

Analysis of the Impact of Student Internet Addiction on Self-Efficacy and Countermeasures after the Resumption of Classes During the COVID-19 Pandemic

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Abstract: This study aims to investigate the impact of internet addiction on the self-efficacy of middle school students after the resumption of classes during the COVID-19 pandemic, and to analyze corresponding countermeasures. In the field of education, the application of self-efficacy has significant implications. Enhancing individual self-efficacy plays an important role in the prevention and treatment of internet addiction. There is a negative correlation between internet addiction and self-efficacy, meaning that the higher the level of internet addiction, the lower the self-efficacy of middle school students. Based on this, this paper proposes interventions to enhance self-efficacy and prevent internet addiction. In a supportive social and policy environment, through concerted efforts from schools and families, we can effectively address internet addiction issues amidst the backdrop of COVID-19, promoting students' physical and mental health development, enhancing their self-efficacy, reducing their dependency and obsession with the internet. Future research could further explore the specific factors influencing internet addiction and self-efficacy, conduct more detailed cross-group comparative studies, and examine the differences and correlations between different groups in terms of internet addiction and self-efficacy. We will also continue to explore the possibility of using intelligent technology to intervene in internet addiction, devising personalized treatment plans tailored to individual characteristics and needs.

Keywords: COVID19, Internet addiction, Self-efficacy, Countermeasure, Feature

1. Introduction

In recent years, the outbreak of the COVID-19 pandemic has greatly changed the global education landscape, especially the popularization and development of online learning. This global crisis has not only had a significant impact on the way schools and universities operate, but it has also changed the way students live and learn. Among them, the phenomenon of student Internet addiction has attracted widespread attention because it may have a profound impact on individual self-efficacy. Therefore, the importance of studying this phenomenon cannot be overstated. Furthermore, it is urgent to identify and propose coping strategies, not only to help students who may be affected by

addiction, but also to provide a theoretical and practical basis for educational institutions and society to develop more effective support measures.

2. Literature review

2.1. Definition and diagnostic criteria of Internet addiction

Adolescent Internet addiction has always been the focus of academic attention in China, and the proportion of Chinese adolescents with Internet addiction is higher than that in other countries [1]. Through clinical observation and exploration, Internet addiction is defined as a mental and behavioral disorder caused by repeated overuse of the Internet, which is manifested by a strong desire to reuse the Internet, withdrawal reactions when Internet use is stopped or reduced, and can be accompanied by mental and physical symptoms [2]. According to the main purpose and content of using the Internet, Internet addiction is divided into online game addiction, Internet pornography addiction, Internet relationship addiction, online information addiction, and online transaction addiction, among which online game addiction is the majority. Through questionnaire measurement and psychobiology, it has been pointed out that online game addiction has a variety of negative effects on the physical and mental health of individuals, such as academic burnout, low self-efficacy, and loss of appetite [3].

2.2. The concept of self-efficacy and its application in the field of education

Self-efficacy refers to an individual's assumptions and judgments about whether he or she is capable of performing a certain behavior. The concept was first coined by psychologist Bandura in 1977, who defined it as "the degree of confidence that people have in their ability to use the skills they possess to accomplish a certain work behavior". In the field of education, the application of self-efficacy has an important impact. It involves both students and teachers.

First, students' self-efficacy influences their attitudes towards school and curriculum, as well as their academic achievement. Students with high self-efficacy are more likely to face learning challenges positively and are more willing to invest time and energy to overcome difficulties and get rid of procrastination, so they tend to perform better academically. Conversely, students with low self-efficacy may feel helpless and frustrated in the face of difficulties, which affects their learning motivation and performance [4].

Secondly, teachers' self-efficacy also has a direct impact on their teaching effectiveness. Teachers with a high sense of teaching effectiveness tend to be confident in their teaching abilities and are better able to cope with the challenges in teaching and improve the quality of teaching. At the same time, their self-efficacy can also affect students' learning self-efficacy, because teachers' behaviors and attitudes can have an important impact on students' learning attitudes and behaviors [5].

