

Relationship between Mobilephone Addiction and Network Media Literacy of College Students

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Abstract: The mobilephone addiction has been increasing serious among the college students with the growth of network mobile technology and the development of a large number of APP software in recent years. In order to study the mobilephone addiction of college students and the relationship with network media literacy. The Scale for Mobilephone Addiction Tendency of College Students and the Self-compiled Questionnaire for Network Media Literacy of College Students are used in the research. 1,020 college students have been surveyed by questionnaire through random cluster sampling. The results showed that: First, The total score of mobilephone addiction for college students was 40.37 ± 11.40 , and the proportion of high tendency for mobilephone addiction was 24.40%. Second, Two demographic variables, namely homeplace and only child or not, had the significant difference in the score of mobilephone addiction, but the difference of other variables was non-significant. Third, The mobilephone addiction and information construction capabilities of college students were negatively correlated, namely that with higher score of information construction capabilities, the score of mobilephone addiction would be lower, and vice versa. Therefore, The improvement of information construction capabilities is beneficial to solving the mobilephone addiction.

Keywords-Mobilephone addiction; Network media literacy; Information construction capabilities; College students

I. INTRODUCTION

The mobilephone addiction refers to overindulging in various activities mediated by mobile phones, developing a strong and constant desire and dependence on the use of mobile phones and resulting in individuals' significant impairment of psychosocial function^[1]. The mobilephone addiction has negative effect on the physical health and mental health of teenagers. Particularly, in recent years, the mobilephone addiction is increasing serious among the teenagers with the growth of network mobile technology and the development of a large number of APP software in recent years. Relative to primary and secondary school students, the college students have freer time management power, and have more prominent mobilephone addiction therefore.

At present, the research on the mobilephone addiction of college students mainly focuses on the relationship between various psychological variables and mobilephone addiction, such as self-esteem^[2], negative emotion^[3] and self-control^[4]. In a wider social background, regarding the mobilephone addiction, we will find that the mobilephone addiction of college students is closely related to the popularity of We-Media. The We-Media, called citizen media, refers to "the paths for ordinary citizens to provide and share their real

views and news through the connection of digital technology and global knowledge system"^[5], such as Weibo, WeChat and BBS. The mobilephone is a carrier of network media information except for the communication function. Therefore, it is necessary to investigate whether the mobilephone addiction of college students is related to the network media literacy or not.

II. RESEARCH METHODS

A. Samples

Samples are from the college students enrolled in 3 universities in Chongqing and Chengdu. The class random cluster sampling is applied. In the survey, 1,200 questionnaires have been issued totally, and 1,130 of them have been collected. The number of effective questionnaires is 1,020 with the effective rate of 90.27%. The average age of participants is 20.25 ± 1.35 .

B. Research tools

1) Scale for Mobilephone Addiction Tendency of College Students^[6]

The Scale for Mobilephone Addiction Tendency of College Students prepared by Xiong Jie, et al. has been used to measure the mobilephone addiction of college students. The scale has 16 items in total, and the 5-point scoring method is adopted. "1" means very inconsistent, and "5" means very consistent. The scale includes four sub-dimensions, including withdrawal symptoms, highlighting behaviors, social comfort and mood alteration. The scale has good reliability and validity. Its coefficient of internal consistency is 0.83 with the test-retest reliability of 0.91 and the construct validity of 0.90.

2) Self-compiled Questionnaire for Network Media Literacy of College Students

On a basis of reference to the existing research, the Self-compiled Questionnaire for Network Media Literacy of College Students has been prepared combining the interview results of college students. The questionnaire has 13 items in total, including 7 items about the sub-dimension of information construction capabilities, and 6 items about the sub-dimension of information application capabilities. The information construction capabilities refer to the capabilities of network media information analysis, judgment and evaluation, namely the capabilities to reconstruct the information. For example, "Do you agree that 'the media report is a mirror of reality and will truly reflect the reality'?", and "For information widely shared in the QQ group or WeChat Moments, do you believe its authenticity?". The information application capabilities refer to the participation

and creation capabilities for network media information. For example, "be able to skillfully search the required contents in the Internet", and "proficiently make network media products, such as making personal web sites, participating in the construction of online public platform, and editing and making digital pictures". 4-point scoring is used for questionnaire. With higher score, the network media literacy is higher. The coefficients of internal consistency for the Sub-scale of Information Construction Capabilities and the Sub-scale of Information Application Capabilities are respectively 0.74 and 0.70.

