MMORPG Escapism Predicts Decreased Well-Being: Examination of Gaming Time, Game Realism Beliefs, and Online Social Support for Offline Problems

Lukasz D. Kaczmarek, PhD and Dariusz Drążkowski, MA

Abstract

Massively multiplayer online role-playing game (MMORPG) escapists are individuals who indulge in the MMORPG environment to avoid real world problems. Though a relationship between escapism and deteriorated well-being has been established, little is known about particular pathways that mediate this relationship. In the current study, we examined this topic by testing an integrative model of MMORPG escapism, which includes game realism beliefs, gaming time, offline social support, and online social support for offline problems. MMORPG players (N = 1,056) completed measures of escapist motivation, game realism beliefs, social support, well-being, and reported gaming time. The tested structural equation model had a good fit to the data. We found that individuals with escapist motivation endorsed stronger game realism beliefs and spent more time playing MMORPGs, which, in turn, increased online support but decreased offline social support. Well-being was favorably affected by both online and offline social support, although offline social support had a stronger effect. The higher availability of online social support for offline problems did not compensate for the lower availability of offline support among MMORPG escapists. Understanding the psychological factors related to depletion of social resources in MMORPG players can help optimize MMORPGs as leisure activities.

Introduction

SOME INDIVIDUALS ENTER THE WORLDS OF massively multiplayer online role-playing games (MMORPGs) seeking growth opportunities such as the pursuit of achievements, leadership, or establishing new social relationships. Others play these games to avoid real world problems, such as academic or work difficulties—a strategy termed “escapism.” MMORPG escapism can be considered a particular case of avoidant coping, which is aimed at dealing with the stressor by escaping the threat or related emotions.

Escapism is the most robust single predictor of decreased well-being among MMORPG players. To date, research on the mechanisms accounting for the detrimental effects of MMORPG escapism has been mostly concerned with specific factors that are analyzed separately. In the present study, we focus on several potential mediators (gaming time, perceived game realism, and social support) that could be integrated into a single explanatory model.

Online social support for offline problems

The negative outcomes of escapism may be mediated by one’s level of social support, that is, the available resources used in the process of coping with stress. Perceived availability of support is one of the most proximal precursors of well-being, as it enhances positive emotions and feelings of self-worth. Socially supported individuals believe that they are cared for, esteemed, and valued as part of a network of communication and mutual assistance. The study of the social environments of MMORPG players has contributed to a better understanding of the structural dimensions of social support. It has led to the observation that other gamers can act as potentially supportive agents besides traditional providers of support (spouses/partners, friends, caregivers, etc.). By separating real world and in-game problems and asking about online support for real world difficulties, we can explicitly show whether other players are instrumental in helping to resolve those problems that primarily undermined MMORPG escapists’ well-being.

Game reality beliefs

Although MMORPGs are often designed to replicate the look and feel of the real world, little is known about how
players actually perceive the realism of MMORPG worlds, or how these beliefs relate to escapism, social support, and well-being. In general, perceived realism is one of the least studied aspects of gaming. There are, however, concepts within the domain of virtual reality and simulator ergonomics that suggest how MMORPGs might facilitate realistic experiences. For instance, besides visual fidelity, MMORPGs can promote the experience of being present in a virtual environment by providing an engaging background story or opportunities to communicate and cooperate with other individuals.

Escapism is a motivational facet of immersion in the MMORPG environment—a concept related to perceived realism. Thus, escapists may be more likely to perceive the MMORPG environment as realistic. Furthermore, as social realism is a component of overall game realism, we might expect that individuals who perceive an MMORPG world as unrealistic are less likely to build real social bonds with other players.

Gaming time

Escapism in MMORPGs is related to a larger time investment in the game, and excessive gaming time is a robust predictor of MMORPG-related problems. MMORPG players with excessively long gaming times report lower levels of offline social support and decreased well-being. These findings suggest that gaming time might mediate the effect of escapism on the social support and well-being of MMORPG players.

The current study

The aim of the current study was to create an integrative framework to observe cognitive (realism beliefs) and behavioral (gaming time) pathways between escapism, social support, and well-being. Furthermore, to account for the specificity of escapism, we performed a more detailed analysis of offline and online social support, with exclusive focus on online social support for real world problems. We expected that, being motivated to isolate themselves from everyday life, escapists are more likely to fortify their in-game bonds at the cost of their offline relationships. Consequently, MMORPG escapists are likely to have fewer offline and more online support for real world problems. We also expected that the extent to which individuals perceive the MMORPG world as realistic and the amount of time they devote to playing facilitates online support and decreases the desirability of offline social support. Finally, we hypothesized that online and offline support would have independent effects on the well-being of MMORPG players.

