Influence of Social Support on Internet Addiction for Chinese College Students and the Mediating Mechanism

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Abstract: The current research explored the mediating role of online self-disclosure and positive psychological resources in the Correlation between social support and Internet Addiction for college students under the framework of self-affirmation theory. Based on a sample of 3189 undergraduates, statistical analysis towards questionnaires containing demographic variables, social support, online self-disclosure, positive psychological resources and Internet Addiction suggested that: (1) Significant negative correlation existed between social support and Internet Addiction; (2) The effect of social support on Internet Addiction was completely mediated by online self-disclosure and positive psychological resources respectively. On one hand, social support could negatively predict online self-disclosure and then suppress Internet Addiction; on the other hand, social support could enhance positive psychological resources and decrease Internet Addiction. Conclusion: College students’ social support could negatively predicted their degree of Internet Addiction and online self-disclosure and positive psychological resources would be the mediating mechanism.

Key words: Internet addiction • Social support • Online self-disclosure • Positive psychological resources • Self-affirmation theory

INTRODUCTION

With the rapid development of Internet, as of December 2016, the number of Chinese Internet users has reached 731 million (CNNIC 39th National Internet Development Statistics Report), among which college students are the most active group as they have more free time and are more sensitive to the latest technology [1]. However, though Internet brings great convenience for people's access to information, it’s easy for people to become dependent on it and even get addicted to it. College students are going to leave family and school to join in society. At this important turning point, Internet addiction disorder will have adverse impact on their future career, family and personal development. Hence, it’s urgent for current researchers to explore Internet addiction disorder of college students and its influencing factors and internal mechanism.

Internet Addiction Disorder and Social Support: Internet addiction disorder (IAD) refers to Internet tolerance and withdrawal reactions, continuous Internet-use desire and out-of-control behaviors due to long-time inappropriate Internet use [2]. It will bring about a series of negative results including school failure, poor work performance and family discord and even divorce [3, 4]. To prevent and intervene with Internet addiction, researchers began to explore the influencing factors of Internet addiction disorder. Young [5] divides the influencing factors of Internet addiction into three categories: Psychological factors, physical factors and social factors. The researches on social factors mainly focus on limited social support system. These researches assume that Internet addicts turn to develop virtual correlation to compensate for their lack of social support in real life to some extent. Davis [6] argues that lack of social support is the sufficient condition for Internet addiction disorder. A lot of empirical researches on teenagers have found that social support and Internet addiction disorder have significant negative correlation [7, 8]. Therefore, in the Research we also assume that, the more social support a college student receives in his real life, the less likely and
by lower degree he gets addicted to Internet. On the contrary, the less social support a college student receives in real life, the more likely and by higher degree he gets addicted to Internet.

However, the above assumptions only explore the phenomenon level. It’s worth further discussing the causes and internal mechanism of social support’s inhibition effect on Internet addiction. We will explore the mediation effect of online self-disclosure with self-affirmation theory as the framework.

**Online Self-exposure:** Online self-disclosure refers to the process that an individual conveys different information about himself to others through Internet [9]. The more information is conveyed in this way, by higher degree online self-disclosure is made. The Research will explore online self-disclosure’s mediation effect on social support to college students and their Internet addiction disorder under the framework of self-affirmation theory.

Self-affirmation theory holds that people are motivated to spontaneously seek self-affirmation information in order to maintain sense of self-worth and self-integrity [10, 11]. Existing researches have found that social support can provide self-affirmation information of universal significance and perceived social support can strengthen self-affirmation [12]. As found by Shi Zhouyan and Huang Chaofeng [13], seeking mutual care, understanding and respect from each other through online self-disclosure is college students’ deep-hidden motivation on Internet. Thus, lack of social support in real life is likely to drive people to turn to Internet to seek self-affirmation information from the social support and intimate relationship gained through online self-disclosure. Therefore, we assume that social support in real life has a negative effect on online self-disclosure. The less social support a person perceives in reality, the more inclined he is to obtain self-affirmation through online self-disclosure.

