Unpopular, Overweight, and Socially Inept: Reconsidering the Stereotype of Online Gamers

Rachel Kowert, MA,1 Ruth Festl, MA,2 and Thorsten Quandt, PhD1

Abstract

Online gaming has become an activity associated with a highly specific, caricatured, and often negative image. This “stereotype” has permeated the collective consciousness, as online gamers have become common caricatures in popular media. A lack of comprehensive demographic inquiries into the online gaming population has made it difficult to dispute these stereotypical characteristics and led to rising concerns about the validity of these stereotypes. The current study aims to clarify the basis of these negative characterizations, and determine whether online video game players display the social, physical, and psychological shortcomings stereotypically attributed them. Sampling and recruiting was conducted using a two-stage approach. First, a representative sample of 50,000 individuals aged 14 and older who were asked about their gaming behavior in an omnibus telephone survey. From this sample, 4,500 video game players were called for a second telephone interview, from which the current data were collected. Only those participants who completed all of the questions relating to video game play were retained for the current analysis (n = 2,550).

Between- and within-group analyses were enlisted to uncover differences between online, offline, and nongame playing communities across varying degrees of involvement. The results indicate that the stereotype of online gamers is not fully supported empirically. However, a majority of the stereotypical attributes was found to hold a stronger relationship with more involved online players than video game players as a whole, indicating an empirical foundation for the unique stereotypes that have emerged for this particular subgroup of video game players.

Introduction

For numerous reasons, perhaps in part because of its rapid growth, online gaming is an activity that has come to be associated in popular culture with a highly specific, caricatured, and often negative image.1–3 This “stereotype” has been reflected in numerous television shows, news reports, current affairs programs, and other sources of popular culture,4–7 and is epitomized in the following quote from Williams et al.: “[online] game players are stereotypically male and young, pale from too much time spent indoors and socially inept. As a new generation of isolated and lonely ‘couch potatoes,’ young male game players are far from aspirational figures.”3(p995) An empirical inquiry by Kowert et al.1 found that the stereotype of online gamers revolves around four themes: (un)popularity, (un)attractiveness, idle-ness, and social (in)competence. The researchers also found evidence to suggest that these negative characterizations have become personally endorsed as accurate representations of the online gaming community.

The validity of the stereotype of online gamers has frequently been disputed as fiction, citing demographic data that have provided little support for these stereotypic attributions.3,8–13 However, the majority of the demographic examinations of the online gaming community have been conducted in the context of broader assessments, which has led to a vast, but shallow, pool of information about the online gaming community. The work of Griffiths10 and Williams et al.3 are two exceptions to this, as they attempted to evaluate the stereotype of online gamers systematically through large-scale demographic assessments. However, these studies are also limited in their ability to support, or discredit, the validity of the stereotype, as they provide information on some aspects of the stereotype (such as age and gender), while others remained completely unexamined (such popularity and sociality). Furthermore, these studies (as well as the majority of the others) focused their demographic inquiries on players of massively multiplayer online role-playing games (MMORPG) rather than online gaming communities more generally. However, this subgroup of

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players has been found to hold different stereotypes, and are perceived more negatively, and stereotypically, than online gamers as a whole,¹⁴ making it difficult to generalize the findings across the broader population of online game players.

The current study aims to evaluate the accuracy of the stereotype of online gamers systematically and clarify whether members of the online video gaming community display the social, physical, and psychological shortcomings stereotypically attributed them. To do so, telephone interviews were undertaken across a representative German sample, whereby participants were asked to provide information about a wide range of outcome variables related to the stereotype of online gamers (the primary variables of interest are outlined in the following section). Differences in outcomes between online, offline, and nonplayers will be examined in two ways. First, broad differences in outcomes will be examined between groups to determine the presence of differences between those who choose to engage in online game play specifically, game players who do not (i.e., online players), and the nongame playing community. Second, the linear relationships between video game involvement and the outcome measures will be assessed across different game playing categories (i.e., all players, offline players, online players). This kind of analysis was chosen, as it will be able to elucidate any differences, and strength of these differences, across different game playing categories, demonstrating the extent to which the stereotypical attributes vary with involvement levels.

As there is little empirical evidence relating to the broader online gaming population, and the validity of the stereotype of this group, this study is largely exploratory. However, if one were to endorse the “kernel of truth” hypothesis,¹⁵ and assume the stereotype is grounded in fact, one would expect online game players to display more stereotypic qualities than offline video game players or nonplayers. These patterns should also be magnified amongst more involved online game players.