Method

Participants

This study involved 1,053 gamers (93.3% male) between the ages of 12 and 49 years ($M=18.64, SD=5.12$) recruited from MMORPG message boards. The participants played World of Warcraft (30.9%), Tibia, (11.1%), Lineage 2 (10.4%), Eve Online (6.16%), Guild Wars (5.49%), Silkroad Online (5.49%), Maple Story (2.75%), MU Online (2.65%), and Warhammer Online (1.89%). Missing data (1.3%) were determined to be random via Little’s $\chi^2(3171)=3205.02, p=0.33$, and were imputed using the Expectation–Maximization algorithm in SPSS v21 (IBM Corp., Armonk, NY). Informed consent was obtained from each participant, and minors were requested to obtain parental consent.

Measures

Well-being. We used the Steen Happiness Index to measure participant pleasure, engagement, and meaning. This scale consists of 20 items and requires participants to read a series of statements and pick the one that best describes their feelings during the past week. Response choices range from 1 = “I dislike my daily routine” to 5 = “I enjoy my daily routine so much that I almost never take breaks from it” (z = 0.90).

Escapism. We used two items from the Motivations of Play in MMORPGs Scale to measure escapist motives among players: “I play so I can avoid thinking about some of my real life problems or worries” and “I play to escape from the real world.” Participants answered on a 5-point scale ranging from 1 = “strongly disagree” to 5 = “strongly agree” (z = 0.72).

Perceived game realism. We measured perceived game realism with four items that asked participants about the extent to which they viewed the MMORPG environment as realistic. Participants were asked to respond to the statements using a 7-point scale ranging from 1 = “strongly disagree” to 7 = “strongly agree”, for example “I perceive the MMORPG environment as a direct reality,” “The MMORPG world is real” (z = 0.78).

Gaming time. Our measure of gaming time reflects the average time spent within the MMORPG environment. Participants reported the number of hours spent on gaming for each day of the week separately (z = 0.94).

Offline and online social support for real world problems. Social support was measured with eight items from the Berlin Social Support Scales that assess instrumental and emotional social support. To measure offline support, participants were instructed to think about people they know offline, not in the MMORPG, and answer items such as “There are people who offer me help when I need it.” To account for the central theme of escapism (escaping from real world problems), participants reported their online support for offline problems, for example “When I am worried, there is someone in the game who helps me.” Participants responded to these items on a 4-point scale ranging from 1 = “strongly disagree” to 4 = “strongly agree” (z = 0.92).

Analytical strategy

We used structural equation modeling with maximum likelihood estimator to determine whether escapism affected player well-being and if this effect was mediated by gaming time, perceived game realism, and online support for offline problems. To create a measurement model, we used composite indicators from individual items of well-being (three parcels), gaming time (three parcels), and social support...
To evaluate the model fit, we calculated the Tucker–Lewis index (TLI), comparative fit index (CFI), and root mean squared error of approximation (RMSEA). TLI and CFI > 0.95 and RMSEA < 0.06 indicate a good fit between the hypothesized model and observed data. The residual variance of online and offline social support was left free to correlate with each other to account for a common method variance. We tested indirect effects using bias-corrected bootstrapping with 10,000 bootstrap samples. Bootstrapping produces point estimates and confidence intervals (CI) for the indirect effects. Significant indirect effects are indicated by CIs that do not include zero. We tested indirect effects with a single mediator (e.g., escapism predicts well-being via offline social support) and with two mediating variables operating sequentially (e.g., escapism predicts well-being via perceived realism and offline social support). Structural equation modeling was performed with mPlus v7.12.

**Results**

Descriptive statistics and intercorrelations between study variables are presented in Table 1. The structural model is presented in Figure 1. According to the fit indices, the model fit the empirical data well, $\chi^2(92)=195.31, p<0.01$, RMSEA = 0.03, 95% CI [0.02, 0.04], CFI=0.99, TLI=0.99. As hypothesized, there was a significant total indirect effect of escapism on well-being, which was mediated by gaming time, reality beliefs, online social support, and offline social support, $b=−0.11$, 99% CI [−0.166, −0.046]. This total indirect effect consisted of five specific indirect effects. Reduced well-being was mediated by poor offline social support, $b=−0.110$, 99% CI [−0.161, −0.058], and the path through gaming time and offline social support, $b=−0.009$, 95% CI [−0.017, −0.002]. Furthermore, the escapism enhanced well-being through online social support, $b=0.015$, 95% CI [0.002, 0.029], and the path through gaming time and online social support, $b=0.002$, 95% CI [0.001, 0.004], as well as the path through reality beliefs and online social support, $b=0.005$, 95% CI [0.001, 0.010]. In sum, these indirect facilitating and inhibiting effects, together with the direct effect, $b=−0.274$, 99% CI [−0.370, −0.178], suggest that escapism is detrimental to player well-being, $b=−0.380$, 99% CI [−0.476, −0.284].

**Discussion**

This study demonstrated the specific pathways through which escapist motivations undermine the well-being of MMORPG players through depletion of offline social support.

