



Are orcs racist? Dungeons and Dragons, ethnocentrism, anxiety, and the depiction of “evil” monsters

Christopher J. Ferguson¹

Accepted: 17 November 2021

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2021

Abstract

Recent years have seen debate about whether depictions of inherently evil monster races such as orcs in role playing games or literature/movies such as *Lord of the Rings* could be considered racist. Although such decisions may be subjective, little data has been produced to inform the debate regarding how critical an issue this is. In particular, does consuming such material relate to racism in the real world, or do a majority of individuals, particularly people of color, consider such depictions racist? The current study sought to address these issues in a sample of 308 adults (38.2% non-White) a subset of whom (17%) were players of the role-playing game Dungeons and Dragons. Playing Dungeons and Dragons (D&D) was not associated with greater ethnocentrism (one facet of racism) attitudes. Only 10.2% found a depiction of orc monsters as inherently evil to be offensive. However, when later asked the blunter question of whether the same depiction was racist, the number jumped to 34.0%, with women particularly inclined to endorse this position. This suggests asking people about racism may prime them to see racism in material they hadn't previously found to be offensive. Neither participant race nor history playing the D&D game was associated with perceptions of offensiveness or racism.

Keywords Dungeons and Dragons · Racism · Anxiety

Issues of race and racism have become forefront in public debates. Much of this has impacted popular culture with a wave of problematizing (the tendency to see immoral content in media) hitting many media industries. This was particularly true after the murder of George Floyd at the hands of Minneapolis police officers in 2020. Jokes that touched on issues of race, such as the characters on *Golden Girls* wearing mud masks or even the depiction of a dog police officer in *Paw Patrol* stirred commentary that such depictions should be eliminated or censored.¹ The Dungeons and Dragons (D&D) game also saw controversy given that the game involves some monster “races” such as orcs which are depicted as inherently evil. Some expressed the concern that orcs were based on actual human races or, even if not, could promote racist attitudes in the real world (Hoffer, 2020). This article seeks to empirically address some of the concerns about race depictions in the D&D game. By contrast, the article also considers a countervailing view that playing the

game is relaxing for players, reducing anxiety rather than leading to an immersive experience that may influence negative outcomes.

Orcs have their origin in Irish and English folklore (Sims-Williams, 2011). However, they were made famous as the bad guy foot soldiers of J.R.R. Tolkien's *Lord of the Rings*. The issue of whether Tolkien himself was motivated to depict actual racial groups (which he, himself, disavowed) or was inspired by internal biases remains debated and is complex (Fimi, 2012). Suffice to say, that issue seems ambiguous enough for individuals to read Tolkien's motives charitably or uncharitably according to their own worldview. From *Lord of the Rings*, orcs became a staple of role-playing games such as D&D, which are often built around narratives of good versus evil and, for which, fighting monsters is a core aspect of the game. But in presenting monster “races” as inherently evil, does this promote racism in real life?

✉ Christopher J. Ferguson
CJFerguson1111@aol.com

¹ Department of Psychology, Stetson University, 421 N. Woodland Blvd., DeLand, FL 32729, USA

¹ The sitcom *Community* has an overlapping, illustrative example. One episode of the show became controversial due to an Asian American character who dressed as a drow elf from the D&D game. Drow have black skin and white hair and many considered an Asian American dressing as a drow to be akin to blackface.

If the question of whether the depiction of orcs as evil is racist is a subjective one, good data can help us understand the practical ramifications of this question. At the heart of the issue would appear to be two key questions. First, is playing the D&D game (or games like it) associated with actual racist attitudes in real life? Second, are people of color, the presumed victims of orc racism, in a consensus that such depictions are racist? Arguably, an affirmative answer to either of these questions might suggest the need to rethink depictions of orcs and other monsters.

Unfortunately, there is little research on D&D at all. What does exist suggests that D&D is actually a largely positive influence on moral development (Wright et al., 2020) and has sometimes been used in therapy (Blackmon, 1994). Studies differ with regard to whether D&D players have entirely normal psychological profiles (Simon, 1987) or experience higher levels of societal alienation (DeRenard & Kline, 1990), though it is worth noting most of these studies are quite old. As such, there is obvious room for new data which can help guide our understanding of whether the current debate on “problematic” depictions of orcs has practical merit.

Media Effects on Racism and Ethnocentrism

For this paper, an operational approach suggested by Kleinpenning and Hagendoorn (1993) for defining racism is used. Kleinpenning and Hagendoorn defined racism as perceiving there to be innate qualitative differences between racial groups of people and perceptions of the superiority of one’s own group. They observed four underlying constructs within racism, of which ethnocentrism (defined below) is one facet (the others being biological racism, aversive racism, and symbolic racism). As such, for the purposes of this article, ethnocentrism will be conceptualized as one facet of racism as applies to cultural beliefs and practices.

As noted above, there is little prior research on role playing games and racism or ethnocentrism (a concept wherein a person expresses preference for associating with members of their own ethnicity and disinclination to associate with people from other ethnicities, as well as morally evaluate other cultures using their subjective baselines). Given that, an examination in other areas may suggest where the data lay in regards to potential media effects.

