Mechanism of College Students' Smartphone Addiction and Relevant Preventive Measures

Weimin Yao

Business School, Macau University of Science and Technology, Macau, China

Abstract: At present, the dependence of college students on smartphones has reached an unprecedented level, and even there is an addiction phenomenon. This article discusses the behavior intention of college students' smartphone addiction and studies the formation mechanism of smartphone addiction, and this study is conducive for the education authorities to formulate effective intervention countermeasures pointing to the factors that affect the causes of college students' smartphone addiction. The article focuses on the pain points and difficulties in the current higher education management, which is innovative to some extent.

1. Introduction

With the approaching of the digital age, the Internet has gradually become the most important element in our daily learning, life and work. According to data from the International Telecommunication Union, the number of Internet users in the world has increased to 3.9 billion, exceeding half of the world's total population for the first time. Among them, young people surf the Internet more frequently than the elderly, and the use rate of the Internet by young people aged 15 to 24 continues to grow. In the least developed countries, up to 35% of individual Internet users are within this age range, and relevant proportion in developed countries is 13%, compared with the global average proportion of 23%. China and India alone have 320 million young people who are using the Internet [1]. (International Telecommunication Union, 2017). As of June 2019, the number of smartphone users in China reached 847 million, marking an increase of 29.84 million over 2018. The proportion of Internet users using smartphones rose to 99.1% from 98.6% at the end of 2018 [2].

In the past few decades, the popularity of the Internet has increased even faster in university campuses. Many college students have been found to be addicted to the Internet. According to the survey company: 6.44% of freshmen in the Northwest of the United States showed symptoms of Internet addiction (Ni, Yan, Chen, Liu, 2009). According to another study of students using the Internet in the United States, a university in the Southeast Region reported that 90% of the participants said they used the Internet every day. About half of the samples meet the criteria for Internet abuse. In China, according to the 2018 Survey on Smartphone Use of College Students issued by McKinsey & Company Report, more than 80% of college students feel addicted to smartphones. A recent survey also shows that the detection rate of smartphone addiction among college students is 14.5%-23.43%, with an average daily use time of up to 6 hours.

Many reports show that patients with smartphone addicts or other Internet addicts are more likely to have health problems. For example, Kittinger, Correia and Irons (2012) pointed out that the popularity of many online social networking sites has led to research on potential use risks, including Internet addiction. The potential negative effects of excessive-use of the Internet on college students include behavioral problems, interpersonal problems, educational problems, psychological problems, physical problems and Internet abuse, as well as some positive effects (Suhail, 2006)[3]. Psychosocial stresses such as insomnia, anxiety, depression, stress and low self-esteem may also occur (Younes et al., 2016) [4]. Reed and Reay (2015) research pointed out that there is a negative correlation between the level of network use and several aspects of students' learning motivation, such as internal goal orientation, learning control, self-efficacy of learning, etc.

2. Concept of College Students' Smartphone Addiction

Many scholars, based on Internet addiction and other related concepts, believe that excessive use of smartphones belongs to behavioral addiction and technical addiction, and define it as Smartphone Addiction[5], which refers to psychological dependence caused by excessive use of smartphones by individuals, thus losing control over the use of smartphones and related services, resulting in interference in daily life and psychological or behavioral problems[6]. Some domestic researchers have defined 6 symptoms of smartphone addiction: Prominence, withdrawal, conflict, recurrence and recovery, tolerance and emotional changes [7].

Although the terms used by the researchers are not exactly the same, they all emphasize four common characteristics: (1) They lose the control over the use of smartphones, such as excessive frequency of use or inability to control the use of smartphones in important occasions, including inability to control the use of smartphones in class; (2) They are psychologically dependent on smartphones, pay too much attention to smartphones and smartphone space, and ignore the surrounding environment and real life; (3) Withdrawal symptoms occur, mainly psychological withdrawal. When individuals cannot use their smartphones or their smartphones are not around, negative emotions such as anxiety, loss and irritability will occur. (4) Addiction has adverse effects on individual interpersonal communication, learning performance, work motivation, physical and mental health, etc.

3. Influencing Factors of College Students' Smartphone Addiction

3.1 Personality Traits of College Students

American psychologist Eysenck proposed 3 personality dimensions according to the 16 root traits obtained by Cattell: Introversion and extroversion, neuroticism and psychoticism. Tupes & Christal et. al. reanalyzed the characteristics of Cattell with lexicological methods and found five relatively stable characteristics, namely, openness, conscientiousness, extroversion, easygoing and neuroticism. Personality is the main psychological variable that affects individual behavior. Therefore, researchers think that personality has a certain relationship with individual addiction.

Some researchers who study college students' behavior have found that college students' personality factors have an impact on their smartphone use behavior. College students with extroverted and neurotic personality will spend a lot of time indulging in smartphone, and college students with neurotic personality are more likely to rely on smartphones. Neurotic personality is extremely easy to show the characteristics of low self-control and unwillingness to contact with people, so it is easier to seek identity through online social media. According to research, it is found that personality traits are closely related to smartphone addiction. Some scholars believe that individual college students may have a personality that may lead to smartphone addiction.

