosophical foundation of Positivism. Through a survey questionnaire, the researcher identified smartphone addiction among students in the social science department at the University of Sargodha. The study utilized a survey research design to collect a substantial amount of quantitative data concurrently, which was subsequently compared and analyzed. To ensure the representation of students from diverse backgrounds in the sociology and criminology departments at the undergraduate, MPhil, and PhD levels, the researcher opted for purposive sampling. The sample consisted of 170 respondents, all of whom completed the questionnaire. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) software. Ethical considerations, including informed consent and confidentiality, was strictly adhered throughout the research process.

Result and Discussion

**Table 1
Frequency and Percentage Distribution of Demographic Variables**

| Sr. No. | Variables | Frequency | Percentage |
|----------|------------|------------|-------------|
| | Age | 170 | 100% |
| 1 | 18-22 | 124 | 72.9% |
| | 22-26 | 43 | 25.3% |
| | 26-30 | 03 | 1.8 |

| | | | |
|---|-------------------------|------------|-------------|
| | Gender | 170 | 100% |
| 2 | Male | 85 | 50.0% |
| | Female | 85 | 50.0% |
| | Marital Status | 170 | 100% |
| 3 | Single | 164 | 96.5% |
| | Married | 5 | 2.9% |
| | Divorced | 01 | 0.6% |
| | Living Area | 170 | 100% |
| 4 | Urban | 87 | 51.8% |
| | Sub-urban | 17 | 39.3% |
| | Rural | 66 | 8.9% |
| | Education Status | 170 | 100% |
| 5 | Bachelor (four year) | 146 | 86% |
| | Master (M. Phil) | 23 | 13.5% |
| | Ph. D | 01 | 0.5% |

Table 1 revealed the frequency and percentage distribution of demographic variables. There is age, gender, marital status, living area and education status variables. In age variable mostly sample of age belong to 18-22 year that is 72.9%. Second highest is 22-26 year that is 25.3%. Third is 26-30 year that is 1.8%. In gender variable male and female are equal with 50.0%. In marital status single are highest with 96.5% and married are 29%. Divorced are 0.6% percent. In living area variable urban are 51.8%. Suburban are 39.3% and rural are 8.9%. Last fifth variable is education. In this bachelor are highest with 86%. Master are 13.5% and PhD are 0.5%.

Table 2
Frequency and Percentage Distribution of Addiction

| Sr.NO. | Statement | To the great extend | Somewhat | Not at all |
|--------|----------------------------------------------------------------------------|---------------------|-------------|-------------|
| 1 | Missing planned work due to excessive smartphone use. | 83 49.4% | 47 28% | 38 22.6% |
| 2 | Struggling to concentrate in class or work due to smartphone distractions. | 77 46.1% | 35 21% | 55 32.9% |
| 3 | Experiencing pain in wrists or neck while using a smartphone. | 79 47.1% | 38 22.6% | 28 16.7% |
| 4 | Unable to endure the absence of a smartphone. | 58 34.5% | 51 30.4% | 59 35.1% |
| 5 | Feeling impatience when not holding the smartphone. | 69 41% | 52 31% | 47 27.9% |
| 6 | Persistent thoughts about the smartphone even when not actively using it. | 61 36.4% | 52 31% | 55 32.7% |
| 7 | Unwilling to give up smartphone use despite significant daily life impact. | 72 43.1% | 42 25.1% | 53 31.7% |
| 8 | Regularly checking the smartphone to avoid missing online conversations. | 70 42.1% | 49 29.5% | 47 28.3% |

| | | | | |
|-----------|------------------------------------------------------------|-------------|-------------|-------------|
| 9 | Using the smartphone longer than intended. | 84 50.3 | 44 26% | 39 23.4% |
| 10 | Being told by others of excessive smartphone usage. | 72 43.7% | 42 25.5% | 51 30.9% |

The table presents a comprehensive overview of smartphone addiction, revealing the frequency and percentage distribution across various statements indicating addictive behavior. Notably, a significant proportion of respondents admit to missing planned work due to smartphone use (49.4%), experiencing difficulty concentrating in academic or work settings because of their smartphones (46.1%), and reporting physical discomfort such as pain in the wrists or back of the neck during usage (47.1%). A substantial portion also expresses a strong dependence on smartphones, with a notable percentage indicating they cannot stand not having one (34.5%) and feeling impatient or fretful when not holding their device (41%). Additionally, a considerable number of respondents admit to constantly checking their smartphones to avoid missing online conversations (42.1%). These findings collectively suggest a noteworthy prevalence of smartphone addiction, encompassing both behavioral and psychological aspects, among the surveyed individuals.