Previous researches have found that, on the other hand, online self-disclosure is a positive prediction factor for Internet addiction [14]. High-degree online self-disclosure can trigger strong emotional connection between individuals [15]. This kind of emotional connection plays a great role in the formation of Internet addiction. Even if an individual receives negative emotional feedback from online self-disclosure, he is likely to be more motivated to pursue positive feedback and thus increases the time and energy spent on Internet. For example, Ford and Mauss [16] argue that the pursuit of positive feedback will result in negative consequences, such as more negative emotional experience, more depressive symptoms [17] and more loneliness [18]. These negative experiences will further lead to Internet addiction [19, 20]. Therefore, in the Research we also assume that college students’ online self-disclosure degree has positive prediction effect on Internet addiction disorder.

In conclusion, we assume that from the social support college students receive in real life, their online self-disclosure degree can be negatively predicted and their Internet addiction degree can be positively predicted. Online self-disclosure is a possible mediation mechanism for social support’s prediction effect on Internet addiction disorder.

**Research Hypothesis:** The Research investigates social support’s influence on college students’ Internet addiction disorder and online self-disclosure’s mediation role via questionnaire. We assume that: (1) the social support college students receive has a significant negative prediction effect on Internet addiction; (2) online self-disclosure has a mediation effect on the above correlation. The specific model diagram is shown in Figure 1.

**Research Methods**

**Research Objects:** According to regional economic conditions, we divide the involved provinces into three categories and make stratified sampling. Developed sampling areas include Jiangsu, Guangdong, Shandong and Liaoning, medium developed sampling areas include Inner Mongolia, Hebei, Shanxi, Chongqing, Henan, Guangxi and Xinjiang and under-developed sampling areas include Gansu, Guizhou and Tibet. In the end, we obtain the valid data of 3,189 college students, including 1,121 male students, accounting for 35.15% and 1,964 female students, accounting for 61.59% (104 students without gender variables); the average age is 20.37 years, with the standard deviation of 1.58 years (67 students without age variables).

**Research Tools:** (1) Social support: adopt self-made questionnaire on social support. The questionnaire has four items, respectively representing the general social care and support, care and support from companions, care and support from teachers and care and support from parents that college students receive. We ask respondents to score the 4 items according to their own real experience, where “1” means very little love and support received, “5” means very much love and support received. Cronbach’ $\alpha = 0.77$. 

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(2) Internet addiction disorder: adopt the 8 item scale compiled by Young [4]. Respondents shall answer “Yes” or “No” on eight questions. “Yes” gets 1 point and “no” gets 0 point. With five “yes”, namely 5 points or more, the respondent can be diagnosed as an Internet addict. Cronbach’s \( \alpha = 0.70 \).

(3) Online self-disclosure: adopt self-made single item questionnaire. We ask respondents “How many things about you have your online friends known, but your real-life friends haven’t?” The respondents are asked to make 7 point score on this question. “1” means very few and “7” means quite a lot.

In addition, the questionnaire has collected information on basic demographic variables such as respondent’ sex, age, nationality and family monthly income (family socioeconomic status) etc.

Data Processing: Make statistics and analysis on data with SPSS 22 and MPLUS 7.

Results and Analysis

Correlation between Ratio of College Students with Internet Addiction Disorder and Respondents’ Background Information Variables: The sum of a respondent’s scores on the 8 items of Internet addiction disorder scale is his total score of Internet addiction disorder. After statistical analysis, we get that college students’ average Internet addiction degree is \( \bar{x} = 1.82 \) (s = 1.76). With five points as the boundary of Internet addiction disorder [4], through frequency analysis, we find that there are 263 college students whose total score is 5 or more, accounting for 8.78% of the respondents with valid data. It shows the proportion of college students with Internet addiction disorder has been noticeably high. As shown in the results of independent sample \( t \) test, male students’ Internet addiction score (\( \bar{x} = 2.02, s = 1.96 \)) is significantly higher than female students’ (\( \bar{x} = 1.70, s = 1.61 \)), \( t(1877) = 4.41, p < 0.001 \), Cohen’s \( d = 0.17 \). In addition, there is no significant correlation between college students’ Internet addiction disorder and their nationality, age and family socioeconomic status (Table 1).

