

Research On College Students' Mobile Phone Addiction Problem and Countermeasures in Sichuan

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Abstract: Science and technology are a double-edged sword. While promoting social progress, they also cause negative impacts. Mobile phones have become widely used, and with the 5G era, smartphone addiction has emerged. Among college students—who have fewer courses, more free time, and limited self-control—mobile phone addiction is a prominent issue. This study explores the current status and characteristics of mobile phone addiction among college students in Sichuan and provides targeted recommendations. A pilot survey using the Mobile Phone Addiction Index (MPAI) was conducted at a college in Sichuan (N=177). The results show that 55.37% of students meet the addiction criteria. Students spend excessive time on phones, mainly on entertainment apps, and experience anxiety when phones are unavailable. Recommendations include physical exercise, group counseling, psychological health education, student association activities, and family involvement.

Keywords: College students; Mobile phone addiction; Countermeasure research

DOI:10.12417/3029-2328.26.03.032

1.Introduction

With the rise of the Internet, mobile phones have profoundly impacted daily life. As of June 2023, China had 1.091 billion mobile Internet users, accounting for 99.9% of all Internet users (CNNIC, 2024). Mobile phones bring convenience but also lead to addiction. According to the 2023 National Mental Health Blue Book, mobile phone addiction has been a hot research topic since 2019. College students use smartphones to browse and disseminate information. However, many become “mobile phone addicts,” experiencing irritability and inability to concentrate when phones are unavailable, which interferes with study and mental health (Mei et al., 2023). High proportions of addiction tendencies have been reported (Li et al., 2024). While mobile phones facilitate learning (Ismail, 2020), excessive use for entertainment reduces sleep quality (Wang et al., 2023), emotional regulation (Yue et al., 2021), and interpersonal skills (Fook et al., 2020). This study takes a college in Sichuan as an example to investigate mobile phone addiction and propose interventions.

2.Problem Statement

College students are a high-risk group for mobile phone addiction. Comparing detection rates across provinces: Guangdong 16.5%, Jiangsu 28.9%, Sichuan 33.33%, Jilin 21.56%. Sichuan has the highest rate. Mobile phone addiction seriously affects physical, psychological, interpersonal, and academic aspects. Physical harms include numbness, dizziness, palpitations, visual impairment, and sleep disorders (Zhang, 2018; Desouky & Abu-Zaid, 2020). Psychological harms include tension, anxiety, and depression. A study at Sichuan University (Guo et al., 2020) screened 30,000 students: 44.46% had mobile phone addiction. Depression prevalence was 1.01% among non-addicted students, 4.85% in mild addiction, 24.8% in moderate, and 58.73% in severe addiction—close to 70% in the severe group. Socially, addicted students isolate themselves, lose interest in real-life activities, and immerse in the virtual world (Fu et al., 2019). Academically, addiction reduces concentration and performance (Roberts, 2015). Some psychologists consider compulsive mobile phone dependence a major non-drug addiction of the 21st century.

3.Limitations

Existing research has limitations: most focus on single variables, lacking an integrated perspective (Sun, 2021). Causes may be personal traits or environmental factors (Wang, 2023; Min, 2023; Wang, 2023). Intervention

strategies are often superficial and lack operability. Most studies are cross-sectional, lacking longitudinal data.

4.Literature Review

4.1 Mobile Phone Addiction

Satoko (2009) defined it as excessive use. You Gov (2008) called it “mobile phone anxiety.” Park (2005) viewed it as dependence causing harm. Addicts show three behaviors: spending much time without self-control; negative emotions when unable to use; impact on daily life. This study defines mobile phone addiction as obsessive use leading to negative effects on physical/mental health, study, work, life, and social interaction.

4.2 Current Research

Subjects: Adolescents (Choliz, 2012), adults (Takao, 2009), wide age ranges (Bianchi, 2011), and college students (Park).

Characteristics: Seven main characteristics: gender, age, self-esteem, impulsivity, personality, neuroticism, loneliness.

Gender: Females more prone due to social communication; males for gaming (Hawi & Samaha, 2016).

Age: 15–16 years most fond (Choliz, 2012); younger individuals show higher addiction (Kim et al., 2018).

Self-esteem: Low self-esteem leads to excessive use (Ching & Tak, 2017); high self-esteem among heavy social network users (Kuss, 2011).

Impulsivity: Higher impulsivity correlates with more frequent use (Elhai & Hall, 2020; Kim et al., 2014).

Personality: Extraverts more prone (Bianchi & Phillips; Kuss, 2011).

Neuroticism: Emotional instability drives excessive use as coping (Chen et al., 2017).

Loneliness: Significant contributor; lonely students use phones to escape (Li et al., 2021).

