

## Effect of Internet Addiction on College Students' Mental Health Level Based on Fuzzy Neural Network

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**Abstract:** Internet addiction (IAD) refers to the uncontrolled impulse to surf the Internet under the action of non-addictive substances, which is manifested in the obvious social and psychological impairment caused by excessive use of the Internet. IAD has become a major new issue facing universities in the new situation. Peer education is a form of education in which peers or people who have a common language share information, ideas or behavioral skills to achieve educational goals. The so-called Internet addiction usually refers to the excessive use or even abuse of the Internet in daily life. Some students call it a pathological use of the Internet by people. Based on fuzzy neural network, this study further explores the impact of Internet addiction disorder on physical, psychological and social functions of college students. Schools and educators should strengthen communication and exchanges with college students when conducting online adulthood addiction interventions, and carry out targeted psychological counseling work to guide college students to use the Internet correctly.

### 1. Introduction

Internet addiction (IAD) refers to the uncontrolled impulse to surf the Internet under the action of non-addictive substances, which is manifested in the obvious social and psychological impairment caused by excessive use of the Internet. At present, we generalize Internet addiction disorder as uncontrollable impulse of Internet-surfing behavior under the action of non-addictive substances, which is manifested by overuse of the Internet, resulting in obvious social and psychological impairment of individuals [1]. The existing evaluation methods of Internet addiction are mainly based on the diagnostic criteria of clinical medicine to formulate the Internet addiction scale, and use questionnaire survey to evaluate and analyze the respondents. But there are some limitations because these models are not precise enough to guarantee them [2]. The proportion of college students in online users has consistently topped the list, and they will be the biggest potential group for internet addiction. The IAD problem has become a new topic facing colleges and universities in the new situation [3]. Peer education refers to an educational form in which peers or people who have a common language for some reason share information, ideas or behavioral skills to achieve educational goals [4]. Peer education is increasingly used in health education for its cultural suitability, acceptability, and economics.

College students' internet addiction has become a common phenomenon among college students in China, and has aroused widespread concern from all walks of life and many scholars [5]. The so-called Internet addiction usually refers to the excessive use or even abuse of the network in daily life, and some students call it a pathological use of the network. College students' internet addiction seriously affects their physical and mental health [6]. Here we analyze the mental health status of college students who are addicted to the Internet in order to carry out effective psychological intervention. Internet addiction refers to the phenomenon of uncontrolled impulse of Internet-surfing behavior under the action of non-addictive substances. It is mainly manifested in the damage of individual's obvious social and psychological functions caused by excessive and improper use of the Internet, accompanied by tolerance, withdrawal reaction and compulsive behavior related to the Internet [7]. The method of fuzzy comprehensive evaluation improves the

accuracy of Internet addiction prediction, but the calculation is complex and does not have the ability of self-learning. Therefore, the goal of further research is to propose a self-learning fuzzy neural network. This study is to further explore and analyze the impact of Internet addiction disorder on college students' physical, psychological and social functions from the perspective of negative effects.

## 2. Materials and Methods

Internet addiction has a significant negative impact on the mental health of college students. In particular, four symptom indicators of obsessive, interpersonal sensitivity, depression, sleep and diet, Internet addiction college students have reached a positive level. This result proves that IAD itself is a compulsive behavior [8]. Excessive network dependence leads to the weakening of interpersonal adaptation in college students, the increase of depression, and the destruction of sleep and diet. Internet addicts were significantly different in the somatization, obsessive-compulsive, interpersonal-sensitive, psychotic, and positive syndromes compared with the control group. There were significant differences in the number of depression, anxiety, and positive symptoms between the two groups. The study showed that online addicts have psychological problems of somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, and psychotic tendency [9]. The influence of long-term Internet access, the constant belief in Internet Affairs and the willingness to believe in opportunities and people has changed the normal social functions such as work, study, life and interpersonal communication, as well as their own psychology and body. When Internet addicted college students fall into the internet, they will feel that the Internet has great attraction and can not help contacting the internet. And the longer the contact, the greater the dependence, and eventually develop into a compulsive behavior.