One line of thought suggests that, in American television, non-white characters tend to be represented as lower status, even as representation overall has improved, and this lower status representation can be associated with negative views toward minority groups (Tukachinsky et al., 2015). In particular, negative depictions of minority groups in news may be associated with increased stereotypes (Dixon, 2008). Other studies have found somewhat

more mixed results, with the effects of exposure to stereotyped images moderated by internal characteristics of the viewer (Strass & Vogel, 2018). Likewise, Mastro et al. (2007) found that effects of television viewership on stereotypes of Latinos is moderated by viewer perceptions, with no direct effects. Further data suggest that minority groups tend to perceive media as hostile and effects as pervasive, though actual exposure to media does not appear to influence this perception (Tsfati, 2007).

Other evidence suggests that media can have some positive influences as well. For instance, positive depictions of minority groups may result in at least short-term positive perceptions of such groups by others (Bodenhausen et al., 1995). Cooperation between groups in a competitive game can boost allegiances between in and outgroups, which may be particularly relevant for the collaborative nature of role-playing games (Adachi et al., 2016).

These observations about past media studies are tempered by the concern that they are not open science/preregistered. The degree to which priming effects such as those seen in media effects studies are replicable has been controversial (Cesario, 2014; Rohrer et al., 2019) and some studies suggest that preregistered studies of media effects in other areas such as aggression have failed to support previously consensus theories (Przybylski & Weinstein, 2019). The problems of spurious positive findings may be particularly common in politically and morally valenced fields such as those touching on race and ethnocentrism, particularly when social science itself has issues of limited viewpoint diversity (Redding, 2001). Thus, it is hard to make definitive conclusions without a pool of preregistered, open science data using rigorous methods. The intent is not to suggest that such older studies are without value, but rather than their temporal validity may decrease over time and newer studies with preregistered designs may lead us to differing conclusions.

As to why media may influence racist attitudes Racial Formation Theory helps to explain this (Omi & Winant, 1994). Put a bit simply, in terms of game play, games may produce spaces which members of majority cultures can explore as heroes, though those spaces are occupied by exotic “others” (Brock, 2011). This can create play spaces where members of the majority culture (Whites, in the United States), perceive members of the majority culture as heroically slaying “evil” members of other races. As different groups of people are organized on external racial characteristics such as skin color, body proportions, etc., this can reinforce tendencies to view social groups as not only different but of differing moral worth (i.e., good versus evil) based on physical racial characteristics. If this is so, this can be extrapolated to the real world, increasing tendencies to view members of other racial categories or cultural groups as being of less moral worth.

Gaming and Anxiety

Many concerns about gaming focus on the potential for games to cause negative impacts on players. By contrast, gamers themselves often express that games are a positive way to relax and decrease stress. It can be helpful to explore the impact of games from both positive and negative directions, understanding that these are not necessarily mutually exclusive.

In contrast to concerns that experience with gaming may relate to racism and ethnocentrism, some research suggest that certain types of game playing may help reduce anxiety and stress. In some cases, video games have been developed specifically to treat anxiety (e.g., Maarsingh et al., 2019; Wijnhoven et al., 2015). However, evidence finds that even commercial games appear to be associated with reduced stress (Ferguson & Rueda, 2010). There is, unfortunately, relatively little evidence related to this regarding role-playing games. Such games are sometimes used in therapy with positive results (Blackmon, 1994). In some cases, role-playing games have been specifically designed to help players manage stress (Lee et al., 2014). It would be interesting for data to examine whether playing role-playing games is associated with reduced anxiety, as appears to be the case for video games.

Although research in this area is fairly limited, research in other related areas, particularly video gaming finds that gaming can reduce stress (Rieger et al., 2015). This typically occurs through a process of mood repair, wherein a pleasant activity can restore mood to a positively valenced position when a person is otherwise stressed or unhappy. It is not unreasonable to speculate that role-playing games might function in a similar manner.

The Current Study

Thus, the current study is designed to provide data for the following hypotheses:

- H1: Greater hours spent playing D&D will be associated with greater ethnocentrism.
- H2: People of Color are more likely to see the portrayal of orcs as "evil" being racist.
- H3: Playing D&D will be associated with reduced anxiety.

Note that this study was preregistered, and the preregistration can be found at: <https://osf.io/u72kp>. All study materials can be found at: <https://osf.io/cs7kp/>. Raw data is publicly provided and available at: <https://osf.io/56qfy/>. I adopt the 21-word statement of Simmons et al (2012): "I report

how we determined our sample size, all data exclusions, all manipulations, and all measures in the study."

Methods

Participants

Participants were recruited online, both through a student research participant database at Stetson University, a liberal arts university in the southeast of the United States as well as through online forums, both general and those devoted to playing the D&D game specifically (mainly a forum devoted to 5th edition D&D on Facebook as well as Twitter). Solicitation materials did not reveal hypotheses, noting that the survey was a survey of leisure activities and personality and stress. There were 324 responses² to the survey. Of these 16 (5%) failed one of two reliable responding checks and were eliminated from the database, and 2 were found to be under the age of 18 and also eliminated, leaving a final sample of 306 respondents.