Table 3
Frequency and Percentage Distribution of loneliness

| Sr. | Statement | Yes | Neutral | No |
|------------|-------------------------------------------------------------------------------------|--------------|----------------|-------------|
| 1 | I have someone available to talk to about my daily problems. | 84 50.9% | 46 27.9% | 35 21.2% |
| 2 | I long for a deep, close friendship. | 92 55.8% | 35 21.2% | 38 23% |
| 3 | I feel a pervasive sense of emptiness. | 65 39.4% | 62 37.6% | 38 23% |
| 4 | I have a sufficient number of people I can depend on during difficult times. | 56 33.7% | 55 33.1% | 55 33.1% |
| 5 | I miss the joy of being in the company of others. | 76 46.1% | 44 26.7% | 45 27.3% |
| 6 | I perceive my circle of friends and acquaintances as too restricted. | 92 55.8 | 43 26.1% | 30 18.2% |
| 7 | I have numerous individuals I can trust wholeheartedly. | 54 32.9% | 42 25.6% | 68 41.5% |
| 8 | I have an adequate number of people I feel emotionally close to. | 75 45.5% | 49 29.7% | 41 24.8% |
| 9 | I miss being surrounded by people. | 68 41.5% | 48 29.3% | 48 29.3% |
| 10 | I frequently experience feelings of rejection. | 27 16.5% | 69 42.1% | 68 41.5% |
| 11 | I can reach out to my friends whenever I need them. | 106 64.2% | 41 24.8% | 18 10.9% |

The provided table examines respondents' sentiments towards social relationships across various statements. Notably, a substantial portion (50.9%) acknowledges having someone available to discuss daily problems, while a majority (55.8%) expresses a longing for a deep, close friendship. Furthermore, 39.4% report a pervasive sense of emptiness, emphasizing the prevalence of emotional experiences. In terms of dependability during difficult times, opinions are divided, with 33.7% affirming and an equal percentage indicating a lack of sufficient support. The desire for companionship is evident, as 46.1% miss the joy of being in the company of others, while 55.8% find their circle of friends and acquaintances too restricted. Trust is also a focal point, with 32.9% expressing complete trust in numerous individuals. Emotional closeness is variable, as 45.5% feel they have an

adequate number of close connections. Additionally, 41.5% miss being surrounded by people, while feelings of rejection are acknowledged by 16.5% of respondents. Importantly, a majority (64.2%) feels they can reach out to friends whenever needed, emphasizing the potential for social support in times of distress.

Table 4
Chi Square Test

| | Value | df | Asymptotic Significance (2-sided) |
|-------------------------------------|----------------------|-----|--------------------------------------|
| Pearson Chi-Square | 655.539 ^a | 532 | .003 |
| Likelihood Ratio | 380.449 | 532 | 1.000 |
| Linear-by-Linear Association | 1.426 | 1 | .232 |
| N of Valid Cases | 170 | | |

a. 580 cells (100.0%) have expected count less than 5. The minimum expected count is .01.

The presented table outlines the results of a statistical analysis examining the relationship between smartphone addiction and a sense of loneliness among students. The Pearson Chi-Square statistic is 655.539 with 532 degrees of freedom, yielding a two-sided asymptotic significance value of .003. This suggests that there is a statistically significant relationship between smartphone addiction and the sense of loneliness among students. Overall, the findings imply a significant overall relationship between smartphone addiction and loneliness, as indicated by the Pearson Chi-Square test.

Table 5
Correlation

| | usage_of_Smartphone | Sense of Loneliness |
|----------------------------|----------------------------|---------------------|
| usage_of_Smartphone | Pearson Correlation | 1 |
| | Sig. (2-tailed) | .091 |
| | N | 170 |
| Sense_of_Lonliness | Pearson Correlation | .233 |
| | Sig. (2-tailed) | .091 |
| | N | 170 |

The provided correlation analysis explores the relationship between smartphone addiction (measured by "usage_of_Smartphone") and a sense of loneliness among students ("Sense_of_Lonliness"). The Pearson Correlation coefficient for smartphone usage and loneliness is 0.091. The associated two-tailed significance (Sig.) value is 0.233, which exceeds the conventional significance level of 0.05. Consequently, based on the given sample of 170 cases for both smartphone usage and loneliness, the results do not support the rejection of the null hypothesis (H1), suggesting that there is no statistically significant relationship between smartphone addiction and a sense of loneliness among the student population under consideration.

Discussions

In an age dominated by technological advancements, the pervasive use of mobile phones has become an integral part of daily life, especially among college students, including those pursuing social sciences (Kuss & Griffiths, 2017). With the increasing reliance on smartphones for communication, information access, and entertainment, concerns have

emerged about the potential consequences of excessive usage, including addiction and its impact on psychological well-being (Li et al., 2021). Simultaneously, the concept of loneliness has gained considerable attention in psychological research, with studies highlighting its detrimental effects on mental health and overall quality of life. This study aims to explore the relationship between addiction to mobile phones and the sense of loneliness among students in the field of social sciences (Mei et al., 2023).

This addiction manifests in various forms, ranging from compulsive checking of notifications to an inability to disconnect from the device, leading to disruptions in daily routines and activities (Abid et al., 2020). Research has shown that excessive mobile phone use can result in negative consequences, such as decreased academic performance, impaired social interactions, and heightened levels of stress and anxiety. Additionally, the continuous exposure to digital screens can disrupt sleep patterns, further exacerbating the potential negative effects on mental well-being (Arslan, Yıldırım, & Zangeneh, 2021).