Correlation between College Students’ Internet Addiction Disorder and Social Support They Receive and Their Online Self-Disclosure: Sum the score on each item of social support and get the total score and then make descriptive statistics and related analysis on online self-disclosure and Internet addiction disorder scores, as shown in Table 2. The statistical results show that Internet addiction disorder has significant negative correlation with social support and significant positive correlation with online self-disclosure. In addition, social support and online self-disclosure have significant negative correlation.

Social Support’s Influencing Mechanism on College Students’ Internet Addiction Disorder: Adopt the method of multiple hierarchical regression [21] and analyze social support’s influence on college students’ Internet addiction disorder and online self-disclosure’s mediation effect. Take gender, age, nationality and family socioeconomic status as control variables. Firstly directly make regression on Internet addiction with social support
Social support Internet addiction disorder

Online self-disclosure

-0.11***

0.13**(0.14***)

Social Support

Internet addiction disorder

0.09***

Fig. 2: Schematic Diagram on Mediation Effect of Online Self-disclosure

and get $\beta = -0.14$, $t(2711) = -7.40$, $p < 0.001$, $\eta^2 = 0.02$. And then make regression on online self-disclosure with social support and find that online self-disclosure can be significantly negatively predicted with social support ($\beta = -0.11$, $t(2864) = -5.66$, $p < 0.001$, $\eta^2 = 0.01$). With Internet addiction as dependent variable and social support as independent variable, add online self-disclosure as mediating variable to make regression and find that Internet addiction can be significantly positively predicted with online self-disclosure ($\beta = 0.09$, $t(2702) = 4.60$, $p < 0.001$, $\eta^2 = 0.01$). Social support has significant direct prediction effect on Internet addiction ($\beta = -0.13$, $t(2702) = -6.80$, $p < 0.001$, $\eta^2 = 0.01$). Model diagram is as shown in Figure 2:

Randomly take 1000 samples with MPLUS 7.1 and BOOTSTRAP, based on which test the mediation effect of online self-disclosure [21]. The results show that online self-disclosure’s mediation effect is 95%, with the BOOTSTRAP interval of [-0.016,-0.004], not including 0. The above results show that social support’s predictive effect on Internet addiction disorder can be mediated by online self-disclosure.

DISCUSSIONS

The Research finds that the ratio of college students with Internet addiction disorder is 8.78% and male students’ Internet addiction degree is higher than female students’, which is basically consistent with the results of previous studies [19]. In addition, the Research not only verifies social support’s negative prediction effect on college students’ Internet addiction disorder, but also confirms online self-disclosure’s mediation effect.

Social Support’s Inhibition Effect on Internet Addiction Disorder: As proven by the Research’s results, the social support a college student receives has negative prediction effect on his Internet addiction degree, which is basically consistent with the results of previous researches [7, 9]. This effect has many possible reasons. On cognitive level, the self-cognition of the college students who have received enough social support will be more stable and consistent [22], so they’re less motivated to escape from reality and indulge in Internet. On emotional level, social support can effectively reduce college students’ loneliness [23] and depression [24] and improve the subjective well-being of college students [25], which will inhibit Internet addiction disorder [19, 20]. Besides, the research of Alexander, Hadaway and Coombs [26] shows that human’s addictive behavior is not necessarily the effect of the addictive substance itself, but the result of human’s own anxiety. According to the Buffering Model of Social Support as put forward by Cohen and Wills [27], when people are faced with anxiety, social support can buffer its negative results (such as Internet addiction disorder and other different addictive behaviors). Hence, social support’s negative prediction effect on Internet addiction disorder is very stable.