Mean age of the sample was 26.24 ($SD = 10.90$, range 18–64). There were 83 males (27.1%) as well as 218 females (71.2%) as well as 5 who reported "other" for gender (1.6%). Regarding race/ethnicity, Whites were the majority (61.3%), followed by Hispanics (25.6%), Blacks (7.2%) and smaller numbers of Asians or other race/ethnicities. 17.1% of the sample played D&D for at least some amount of time during the past week.

Materials

Distractor Items Although not hypothesis relevant, it is worth noting that several items were included to reduce hypothesis guessing among participants. When asking about leisure activities, participants were asked about multiple leisure activities, with D&D playing embedded among them. Also, a Music Motivation Questionnaire was also included as a distractor survey though it was unrelated to any hypothesis. No more is said about these items as they are not hypothesis relevant and were not analyzed.

Orc Questionnaires Twice during the study, once about mid-way and once at the very end, participants were presented with the source material D&D description of orcs which had elicited controversy. This read "Most orcs have been indoctrinated into a life of destruction and slaughter. But unlike

² This number exceeds to preregistered sample of 200, though due to online recruitment, participation was a bit organic. Recruitment was not continued beyond 200 due to concerns regarding statistical significance, and no examination of data occurred during the recruitment period.

Table 1 Descriptive responses to the subtler and blunter questions related to the standard D&D depiction of orcs

Question	Agree	Disagree
Subtler Set		
1) I think this sounds like an exciting monster to fight	57.2%	42.8%
2) These creatures sound scary	70.8%	29.2%
3) I think I would consider playing an orc character were I to play the game	56.4%	43.6%
4) The description makes me feel angry	13.1%	86.9%
5) I think this is a great description	73.4%	26.6%
6) (reliability check item)		
7) This description offended me	10.2%	89.8%
8) This description made me feel good	19.0%	81.0%
9) This description made me feel sad	35.9%	64.1%
10) These creatures sound like worthwhile foes for good guys to fight	59.2%	40.8%
11) The description feels unfair	47.2%	52.8%
12) These creatures sound intimidating	75.2%	24.8%
13) This description seems too reductive or simplistic	49.0%	51.0%
14) This description is just fine the way it is	57.0%	43.0%
Blunter Set		
1) I am concerned that orcs represent real life human cultures	53.6%	46.4%
2) I find the depiction to be racist	34.0%	66.0%
3) I worry players of D&D experiencing this may become more racist in real life	19.6%	80.4%
4) It is unacceptable to define even monster races as inherently evil	42.8%	57.2%
5) I would advocate that this depiction be removed from all D&D products	20.6%	79.4%

The position of the reliability check item was retained for clarity

creatures who are by their very nature evil, such as gnolls, it's possible that an orc, if raised outside its culture, could develop a limited capacity for empathy, love and compassion. No matter how domesticated an orc might seem, its blood lust flows just below the surface. With its instinctive love of battle and its desire to prove its strength, an orc trying to live within the confines of civilization is faced with a difficult task."

In the subtle cue response, participants were asked a series of 13 (14 including a reliability check item), questions that were both positively (e.g., "I think this sounds like an exciting monster to fight") and negatively (e.g., "The description makes me feel angry") valenced items. At this juncture, none of the items asked about race or racism, just about emotional and attitudinal responses to the depiction (including "This description offended me"). Responses were coded on a 4-point Likert scale (with choices ranging from definitely true to definitely false). As per the preregistration, the negatively valenced items were combined into a scale ($\alpha = 0.776$).

In the racism cue response, at the very end of the survey, participants were asked 5 blunter questions about whether the depiction could be considered racist. When combined the alpha reliability for this scale was 0.774. All items as well as the percent agreeing or disagreeing (collapsed across "Definitely" and "probably" categories) are presented in Table 1

Dungeons and Dragons Exposure D&D playing was assessed with a single question asking how many hours per week each person spent playing the game. As noted above, this question was embedded among multiple distractor questions asking about other leisure activities such as jogging, reading the newspaper, or donating time to charity.

Social Desirability Social Desirability was controlled using a 14-item scale developed by Ferguson and Negy (2006). This scale involves true/false items that are unflattering but typically common for most individuals (e.g., "Some people make me want to hit them"). Coefficient alpha was 0.685.

Anxiety Anxiety was assessed using the state stress scale developed by Spielberger et al. (1983). This is a 20-item Likert scale designed to measure current anxiety level. Coefficient alpha for the present sample was 0.936.

Ethnocentrism Ethnocentrism is a concept marked by preference for being around individuals similar to one's own ethnicity and dislike or disdain for those who are of a different ethnic background. For this study it was measured using the Multiethnic Climate Inventory (Johnson & Johnson, 1996). Sample items include "I don't like some other races or cultures" and "I want to do social things only with people of my own race and culture." This was a 10-item Likert scale with coefficient alpha of 0.844.