Materials and Methods

Participants

The present study draws from a large representative sample⁶ (N=5,000) of computer and console game players in Germany who took part in a telephone interview between March and April 2011. Only those participants who completed all of the questions relating to the variables of interest were retained for the current analysis (n=2,551). Of these participants, 2,051 were identified as active players (i.e., playing for more than 1 minute a day), 896 online players (i.e., participants who reported to play online video games more often than “never”), and 1,155 offline only players (i.e., active players of video games who reported never engaging in online play). The remaining 500 participants were nonplayers (i.e., no history of video game play). A summary of the demographic information of these game playing categories can be found in Table 1.

As seen in Table 1, the gender distribution varied across categories, with online players showing a more disproportionate ratio of male to female participants. Online gamers were also found to be significantly younger⁷ and to play more⁸ than the subgroup of offline players.

Table 1. Mean and Standard Deviations of Demographic Variables Across All Gaming Groups

<table>
<thead>
<tr>
<th></th>
<th>Offline players</th>
<th>Online players</th>
<th>Nonplayers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>1,155</td>
<td>896</td>
<td>500</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>45.9%</td>
<td>70.0%</td>
<td>39.6%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>45.45 (14.75)</td>
<td>33.57 (13.28)</td>
<td>48.56 (17.12)</td>
</tr>
<tr>
<td><strong>Play Duration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>33.68 (61.61)</td>
<td>74.19 (83.66)</td>
<td>—</td>
</tr>
</tbody>
</table>

Variables of interest

Assessment of stereotypes. The selection of the stereotypical attributes was guided by the research of Kowert et al.,¹ who identified four core components to the stereotype of online gamers (see Table 2). Due to the time constraints of telephone interviews, considerable semantic overlap between some of the subcomponents of this model (e.g., athletic and overweight), and difficulty in assessing the more subjective components of the stereotype (e.g., fashionable, unattractive), each subcomponent was not individually assessed.

For instance, within the “Popularity” component of the stereotype, only the subcomponents of popular and athletic were evaluated, as these two subcomponents could be clearly measured (i.e., popularity was measured through a report of how many good friends participants had, while athleticism was quantified by frequency of exercise), while the other two facets (fashionable and well groomed) would only be quantifiable by subjective measures of participants’ perceptions. As this kind of evaluation would likely be more influenced by self-perception variables and, consequently, more biased, than a report of the size of one’s friendship circle or frequency of participating in a particular activity, a direct assessment of popularity and athleticism was prioritized.

However, as can be seen in Table 2, subcomponents from all four of the primary stereotype dimensions were examined (e.g., popularity, attractiveness, idleness, and sociality).

The measures enlisted to evaluate the stereotypical dimensions varied. While some constructs were measured with a single item (such as a frequency report), others were assessed with shortened versions of validated scales. This variation should not be considered problematic, however, as the evaluation of each subcomponent was tailored to the particular construct in question based on previous research. The assessed subcomponents, and the measures enlisted to quantify them, are discussed in more detail below.

Table 2. Four Components of the Stereotype of Online Game Players According to Kowert et al.

<table>
<thead>
<tr>
<th></th>
<th>Popularity</th>
<th>Attractiveness</th>
<th>Idleness</th>
<th>Sociality</th>
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<tbody>
<tr>
<td>Well-groomed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fashionable</td>
<td><em>Young</em>*</td>
<td></td>
<td></td>
<td>*Socially inept</td>
</tr>
<tr>
<td>*Popular</td>
<td>*Loner</td>
<td>*Isolated</td>
<td></td>
<td>*Reclusive</td>
</tr>
<tr>
<td>*Athletic</td>
<td>*Obsessive</td>
<td></td>
<td></td>
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</table>

Note. *Assessed subcomponent. **While what constitutes young is debatable, the average age of online gamers will be assessed in relation to the stereotypical “teenage male,” which is stereotypically portrayed as the primary consumer of online games.
Popularity. To assess popularity, participants reported the size (i.e., number of important persons) and quality (i.e., number of good friends) of their social circle, with a greater number of friends of a greater quality signifying popularity. The athleticism subcomponent of this factor was assessed by asking participants to report how often they exercise in their leisure time (on a 0–4 scale ranging from “never” to “daily”), with less frequent exercise signifying a lower level of athleticism.