When analyzing the effects of various treatment, intervention and preventive measures, we often use complex and multi-level multi-factor correlation analysis, clustering and factor analysis to find the causal relationship among the factors. To test the change of the accuracy of Internet addiction behavior health care operation under different integration scales. The average value is taken as the final classification accuracy. When constructing base classification, we should consider the storage and time overhead allowed in practical application to select the appropriate integration scale. As shown in Figure 1.

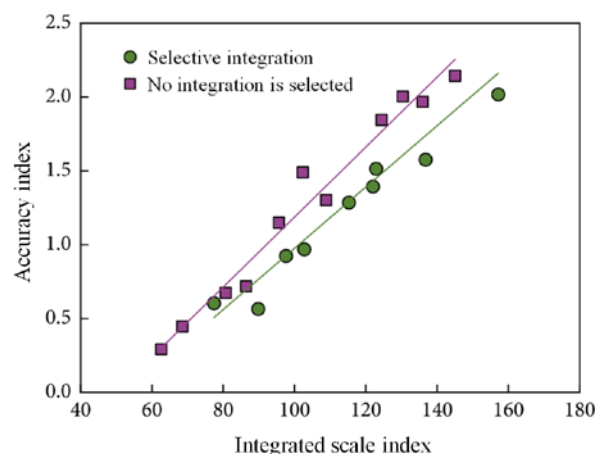


Figure 1 Effect of different integration scales on the accuracy of online addiction behavior health care operations

The Internet addiction group has obvious somatization, obsessive-compulsive symptoms, interpersonal sensitivity, anxiety, depression, and psychotic tendency. It may be possible to increase the level of dopamine in the brain with long-term Internet access. The patient is presented with a high degree of excitement in a short period of time, and the virtual world indulging in the network cannot be extricated. Internet addiction seriously affects the physical and mental health, learning and life of college students, and sometimes even jeopardizes their lives. Over time, it causes a series of complex physiological and biological changes. In particular, autonomic dysfunction, imbalance

of hormone levels in the body. This causes changes in physical discomfort, behavior, and emotions. First of all, it is manifested in the spiritual dependence, that is, the thirst for the Internet, the performance of "there is a sense of loss after the network", "I don't forget the Internet", "I can eliminate all kinds of unpleasantness when I go online." Some needs lead to the behavior of surfing the internet, and the result of surfing the Internet is satisfied to a certain extent, which further strengthens the behavior of surfing the internet. Repeated behavior may lead to excessive amphetamine secretion, resulting in a large number of "stereotyped behavior", which can not be controlled by will, and ultimately form "internet addiction".

It should be noted that the etiology of behavioral disorders of Internet addiction is composed of many factors. The results of single factor analysis are often unreliable and should be avoided in work. Popularization and application of these technical knowledge is essential for conducting psychological and behavioral health care guidance. It is necessary to select an initial node randomly. The accuracy of the final model is different for different initial nodes. The experimental results are shown in Figure 2.