Aggressiveness Trait Aggression was included as a control variable for this study. It was measured using the 12-item short-form version of the Buss-Perry Aggression Questionnaire (Bryant & Smith, 2001). This Likert scale had a coefficient alpha of 0.825 with the current sample. Aggression is used as a control variable out of concern that trait aggression may predict more ethnocentric attitudes, as well as be associated with attraction to more violent media such as RPGs. As such, controlling for trait aggression can help us to understand the unique variance explained in ethnocentrism by RPGs outside of aggressive personality.

Procedure

All surveys were taken online using Qualtrics software. Recruitment occurred through both a university participant pool, as well as through social media, including forums dedicated to the D&D game. All participants were presented with an informed consent form, followed by the demographics questionnaire. Following this, the social desirability, anxiety, and ethnocentrism scales were administered. This was then followed by the music motivations questionnaire as a distractor. Following this, participants received the first set of orc questions, the more subtle set. They were then given the aggression questionnaire, followed by the blunter, racism-focused set of questions on the orc depiction. After this, they were provided with a debriefing including all study hypotheses and thanked for their participation. Analyses were conducted in SPSS software and, aside from descriptive data and exploratory analyses described below, all main analyses with OLS regressions with pairwise deletion of missing data.

Results

Descriptive Data

Responses to all questions from both the subtler set and the blunter set of questions regarding the standard D&D orc description are presented in Table 1. “Definitely true” and “Probably true” responses were collapsed to “Agree” and “Definitely false” and “Probably false” responses were collapsed to “Disagree.”

In the subtler set of questions, attitudes toward the depiction of orcs generally leaned positive. In particular, for the key item of whether respondents found the description found the description “offensive”, only 10.2% did. However, when asked blunter questions about orcs and race, disapproval increased somewhat. In particular, 34.0% claimed to find the depiction of orcs to be “racist” despite only 10.2% previously finding the depiction to be offensive. A majority of participants (53.6%) expressed that orcs might represent

Table 2 Regression results (standardized regression coefficients)

Predictor	Ethnocentrism	Anxiety	Disapproval	Racism Scale
Age	.042	-.154*	-.133	-.077
Gender	.057	.129*	.075	.190*
Race (White/POC)	.235*	-.022	-.015	.062
Education Level	.009	-.092	.171	.031
Trait Aggression	.188*	-.332*	.053	.167*
Social Desirability	.104	.012	.013	.114
D&D hours	-.095	-.040	.115	.025

actual human cultures, whereas a substantial minority thought monsters shouldn’t be depicted as inherently evil (42.8%). Nonetheless, only a minority worried such depictions might cause racism among players in real life (19.6%) or thought the depictions should be removed from D&D products (20.6%).

Although negative views of the orc description were a minority view in either case, the jump from 10.2% who found the depiction offensive in the subtler set of questions to 34.0% who found it to be racist in the blunter questions is curious. It seems unlikely most individuals would find a depiction racist but non-offensive. Thus, there may be a particularly moral priming effect that occurs when asking participants about race and racism, but we’ll return to this issue in the discussion.

Main Analyses

Standardized regression coefficients for each Ordinary Least Squares (OLS) regression are presented in Table 2. As per the preregistration, predictor variables were: Age, Gender, Race (White/POC), Education Level, Trait Aggression, Social Desirability and D&D hours. Predictors related to age, gender and education were considered general control variables. Aggression, as indicated earlier, was included as a control variable to control for trait-level personality which may predict both ethnocentrism and attraction to RPGs. Given that the surveys included questions that may related to stigmatized views regarding ethnocentric views, social desirability was also controlled. The initial race comparison of Whites compared to People of Color was employed both to allow for the greatest numerical comparison as well as the common perception that Whites may be less sensitive to racial/ethnic issues than People of Color. It should not be assumed that this comparison is meant to imply that Whites are a “default” position to which all other races/ethnicities should be compared, or that all other race/ethnic

groups represent a monolithic view on race and ethnicity. Exploratory analyses will rerun these regressions comparing Whites to the two other largest race/ethnic groups, specifically Hispanics and Blacks. VIF analyses revealed a lack of collinearity issues with all regressions, with all VIFs under 2.0. To correct for multiple regression models, a significance level of 0.0125 will be employed to interpret results as statistically significant.

Regarding the regression for ethnocentricity, the overall model was significant [$R = 0.364$, $R^2_{adj} = 0.112$, $F(7, 290) = 6.24$, $p < 0.001$]. Significant predictors of ethnocentricity include race ($\beta = 0.235$) such that People of Color reported slightly higher ethnocentricity than Whites, as well as trait aggression ($\beta = 0.188$). D&D playing was not a significant predictor of ethnocentrism, and its effect size was negative ($\beta = -0.095$) suggesting that, if anything, D&D playing was associated with less ethnocentrism, albeit to a non-significant degree, thus ruling out the potential for Type II error.

Regarding the regression for state anxiety, the overall model was significant [$R = 0.473$, $R^2_{adj} = 0.205$, $F(7, 290) = 11.94$, $p < 0.001$]. Significant predictors of ethnocentricity include age ($\beta = -0.154$) and gender ($\beta = 0.129$) such that women and those who reported gender as “other” had higher anxiety, as well as trait aggression ($\beta = -0.332$). D&D playing was not a significant predictor of anxiety.