In the field of education, improving self-efficacy is an important goal. This can be achieved in a number of ways, such as by providing students with opportunities and experiences to succeed and make them feel empowered and valued, and by providing positive feedback and suggestions to help students develop a positive sense of self. For teachers, they can improve their teaching skills and enhance their self-efficacy by participating in professional development courses.

2.3. An overview of interventions for internet addiction at home and abroad

Internet addiction has become one of the important social problems faced by contemporary society. Cognitive-behavioral therapy is a common psychotherapy approach that has been applied to treat a variety of addiction problems, including internet addiction. With CBT, individuals can learn to identify and change negative patterns of thinking and behavior that lead to excessive network use, thereby reducing their dependence on the network. Family intervention is an important tool to help

family members understand and cope with internet addiction. This intervention can include family meetings, family therapy, and homeschooling sessions designed to improve communication within the family, strengthen the family support system, and assist members in developing strategies to reduce internet use. In some cases, medication can be used as an intervention for internet addiction. For example, antidepressants, anti-anxiety medications, etc., can help alleviate symptoms of anxiety and depression associated with addiction, thereby reducing dependence on the web. Schools and educational institutions can help students, faculty, and staff establish correct awareness and habits of Internet use by carrying out Internet addiction prevention education activities, formulating a code of conduct for Internet use, and providing psychological counseling services.

2.4. Research on Internet addiction and self-efficacy

Self-efficacy refers to an individual's evaluation and confidence in his or her own abilities, which is an important concept in the social learning theory proposed by Bandura. In the field of Internet addiction research, more and more studies have paid attention to the relationship between self-efficacy and Internet addiction, trying to explore the interaction and mechanism between the two.

Studies have shown that there is a correlation between an individual's self-efficacy and their susceptibility to and degree of internet addiction. Individuals with low self-efficacy are more likely to fall into over-reliance and addiction to the Internet, as they may lack confidence in controlling their behavior and find it difficult to effectively manage and regulate their online use.

Several studies have focused on the importance of improving individual self-efficacy in the prevention and treatment of internet addiction. By enhancing individuals' self-efficacy, it can help them better understand and control their own Internet usage behavior, and reduce their dependence on and addiction to the Internet.

An individual's self-efficacy is influenced by many factors, including personal traits, social support, family environment, etc. For example, the way families educate and communicate with family members may affect an individual's self-efficacy, which in turn can further influence their internet use behavior and the development of internet addiction.

Future research can further explore the specific mechanism of self-efficacy in the formation and intervention of Internet addiction, as well as its relationship with other psychological factors. At the same time, empirical research and intervention practice can be combined to explore how to effectively improve individual self-efficacy, so as to prevent and treat Internet addiction.

2.5. New features of internet addiction in COVID19 context

Since its outbreak in early 2020, the novel coronavirus pandemic has become a global public health crisis that has had a profound impact on people's lifestyles and mental health. In this context, the problem of Internet addiction has shown some new characteristics and trends, which have attracted the attention of researchers and policymakers.

In COVID19 context, internet addiction presents new characteristics such as increased social isolation and loneliness, the impact of remote work and learning, excessive access to information and anxiety, online entertainment and escapism, and stress in family and personal relationships. These characteristics highlight the need for more attention and effective intervention on Internet addiction during the epidemic to protect people's physical and mental health and social functioning. Future research and practice should focus on these emerging aspects, implementing tailored interventions to assist individuals in effectively managing the risks associated with Internet addiction [6].

3. Findings

3.1. Statistical relationship between Internet addiction and self-efficacy

3.1.1. Negative correlation

The study found a significant negative correlation between internet addiction and self-efficacy. This means that individuals with higher levels of internet addiction tend to have lower self-efficacy. For example, a study targeting adolescents revealed a noticeable negative correlation between the severity of internet addiction and self-efficacy, indicating that adolescents with more severe internet addiction typically exhibit lower levels of self-efficacy. These research findings underscore the intricate relationship between internet usage patterns and individuals' perceptions of their own capabilities and efficacy, particularly within the developmental context of adolescence. These findings emphasize the urgency of targeted interventions aimed at alleviating internet addiction and promoting the development of robust self-efficacy among adolescent populations.