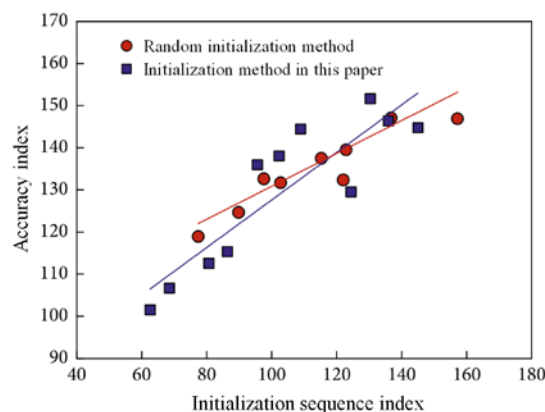


Figure 2 Different initialization sequence

### 3. Result Analysis and Discussion

Internet addiction significantly enhanced the level of college students' de-inhibition. It shows that IAD's depressant effect also exists in Chinese society. In virtual interpersonal communication, people do not have to be constrained by secular, norms or norms in order to maintain their identity and status. Therefore, it has the function of restraint and relief. People often need to complete the established course according to their roles in society. However, the hidden nature of the Internet makes it impossible for others to truly and effectively understand their true information. This also makes it possible for students to use their virtuality to forge a more perfect self in the use of the Internet. Internet addiction college students had no statistically significant difference between the two symptoms of anxiety and delusion and non-Internet addiction college students. Other symptoms were significantly higher than those of non-Internet addiction colleges [10]. After Internet addiction, the body of the young university was severely devastated. On the one hand, if you go online for a long time, your body will not get exercise, and you will not get enough rest. The whole body is in a state of high consumption fatigue. Due to decreased appetite or limited conditions, the body rarely gets enough nutrients. The body is in a state of low supply and high consumption for a long time, causing physical changes in the Internet addiction disorder.

It is by no means our goal to evaluate the psychological behavior of Internet addiction. Our aim is to find ways to use social and psychological behavioral knowledge and methods to prevent, intervene and treat diseases. Through repeated investigations at the grass-roots level and analysis of the current situation of child health workers in the region, the responsibilities and scope of psychological and behavioral health care and referral system of child health workers at all levels were established. The earlier the diagnosis, the earlier the training, the stronger the intensity and the longer the training time, the better the effect of parents' cooperation. After the intervention, the social life ability of the two groups of Internet addiction students was shown in Table 1.

Table 1 Social life ability of two groups of Internet addiction students after intervention

Group	Independent life	Motion	Contact	Collective activities	Self management
Control group	33.56	22.49	35.39	32.62	29.79
Intervention group	36.79	25.64	37.85	38.79	32.23

Because of the virtual nature of the Internet, students can get information through various ways in the Internet, and then achieve self-fulfillment from emotional and other perspectives. Internet addicts often suffer from other psychological disorders before Internet addiction, especially depression and anxiety disorders. It is suggested that Internet addiction disorder, as a psychological disorder and other psychological disorders, has a certain degree of interaction. In the long run, college students tend to lose themselves in the Internet and cause confusion in self-perception. When the real self can not meet the requirements of the virtual self, the sense of loss often arises. In daily teaching, teachers should effectively guide students to help them divide virtual and reality. And guide students to explore things that can replace the game's sense of accomplishment in reality to improve their Internet addiction. Peer educators conduct online mental health education activities such as prevention of network addiction theme class, college student IAD case analysis, and psychological games. Enhance healthy, optimistic, positive psychological quality, consciously adjust online behavior, resist network temptation, and overcome network dependence.

#### 4. Conclusion

In the research, we deeply realized that peer education needs to be combined with school cultural life and students' social activities ability to establish a set of scientific and effective comprehensive strategy system. Therefore, the intervention of college students' IAD behavior is more effective. Schools and educators should strengthen communication and exchanges with college students when conducting online adulthood addiction interventions, and carry out targeted psychological counseling work to guide college students to use the Internet correctly. In view of the problem of college students' internet addiction, teachers should clearly understand that the role of cognition for students is often greater than the role of compulsory means. Introverted and detail-bound people are prone to Internet addiction. Usually, they have the power of "not reaching their goals, never stopping" when they do things. And the pursuit of everything when doing things, once a certain thing is identified, it is difficult to change. This also requires teachers to change their previous ideas of educating students, to analyze the underlying causes of College Students' Internet addiction from the psychological factors that lead to college students' Internet addiction, and then to implement effective intervention on college students on the basis of the adverse effects of Internet addiction on College students, so as to effectively change the current status of College Students' Internet use.

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