Regarding the regression for the negatively valenced subtle orc response items (Disapproval in the table), the overall model was nonsignificant [$R = 0.175$, $R^2_{adj} = 0.007$, $F(7, 290) = 1.31$, $p = 0.246$]. It was not examined further.

Regarding the regression for the racism blunter orc response items, the overall model was significant [$R = 0.258$, $R^2_{adj} = 0.044$, $F(7, 290) = 2.95$, $p = 0.005$]. Significant predictors of concerns about the depictions of orcs being racist included age gender ($\beta = 0.190$) such that women and those who reported gender as “other” had higher concerns about racism, as well as trait aggression ($\beta = 0.167$) which also, unexpectedly, was associated with higher concerns about racism. D&D playing was not a significant predictor of concerns about racism in the D&D depiction of orcs.

Regressions regarding the Disapproval items and concerns about Racism, were rerun with comparisons between Whites and Hispanics and Whites and Blacks. Note, these are exploratory in nature and were not included in the pre-registration. Race/ethnicity was non-significant in each case.

As further exploratory analyses, Bayesian independent samples t-tests were run to compare Whites versus People of Color on the individual “offensive” and “racist” items as well as the scales for Disapproval and Racism scales. Results indicated that the null hypothesis was clearly supported for the Disapproval scale (BF = 9.028 in favor of the null hypothesis), the racism scale (BF = 6.447 in favor of the null hypothesis), as well as the individual “racist” item

(BF = 10.71 in favor of the null hypothesis). However, People of Color were slightly more likely to indicate they were *not* offended by the description of orcs ($M = 3.76$, $SD = 0.52$, higher scores indicate less offended), than Whites ($M = 3.66$, $SD = 0.77$), though Bayes Factors suggested this effect was not strongly conclusive (BF = 1.89 in favor of the alternative hypothesis).

Lastly, exploratory follow-up analyses were run with gender. Given there were 5 individuals who identified as “other” for gender, the regressions were rerun with 2 dummy variables, 1 for male, another for female, each of which were rerun as separate regressions. Results were similar in most cases to the original regressions. One exception was in the case for anxiety. In this case, the contrast of males to women and “other” identifying individuals was significant ($\beta = 0.129$, $p = 0.043$) whereas the contrast between women and men and “other” identifying individuals was not ($\beta = 0.085$, $p = 0.137$). This suggests that “other” identifying individuals may be particularly driving the relationship between gender and anxiety. With the orc racism scale, the male dummy gender variable ($\beta = 0.155$, $p = 0.021$) was significant whereas the female dummy gender variable was not ($\beta = 0.102$, $p = 0.106$), clarifying that males were less likely to find the depictions racist than were either women or individuals identifying as “other” in terms of gender.

Discussion

The issue of how to decide which media forms are “problematic” is becoming more pronounced in recent years. It is clear that many impressions of popular media are subjective. Arguably, there are risks both in ignoring the potential that some media may include racist, sexist or other negative portrayals, while, at the same time enforcing increasingly puritanical guidelines most consumers disagree with that can undercut the seriousness of the effort and distract from more pressing societal problems. The current study sought to address this regarding current controversies over depictions of orc monsters in the D&D game. Specifically, were concerns that such depictions might be “problematic” supported either by data correlating the game to ethnocentrism, or general consensus that such depictions are offensive or racist?

Regarding the ethnocentrism outcome, no evidence emerged that playing D&D was associated with ethnocentrism. The effect size, though non-significant, was in the opposing direction from the hypothesis. Thus, H1 was not supported.

Regarding H2, a descriptive analysis of opinions, it is clear that there is no consensus that the D&D depiction of orcs is either offensive or racist. Nor do most individuals want it removed from the D&D game. Interesting, however, the proportion of individuals who found the depiction of

orcs offensive (10.2%) jumped somewhat when the question asked about racism (34.0%). Though neither represent a consensus, this outcome is curious. Presumably, most individuals who find a depiction to be racist should also find it offensive. So why did they not report both? One possibility is that queries about racism themselves are priming. After all, why would one ask if something were racist if it were not? This line of questioning, given the emotionally evocative nature of racism, may lead some respondents to see something as racist when they had not seen it previously. Interestingly, this was particularly true for more aggressive individuals. This may be a cautionary note for those engaged in public opinion surveys on the matter...cautious, neutral queries may garner more accurate responses. By contrast, when emotionally evocative terms are used, respondents may over endorse in order to avoid the implication that, by not seeing something as racist, they themselves are racist. This issue could be examined experimentally, such as with within-participant designs, to see if participants respond differently after being primed with morally valenced cues.

