AN EMPIRICAL STUDY ON THE ANTECEDENTS TO COLLEGE STUDENT ONLINE GAME ADDICTION IN CHINA

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ABSTRACT

In this research, we studied the antecedents to college student online game addiction. Building on the relevant literature, we conducted a survey research on a group of college students. Analyzing the data collected from 65 students, we found that three factors have significant relationships with online game addiction: perception of loneliness, sense of achievement derived from online game, and excitement derived from online game.

Keywords: College Student; Online game Addiction; Online game Motivation.

Introduction:

As the internet penetration rate of China increases, internet has become an inseparable part of the people's live. According to official reports, as at June 2015, there are 668 million netizens in China, and the internet penetration rate has reached 48.8% (China Internet Network Information Center, 2015b). At the same time, online game has also taken an increasingly important role in people's daily lives. It has become one of the major means that the Chinese use to entertain themselves. According to official sources, the exponential increases enjoyed by the smart phone online game market has reached its record during the first half of 2014 (China Internet Network Information Center, 2015a), and it is predicted that the market will continue to increase in 2015. Being a group of faithful pursuer for fashion and entertainments, college students make up a big portion of the population of online gamers.

Hitherto, there is a dearth of empirical research based literature on online game addiction of Chinese college students. Thus, we conducted the current research to contribute to the literature. We hope that through this research, we can find the way to help college students addicted to online game. We adopted the work of Liu (2007) as our theoretical framework. We first conducted a survey on a sample of college students, and then we analyzed the relationship between online game addiction and its antecedents.

Literature Review:
Online Addiction:

Online game addiction was first proposed by Goldberg, and Young conducted an empirical research later to verify the existence of the phenomenon (Zhang, 2007). Online addiction is defined to be the chronic or periodic state of obsession that is caused by the repetitive use of the internet (Zhang, 2007). Addicted individuals will have an irresistible urge to continue using the internet. They derive happiness from using the internet, and it will cause them to develop psychological dependency on the internet in the long term.

In China, scholars are interested in the antecedents to the online addiction of students. For example, in their research on the online addiction of 36,000 elementary and middle school children, Wang, Wang and Fu (2008) found that the demographic characteristics of children have an influence on whether they would become addicted to the internet. For example, the age, sex, ranking of school, whether they are the only child of their parents, and economic well-being of the children are found to have significant relationship with online addiction. In Zhang and Li's (2011) research on college student online addiction, they found that male students have a higher risk of becoming addicted to the internet than female students and students who are the only child of their parents are also at higher risk of becoming addicted.

In the western literature, scholars have also focused their research on the antecedents of online addiction (Weinstein, Feder, Rosenberg, & Dannon, 2014). The authors listed factors such as personality, family conditions, alcoholic use and social anxiety as antecedents to online addiction. Müller and colleagues (2012) used the youth self-report and child behavior checklist to conduct their research on a group of underage children, and they found that online addiction is a common observation among minors in psychiatric institutions.

Online game Addiction:

Scholars from China and the West have focused their research efforts on different aspects of online game. Scholars from China have focused their attentions on the negative aspects of online game. For example, in Chen and Chen (2005), they found that aggressive online games can increase online gamers' implicit aggressiveness. Wang, Yu and Yang (2007) found that online game addiction of students has a relationship with learning burnout. On the other hand, western scholars tend to focus their research on the business model of online games. For example, Wu, Chen and Cho (2013) analyzed an online game's business model, and discussed how the company should optimally price the accessories of online game.

One group of Chinese scholars are interested in studying the antecedents of college students playing online games. They focused their efforts on studying the motivation for college students to play online games. For example, Liu (2007) studied the motivation for college students to play online games. Liu found that the antecedents to college students playing online game can be categorized into three groupings: the individual characteristics of the student (perception of loneliness, perception of gap between reality and dream, cannot adapt to the college's lifestyle), the college's environment (defects in the college's culture, lack of student union organized activities, defects in the student's appraisal system, and defects in the psychological education policy), and the features of the online game (indulgence, entertainment, and sense of fulfilment).

Summarizing our discussion, we propose the following hypotheses:

H1: Online game addiction has a positive relationship with perception of loneliness.
H2: Online game addiction has a positive relationship with stress with study.
H3: Online game addiction has a positive relationship with perception of aimless life.
H4: Online game addiction has a positive relationship with lack of self-control.
H5: Online game addiction has a positive relationship with perception of gap between dream and reality.

H6: Online game addiction has a positive relationship with amount of free time in college.
H7: Online game addiction has a positive relationship with lack of student union organized activities.
H8: Online game addiction has a positive relationship with lack of supervision from home and college.
H9: Online game addiction has a positive relationship with influence from online gamer roommates.
H10: Online game addiction has a positive relationship with excitement derived from online game.
H11: Online game addiction has a positive relationship with sense of achievement derived from online game.

