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Virtual ideals: The effect of video game play on male body image

Zeely Sylvia *, Teresa K. King, Brendan J. Morse

Bridgewater State University, Department of Psychology, Bridgewater, MA, United States

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ABSTRACT

The perpetuation of unrealistic body ideals by popular media has been linked to negative body image and self-esteem; however, the influence of video games has remained largely unexamined despite their growing popularity as a media form, particularly among men. The purpose of this study was to investigate whether playing video games that emphasize an unrealistic male body ideal has a negative impact on body satisfaction. Participants played a highly realistic video game for 45 min and then completed questionnaires measuring muscularity concerns and body image. Men randomized to the experimental group played the game with a character of exaggerated muscularity, whereas those randomized to the control group played with a character of average build. Men in the muscular condition reported significantly lower body satisfaction than men in the control condition. Considering the wide-spread use of video games, as well as the increasing muscularity of the ideal male body in popular culture, this finding could have important implications for the psychological well-being of men who regularly play video games. Further research should assess whether this lowered body satisfaction is maintained and to determine if negative behavioral consequences emerge.

1. Introduction

Popular media has an enormous influence on how Americans perceive their bodies, and the negative consequences of this influence are well-documented. The current study investigates whether video game play, one of the most popular forms of media today, may increase body dissatisfaction among young men by way of the increasingly muscular, and unrealistic, virtual bodies that are used in modern video games.

Body image dissatisfaction (BID), defined by Crowther and Williams (2011) as negative and dysfunctional thoughts and attitudes about the shape and weight of one's own body, is a common affliction throughout the US. Evidence suggests that BID has consistently remained at high levels among women over the past few decades (Rozin, Trachtenberg, & Cohen, 2001), and potentially increased among men (Adams, Turner, & Bucks, 2005; Neighbors, Sobal, Liff, & Amiraian, 2008). BID has been found to be negatively correlated with self-esteem and social functioning (Furnham & Calnan, 1998), and has also been regarded as a key risk factor for the development of eating disorders (Brannan & Petrie, 2011; Polivy & Herman, 2002).

Traditionally, body image dissatisfaction has been viewed by researchers and the public as a primarily female affliction, greatly influenced by body ideals, such as thinness, perpetuated in popular media. Although women continue to report less body satisfaction than men (Bearman, Presnell, Martinez, & Stice, 2006; Fallon & Rozin, 1985; Feingold & Mazzella, 1998; Gillen & Lefkowitz, 2012), recent studies have found significant increases in body dissatisfaction in males following media exposure, suggesting that BID is an issue for both genders (Arbour & Martin Ginis, 2006; Farquhar & Wasylkiw, 2007; Leit, Gray, & Pope, 2002). The growing attention to idealized male bodies in the popular media has likely heightened males' awareness of body image ideals (Blond, 2008), and altered their attitudes towards them. The tripartite influence model (Thompson, Coovert, & Stormer, 1999) posits that an individual's body image is formed by three different direct influences: parental, peer, and media influence. The effect of the media on body image has been shown to be quite strong among females (Tiggeman, Verri, & Scaravaggi, 2005; Mazur, 1986), and influential on men as well (Hobza, Walker, Yakushko, & Peugh, 2007). Thus, for men regularly exposed to images of unrealistic male body ideals, the unrealistic body could eventually become the benchmark for a normative body. This benchmark could be responsible for the increase in body dissatisfaction among men being observed today (Murnen, 2011).

In contrast to the modern female body ideal that emphasizes a small waistline and a disproportionately large bust, attitudes

* Corresponding author. Address: The Weight Control and Diabetes Research Center, Warren Alpert Medical School of Brown University, 196 Richmond St., Providence, RI 02903, United States. Tel.: +1 401 793 9712.
E-mail address: Zsylvia@lifespan.org (Z. Sylvia).