Despite the initially perceived connectivity facilitated by mobile phones, studies have increasingly suggested a complex relationship between mobile phone addiction and loneliness (Csibi et al., 2018). While mobile phones offer a means of virtual connection, the excessive use of these devices can lead to a decline in face-to-face interactions, contributing to a sense of social isolation and disconnection (Alinejad et al., 2022). Moreover, the superficial nature of digital communication often fails to fulfill the need for genuine emotional support and companionship, leading to a heightened sense of loneliness among individuals who excessively rely on virtual interactions at the expense of meaningful interpersonal relationships (Asghari, 2018).

Furthermore, the immersive nature of mobile phone usage, including the consumption of social media and digital content, can perpetuate unrealistic social comparisons and foster feelings of inadequacy and isolation (de Bérail et al., 2019). The prevalence of curated and idealized representations of social lives on various online platforms can contribute to a distorted perception of reality, exacerbating the feelings of loneliness and social exclusion among individuals, particularly among students who are still in the process of forming their identities and social networks (DİKEÇ et al., 2017).

The results indicating a significant relationship between smartphone addiction and a sense of loneliness among students in the social sciences are consistent with several other studies that have explored the impact of technology use on social connectedness and psychological well-being (Elhai et al., 2019). Various research endeavors have highlighted the detrimental effects of excessive smartphone usage on interpersonal relationships and feelings of isolation among different demographic groups, including students. For instance, a study conducted by (Wang, Sheng, & Wang, 2019) found a strong association between smartphone addiction and increased loneliness among college students, corroborating the findings of the current study. Similarly, a meta-analysis by (Faiz et al., 2023) revealed that higher levels of smartphone addiction were linked to greater psychological distress and social isolation, emphasizing the detrimental implications for individuals' overall mental health and social integration.

Moreover, studies focusing on the psychological impacts of social media use have also indicated a similar trend. Research by (Gao et al., 2017) demonstrated that excessive use of social media platforms, facilitated by smartphone technology, was associated with heightened feelings of social isolation and decreased subjective well-being. This supports the idea that the virtual connectivity provided by smartphones might not fully compensate for the absence of genuine, in-person social interactions, leading to a compromised sense of belonging and community among student populations (Gezgin et al., 2018). Additionally, the findings of these studies underscore the importance of understanding the nuanced relationship between digital technology, social behavior, and emotional health within the context of educational settings, aligning with the focus of the current study on students in the social sciences (Jiang et al., 2018).

However, it is crucial to note that some studies have reported conflicting results, indicating a lack of consensus within the field (Ivanova et al., 2020). Research by (Moretta & Buodo, 2020; Reissmann et al., 2018; Shen & Wang, 2019; Sun & Zhang, 2021) suggested that the relationship between smartphone addiction and loneliness might be mediated by other psychological factors, such as self-esteem and social competence, rather than representing a direct causal link. These contrasting findings highlight the complexity of the relationship between technology use and feelings of loneliness, emphasizing the need for a more comprehensive and nuanced understanding of the underlying mechanisms driving these associations (Kim et al., 2017; Kuss & Griffiths, 2017; Li et al., 2021).

Furthermore, recent longitudinal studies, such as those conducted by (Kanat, 2019) have emphasized the bidirectional nature of the relationship between social media use and perceived social isolation. Their findings indicated that while increased social media use could contribute to heightened feelings of loneliness, individuals who already experienced loneliness were more likely to intensify their use of social media platforms as a means of seeking social support and alleviating their sense of isolation (Moretta & Buodo, 2020; Reissmann et al., 2018). This bidirectional relationship emphasizes the need for a more holistic approach to addressing the complexities of smartphone addiction and loneliness, incorporating individual predispositions, social dynamics, and technological influences (Wegmann et al., 2017; Yaseen et al., 2021; Zhen, Li, Li, & Zhou, 2023).

Conclusion

In conclusion, the relationship between smartphone addiction and the sense of loneliness among students in the social sciences reflects a complex interplay of psychological, societal, and cultural factors. Recognizing the correlation between smartphone addiction and feelings of loneliness as a result of psychological variables is essential to understanding its effect on students' wellbeing and learning outcomes. To address this, social science researchers and practitioners must develop treatments and methods to promote the use of healthy technologies, social connectedness, and resilience in students. By doing so, they can create a comprehensive picture of the effects that excessive smartphone use has on social interactions and feelings of loneliness.

Recommendations

- The study's reliance on a relatively small sample size of students in the social sciences might limit the generalizability of the findings to a broader student population, emphasizing the need for larger and more diverse samples in future research.
- There is a possibility that the researcher obtained biased information as they have used self-administered scales to capture smartphone addiction and loneliness among the participants in the study.
- The cross-sectional nature of the study only allows for associational linkages between smartphone addiction and the sense of loneliness, which necessitate longitudinal studies to reveal the temporal dynamics of the interrelationships.
- There is a need to conduct multi-institutional studies for a better understanding of the phenomena because studying within a single educational institution may compromise the validity and generalizability of results as it confines generalizability to only one setting.

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