

Risk Factors as Predictors of Time Spent in Online Games among Filipino Females

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This research determined which among the risk factors is associated with the time spent playing online games among the respondents, and which among the associated risk factors predicts time spent online gaming the most. The respondents that participated in this study are female, plays online games for the last 6 months, and lives in BF Homes Parañaque City, Philippines. A total number of 200 respondents were selected through the use of purposive sampling. The results showed that the respondents have low levels of aggression and narcissism and average levels of self-esteem and life-satisfaction. Of all the four risk factors, narcissism is the only risk factor that significantly associates with time spent playing online games among the respondents, having a moderate strength of association, and it is the risk factor that significantly predicts time spent playing online games among the respondents the most. This study implied that narcissism is a risk factor among the respondents that can affect their time spent playing online games.

Key Words: *online gaming, aggression, narcissism, self-esteem, life-satisfaction*

Technology helps improve the quality of life. However, people are plagued by the recent advances in technology that they forget to have time for their family. Computer games have always been a great way to pass the time in these modern times. Online gaming is defined as playing any computer game online or with the use of the internet. Online gaming started to become popular not long after the internet was introduced to the public. This soon turned into a problem when people started playing it excessively, which could turn a simple pastime into an addiction (Kuss, 2013). In the United States, the gender split in playing online computer and video games is roughly 56% male and 44% female (ESA, 2015). However, in China about 10% of the more than 30 million and growing online gamers were identified as playing excessively as it is already classified as an addiction (Young, 2009). In Southeast Asia, Indonesia is the country with the most online gamers (in millions) at 34% with Philippines being the third with 27.2% (Newzoo, 2014). In the Philippines, there have been reports of a teenage boy that beats up his grandmother for lecturing him about playing online games excessively, and a teenage boy stabbing another teenage boy to death because of a feud with regards to an online game (Garcia, 2015). The importance of solving these problems is to help reduce stress, promote social and emotional development. Generally, healthy interpersonal relationships and increased academic performance gives positive self-worth and self-esteem (Martin, 2014). While, the Chinese authorities attempt to create a solution for the ever growing problem of excessive online gaming of adolescents in China by regularly shutting down internet cafes and instituting laws with regards to the limitation of the adolescents time spent in playing online games (Young, 2009).

Aggression and Online Gaming

Different studies (Mehroof & Griffiths, 2010; Grüsser et al., 2007; Kim, Namkoong, Ku, & Kim, 2008; Festl, Scharnow, & Quandt, 2012; Teng, Li, & Liu, 2014) have shown that aggression is related to online gaming. Kim et al. (2008) further supported this by linking the relationship between aggression and online gaming. Furthermore Mehroof & Griffiths (2010) found out the significant associations of aggression and online gaming. The study of Festl et al. (2012) used an online gaming scale and it showed that higher time spent with playing online games is associated with aggression. Another study supporting the correlation of online gaming and aggression is the study of Teng et al. (2014) which showed that low self-control and violent online game exposure can be factors causing aggression. In contrast Grüsser et al. in 2007, found out that there is only weak evidence in the relationship of aggressive behavior and excessive playing of computer games.

Narcissism and Online Gaming

Several studies (Kim et al., 2008; Hussain, Griffiths, & Baguley, 2012; Karapetsas, Karapetsas, Zygouris, & Fotis, 2014) revealed the positive correlation of narcissism and online gaming. In addition to that, relationship of hypercompetitiveness and narcissism was the only significant cause leading to increasing amount of time spent in online gaming for Facebook gamers (Groves, Skues, & Wise, 2015). In contrast to that, people

who scored high in openness and sensation seeking are more likely to play online games on social networking sites(SNS), while narcissists tend to upload their attractive photos, and update their status more frequently for self-presentation (Wang, Jackson, Zhang, & Su, 2012).

