

Research on the Relationship Between Understanding of Social Support and Mobile Phone Dependence: The Mediating Role of Loneliness

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Abstract

In order to explore the relationship between college students' understanding of social support, loneliness and mobile phone dependence, 316 college students were surveyed by understanding social Support Scale (PSSS), mobile phone addiction Index scale (MPAI) and loneliness scale (UCLA). The results showed that loneliness had a complete mediating role between friend support and inefficiency, and that individual friend support had a positive impact on the inefficiency of mobile phone dependence through loneliness. Suggestions on the parent-child relationship and children's mental health.

Keywords

College students; Understanding of social support; Mobile phone dependence; Loneliness.

1. Introduction

As early as 2009, Shi Jianguo immersed an individual in a mobile phone, defined as mobile phone dependence, which refers to the obsession state of individuals losing control of using a mobile phone, resulting in significantly impaired physical, physiological, psychological and social functions. China Internet Network Information Center for China Statistical Report on Internet Development in China (CNNIC) shows that by December 2021, the number of Internet users in China reached 1.032 billion, an increase of 42.96 million compared with December 2020, and the Internet penetration rate reached 73.0%. In Zhang Jian and Yang Shuai's 2019 study, nearly 50 percent of students relied on mobile phones, a significant increase from 30 percent of studies a decade ago. Therefore, in the information age, it is particularly necessary to study the phenomenon of the use of mobile phones.

Through a large number of studies, it has been found that mobile phone dependence is closely related to understanding social support and loneliness. Understanding social support refers to the subjective experience of social support, is the individual in the emotional experience of support, individuals in their social relations can get support, respect, understanding and emotional experience, and on the basis of the emotional satisfaction, the support from parents, friends and other social relations. Parents' support for individuals is mostly reflected in the stage of living together. Individuals get along with their parents day and night. Parents not only guarantee the needs of life, but also provide emotional support. When individuals enter the university and enter the society, they will be more closely connected with friends than their parents. Most individuals will choose to seek help from friends when encountering difficulties, and choose to report good news to their parents, which makes friends become a more important emotional sustenance for individuals.

Loneliness is one of the most common feelings in daily life. Loneliness is a negative emotion that comes from the difference between the expectation of social interaction and the level of reality (Cetin, Tan, Mustafa, et al..2013). Everyone is in various social relations, so the loneliness

generated by individuals comes from the emotional dependence on the group on the one hand, and from the subjective experience of the self on the other hand. Loneliness does not mean being alone, but the lack of inner unhappiness and pain caused by the connection of their own personal needs or desires. In the study of Yang Xiaoyan (2022) and others, it was concluded that loneliness is a predictor of mobile phone dependence. When they first entered the university, they were faced with strange cities, strange campuses, and strange teachers and classmates. In order to get rid of loneliness, college students would choose to use mobile phones to obtain temporary psychological satisfaction. According to the research of Yin Zijun (2022) and others, college students with closed characteristics will feel more loneliness in real life, and have more missed fear experience in the process of social media use, and may even have mobile phone dependence.

Understanding that social support can positively predict the level of individual subjective well-being (Zhang Ping et al., 2020; Niu Yubai et al., 2019), and understanding that insufficient social support will produce a lot of negative emotions, which is significantly negatively associated with loneliness (Liu Xinyun et al., 2020; Karatekin, 2020). Mutual understanding, mutual support and mutual companionship between peers can relieve loneliness to a large extent. Because they are similar in age with friends and have more common experiences and encounter similar difficulties, they can understand each other better and provide more needed emotional support. Understanding social support among college students plays an important role in mental health (Tinajero et al., 2015), and peer support can well alleviate depression, anxiety and other emotional problems due to academic difficulties and academic stress. (Dou Fen et al., 2018; Ye Baojuan et al., 2019; Crockett et al., 2017). For freshmen who just enter the campus, peer support can predict their psychological adaptability, and they can familiarize themselves with and adapt to the campus as soon as possible (Xiang Guangcan et al., 2018).

Therefore, this study speculated that understanding social support can positively predict mobile phone dependence, and that loneliness plays a mediating role in understanding social support and mobile phone dependence. Taking college students as the research object, integrating some previous research results on social support, loneliness status and the phenomenon of mobile phone dependence, we will conduct in-depth research on this basis. The purpose is to reveal the relationship between social support, loneliness and mobile phone dependence, and to understand whether understanding social support has an impact on mobile phone dependence through loneliness. Through the research of different sources of understanding social support and different degrees of loneliness experience, to predict the degree of mobile phone dependence, and the differences between influencing factors.

2. Research Methods

2.1. Subject investigated

According to the principle of convenient sampling, college students in Tianjin were selected and received 316 questionnaires. Through screening, 309 effective questionnaires were 97.78%, including 153 boys and 156 girls, 50 in freshman, 96 in sophomore, 91,72 in Grade 4,167 only children, 142 non-only children, 178 urban residents, 131 in villages, 175 students in literature and history, and 134 students of science and technology.