---

**Table 1. Descriptive Statistics and Intercorrelations Among Study Variables**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Escapism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Well-being</td>
<td>−0.30**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Time (hours/day)</td>
<td>0.19**</td>
<td>−0.12**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Realism</td>
<td>0.23**</td>
<td>−0.08**</td>
<td>0.14**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Offline social support</td>
<td>−0.25**</td>
<td>0.50**</td>
<td>−0.15**</td>
<td>−0.15**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Online social support</td>
<td>0.15**</td>
<td>0.17**</td>
<td>0.12**</td>
<td>0.19**</td>
<td>0.26**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Age</td>
<td>−0.05</td>
<td>0.05</td>
<td>−0.03</td>
<td>−0.03</td>
<td>0.01</td>
<td>−0.10**</td>
<td>0.01</td>
</tr>
<tr>
<td>8. Sex</td>
<td>−0.02</td>
<td>−0.03</td>
<td>0.04</td>
<td>−0.03</td>
<td>−0.04</td>
<td>−0.11**</td>
<td>0.01</td>
</tr>
<tr>
<td>$M$</td>
<td>4.20</td>
<td>58.21</td>
<td>4.02</td>
<td>6.48</td>
<td>23.70</td>
<td>15.62</td>
<td>18.64</td>
</tr>
<tr>
<td>$SD$</td>
<td>2.22</td>
<td>12.39</td>
<td>2.34</td>
<td>3.25</td>
<td>6.07</td>
<td>6.11</td>
<td>5.11</td>
</tr>
</tbody>
</table>

Sex coded as 0 = women, 1 = men. *p < 0.05; **p < 0.01; ***p < 0.001.
The main contribution of the present study to the literature is our investigation of gaming time, beliefs about game realism, and social support that mediated this relationship. We found that escapism predicted more time spent within the virtual environment and a stronger belief that the MMORPG environment is as realistic as the real world. This finding adds to the emerging literature on perceived realism of MMORPGs and corresponds with telepresence as a related construct.

Most importantly, it indicates that perceived realism can be related to a specific motivational factor in addition to the characteristics of the game per se.

Our study also revealed more about structural dimensions of social support, as we asked players about their online and offline supportive social interactions. We found that escapism, gaming time, and realism beliefs independently predicted lower offline social support, a resource known to facilitate well-being. Additionally, we found compensatory processes. Individuals who spent more time playing and who perceived the MMORPG environment to be realistic were more likely to report greater support from other players for their offline problems. The results of this part of our study indicate how the overall structure of social support among players can be predicted by MMORPG-related motivations (escapism), cognitions (game realism beliefs), and behaviors (gaming time).

To account for the central problem in escapism (i.e., avoiding resolution of real world problems), we examined a specific aspect of social support by asking participants how other gamers support them in coping with their offline problems. Availability of support from other players was comforting, as indicated by the positive association between online social support and well-being. Unlike prior research, the effect of online social support was still significant after controlling for offline social support. This shows that online social support can facilitate, to some extent, coping with everyday problems independently from the effects of offline social support. It is important to note that this effect could be different if we asked about online support for coping with offline and online difficulties. In-game problems can generate a considerable amount of online supportive interactions that were purposefully omitted in our measure of online social support.

Online support did not compensate for a lower availability of social supports in the real world. Consequently, MMORPG escapists reported fewer overall social ties to help maintain their well-being. Instead of social augmentation or compensation, MMORPG players who fixated on relationships with other gamers at the cost of their offline social ties were more likely to experience a deterioration in well-being.

The following limitations should be considered when interpreting our findings. First, our sample was comprised mostly of young males. Therefore, we cannot determine whether this model generalizes to other age groups or to female gamers. Second, despite the close fit of our model to the empirical data, additional predictors of well-being and social support among MMORPG escapists might have been introduced into the model. Further studies could account for the differences between particular games or for the developmental perspective because specific causes for escapist motivations are likely to depend on age. Third, though structural equation modeling allows for interpretation of causal effects, only further experimental designs can provide direct evidence for validity of the model.

The current study may have practical implications. It recently has been suggested that measures of escapism might be used to screen for Internet addiction among MMORPG players. Additionally, our model suggests pathways that might optimize involvement in MMORPGs as healthy leisure activities. Reducing gaming time and inhibiting excessive beliefs about MMORPG realism may be protective for gamers displaying symptoms of escapism. Furthermore, MMORPG users should become more aware of the scientific evidence that their in-game relationships cannot serve as complete substitutes for real world support.

The strength of the present study lies in its integrative structural design, which allowed us to observe paths and indirect effects between constructs that were previously studied separately. Our model suggests that scientific knowledge about risk in MMORPGs is cumulative, replicable, and allows for further meaningful differentiations within broader concepts (e.g., distinguishing online support for offline problems). By understanding psychological and resource factors that determine well-being among MMORPG players, it becomes increasingly possible to optimize MMORPG usage.

Acknowledgment

The authors thank Roman Cieślak for his helpful statistical comments.

Author Disclosure Statement

No competing financial interests exist.

References


Address correspondence to:
Dr. Lukasz D. Kaczmarek
Institute of Psychology
Adam Mickiewicz University
89 Szamarzewskiego Street
PL-60-568, Poznan
Poland

E-mail: Lkacz@amu.edu.pl