Self-Esteem and Online Gaming

The studies of Ko et al. in 2005 and Yee in 2006 revealed that lower self-esteem is associated with online gaming. This was further supported by the study of Kardefelt-Winther in 2014 which stated that people who play online games excessively and have low self-esteem are more prone to experiencing negative outcomes in their lives because they use online games excessively to cope up with their real world problems. People with lower self-esteem were more likely to spend more time to online games due to their lack in social skills and self-confidence; they would often use online games as a means for compensation and avoidance with their everyday problems (Wan, & Chiou, 2006). In contrast to these studies, people with high self-esteem do not play online games in order to satisfy basic needs (like autonomy, social affiliation, and competence) they are also less prone to addiction because they play online games as a means of recreation, not as a source of escapism (Billieux, Thorens, Khazaal, Zullino, Achab, & Van der Linden, 2014).

Life Satisfaction and Online Gaming

In the last ten years, several studies (Ko et al., 2005; Wang, Chan, Mak, Ho, Wong, & Ho, 2014; Festl et al., 2012; Mehroof & Griffiths, 2010; and Ko, Yen, Yang, Yen, & Chen, 2009) have been explored dealing with online gaming. Ko, et. al. (2005) found out that lower self-esteem and lower satisfaction with daily life is associated with increasing amount of time spent in online games, this was supported by the studies of Wang et al. (2014) and Festl et al. (2012). Similarly, Mehroof & Griffiths in 2010 discovered the link of personality traits (neuroticism, aggression and anxiety) and excessively playing online games. Both studies showed that neuroticism and anxiety of a person can lead to increasing amount of time spent in online games. Ko, et al. (2009), associated excessive online gaming similar to substance dependence. The part of the brain where craving in substance dependence can be identified is similar to the area in the brain where craving for video games occur. This can be the reason why gamers spending a lot of time in online games tend to have a lower satisfaction with daily life.

Synthesis

The previous studies mostly focused on male as the only/primary respondents. Despite the growing amount of literature with regards to online gaming there was still a lack of research focusing on female respondents. Due to the conflicting results of the studies regarding aggression and online gaming, it implied to take a look if aggression is a predictor in time spent playing online games among females. Some of the previous studies linked narcissism to online games in social networking sites. There is a lack of studies reviewed which focuses on online gaming by online computer/video games that are not connected to SNS, and it's link to narcissism among females. The previous studies have shown that self-esteem and life-satisfaction is a probable factor that influences the time spent in online games, and the previous studies mostly focused on males with regards to self-esteem and life-satisfaction. The current study purposed to know the profile of respondents regarding the risk factors. Additionally, this study aimed to determine which among the risk factors associates with time spent playing online games among the respondents; if these risk factors are predictors of time spent playing online games among the respondents, then which of them best predicts time spent playing online games.

Methodology

Research Design

The study is quantitative in nature and used a descriptive correlational research design. Descriptive research design was used to identify and describe the levels of aggression, narcissism, self-esteem, and life-satisfaction of the respondents. Correlational research design was used to check the association of the risk factors to time spent playing online games among the respondents.

Participants

The respondents that partook in this study are female, and plays online games (multiplayer, computer games, not Facebook or Flash games) for the last 6 months. A total number of 200 respondents were selected through the use of purposive sampling. The respondents were classified according to their time spent playing

online games each day (Below 1 hour, 1-5 hours, 6-10 hours, 11 hours and above) (Przybylski, 2014; Griffiths, 2009). The researcher looked for respondents in computer shops across BF Homes Parañaque City.

Instruments

The researcher utilized a number of scales to gather the data necessary to obtain the results of this study. They now consist of 15 items each and the scales are modified to be answerable by checking the box that corresponds to the answer: 1-Strongly Disagree, 2- Disagree, 3-Agree, 4-Strongly Agree. The scales were scored by getting the mean of the answers in the 15 items question and then ranking it as either low (1-2), average (2.1-3), or high (3.1-4) levels of the variable they are measuring.

Modified Aggression Scale. This instrument was originally developed by Orpinas and Frankowski (2001). It consists of 15-items designed to measure self-reported aggressive behaviors. Three components of aggression (physical, verbal, and anger) were included. The Modified Aggression Scale has a Cronbach's alpha of .86 computed through the use of SPSS.