3.2 Social Exclusion of College Students

Social exclusion has two meanings in terms of sociology and psychology. The definition of sociology is mainly about the research on the human poverty, resource deprivation and disadvantage concepts and theories. At first, the study of human poverty mainly shifted from the research of individuals and families to the research of the whole society, economic development, political establishment and the stability of the environment. At present, the research on social exclusion is more based on sociological viewpoints, mainly on social exclusion and the policy implementation of the society in which it is located, as well as the attention paid to vulnerable groups, etc. The definition of psychology mainly focuses on personality traits and interpersonal communication. As an individual, he hopes to be accepted by social groups and has a strong sense of belonging. When he is not accepted by family members, classmates, colleagues and friends, he will feel excluded. College students are a kind of large group. Due to the large gap between urban and rural areas, family economic differences and geographical location differences in China, students' behaviors are quite different. For some students who cannot integrate into class group and roommates due to poverty, appearance characteristics, academic performance, living habits and

other factors, they will suffer from interpersonal "cold violence" and exclusion. Individuals who suffer from exclusion sometimes take positive corrective actions and reintegrate into the group, but some students also seek ways and groups that can be acceptable. The characteristics of Internet social media and online games make them find a destination.

Researches have proved that excluded people may be more inclined to search for violent online games, while excluded teenagers may try to reduce the pain of exclusion by playing violent video games (Riva, 2016). In addition, some researches also show that after social exclusion, individuals have lower motivation to exert their self-regulation ability (Baumeister, DeWall, Ciarocco, & Twenge, 2005). Therefore, excluded teenagers may have lower motivation to resist the temptation to choose violent video games on the Internet, which leads to Internet addiction on the other hand. (Alessandro Gabbiadini & Paolo Riva, 2017)

3.3 Social Avoidance and Distress

Social avoidance and distress were proposed by Watson D and Friend R when they defined social anxiety in 1969. Through research, they believe that social avoidance specifically includes actual social communication avoidance behavior and avoidance willingness and tendency from inner feelings. Social distress is a negative emotion experienced by individuals in the process of social communication, or a lack of positive emotional experience [8]. With the further deep research by scholars in various countries, social avoidance is clearly defined as "a series of psychology or behaviors that individuals actively avoid social communication in the process of social communication".

In the process of social communication, college students' own communication needs cannot be responded or met, which leads to their avoidance and distress. According to Maslow's Needs-Hierarchy Theory, the communication needs that cannot be met for college students in the real environment will get to be met through other media. As smartphones have various attributes to meet their needs, therefore, smartphones have become the first choice for college students, but excessive use of smartphones will lead to dependence on smartphones. Long-term dependence will make college students pay less attention to the improvement of interpersonal relationships in real life, thus causing social anxiety, which will lead to college students' smartphone addiction [9].

3.4 Smartphone Network

At present, mobile phones are basically smartphones, which not only have the functions of traditional phones, but also have the function of wireless Internet access. Smart phones can achieve a high degree of integration of functions like learning, socializing, shopping, entertainment, games, tourism, information sharing by installing various functional APPs. Smartphones satisfy and facilitate the daily life of college students, but due to excessive dependence on smartphones, college students may be more likely to excessively use or even abuse them, thus causing students technically and psychologically independent on phones and causing the addiction. With the informatization of education and the personalization and customization of teaching contents, smartphones have become an important learning tool. College students born in the ecological society of the Internet have more preferences for smartphones, which leads to more smartphone usage behaviors. In addition, due to the portability of the smartphone, college students can view emails, go shopping, play games or browse social networking sites at any time. This function enables college students to improve their learning efficiency and increase personal psychological satisfaction without paying too much energy in the process of using smartphones, thus increasing the use time and degree of relying on smartphone, which is more likely to lead to smartphone addiction.

4. Intervention Strategies for College Students' Smartphone Addiction

4.1 Strengthen Effective Social Guidance

Due to its high efficiency and convenience, smartphones have increasingly become an

indispensable part of college students' social life, even affecting all fields of social life services. In addition to its convenience, smartphones also have many negative effects. College students' excessive use of smartphones leads to dependence and addiction behavior, which not only affects their academic achievements, interpersonal communication and social life, but also leads to serious mental health problems. Online loans in smartphone APPs have seriously affected the lives of college students, and even affected their families. Some students are addicted to smartphone games, which makes it unable to guarantee their normal study time and exercise time. Many students choose to sleep during class or play truant. The use of smartphones when walking, riding bicycles and electric vehicles leads to traffic accidents, etc. Therefore, from the perspective of the state and society, it is required to pay extensive attention to, and effectively guide college students in, the use of smartphones. It shall, through strengthening the supervision of various APPs of smartphone, formulate information security laws and regulations, and standardize the practice behavior of practitioners; Through scientific and technological means, college students are warned to have a good rest when using smartphones to avoid excessive dependence. At the same time, it shall strengthen the management of college students' psychological and physical health, monitor college students' extracurricular physical exercises and improve their physical fitness through the use of smartphones, and implement scientific and effective guidance to the students.