3.1.2. Role of self-efficacy in internet addiction interventions

Self-efficacy plays an important role in the prevention and treatment of internet addiction. Studies have shown that improving an individual's self-efficacy can reduce their dependence on the internet and their level of addiction. For example, one intervention study found that by strengthening adolescents' self-efficacy, it was effective in reducing their internet addictive behaviors.

3.1.3. Gender differences

In addition, there are gender differences in the relationship between internet addiction and self-efficacy. For example, the study found that women showed a higher negative correlation between internet addiction and self-efficacy. This means that women may be more susceptible to self-efficacy when it comes to internet addiction.

3.1.4. Influencing factors

An individual's self-efficacy is influenced by a variety of factors, such as family environment, social support, educational attainment, etc. These factors may moderate the relationship between internet addiction and self-efficacy, causing it to exhibit different patterns and degrees. Overall, the results of statistical studies suggest that there is a negative correlation between internet addiction and self-efficacy, i.e., the higher the degree of internet addiction, the lower the self-efficacy. At the same time, improving individual self-efficacy can play a positive role in the prevention and treatment of internet addiction. Future research can further explore the mechanisms and influencing factors of this relationship to better guide the intervention and treatment of Internet addiction.

3.2. Analysis of specific factors influencing self-efficacy

Successful experiences are considered to be one of the most direct and powerful influencing factors. When individuals are successful in a task or activity, their self-efficacy tends to increase. This kind of success experience is not only about completing the task itself, but also about coping with and overcoming difficulties.

Emotional state has a significant impact on self-efficacy. Positive emotions and optimistic attitudes can boost an individual's self-efficacy, whereas anxiety and depression can diminish it. Research indicates that people are inclined to have greater trust in their abilities when experiencing positive emotions, thus bolstering their self-efficacy [7].

Social support refers to recognition, support, and encouragement from others. Studies have found that receiving support and encouragement from others can significantly improve an individual's self-efficacy. This support can come from social networks such as family, friends, colleagues, etc. Social support not only boosts an individual's confidence in their abilities but also helps them cope with difficulties and challenges.

Individuals evaluate their abilities and performance by observing their own actions and outcomes. This self-observation can help individuals establish an objective perception of their own abilities, which can affect their self-efficacy. Studies have found that positive self-observation and self-evaluation can promote the improvement of self-efficacy.

3.3. Comparison of differences between different groups

During the COVID19 pandemic, adolescents are more susceptible to internet addiction and may have a negative impact on their self-efficacy. With school closures and restrictions on social activities due to the pandemic, teens are spending more time online. Prolonged periods of virtual social and online entertainment may lead to a gradual loss of confidence in other real-life skills, reducing self-efficacy.

For college students, the study found that COVID19 epidemic, the impact of Internet addiction on their self-efficacy was also significant. In the process of distance learning, college students need to rely on the Internet to access teaching resources and communicate with teachers and classmates. However, over-indulging in the internet may cause them to neglect the development of other learning and life skills, thereby reducing their self-efficacy.

In the workplace, especially those who have shifted to remote work, internet addiction may have a negative impact on their self-efficacy. Remote work makes individuals need to rely more on online tools and platforms to complete work tasks, and prolonged online use may lead to a decrease in their confidence in their ability to work.

In the elderly group, the impact of Internet addiction on self-efficacy cannot be ignored. During the pandemic, older adults have been using the internet more for information, shopping, and entertainment. However, due to the limitations of their ability to use technology and the possibility of social isolation, internet addiction may reduce their self-efficacy and cause them to have a negative perception of online technology and social media.