Attractiveness. The two subcomponents of loner and obsessive were examined. “Loner” was quantified by examining participants’ social motivations for play, as greater social motivation would indicate a preference to be in the company of others (when playing) rather than alone (i.e., loner). To assess social motivations, participants responded to six statements adapted from Yee’s gaming motivation scale. Reponses were given on a 5-point Likert scale ranging from 1 = “does not apply at all” to 5 = “applies completely.” These items examined the extent to which players engaged in online game play to be part of the community (“I use video games to be part of a community”; “I use video games to enter into an exchange with others”), to gain social capital (“I use video games to find new friends”; “I use video games to get to know other gamers”), and to be part of a team (“I use video games to play with other people”; “I use video games to play on the same team as others”). This scale was found to be highly reliable (Cronbach’s $\alpha = 0.89$). Outcomes were averaged to provide a mean score for each participant.

To evaluate obsessiveness, the short form of the Game Addiction Scale developed by Lemmens et al. was administered (for an in-depth analysis of this scale see [Festl, Scharnow, and Quandt, 2013]). Participants indicated how often they experienced each of the seven situations described in scale within the last 6 months. Responses were given on a 5-point Likert scale ranging from 1 = “never” to 5 = “very often.” This scale was found to be highly reliable (Cronbach’s $\alpha = 0.89$). Outcomes were averaged to provide a mean score for each participant.

Idleness. The underachiever and isolated subcomponents of idleness were evaluated. To assess underachievement, participants were asked to rate how successful they are in school/university/occupational settings compared to their peers on a 5-point Likert scale ranging from 1 = “not at all successful” to 5 = “very successful” (see Turban and Dougherty for a similar approach). A lower outcome would suggest a greater degree of underachievement. As these categories are mutually exclusive, outcomes for each of these questions will be assessed independently.

The outcomes from an abridged version of the Berlin Social Support Scale were used to quantify isolation. The four items included in this assessment represent the highest loading items from each of the two subscales of this measure (instrumental and emotional support; Cronbach’s $\alpha = 0.87$). This scale was found to be highly reliable (Cronbach’s $\alpha = 0.84$). The outcomes from this measure were averaged to compute a mean score.

Sociality. Two of the four components of sociality were directly assessed: socially inept and reclusive. Social competence was measured using two items adopted from the California Psychological Inventory (CPI; i.e., “I get on very well with others” and “I set high standards for myself and others”). Reclusiveness was assessed alongside “loner” by examining participants’ social motivations to play. Greater social motivation to play would suggest players are not reclusive but instead engage in this activity in order to participate with others.

An overview of the assessed subcomponents and their measures can be found in Table 3.

### Results

#### Between-group analyses

Differences in stereotypical attributes between online and offline players and between online and nonplayers were examined with two separate MANOVA analyses. It was predicted that online players would exhibit the stereotypical...
attributes to a greater extent than offline and nonplayers. These predictions were not supported. After controlling for multiple comparisons (Bonferroni adjustment, \( p < 0.001 \)), no significant differences between online and nonplayers were found. However, significant differences between online players and offline players were found, with online players reporting greater problematic play behavior \( (F = 16.35, p < 0.001, \text{partial } \eta^2 = 0.008) \) and greater social motivations for play \( (F = 436.57, p < 0.001, \text{partial } \eta^2 = 0.178) \) than offline players. These results can be seen in Table 4. No other significant differences were found.

**Within-group analyses**

Hierarchical regression analyses were conducted whereby video game involvement was regressed by each of the variables across each gaming group. In line with previous research, a measure of play duration was employed as the measure of video game involvement. This was quantified as average daily play time (minutes), with a higher rate of play indicating greater interaction, or involvement, with video game environments.

A potential problem in this type of analysis is the correlational fallacy, in which two variables (i.e., involvement and social motivations) are correlated because they share variance with a third variable (i.e., gender). This can lead to an erroneous interpretation that the two variables are directly related when in fact they are not. The diversity of the current sample makes this problem particularly likely, as there are several variables that could potentially co-vary with both gaming involvement and the various outcome measures, such as gender and age. Therefore, the effects of age and gender were partialled out in step 1 and are not reported. As can be seen in Table 5, significant linear relationships between video game involvement and the outcome measures were found across game playing categories. To ease interpretation, the stereotypic factor(s) that each item relates to is listed next to each outcome variable.

Lower exercise frequency, poorer occupational success, lower social support, and a greater social motivation to play were all found to be predictive of increased levels of involvement, all of which were magnified amongst the subgroup of online players. Increased problematic use also emerged as a significant individual predictor of online video game involvement, suggesting that increased online video game play is a particularly strong predictor of problematic use.