Modified Narcissism Scale. This instrument was originally developed by Raskin and Terry (1987). It originally consists of 40-items intended to measure narcissism. The original name of the scale is Narcissistic Personality Inventory-40 (NPI-40). The modified scale obtained a Cronbach Alpha reliability of .92 through the use of SPSS.

Modified Self-Esteem Scale. This instrument was modified from the Rosenberg Self-Esteem Scale developed by Rosenberg in 1965. The modified scale has a Cronbach's Alpha of .89 computed with SPSS.

Modified Life-Satisfaction Scale. This instrument was modified from the Satisfaction With Life Scale (SWLS) developed by Diener, Emmons, Larsen, and Griffin (1985). The scale has a cronbach's alpha of .90 obtained with the use of SPSS.

Procedures

The researcher utilized the modified scales to gather the necessary data required to create conclusions. After the data have been gathered and interpreted, the researcher then devised answers to the research questions and created conclusions based on the data.

Statistical Analysis

This research used Mean and Standard Deviation to show the levels of the risk factors of the respondents. Chi Square to find the association between the variables aggression, narcissism, self-esteem, and life-satisfaction to time spent playing online games. Multinomial Logistic Regression was used to find out which among the variables best predicts time spent playing online games.

Results and Discussion

Research Question #1: What is the profile of the respondents?

Table 1. Profile of the Respondents

Risk Factors	\bar{x}	σ	Interpretation
Aggression	1.65	0.45	Low
Narcissism	1.98	0.51	Low
Self-Esteem	2.85	0.31	Average
Life-Satisfaction	2.88	0.36	Average

In table 1, respondents were shown to have low levels of aggression as indicated by a \bar{x} value of 1.65 and narcissism as indicated by a \bar{x} value of 1.98 while having average levels of self-esteem as indicated by a \bar{x} value of 2.85 and life-satisfaction as indicated by a \bar{x} value of 2.88. Furthermore, the respondents' scores in terms of aggression are between 0.3 and 3 as indicated by a σ value of 0.45. While, narcissism scores are between 0.45 and 3.51 as indicated by a σ value of 0.51, self-esteem scores are between 1.92 and 3.78 as indicated by a σ value of 0.31, and life-satisfaction scores are between 1.8 and 3.96 as indicated by a σ value of 0.36. As the results suggest, the respondents were shown to have low levels of aggression and narcissism, while having average levels of self-esteem and life-satisfaction.

Research Question #2: What is the degree of association of the risk factors with time spent playing online games?

Table 2. Risk Factors Association with Time Spent Playing Online Games

Risk Factors	Chi-Square Value	Significance Level	Interpretation	Cramer's V Value	Significance Level	Interpretation
Aggression	11.101	.085	Not Significant	.176	.055	Weak Association
Narcissism	15.587	.016	Significant	.221	.04	Moderate Association
Self-Esteem	6.552	.364	Not Significant	.128	.429	Very Weak Association
Life-Satisfaction	6.556	.363	Not Significant	.136	.312	Very Weak Association