Online Self-disclosure’s Mediation Effect: The Research proves online self-disclosure’s mediation effect. It means the more social support a college student receives, the less he tries to obtain temporary and compensatory intimate relationship through online self-disclosure and take it as self-affirmation information to maintain his sense of self-worth and self-integrity, which will reduce the incidence of Internet addiction disorder. The college students who have received enough social support in real life have developed sufficient intimate relationship in real life and stable and reliable self-disclosure objects that in themselves are individual’s stable external self-affirmation information. These college students’ self-affirmation demands have been met in real life, so they’re probably less motivated to make self-disclosure to Internet friends, which reduce the incidence and degree of Internet addiction disorder. And the college students who receive very few social supports in real life are likely to spontaneously turn to Internet to meet their psychological demands of self-affirmation, which leads to Internet addiction disorder. The Research finds that non-Internet addict group’s identity demand and interpersonal communication demand in reality are significantly better met than Internet addict group and Internet addict group’s interpersonal communication demand in Internet.
is significantly better met than non-Internet addict group [1]. Hence, the self-affirmation information sources in interpersonal identity and interpersonal communication of Internet addicts and non-Internet addicts are significantly differentiated: Non-Internet addicts’ self-affirmation information mainly come from real life, while Internet addicts’ self-affirmation information mainly come from Internet, namely, online world supports his sense of self-worth and self-integrity.

Online self-disclosure’s mediation effect and its inferences show that as for the college students who over-disclose themselves in Internet and get addicted to Internet because they receive too few social support in real life, it’s suggested to eliminating their habit of online self-disclosure in case Internet gradually becomes the base of their sense of self-worth and at the same time to helping them find suitable self-affirmation information in real life as a replacing supporting system. Meanwhile, as for the defensive reactions harmful to long-term personal development such as Internet addiction disorder, the operation methods of self-affirmation (for example, let college students reflect the values important to them) can help college students reduce psychological threats’ (such as social exclusion and rejection) influence on them [12] and prevent them from getting addicted to Internet to escape from reality.

Deficiencies and Prospect: The data of the Research all comes from questionnaire, so no causal relationship can be obtained. For example, many researches explore Internet addiction disorder’s influence on social support and have acquired very good results. Hence, the causal relationship between Internet addiction disorder and social support has to be confirmed in follow-up researches. In addition, the data in the Research is derived from large scale cross-sectional study. Due to manpower, cost and other reasons, we cannot make long-term vertical analysis. If there is long-term vertical data, on one hand, the Research itself has greater value in the sense of development and on the other hand we can make cross-lagged analysis on variables, which is also a possible way to get causal relationship. This is also a way that future research can try.

CONCLUSION

- The ratio of college students with Internet addiction disorder is about 8.78% and male students’ Internet addiction degree is higher than female students’.
- The social support a college student receives and his Internet addiction degree have significant negative correlation.
- Online self-disclosure mediates social support’s prediction effect on Internet addiction disorder.

REFERENCES


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Appendices:

Social Support

Please evaluate others’ care and support for you according to your real experience. The greater the number is, the more care and support you feel. “1” means very little, “2” means little, “3” means average, “4” means much, “5” mean very much. Please circle the corresponding number. For each topic, you can only have one option.

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Very little</th>
<th>little</th>
<th>Average</th>
<th>Much</th>
<th>Very much</th>
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<tr>
<td>1</td>
<td>Care and support I receive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Care and love I receive from classmates or colleagues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Care and love I receive from teacher or boss</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
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<tr>
<td>4</td>
<td>Care and love I receive from parents</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tbody>
</table>
2 Internet addiction disorder
The following are some statements about Internet use, please choose Yes or No according to your actual situation.
(1) Are you addicted to Internet____ ① Yes ② No
(2) Do you need to gradually increase Internet use time to get sense of satisfaction____ ① Yes ② No
(3) Do you often feel hard to resist the temptation of Internet and get offline____ ① Yes ② No
(4) Will you have negative emotional experience and adverse physiological reaction if you stop using Internet____ ① Yes ② No
(5) Every time, your actual Internet use time is longer than you scheduled____ ① Yes ② No
(6) Have access to Internet had any negative impact on your interpersonal relationship, job, education and occupation____ ① Yes ② No
(7) Have you ever lied to your family, friends or psychological consultants about your actual online time and cost____ ① Yes ② No
(8) Do you take going online as a way to escape from problem and relieve negative emotion____ ① Yes ② No

3 Online Self-disclosure
How many things about you have your online friends known, but your friends in real life haven’t?
① None ② Very few ③ Few ④ Average ⑤ Many ⑥ Very many ⑦ Quite a lot