4.3 Causes Analysis

Researchers focus on subject characteristics: gender, age, personality, self-esteem, impulsivity, neuroticism, loneliness. Vacaru (2014) found adolescents more dependent. Augner (2011) found impulsive individuals more dependent. Kuss (2011) found extraverts more dependent. Objective reasons are rarely analyzed.

4.4 Analysis of Countermeasures for Mobile Phone Addiction

Motoharu Takao (2018) believed that education and intervention for mobile phone addiction groups have significant effects, but the methods for education and intervention were not detailed. Bin Zhang and Yu Peng (2021) found that mindfulness training can reduce adolescents' dependence on mobile phones.

5.Research Questions

(1)The current status of mobile phone addiction among college students in Sichuan: A case study of Sichuan Vocational College of Business.

(2)Providing reasonable suggestions based on this status.

6.Research Objectives

To determine the pattern of smartphone usage among college students in Sichuan and to assess the presence of smartphone addiction, if any;

To examine the factors influencing mobile phone addiction among college students in Sichuan.

To develop solutions to alleviate mobile phone addiction among college students, and conduct pilot implementation and evaluation.

7.Research Methodology

(1)Literature Review : Clarified the concept of “mobile phone addiction,” analyzed Sichuan’s cultural background, and built a logical framework.

(2)Questionnaire Survey: Used the Mobile Phone Addiction Index (MPAI) developed by Louis Leung (Chinese University of Hong Kong), designed for adolescents and college students. MPAI has high internal consistency (Cronbach’s $\alpha > 0.80$). It contains 17 items across four dimensions: withdrawal, lack of control, inefficacy, escapism. A 5-point scale (1=never, 5=always). Positive response to 8 items indicates addiction. Combined with a usage questionnaire, conducted a pilot survey at a college in Sichuan.

(3)Pilot Study: Conducted in May 2024 among nursing students at a college in Sichuan. Online questionnaire via Questionnaire Star. Distributed 230, received 177 valid responses (response rate 77.0%). Gender: 48 males (28.4%), 121 females (71.6%) due to low male enrollment. Grade: freshmen 47.34%, sophomores 36.09%, juniors 16.57%.

Data Analysis Plan: SPSS 17.0 used for descriptive statistical analysis of demographic data.

Table 1. Basic Situation of Mobile Phone Addiction Among College Students in the Pilot Study

Category	Number of Students	Percentage
Mobile Phone Addiction	98	55.37%
No Mobile Phone Addiction	79	44.63%
Total	177	100%

8.Current Status of Mobile Phone Usage among College Students in the Pilot Study

8.1 Excessive Mobile Phone Usage Time

The majority of students spent more than 6 hours a day using their mobile phones online, with a certain proportion (7.91%) spending more than 10 hours daily. Only a small number of students (4.52%) spent 2-4 hours online daily. Excessive mobile phone usage impacted students' physical health. In the pilot survey 52.54% of students experience ear pain from prolonged phone calls, and the majority of students (71.75%) report neck and shoulder pain due to frequent phone use. Additionally, 23.16% of students have been involved in traffic accidents because they were too absorbed in using their phones.

Table 2. Daily Time Spent by College Students on the Internet Using Mobile Phones

Option	Subtotal	Percentage
2-4H	8	4.52%
4-6H	45	25.42%
6-8H	76	42.94%
8-10H	56	31.63%
More than 10H	14	7.91%

8.2 College Students Are Inseparable From Their Mobile Phones

College students generally considered mobile phones an essential part of their lives and experience anxiety when their phones were not around. Most students (85.31%) carried their phones during classes or activities, and only a small portion (1.69%) left their phones at home or in the dormitory. Because of this, more students choose to play with their phones in class rather than listen to the teacher, affecting their studies.

Table 3: Where Students Place Their Mobile Phones During Class

Option	Number of Students	Percentage
Carry it	151	85.31%
Leave it at home or in the dormitory	3	1.69%
Place it where they can see it	17	9.6%
Hold it in their hand	6	3.39%

As shown in Table 4, results indicated that students most commonly use their phones before and after sleep (53.67%), followed by during boring self-study sessions (29.38%). The lowest proportion of phone usage occurred at gatherings (6.21%). Results showed that students are most likely to play with their phones before sleep and when bored, leading to late nights and impacting their health and morning classes.

Table 4. Most Common Situations for College Students to Use Mobile Phones

Option	Number of Students	Percentage
Before and after sleeping	95	53.67%
When bored during self-study	52	29.38%
During gatherings	11	6.21%
On the road	10	5.65%
In class	9	5.08%

8.3 Students Mainly Use Phones for Entertainment Apps Like TikTok, Kwai

The top three entertainment used of mobile phones were social apps (91.18%), gaming (60.66%), and video apps like TikTok and Kwai (50.04%), with listening to music (34.93%) also common. A smaller proportion 26.84% used their phones to read novels. The results showed that the main purpose of mobile phone usage is to kill time and search for emergency information.