Sig. at < .05 level

Table 2 shows the association of the risk factors with time spent playing online games. Narcissism was the only risk factor showing significant association with time spent playing online games as implied by $\chi^2(1) = 15.587$ and $p = .016$. While, aggression as implied by $\chi^2(1) = 11.101$ and $p = .085$, self-esteem as implied by $\chi^2(1) = 6.552$ and $p = .364$, and life-satisfaction as implied by $\chi^2(1) = 6.556$ and $p = .363$, were shown having a not significant association with time spent playing online games. In terms of the strength of the association, narcissism was shown to have a moderate association as implied by $v = .221$ and $p = .04$, with time spent playing online games; while aggression has a weak association as implied by $v = .176$ and $p = .055$, with time spent playing online games; self-esteem as implied by $v = .128$ and $p = .429$, and life-satisfaction as implied by $v = .136$ and $p = .312$, having a very weak association with regards to time spent playing online games. Out of the 4 risk factors (aggression, narcissism, self-esteem, life-satisfaction), the results show that narcissism was the only variable showing significant association with regards to the dependent variable (time spent playing online games). This suggests that narcissism has a significant but mild influence to the time spent playing online games of the respondents. Furthermore, this could imply that narcissism is a variable among the respondents that influences the amount of time they spend playing online games. This was partially supported by the studies of Karapetsas et al. (2014), Kim et al. (2008) and Hussain et al. (2012) which states that there is a positive correlation between narcissism and playing online games. On the other hand, the effects of aggression is not significant, although it may have little to minimal influence or effect to the time spent playing online games of the respondents. The study of Grüsser et al. in 2007 which states that there is a weak association between aggression and excessive time spent playing online games supports this result. Additionally, it may be inferred that self-esteem and life-satisfaction will not affect the time spent playing online games of the respondents, no

matter if their self-esteem or life-satisfaction levels increases or decreases, since there is a not significant and very weak association among the variables.

Research Question #3: Which among the risk factors best predicts the time spent playing online games of the respondents?

Table 3. Regression Analysis of the Risk Factors

Risk Factors	Significance Level	Interpretation
Aggression	.751	Not Significant
Narcissism	.014	Significant
Self-Esteem	.999	Not Significant
Life-Satisfaction	.660	Not Significant

Sig. at < .05 level

As shown in Table 3, the only risk factor that significantly predicts the time spent playing online games among the respondents is narcissism at $p = 0.14$. On contrary, self-esteem at $p = 0.660$, aggression at $p = 0.751$, and self-esteem at $p = 0.999$, were shown to be not significant with regards to predicting the time spent playing online games of the respondents. The results show that aggression, self-esteem and life-satisfaction cannot predict how long the respondents may play online games. When ranked however as to which variable comes next to possibly predicting the time spent playing online games albeit being not significant, life-satisfaction comes next after narcissism, followed by aggression, with self-esteem being the risk factor that may predict the least. Contrariwise, the results implied that narcissism is in fact a variable that predicts how long respondents play online games. These could possibly mean that, the higher the narcissism levels of a respondent, the higher the time they spend playing online games. Furthermore, when it comes to predicting the time spent playing online games of the respondents, narcissism is the best predictor since it's the only significant variable. A possible reason for this result is the nature of online games, which is different from the rest of the features of the internet. In playing online games, a person can level-up and get better equipment for their virtual characters in online games, which could grant them admiration and recognition from other players. This could lead them to playing online games for longer periods of time to acquire the admiration and recognition that they needed (Karapetsas et al., 2014). This was further supported by the study of Hussain et al. in 2012 which stated that a person's attempt to keep up with their friends and online friends in terms of items and equipments in the online games in order to increase their prestige among their friends and online peers is a factor that increases their time spent playing online games. Arguably, a person can also gain admiration and recognition online, through the use of social networking sites, either by posting their pictures and getting likes, or putting a status which could possibly trend, and about 56% of social networking sites users are female (Hampton, Goulet, Rainie, & Purcell, 2011). Presented in the DSM-V is the concept that individuals with narcissistic personality traits are shown to have a grandiose of self-importance, fantasies of power, success, and they require excessive recognition and admiration (Kim et al., 2008).

Conclusions and Recommendations

In conclusion, the respondents were shown to have low levels of aggression and narcissism, while having average levels of self-esteem and life-satisfaction. There is a significant moderate association between time spent playing online games and narcissism among the respondents, while the other risk factors showed no significant association with time spent playing online games. However even though the associations were not significant, aggression was shown to have a weak association with time spent playing online games, while self-

esteem and life satisfaction have a very weak association with time spent playing online games. Narcissism is the risk factor that best predicts the time spent playing online games of the respondents since it's the only risk factor that significantly predicts time spent playing online games of the respondents. The researcher recommends changing the way the dependent variable is measured, measuring it as a continuous variable. Specifically getting the exact or estimated amount of hours a person plays online games per day.

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