C. Data analysis

SPSS16.0 statistical software is used for data processing, and the main statistical methods include variance analysis and simple effect analysis.

III. RESULTS

A. Analysis for mobilephone addiction of college students

The total score of the Scale of Mobilephone Addiction for College Students and its sub-dimensions are shown in Table 1. As defined in the scale, the individuals ≥ 48 points are highly inclined to the mobilephone addiction. In the survey, there are 249 students with high tendency to mobilephone addiction, accounting for 24.40%.

TABLE 1 SCORES OF MOBILEPHONE ADDICTION AND ITS SUB-DIMENSIONS

Score of scale	M	SD
Total score of mobilephone addiction	40.37	11.40
Withdrawal symptoms	16.31	4.90
Highlighting behaviors	9.47	3.78
Social comfort	7.39	2.64
Mood alteration	7.35	2.64

In order to further analyze the significant difference of demographic variables in the mobilephone addiction score, 6 items including grade, gender, specialty, student cadre experience, homeplace and only child or not are regarded as the independent variables, and the mobilephone addiction score is regarded as the dependent variable for the one-way analysis of variance. The result indicates that 2 items, namely homeplace and only child or not, had the significant difference in the score of mobilephone addiction, but the difference of other variables was non-significant. Refer to Table 2 for specific results.

TABLE 2 VARIANCE ANALYSIS FOR DEMOGRAPHIC VARIABLES IN MOBILEPHONE ADDICTION SCORE

		Number of persons	Mobilephone addiction	F	Sig
Grade	Junior grade	569	40.02±11.50	2.21	0.12
	Senior grade	451	40.81±11.62		
Gender	Female	584	40.81±10.78	2.32	0.13
	Male	436	39.65±12.35		

Speciality	Arts	512	41.02±10.49	2.89	0.09
	Science and engineering	508	39.75±12.16		
With student cadre experience or not	Yes	620	40.24±11.46	0.76	0.47
	No	400	40.70±11.33		
Homeplace	Cities and towns	470	42.27±11.47	12.22**	0.00
	Villages	550	38.74±11.11		
Only child or not	Yes	422	42.04±11.58	5.44*	0.00
	No	598	39.58±11.18		

Note: ** refers to $p < 0.01$

In order to investigate the interaction between two variables, the "homeplace" and "only child or not" are regarded as independent variables, and the total score of mobilephone addiction is regarded as dependent variable for the two-way analysis of variance. The result indicates that the interaction of two variables was significant ($F=4.36$, $p=0.03$). In the further simple effect analysis, it has been found that the simple effect was non-significant when the "non-only child" was leveled, and it was significant when the "only child" was leveled for the variable of "homeplace" ($F=15.24$, $p=0.00$). It has shown that the "only child" with the homeplace in a city or town has higher score in mobilephone addiction compared with the "only child" with the homeplace in a village.

B. Variance analysis of network media literacy for mobilephone addiction

Two sub-dimensions of network media literacy are respectively regarded as the independent variable, and the total score of mobilephone addiction is regarded as the dependent variable for variance analysis. The average score of the information construction capability score is taken as the demarcation point: low score group in case of the score ≤ 18 points, and high score group in case of the score > 18 points. The result indicates that the difference for the score of mobilephone addiction was significant ($F=48.86$, $p=0.00$). The average score of the information application capability score is taken as the demarcation point: low score group in case of the score ≤ 13 points, and high score group in case of the score > 14 points. The result indicates that the difference for the score of mobilephone addiction was non-significant ($F=2.52$, $p>0.05$).

In order to further investigate the relationships among the information construction capabilities of college students with sub-dimensions of mobilephone addiction, the information construction capabilities are taken as the independent variable, and the sub-dimensions of mobilephone addiction are taken as the dependent variable for variance analysis respectively. Refer to Table 3 for results, from which it can be seen that the score of low score group is significantly higher than that of high score group concerning the total score of mobilephone addiction and its sub-dimensions. That is, the score of mobilephone addiction is higher with lower score of information construction capabilities.