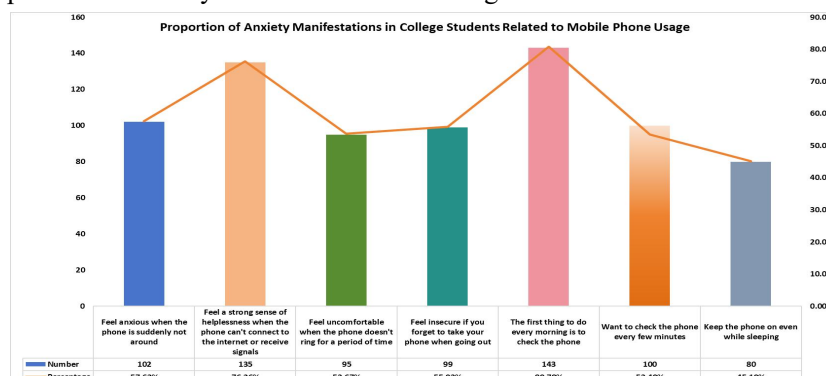
Table5. Proportion of College Students Using Mobile Phones for Entertainment Daily

Option	Subtotal	Percentage
Social apps	161	91.18%
Playing games	107	60.66%
Short video apps like TikTok	89	50.04%
Listening to music	62	34.93%
Reading novels	48	26.84%

8.4 Most Students Are Overly Dependent on Their Mobile Phones

According to the data, most respondents (45.76%) felt anxious or uneasy when their phones were lost or suddenly unavailable, and some students even felt they could not live without their phones (11.86%). Most people felt anxious without their phones. About 76.26% of students felt powerless when their phones were offline or out of signal. Around 53.67% feel lonely and uncomfortable if their phones do not ring for a while (half a day, a day, or two days). More than half (55.93%) felt insecure when they forgot their phones when going out. About 80.78% of college students checked their phones first thing in the morning, fearing missing any messages. This fear of missing out was severe, with 56.49% checking their phones every few minutes, and 45.19% keeping their phones on even while sleeping.

Table 6. Proportion of Anxiety Manifestations in College Students Related to Mobile Phone Usage



8.5 Overall Situation of Mobile Phone Addiction among College Students in the Pilot Study.

As shown in Table 1, among the 177 students surveyed, 98 met the diagnostic criteria for mobile phone addiction, accounting for 55.37% of the respondents. The results indicated that mobile phone addiction among college students is quite severe, affecting their lives and studies.

9. Findings and Conclusions

9.1 College Students Generally Use Phones Less for Study

Most students use phones for entertainment rather than study. Many lack self-discipline and time management. 65.56% occasionally delay studies due to phone use; 23.61% often delay studies; only 10.83% use phones without affecting studies. This impacts physical and mental health and leads to dependency.

9.2 Entertainment Functions Are Highly Attractive

Phones partially replace computers. New apps allow full subjective initiative. Anonymous and instant communication is especially appealing. QQ, WeChat, Microblog are changing mainstream communication modes. Their novelty, fashion, and convenience are highly attractive to college students.

10. Recommendations

10.1 Encourage Physical Exercise to Alleviate Phone Dependence

Physical exercise plays a positive role. Schools should organize diverse sports activities to reduce phone dependence and daily usage time. Scientific exercise stimulates positive emotions, helps release negative emotions and psychological pressure, and prevents immersion in the virtual world.

10.2 Conduct Group Psychological Counseling to Regulate Phone Usage

Psychological health teachers should emphasize phone addiction, regularly conduct group counseling sessions, explain harms of addiction to mental health, physical health, and personal development. Teachers should guide mutual monitoring, strictly limit daily phone time, encourage physical exercise and reading, divert attention, and improve self-control. Guide students to use phones as learning tools, download educational apps, balance study and entertainment.

10.3 Emphasize Psychological Health Education to Enhance Self-Control

Improve the psychological health education system. Use school's WeChat public account to push articles and short videos on mental health and phone addiction, allowing students to learn while using phones. Compile counseling cases, provide methods to alleviate addiction, innovate education methods, eliminate resistance, and truly help students overcome addiction.

10.4 Leverage Student Associations to Improve Social Skills

Student association activities promote cross-class, cross-major, and cross-grade communication, enhancing social skills and distracting from phone dependence. Psychological health teachers can guide psychological and drama associations to rehearse psychological dramas, conveying knowledge through easy-to-understand performances, increasing awareness and attracting more students to join associations.

10.5 Strengthen Family Care and Guidance to Improve Self-Discipline

Guide parents to participate in psychological health education. Make them aware of the impact on professional education, moral cultivation, and employment. Make parents aware of children's phone addiction issues and cooperate with school's efforts to build a collaborative education model, enhancing students' self-discipline and resilience.

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