One counter possibility is that some participants may have perceived the orc content as racist, but not offensive. Or put another way, of the people who found the orc content to be racist, less than one third of these individuals were offended by it. However, existing data suggests that most individuals who perceive content as racist also perceive it to be offensive. In one study (Wolfer, 2017), of 20 different categories of offensive content, racist content was rated as the most offensive among college aged students and 4th most offensive among older adults. Similarly, though some contexts such as humor may blunt the offensiveness of racist views, participants in one experiment still mainly felt comfortable confronting perceived racism in humor (Woodzicka et al., 2015). White individuals, in particular, are offended by racist content, perhaps sensitive to historical racism by the majority culture (Smeltzer & Leap, 1988), though this is also mitigated by social power, with more influential individuals less likely to take offense (Knegtmans et al., 2018). Ultimately, more data can help elucidate whether querying about racism primes socially desirable responding, or whether numerous individuals do not perceive racist content as offensive.

The current data did not support Racial Formation Theory, at least as it applies to the D&D game. It may be that monster races are too distal (compared to, say, representation of actual human racial groups in video games, see Brock, 2011) for players to make the association with race as it is categorized in modern societies. It may also be that fictional representations have less impact on attitudes and behavior than previously thought or assumed. This observation, of course, applies only to the specific context examined here and more research is needed across other play modalities, particularly using preregistered studies.

Race itself was not a predictor of attitudes toward D&D depictions of orcs. Neither Whites nor People of Color were more likely to find the depictions offensive or racist. If anything, People of Color were slight *less* likely than Whites to find the descriptions offensive. However, men were generally less likely to report the depictions of racists whereas more aggressive individuals were *more* likely to report the depictions as racist. This finding is a bit surprising, but it may reflect a tendency of more aggressive individuals to engage in moral grandstanding (Tosi & Warmke, 2020). D&D players were also no more or less likely to find depictions offensive or racist compared to non-players.

Regarding H3, D&D playing was not associated with anxiety. Thus, H3 was not confirmed. It does not appear that D&D playing has a clear relationship with current anxiety levels. This finding may come as something as a disappointment for game players who phenomenologically feel the experience is related to reduced stress. Lack of an effect may suggest that anxiety reduction is temporary, without a long-term effect. It is also possible that the exciting nature of the game may increase sympathetic neurological activity, working against anxiety reduction, while still being fun.

Overall, results appear to suggest that Wizards of the Coast, the makers of D&D, proceed with caution in response to individuals complaining about orcs as “problematic.” At present, relatively small numbers of individuals may be motivated either in good faith, due to ideological biases, or due to social capital and moral entrepreneurship to “problematize” an increasingly wide range of media. At present, there is no documentation that orc depictions are associated with ethnocentrism or racism in the real world, nor do a majority of individuals, whether People of Color, D&D players, etc., agree that such depictions are problematic.

Overresponding to problematizing complaints can come with real costs. First, for companies, far from appeasing the masses, they may frustrate and annoy a wider customer base. This may also cause resentment leading to worsening race relations rather than better. Second, to the extent that problematizing efforts are rewarded and gain social capital they can, over time, begin to cause real problems for free speech concerns. This can create a situation where a small number of offended individuals (e.g., Gabay et al., 2020) ultimately dictate what the majority can read, say, play, watch, etc., even if working through private companies rather than direct government intervention. Of course, there is no guarantee that the activists of today will be those making decisions about what is “problematic” in the future. Deciding what is offensive is often subjective. What’s less clear is how companies should decide how to contend with accusations that something is offensive. Should content be removed if *anyone* finds it offensive and, if so, what would be left? Or if not, what degree of consensus is required and how do companies understand when such a consensus has been reached?

There are probably minor compromises that may be worth considering, such as not using the word “race” to describe monsters. However, wholesale changes to the game or its good versus evil narrative should be approached with considerable caution.

It’s worth remembering that the D&D game went through a previous period of moral panic (Bowman, 2016) in the late 80 s and 90 s, where the game was thought to be associated with everything from Satanism to suicide. This led, in the game’s 2nd edition, to the elimination of some elements of the game such as “devils” and “demons” as monsters, to appease Christian conservatives. Ultimately, the effort mainly annoyed players of the D&D game and devils and demons were restored in the game’s 3rd edition. The current controversy over orcs has many parallels... a small number of individuals dictating morality for a wide range of individuals, concerns about ephemeral harm without data, calls for significant editorial changes before data is available, etc. To the extent that the makers of D&D once again give in to moral demands, they are likely to both increase moral crusades against media in the future, and ultimately distract society into culture wars rather than focusing on real issues that influence racism or injustice in the real world, such as educational disparities and criminal justice reform.

Limitations and Conclusions

Several limitations of the current study are worth noting. First, the data is correlational, and no causal implications can be made. Second, given the unexpected contrast in the “offensive” and “racist” questions, it might have been interesting to ask the “offensive” question a second time to get a direct comparison of the priming effect for asking about racism. Future studies could consider this. Thirdly, as a self-report study, this survey has the typical limitations of any self-report study. Fourth, it is possible that some individuals may have had exposure to orcs and other “evil” creatures in other media outside of role-playing games such as the Lord of the Rings book or movie series. Fifth, regarding the question on perceiving the descriptions of orcs as racist, it is possible some respondents may have been confused whether that referred to racism in real life, or racism toward the orcs. Granted, that question was bookended by two questions on real-life racism “I am concerned that orcs represent real life human cultures” and “I worry players of D&D experiencing this may become more racist in real life”, potentially reducing this possibility. Nonetheless, other research may want to address this issue with different question wording.