4.2 Strengthen the Management of Smartphone Use in Schools

Schools should strengthen and guide the rational use of smartphones by college students. Construct rich and colorful campus culture and improve the teaching management system. Carry out rich and colorful campus cultural activities suitable for the college students, and organically combine college students' second class with professional learning programs, so as to improve college students' participation and divert their attention. Through community activities and innovative and entrepreneurial activities, improve the quality of college students in an all-round way, and improve the quality of extracurricular activities, so that students can self-examine on themselves, improve themselves and encourage themselves. Psychologists and psychiatrist are widely invited to give lectures on cases of smartphone addiction for college students. At the same time, strengthen the construction of academic atmosphere and professional ethics, guide and encourage students to study hard and actively, strengthen teaching management, organize teachers to carry out teaching reform, change traditional teaching methods, and improve students' interest and participation. Smartphone boxes or smartphone bags shall be set up in the classroom to guide students not to use smartphones during class. Strengthen the humanistic management of college students, and try to adopt the method of persuasion, so that college students can actively reduce the use time of smartphones and weaken their dependence on smartphones.

4.3 Guide Teachers to Actively Educate Students

Teachers should teach students according to their characteristics, arouse students' interest, endow students with learning ability, and stimulate them with the viewpoint of "interest is the best teacher". Make a good career planning for students, guide students to establish clear learning objectives and motives, and provide help for students' future career development. Teachers should actively take advantage of their professional level, guide students to be interested in learning, stimulate students' internal driving force in learning, use their professional quality and personality charm, build teachers' influence, actively make friends with students, open students' hearts, and warn students to actively return to reality instead of being indulged in the Internet world. Make good use of management skills, improve students' participation in the classroom, make students have a strong interest in knowledge and help them overcome smartphone Internet addiction.

4.4 Improve College Students' Self-control Ability

Although college students are over 18 years old, they are still in the transitional stage of adulthood and their outlook on life and values have not yet been fully formed. They are in lack of mature logical thinking ability and ability to analyze and solve complex problems. However, college students were born in the information society and are "aborigines" of the Internet world.

The curiosity and adventure are their labels. The rich and colorful Internet world makes it difficult for them to resist the attraction of the "smartphone world" and they start "losing control" in smartphones, resulting in smartphone dependence or addiction due to excessive use. Considering the students' behavior, it is a must to improve their self-control ability. First of all, college students should have a clear understanding of their own personality traits through psychological tests, know their own interests, advantages and disadvantages, take advantage of strengths and avoid weaknesses, improve self-confidence and self-control, and use their strong willpower to overcome the allure of smartphone networks. Secondly, college students should carry out career planning, set goals to facilitate interest in learning, and improve the execution efficiency of learning through clear planning. Thirdly, through participating in a large number of community activities and public welfare activities, college students continuously enrich themselves, stimulate themselves to establish good mental and behavior patterns, and better improve their ability to restrain themselves and control themselves.

5. Summary

College students' smartphone addiction is a negative consequence brought by scientific and technological progress, and its negative impact on college students' physical and mental health has aroused widespread concern of the whole society. Especially in South Korea and Taiwan, smartphones are more popular and therefore the addiction problem is more serious. With the rapid development of Internet and artificial intelligence technology, smartphones have become a necessity for college students. Closely monitoring and establishing intervention strategies will become a long-term and hard task for educators in the future. Only through continuous research and practice can the increasingly prominent problem of smartphone addiction be solved.

References

[1] The website of 44th China Internet Development Status Statistical Report www.cac.gov.cn.

[2] Tencent Education- Marcus (2018). Survey on Smartphone Use of College Students in 2018.

[3] Chen Hui, Xu Danyang and Yang Zhihui (2017). Neuroticism and Smartphone Addiction of College Students; Sequence Mediating Effect Analysis. Chinese Journal of Clinical Psychology. no.5,pp.888892.

[4] Young K. Internet addiction. (1998). The emergence of a new clinical disorder. CyberPsychology & Behavior .no.1, pp. 237-244.

[5] Bragazzi NL, Pionte GD. (2014). A proposal for including nomophobia in the new DSM-V. Psychol Res Behav Manag. .no.7, pp. 155-60.

[6] Walker M B. (1989). Some problems with the concept of "gambling addiction": Should theories of addiction be generalized to include excessive gambling. Journal of Gambling behavior.no.5 (3), pp. 179-200.

[7] Rachlin H. (1990).Why do people gamble and keep gambling despite heavy losses?. Psychological science, no1 (5), pp.294-297.

[8] Watson D & Friend R (1969). Measurement of social evaluativeanxiety. Journal of Consulting and Clinical Psychology.no33 (4).pp.448-50.

[9] Mei Songli (2008). A Study on the Psychological Mechanism of Internet Addiction among College Students. Jilin University.