Methodology:
Instruments:

We used the survey method for data collection. In the survey, we collected data on the college students' basic demographics, the average frequency of the students playing online game, the average time that students use to play online game, and we adapted the 11 questions on the motivations of college students playing online game that were proposed by Liu (2007) for the purpose of this research (0 = No, 1 = Yes). We used the frequency of playing online game and the amount of time used to play online game as the two indicators of online game addiction.

Participants:

We sent our invitations to 200 college students. After eliminating incomplete surveys and invalid surveys, we were left with 65 colleges (effective response rate = 32.5%).

Analytical Strategy:

We first used SPSS to calculate the means and standard deviations of the data, and we used the software to conduct correlation analysis and regression analysis on the data to analyze the relationship between online game addiction and motivations for playing online game.

Results:

The results of the correlation analysis are shown in Table 1. Based on our analyses, we found that frequency of online game has a significant relationship with perception of loneliness ($r = 0.293$, $p < 0.05$) ; excitement derived from online game ($r = 0.36$, $p < 0.01$) ; and sense of achievement derived from online game ($r = 0.38$, $p < 0.01$). We also found that the amount of time spent on online game has a significant relationship with excitement derived from online game ($r = 0.337$, $p < 0.01$). Thus, H1, H10, and H11 have received partial support from the data.

Based on our regression analyses, we found that frequency of online game has a significant

Table 1: Correlations of Variables

Variables	M	s.d.	1	2	3	4	5	6	7	8	9	10	11	12
1. Gaming frequency	2.0	1.10												
2. Average spent time per entry	2.2	.98	.64**											
3. Perception of loneliness	.31	.47	.29*	.17										
4. Stress with study	.37	.49	-.047	-.23	.18									
5. Perception of aimless life	.35	.48	.11	.24	.34**	.10								
6. Lack of self-control	.29	.46	-.01	.18	.09	-.07	.37**							
7. Perception of gap between dream and reality	.14	.35	.05	.17	.22	.16	.45**	.23						
8. Amount of free time in college	.31	.47	-.04	.04	-.08	-.10	.06	.01	.22					
9. Lack of student union organized activities	.12	.33	.05	.19	.06	.004	.21	.38**	.39**	.16				
10. Lack of supervision from home and college	.15	.36	.21	.15	-.01	.03	.22	.38**	.20	.18	.10			
11. Influence from online gamer roommates	.25	.43	.18	.11	.39**	.16	.25*	.34**	.19	-.07	.11	.15		
12. Excitement derived from online game	.28	.45	.36**	.34**	.26*	.24	.19	.06	.15	.03	.08	.21	.29*	
13. Sense of achievement derived from online game	.32	.47	.38**	.23	.11	.09	.11	-.08	.20	.04	.04	.07	.14	.60**
*p < 0.05														
**p < 0.01														
***p < 0.001														

relationship with sense of achievement derived from online game (β=0.380, $p < 0.05$), and we also found that the amount of time spent on online game has a significant relationship with excitement derived from online game ($\beta = 0.346$, $p < 0.05$). Thus, H10 and H11 have received support from the data.

Discussion:

Our correlation analyses and regression analyses have indicated that online game addiction has a positive relationship with sense of achievement derived from online game. According to Maslow's theory, humans have the need to self-actualize (George & Jones, 2008). Humans have the need to self-actualize in certain fields. The field where one can self-actualize can be part of the real world, and it can also be part of the virtual world. Nevertheless, to succeed in the real world is never easy. One is likely to face many challenges and obstacles. Different from the reality, in online games, players face no gap between their social status, educational background, age, etc. The virtual world works on another set of rules: online gamers only judge each other in terms of how well one has played the game. Hence, when a person is rejected in the real life, when that person has faced challenges, they can choose to "escape". They can escape into the simpler virtual world – the world of online game. They can search for the pleasure of succeed and achievements in the online game to fulfill their need for self-actualization. Reflecting on the results of our analyses, we believe that this is one of the main motives for online game addiction.

Our analyses have also indicated that online game addiction has a positive relationship with excitement derived from online game. Humans need excitement and passion in life. However, these factors cannot be obtained easily from the real world. Real life is usually about chores and works. However, the virtual world is different from the real world. In online games, players can search for their excitements and passions easily. Hence, students who lack excitement and passion will want to search for it in online games. We believe that this is the second cause of online game addiction.

While some people may view playing online game as a form of "bad habit" that drains a person's energy from meaningful works, we found that what really causes college students to be indulged in online game is not the game itself. What have caused college students to be addicted to online game are their needs, especially those needs that cannot be easily satisfied in real life. Hence, we believe that the way to "cure" online game addiction is not to ban online games. The way to "cure" online game addiction is by giving more attentions to the inner world of college students.

Conclusion:

Building on the literature on online game addiction, we conducted the current empirical research. Based on our analyses, we contributed to the literature by eliminating those factors that were not found to have significant relationship with online game addiction behavior. Future research should consider focusing on finding the other factors that can contribute significantly to online game addiction.

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