In conclusion, the current data did not meet either criteria (e.g., association with ethnocentrism or consensus of opinion) for considering D&D depictions of orcs to be problematic. The D&D game was not associated with ethnocentrism in real life, nor did a consensus of individuals, including

People of Color, find the depiction to be offensive or racist. It appears that, if we are serious about addressing race issues in the United States and internationally, focusing on monster depictions in the D&D game may not be the most fruitful avenue.

Data Availability All data are openly available at: <https://osf.io/56qfy>

Declarations

Conflict of Interest The authors have no conflicts of interest to declare.

Informed Consent All research described within passed local IRB and was designed to comport with federal standards for human participants research included proper informed consent.

References

- Adachi, P. J. C., Hodson, G., Willoughby, T., Blank, C., & Ha, A. (2016). From outgroups to allied forces: Effect of intergroup cooperation in violent and nonviolent video games on boosting favorable outgroup attitudes. *Journal of Experimental Psychology: General*, *145*(3), 259–265. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1037/xge0000145>
- Blackmon, W. D. (1994). Dungeons and Dragons: The use of a fantasy game in the psychotherapeutic treatment of a young adult. *American Journal of Psychotherapy*, *48*(4), 624–632.
- Bodenhausen, G. V., Schwarz, N., Bless, H., & Wänke, M. (1995). Effects of atypical exemplars on racial beliefs: Enlightened racism or generalized appraisals? *Journal of Experimental Social Psychology*, *31*(1), 48–63. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1006/jesp.1995.1003>
- Bowman, N. D. (2016). The rise (and refinement) of moral panic. In R. Kowert & T. Quandt (Eds.), *The video game debate: Unravelling the physical, social, and psychological effects of digital games*. (pp. 22–38). New York, NY: Routledge/Taylor & Francis Group.
- Brock, A. (2011). “When Keeping it Real Goes Wrong”: Resident Evil 5, Racial Representation, and Gamers. *Games and Culture*, *6*, 429–452.
- Bryant, F. B., & Smith, B. D. (2001). Refining the architecture of aggression: A measurement model for the Buss–Perry Aggression Questionnaire. *Journal of Research in Personality*, *35*(2), 138–167. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1006/jrpe.2000.2302>
- Cesario, J. (2014). Priming, replication, and the hardest science. *Perspectives on Psychological Science*, *9*(1), 40–48. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1177/1745691613513470>
- DeRenard, L. A., & Kline, L. M. (1990). Alienation and the game Dungeons and Dragons. *Psychological Reports*, *66*(3, Pt 2), 1219–1222. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.2466/PRO.66.4.1219-1222>
- Dixon, T. L. (2008). Network news and racial beliefs: Exploring the connection between national television news exposure and stereotypical perceptions of African Americans. *Journal of Communication*, *58*, 321–337. <https://doi.org/10.1111/j.1460-2466.2008.00387.x>
- Ferguson, C. J., & Negy, C. (2006). Development and preliminary validation of a defendant and offender screening tool for