**Discussion**

This study examined the validity of the stereotype of online gamers by evaluating differences in outcomes on a range of variables associated with the cultural stereotype of this population. Contrary to predictions, broad differences were not found between online and nonplayers. The only significant difference to emerge between these groups was age, as online players were found to be significantly younger than offline or nonplayers. However, the average online player was found to be in their 30s, rather than their teenage years, disputing the anecdotal prototype and confirming previous demographic findings. Additional differences did emerge between online and offline players. However, these differences were limited to problematic play and social motivations, with online players generating higher outcomes on both of these measures. The lack of overarching differences between online, offline, and nonplayers signifies that most the components of the stereotype are not empirically supported. Online players do not seem to be more lazy, overweight, or unathletic than offline or nonplaying participants, as they all reported similar levels of exercise, nor are particularly unpopular, socially inept, isolated, or reclusive, as online players reported equivalent levels of quality friendships and sociability as compared to the other groups, as well as a greater social motivation to play than offline players.

However, regression analyses did uncover significant inverse relationships between involvement and frequency of exercise, occupational success, and social support, suggesting that more involved online video game players are more unathletic, underachieving in their occupational pursuits in relation to their peers, and less socially supported than the broader video game playing population or the subgroup of offline players. A positive relationship between involvement and problematic play amongst online players also emerged, indicating that the greater involvement one has in online gaming as an activity, the greater likelihood one will exhibit the qualities associated with problematic play (e.g., salience, tolerance, mood modification, relapse, withdrawal, conflict, and problems). While these results indicate that variation in outcomes correspond with increased involvement, it remains unclear whether the emergence of linear relationships signifies a causal chain or represents preexisting differences. It is possible that changes in athleticism, occupational success, and social support are cultivated through involvement, whereas the relationships between involvement and problematic play reflect differences that existed prior to engagement, as no broad differences were found between groups with the former but were evident for the latter. However, additional research, particularly, longitudinal, would be needed to clarify the mechanisms underlying these findings.

**Limitations and future research**

While this work provides the first systematic examination of the validity of the stereotype of online gamers, there are limitations to consider. First, the current sample was limited
to residents of Germany. As such, replications are needed to determine if these effects remain across other Western populations. Second, due to the limitations of computer assisted telephone interviewing, it was not possible to evaluate every subcomponent of the stereotype or provide an in-depth analysis of each of the attributes that was assessed. As such, some differences may have gone undetected. For instance, it is possible that online game players exhibit greater degrees of introversion than the offline or nongaming population. It is also possible that the measure of sociability was too broad to uncover any substantial differences between online gamers and nonplayers. These two contentions seem particularly likely, as researchers have identified considerable differences in sociability within online gaming populations and suggested that online video game play may be particularly desirable for introverted individuals.

Conclusion

The stereotype of online gamers centers around themes of (un)popularity, (un)attractiveness, idleness, and social competence, conjuring up images of socially inept teenage boys, hypnotically engaged in their gaming worlds. While this characterization has permeated the collective consciousness, both anecdotally and individually, there has yet to be a systematic evaluation into the validity of these stereotypical attributions. The current research attempted to provide this information by examining the demographic profile of online gamers and its alignment with popular stereotypes. The results indicated that the stereotype of this population is not fully supported empirically. While more involved online video game players do seem to differ from their less involved counterparts on a variety of stereotypically ascribed attributes, particularly in relation to the psychological (e.g., problematic use, occupational success, social support) components of the stereotype, most aspects of the stereotype did not garner empirical support. As broad differences did not emerge between online, offline, and nonplaying populations for most of the stereotypical constructs (i.e., unpopular, unathletic, loner, isolated, socially inept, reclusive), it can be concluded that the average online gamer does not epitomize the stereotypical mold anecdotally attributed to them.

Notes

a. This sample was drawn from a representative sample of 50,000 individuals aged 14 and older who were asked about their gaming behavior in an omnibus telephone survey using the German standard computer assisted telephone interviewing (CATI) sampling procedure.
b. Univariate ANOVA analysis, controlling for age: F(1, 2047) = 116.26, p < 0.001, η² = 0.054.
c. Univariate ANOVA analysis controlling for age and gender: F(1, 2048) = 396.22, p < 0.001, η² = 0.126.
d. While an inverse relationship was found for the general size of their social circle (e.g., number of important persons), this relationship was relatively small in magnitude, suggesting that this difference is not substantial.

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References


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