4. Countermeasure analysis

4.1. Interventions based on research results

Organize safe in-person activities and encourage youth to participate in physical social activities to increase their confidence and participation in real life. Educational sessions on internet addiction and self-efficacy are developed to help adolescents understand the dangers of addiction and provide effective self-management and control skills. Guide college students to set clear learning goals and time management strategies to reduce ineffective online time. Online psychological counseling services have been set up to help college students cope with the psychological pressure brought about by the epidemic and improve their emotional regulation skills. Provide remote workers with training in cybersecurity and technology use to help them leverage network tools and platforms more effectively. Encourage workplace teams to set clear work boundaries, incorporate rest periods, and avoid prolonged, uninterrupted online work sessions. Encourage family members to offer emotional support, spend quality time together, and foster open communication within the family unit [8].

Provide targeted network and technology training for the elderly to help them make better use of network resources. Organize online or offline community mutual aid activities to promote social interaction and communication among older adults.

Through the above targeted interventions, we can more effectively help different groups cope with Internet addiction in COVID19 context and improve their self-efficacy.

4.2. Roles and responsibilities of schools and families

Schools and families should establish a good working relationship to focus on students' Internet addiction and jointly develop and implement interventions. Schools and families should communicate regularly to share students' internet usage and addiction risks, and work together to develop targeted countermeasures and intervention plans. Schools and families should work together to develop students' self-management skills, help them learn self-control and planning, and avoid Internet addiction. Schools and families should work together to provide social and psychological support to students to help them better cope with the stress of the pandemic and internet addiction. Schools and families should establish a common monitoring and evaluation mechanism for students' Internet addiction, and regularly check for changes in students' Internet use and self-efficacy.

Through the joint efforts of schools and families, we can more effectively deal with the problem of Internet addiction in the context of COVID19, promote the physical and mental health development of students, improve their self-efficacy, and reduce their dependence on and addiction to the Internet. At the same time, it is necessary to pay attention to adjusting and optimizing countermeasures according to the actual situation and students' needs, so as to achieve positive interaction and cooperation between schools and families.

4.3. Social, environmental and policy support

First, the government and relevant departments should formulate and improve policies for the prevention and control of Internet addiction, and clarify the definition, identification criteria and intervention measures for Internet addiction. Secondly, it is necessary to carry out publicity and education activities on Internet addiction for the public and specific groups to raise the awareness and attention of the society on the problem of Internet addiction. The government can promote the establishment of a mechanism for school, family and social cooperation to jointly address the problem of Internet addiction among students. Furthermore, it is essential for the government to enhance the research, development, and implementation of cybersecurity technologies. This will create a secure online environment and help mitigate the factors that contribute to cyber addiction [9]. At the same time, strengthen the supervision of online platforms and applications, regulate online content and services, and reduce the impact of negative information on individuals. Finally, it is necessary to establish Internet addiction intervention institutions or provide financial support to provide professional psychological counseling and rehabilitation services for Internet addiction individuals. Encourage communities and social organizations to participate in efforts to prevent and control Internet addiction, organize and carry out relevant activities and services, and provide social and emotional support.

5. Conclusion

We summarise relevant research on internet addiction, self-efficacy, and internet addiction in COVID19 contexts. Studies have shown that there is a negative correlation between internet addiction and self-efficacy, i.e., the higher the level of internet addiction, the lower the self-efficacy.

High self-efficacy can reduce an individual's dependence on and addiction to the Internet, and improve the ability to cope with Internet addiction. There are differences in the perceived impact of self-efficacy of Internet addiction among different groups, such as adolescents, college students, working groups, housewives and housewives, and elderly groups, in COVID19 contexts. These

differences may be influenced by factors such as lifestyle changes, the level of social support, and online usage habits brought about by the pandemic.

Future research can further explore the specific factors affecting Internet addiction and self-efficacy, including individual psychological characteristics and social environmental factors. Conduct more cross-group comparative studies to explore the differences and connections between different groups in terms of internet addiction and self-efficacy. Conduct long-term follow-up studies to understand how the problem of internet addiction is evolving and changing. To assess the effects of different interventions on individual self-efficacy. To study the impact of social support and policy measures on internet addiction, and to evaluate their effects and problems in practice. In the future, we should continue to explore the possibility of using technology to intervene in Internet addiction, such as smartphone applications and online counseling. Develop individualized internet addiction treatment programs that are tailored to individual characteristics and needs.

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