- psychopathology in inmate populations. *Criminal Justice and Behavior*, 33, 1–22.
- Ferguson, C. J., & Rueda, S. M. (2010). The Hitman study: Violent video game exposure effects on aggressive behavior, hostile feelings, and depression. *European Psychologist*, 15(2), 99–108. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1027/1016-9040/a000010>
- Fimi, D. (2012). Revisiting Race in Tolkien's Legendarium: Constructing Cultures and Ideologies in an Imaginary World. Keynote in 2012 at the Politics of Contemporary Fantasy conference at the University of Wurzburg, Germany. Retrieved from: <http://dimitrafimi.com/2018/12/02/revisiting-race-in-tolkiens-legendarium-constructing-cultures-and-ideologies-in-an-imaginary-world/>. Accessed 3 Dec 21
- Gabay, R., Hameiri, B., Rubel-Lifschitz, T., & Nadler, A. (2020). The tendency for interpersonal victimhood: The personality construct and its consequences. *Personality and Individual Differences*, 165. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1016/j.paid.2020.110134>
- Hoffer, C. (2020). Why orcs are problematic in Dungeons and Dragons. *ComicBook*. Retrieved from: <https://archive.md/xeqnl>
- Johnson, P. E., & Johnson, R. E. (1996). The role of concrete-abstract thinking levels in teachers' multiethnic beliefs. *Journal of Research and Development in Education*, 29, 134–140.
- Kleinpenning, G., & Hagendoorn, L. (1993). Forms of racism and the cumulative dimension of ethnic attitudes. *Social Psychology Quarterly*, 56(1), 21–36. <https://doi-org.stetson.idm.oclc.org/10.2307/2786643>
- Knegtmans, H., van Dijk, W. W., Mooijman, M., van Lier, N., Rintjema, S., & Wassink, A. (2018). The impact of social power on the evaluation of offensive jokes. *Humor: International Journal of Humor Research*, 31(1), 85–104.
- Lee, M. D., Kang, X., & Hanrahan, N. (2014). Addressing cultural contexts in the management of stress via narrative and mobile technology. *Annual Review of CyberTherapy and Telemedicine*, 12, 173–177.
- Maarsingh, B. M., Bos, J., Van Tuijn, C. F. J., & Renard, S. B. (2019). Changing stress mindset through Stressjam: A virtual reality game using biofeedback. *Games for Health*, 8(5), 326–331. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1089/g4h.2018.0145>
- Mastro, D., Behm-Morawitz, E., & Ortiz, M. (2007). The cultivation of social perceptions of Latinos: A mental models approach. *Media Psychology*, 9(2), 347–365. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1080/15213260701286106>
- Omi, M., & Winant, H. (1994). *Racial formation in the United States: From the 1960s to the 1980s* (2nd ed.). Routledge.
- Przybylski, A., & Weinstein, N. (2019). Violent video game engagement is not associated with adolescents' aggressive behaviour: Evidence from a registered report. *Royal Society Open Science*, 6, 171474. <https://doi.org/10.1098/rsos.171474>
- Redding, R. (2001). Sociopolitical diversity in psychology: The case for pluralism. *American Psychologist*, 56, 205–215.
- Rieger, D., Frischlich, L., Wulf, T., Bente, G., & Kneer, J. (2015). Eating ghosts: The underlying mechanisms of mood repair via interactive and noninteractive media. *Psychology of Popular Media Culture*, 4(2), 138–154. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1037/ppm0000018>
- Rohrer, D., Pashler, H., & Harris, C. R. (2019). Discrepant data and improbable results: An examination of Vohs, Mead, and Goode (2006). *Basic and Applied Social Psychology*, 41(4), 263–271. <https://doi.org/10.1080/01973533.2019.1624965>
- Simmons, J., Nelson, L., & Simonsohn, U. (2012). 21 Word Solution. Retrieved from: <https://ssrn.com/abstract=2160588> or <https://doi.org/10.2139/ssrn.2160588> or http://spsp.org/sites/default/files/dialogue_26%282%29.pdf. Accessed 3 Dec 21
- Simón, A. (1987). Emotional stability pertaining to the game of Dungeons & Dragons. *Psychology in the Schools*, 24(4), 329–332. [https://doi.org/10.1002/1520-6807\(198710\)24:4<329::AID-PITS2310240406>3.0.CO;2-9](https://doi.org/10.1002/1520-6807(198710)24:4<329::AID-PITS2310240406>3.0.CO;2-9)
- Sims-Williams, P. (2011). *Irish influence on medieval welsh literature*. Oxford University Press.
- Smeltzer, L. R., & Leap, T. L. (1988). An analysis of individual reactions to potentially offensive jokes in work settings. *Human Relations*, 41(4), 295–304.
- Spielberger, C. D., Gorusuch, R. L., & Lushene, R. E. (1983). *State-Trait Anxiety Inventory for Adults (STAI-AD) Manual*. CA, Consulting Psychologists Press.
- Strass, H. A., & Vogel, D. L. (2018). Do stereotypical media representations influence white individuals' perceptions of American Indians? *The Counseling Psychologist*, 46(5), 656–679. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1177/0011000018788532>
- Tosi, J., & Warmke, B. (2020). *Grandstanding: The Use and Abuse of Moral Talk*. Oxford University Press.
- Tsfati, Y. (2007). Hostile media perceptions, presumed media influence, and minority alienation: The case of Arabs in Israel. *Journal of Communication*, 57(4), 632–651. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1111/j.1460-2466.2007.00361.x>
- Tukachinsky, R., Mastro, D., & Yarchi, M. (2015). Documenting portrayals of race/ethnicity on primetime television over a 20-year span and their association with national-level racial/ethnic attitudes. *Journal of Social Issues*, 71, 17–38. <https://doi.org/10.1111/josi.12094>
- Wijnhoven, L. A. M. W., Creemers, D. H. M., Engels, R. C. M. E., & Granic, I. (2015). The effect of the video game Mindlight on anxiety symptoms in children with an Autism Spectrum Disorder. *BMC Psychiatry*, 15. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1186/s12888-015-0522-x>
- Wolfer, L. (2017). Age Differences in Online Communication: How College Students and Adults Compare in Their Perceptions of Offensive Facebook Posts. *Online Journal of Communication and Media Technologies*, 7, Retrieved from: <https://www.ojcm.net/download/age-differences-in-online-communication-how-college-students-and-adults-compare-in-their-perceptions.pdf>. Accessed 3 Dec 21
- Woodzicka, J., Mallet, R., Hendricks, S., & Pruitt, A. (2015). It's just a (sexist) joke: Comparing reactions to sexist versus racist communications. *Humor*, 28, 289–309.
- Wright, J. C., Weissglass, D. E., & Casey, V. (2020). Imaginative role-playing as a medium for moral development: Dungeons & Dragons provides moral training. *Journal of Humanistic Psychology*, 60(1), 99–129. <https://doi-org.stetson.idm.oclc.org/https://doi.org/10.1177/0022167816686263>

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.