2.2. Research tool

The Understanding Social Support Scale (PSSS) was revised by Jiang Qianyuan (1999) from Blumenthal et al. (1987). The scale is a social support scale that emphasizes individual self-understanding and self-perception. It consists of 12 projects, including three dimensions: family support, friend support, and other support. The test-retest reliability was 0.85.

The Loneliness Scale (UCLA), which was compiled by psychologists Russell, Peplau and Ferguson in 1978, is a self-rating scale that is one-dimensional and mainly evaluates the loneliness caused by the gap between the desire for social interaction and the actual level. The internal consistency coefficient was 0.88.

Mobile phone addiction refers to the quantity table (MPAI), compiled by Liang Liang of the Chinese University of Hong Kong (2008), and is mainly used to diagnose mobile phone addiction among adolescents and college students. The scale consists of 17 items, including four dimensions: runaway, withdrawal, evasion, and inefficiency. The internal consistency coefficient is 0.86.

2.3. Search procedure

For 307 college students, the research purpose and research ethical norms were included in the questionnaire instruction. The investigation is anonymous and does not involve privacy issues, and all information is for research use only.

2.4. Statistical treatment

Descriptive statistics, correlation analysis, one-way ANOVA and independent sample T-test, regression effect test, mediation effect test were performed on post-screening data using SPSS 25.0.

3. The Results of The Study

3.1. College students understand the basic situation of understanding social support

The results of the PSSS scale of 307 college students showed the lowest score of 17 and the highest score of 84, with a mean score of 60.58 and a standard deviation of 14.56. According to the results, the subject group has a high understanding of social support.

There were significant gender differences in friend support dimensions ($t = -3.95, p = 0.00 < 0.05$), Other dimension differences were not significant, Women (21.97 ± 4.93) received more support than men (19.78 ± 4.79); There are significant differences in family support dimensions among college students of different grades ($F = 3.40, p = 0.02$), Further LSD post-hoc tests indicated that, Available from Table 3-1, The freshman (21.38 ± 5.54) received higher support than the freshman (18.71 ± 5.54), Higher sophomore (20.77 ± 5.33) than junior (18.71 ± 5.54), Fourth grade (5.10 ± 1.36) received higher support than third grade (4.67 ± 1.34). Other demographic variables did not differ significantly.

3.2. Basic situation of loneliness among college students

The results of the UCLA scale of 307 college students showed that the lowest score was 24, the highest score was 71, the average score was 47.14, and a standard deviation was 8.17. Most of the scores were concentrated in the middle fraction, indicating that the group did not feel strong loneliness.

There were significant differences in loneliness among college students between the sexes ($t = 3.71, p = 0.000$). Men (48.83 ± 7.62) produced higher loneliness than women (45.45 ± 8.30). Other demographic variables did not differ significantly.

3.3. Basic situation of college students' dependence on mobile phones

The results of the MPAI scale for 307 college students showed a minimum score of 26 and a maximum score of 75. The mean score was 45.05 with a standard deviation of 9.15. Six of the 309 subjects answered 8 subjects positively, defined as mobile phone dependent, with a detection rate of 1.9%.

There were significant differences in total scores ($t = -12.94, p = 0.000$), runaway ($t = -14.20, p = 0.000$), withdrawal ($t = -13.39, p = 0.000$) and evasion ($t = -7.23, p = 0.000$), and other dimensions. Boys (50.39 ± 7.74) were higher than girls (39.74 ± 7.15), boys (21.42 ± 3.50) higher than girls (16.24 ± 3.07), boys (12.45 ± 2.80) (8.87 ± 2.06), and boys (9.72 ± 2.53) higher than girls (7.70 ± 2.63). Other demographic variables did not differ significantly.

3.4. College students understand social support, loneliness and mobile phone dependence

For the relevant analysis of college students' understanding of social support, loneliness and mobile phone dependence, It can be concluded that loneliness is negatively associated with the escape and inefficiency dimensions of mobile phone dependence, that the total score of understanding social support and all dimensions are negatively associated with loneliness, and that there is a positive correlation between family support and friend support and the inefficiency of mobile phone dependence.

3.5. Test of the intermediary effect of loneliness in understanding social support and mobile phone dependence

In this study, the percentile Bootstrap method was used to test the mediation effect of loneliness between understanding social support and mobile phone dependence. The effect size and confidence interval estimate of the mediation effect between understanding social support and mobile phone dependence was Process using the mediation and regulatory effect analysis program based on SPSS. Using model 4 in process, to understand social support as an independent variable, loneliness as the intermediary variable, mobile phone dependence as dependent variable for the mediation effect test, the results concluded that understanding social support can negatively predict loneliness ($\beta = -0.84, p = 0.00$), loneliness can positively predict mobile phone dependence ($\beta = 0.32, p = 0.00$), understand social support can negatively predict mobile phone dependence through loneliness ($\beta = 0.14, p = 0.01$). Using Bootstrap method to further test, the indirect effect of loneliness between understanding social support and mobile phone dependence is -0.27 , and the confidence interval $[-0.45, -0.10]$ does not include 0, indicating that the mediation effect exists, the direct effect is 0.13 , and the confidence interval $[-0.07, 0, 0.34]$ contains 0, indicating that loneliness plays a complete mediating role between understanding social support and mobile phone dependence. The indirect effect as a percentage of the total effect was 29.48%. As shown in Figure 1.