TABLE 3 VARIANCE ANALYSIS OF INFORMATION CONSTRUCTION CAPABILITIES FOR MOBILEPHONE ADDICTION

	Information construction	Score	F	Sig
Mobilephone addiction	Low score group	43.10±10.54	48.86**	0.00
	High score group	38.03±11.52		
Total score	Low score group	17.41±4.60	43.58**	0.00
Withdrawal symptoms	High score group	15.37±4.98		
Highlighting behaviors	Low score group	10.18±3.17	36.74**	0.00
	High score group	8.86±3.59		
Social comfort	Low score group	7.94±2.68	38.21**	0.00
	High score group	6.93±2.61		
Mood alteration	Low score group	7.83±2.58	30.72**	0.00
	High score group	6.92±2.61		

Note: ** refers to $p < 0.01$

IV. DISCUSSION

A. Analysis for mobilephone addiction of college students

According to the survey results, the proportion of students with high tendency to mobilephone addiction was 24.40%, which was basically similar to other domestic research results, indicating the severity of college students' mobilephone addiction as well. Besides, the mobilephone addiction is relevant to the homeplace and family structure. The urban "only child" is a highly risky group. It is probably because that: first, the economic condition of urban college students is often better than that of rural college students, and they are more likely to have high-performance smartphones and earlier access to the network media information, so that the possibility of mobilephone addiction will be increased. Second, the "only child" has stronger aloneness compared with the "non-only child". Besides, the mobilephone addiction and the individuals' aloneness are positively correlated^[7]. Therefore, it is necessary to strengthen the emphasis on this group.

B. Relationship between mobilephone addiction and network media literacy of college students

The media literacy refers to the capabilities of information selection, questioning, understanding, evaluation, creation and production, and the reaction capacity of thinking and reasoning manifested by people for various information in different media^[8]. The core competence includes media information construction capabilities and application capabilities. Above data show that the mobilephone addiction of college students has little correlation with the information application capabilities but is close to the information construction capabilities. The possibility of mobilephone addiction is lower with higher information construction capabilities.

The network media information with the carrier of smartphones, particularly the We-Media information, has the features of fragmentation and low credibility except for instantaneity, huge amount, individuation and liberalization. However, in the We-Media era, the receiver and publisher of media are gradually integrated, and the roles of media "gate-keeper" have been weakened little by little. While facing the network media information difficult to distinguish between true and false, the college students will be addicted to the Internet if lacking the capabilities of analysis, judgment and evaluation and regarding the media world as the real world. In the real life, the following situations are frequent: due to a large number of network linking, the college students often deviate from the original objectives while surfing the Internet with mobilephone and waste a lot of time without knowing it. The presentation of fragmented information enables the media information integrated into all links of life. While eliminating the boundary between study and living, the psychological dependence on mobilephone has been enhanced as well. The personalized information presentation has weakened the sense of collective responsibility when displaying the multiple values and enhancing the independent consciousness. The instant communication mode has hindered the "face-to-face" traditional interpersonal communication mode while expanding the range of interpersonal communication. The college students often share the information, particularly social public events and commonweal information, in the WeChat Moments or QQ group without judgment. It is a manifestation of lacking critical spirit and information construction capabilities in fact. Therefore, improving the information construction capabilities is beneficial to the college students to correctly evaluate own media world to avoid the mobilephone addiction.

In the educational practice, it is possible to let the college students know the making process of network media products and know that the medium information is rebuilt from objective facts and that specific social historical context shall be combined for understanding, so as to promote the development of media critical ability in turn. In the meantime, it is also possible to learn from foreign media literacy education experience, combine the domestic educational practice and take such means as integrated curriculum and thematic activities to improve the network media literacy of college students and reduce the occurrence rate of their mobilephone addiction.

V. CONCLUSION

The results showed that: First, The total score of mobilephone addiction for college students was 40.37±11.40, and the proportion of high tendency for mobilephone addiction was 24.40%. Second, Two demographic variables, namely homeplace and only child or not, had the significant difference in the score of mobilephone addiction, but the difference of other variables was non-significant. Third, The mobilephone addiction and information construction capabilities of college students were negatively correlated, namely that with higher score of information construction capabilities, the score of mobilephone addiction would be lower, and vice versa. Therefore, The improvement of information construction capabilities is beneficial to solving the mobilephone addiction.

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