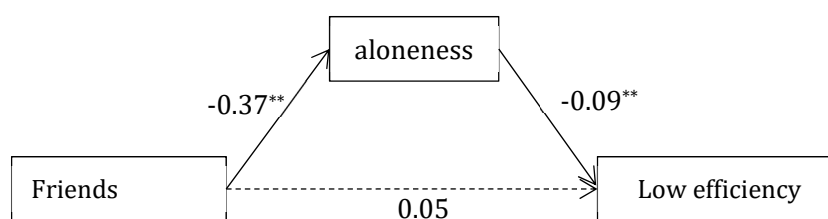


Figure 1.

4. Discussion

Through the analysis of the current situation of college students' understanding of social support, loneliness and mobile phone dependence, we can conclude that the studied college students get high understanding of social support, low loneliness mood, and fewer people are selected to meet the conditions of mobile phone dependence. The results show that understanding social support can play a predicting role in loneliness, and loneliness can predict mobile phone dependence. By analyzing the mediating role of loneliness between the other two

variables, we can understand that social support can play a complete mediating role in mobile phone dependence through loneliness. Similar to the results of previous studies, understanding social support for college students can significantly predict mobile phone dependence, while loneliness can significantly predict mobile phone dependence. Loneliness for college students plays a partial intermediary role between social support and mobile phone dependence (Yang Weiqi, 2015).

In the general cognition, men do not often tell their thoughts to others like women. Men always keep their worries in their hearts. In the long run, men will experience more stress and loneliness. In this study, male loneliness score was higher than female, indicating that male loneliness scores were relatively concentrated, verifying this phenomenon. The reason is that men can less express their inner emotions to the outside world, especially they are not good at expressing negative emotions. When they encounter lonely emotions, they are usually depressed in their hearts. In the face of loneliness, women will digest their negative emotions in various ways, such as chatting with friends, shopping, watching TV series and so on, so their individual scores are scattered. In addition, in this study, women received higher support from friends than men, perhaps because women are good at expressing emotions to friends and have both positive and negative emotions, which also responds that women's loneliness can be alleviated by connecting with the outside world.

In different grades, third grade for family social support scores significantly lower than other grade, freshman has the highest score, probably because of the first school, first away from the family experience the collective life, so the need for family support, with the improvement of the grade, the campus life and collective life increasingly familiar, so the need of family emotional support is reduced year by year, and big fourth grade because near graduation, facing the future life road choice, so the need for family support, sophomore and junior has formed a stable living habits and social network, so need more social.

The results show that the group has high emotional support, which comes from family, friends and multiple other aspects, and individuals get different aspects of support, respect and understanding in social relations. After receiving high emotional support, individuals will believe that they are loved and cared for, so they will have more positive emotional experience in interpersonal communication and daily life, and experience less negative emotions such as loneliness. The weaker the individual loneliness, the weaker the escape dimension of mobile phone dependence, which means that individuals will not escape from the virtual network for a long time, and will not lead to lower learning or work efficiency due to excessive use of mobile phones. So when the individual get the higher the social support, the lower the individual escapism, not too dependent on mobile phone to loneliness, will be more attention on working life and daily interpersonal communication, can't cause anxiety, irritable and other bad mood, can also arrange the study of daily life, not because excessive use of mobile phone and waste a lot of time, learning or work efficiency increased.

5. Shortcomings and Prospects

The range of subjects selected in this study is small, and most of the subjects are from the same university, which can not represent the general status of college students. The next step will be to expand the representativeness of the sample. Measurement was only used in this study, and the next step can further reveal the causal relationship between variables through experiments. Friends give trust, encouragement, help and other support can make individuals can rely on object, reduce individual loneliness, low loneliness will not desire to establish relations with the outside world, on the use of mobile phone will be more reasonable, not rely on mobile phone to find their contact with others, focus their attention on learning, improve the learning efficiency. In addition to reducing individual mobile phone dependence through the emotional

support of others, mindfulness training can also improve the attention bias of mobile phone dependence (Shen Yanfei, 2022), and reduce the sensitivity to related stimuli by changing the individual attention bias mechanism, so as to achieve individual control over self. Therefore, future research could look at alleviating mobile phone dependence by changing individuals' own cognition.

6. Conclusion

In this study, through studying the relationship between understanding social support, loneliness and mobile phone dependence among 309 college students, we obtained the following conclusions:

- (1) Family support and friend support dimension have negative prediction effect on loneliness, while other support can positively predict loneliness; loneliness has negative prediction effect on both low and low efficiency; friend support has positive prediction effect on inefficiency.
- (2) Loneliness plays a complete intermediary role between friend support and inefficiency. The friend support of individuals will have a positive impact on the inefficiency of mobile phone dependence through loneliness.

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