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towards the male body emphasize extreme proportions of a different nature. Muscularity concerns dominate male body image. Men are more likely to have a desire to increase their muscularity and either gain or lose weight to attain a mesomorphic physique, i.e. broad shoulders and chest, small waist, and minimal body fat (Pingitore, Spring, & Garfield, 1997). There is evidence that attitudes towards muscularity often equate having large muscles with masculinity and traditional masculine norms such as risk-taking and emotional control (Helgeson, 1994; Steinfeldt, Gilchrist, Halterman, Gomory, & Steinfeldt, 2011). Studies have observed a steady increase in the muscularity of cultural icons such as male models (Leit, Pope, & Gray, 2000) and action figures (Pope, Olivardia, Gruber, & Borwiecki, 1999) over time. This suggests that as the male body ideal becomes ever more muscular, male attitudes towards muscularity will become more salient; that is, the importance of having a muscular physique will increase. Consequently, male body dissatisfaction may increase as most men find themselves farther from the hypermuscular media ideal.

In a meta-analysis, Blond (2008) reviewed 15 studies examining the effect of media images of idealized bodies on male body dissatisfaction. The results showed that 30 out of 35 effect sizes were significant, indicating an increase in overall dissatisfaction. Agliata and Tantleff-Dunn (2004) exposed college-aged males to commercials either featuring male actors who embodied the male ideal (muscular, lean and young, wearing athletic attire or appearing shirtless), or commercials featuring average looking men (older, fully clothed, advertising neutral products). The men who viewed the commercials featuring ideal male bodies reported significantly higher rates of muscle dissatisfaction and depression than the neutral group. Similarly, Baird and Grieve (2006) found that men who were asked to view advertisements featuring ideal male bodies reported significantly lower rates of body satisfaction than men who were asked to view neutral advertisements featuring only products.

Although the evidence of the media's influence on male body image is mounting, there has been little research on the effects of video games on male body dissatisfaction, despite the fact that most households own at least one video game console, and that the majority of video game consumers are male (Entertainment Software Association., 2012). Considering that video games are one of the most popular forms of media today, and more psychologically immersive than some other forms of media, it is important to understand how these games affect body image.

Despite the need for research into the relationship between video games and male body image, the complexity of this task must be acknowledged. There is a great deal of variability in the portrayal of video game avatars, making it difficult to draw conclusions about any kind of general effect. An avatar is a digital, visual representation that reflects the behaviors executed by the human player in real time (Bailenson & Blascovich, 2004). Martins, Williams, Ratan, and Harrison (2011) compared avatars to the real measurements of an average American male as well as the dimensions of the media ideal. They concluded that, overall, video game avatars tended to be larger than the average US male, but slightly blockier than the media ideal, suggesting that game characters, unlike magazine ads or commercials featuring actual human beings, may not embody the physical ideal in the same ways as other forms of media.

The advanced technology of modern video games is also an important factor when considering how games may affect body image. There is evidence that as video games become more realistic, they also become more psychologically salient. Presence is the degree to which a person feels that they are actually experiencing a virtual world (Lombard & Ditton, 1997), and the amount of presence in video games has increased in parallel with the advancement of video game technology (Ivory & Kalyanaraman, 2007). Presence has been linked with increased arousal, involvement and aggressive affect, which can increase identification with video game characters: for example, gamers who identified more with their characters while playing an aggressive game displayed more aggressive behaviors afterwards (Fischer, Greitemeyer, Kastenmuller, Vogrincic, & Sauer, 2011; Ivory & Kalyanaraman, 2007).

Similarly, a concept known as the Proteus Effect, in which a video game user may make inferences about his expected behavior based on the appearance of his avatar, has received some attention in the literature. Yee, Bailenson, and Ducheneaut (2009) found that people who participated in a negotiation task using a tall avatar, as opposed to a shorter avatar, negotiated more aggressively both in the virtual environment and in a face-to-face task immediately afterward. This provides tentative evidence that video games may influence behavior outside of the virtual environment as well. If vivid, technologically advanced video games that depict male body ideals do impact male body dissatisfaction, there may be an increased chance of this dissatisfaction manifesting behaviorally outside the virtual environment. Harmful behaviors linked with body dissatisfaction include steroid use and excessive exercise (Hatoum & Belle, 2004).

To date, there has been only one published study that specifically examines the relationship between video game play and male body satisfaction (Bartlett & Harris, 2008). Male participants were recruited to play the video game *WWF Wrestlemania 2000*, chosen because of its emphasis on muscular male bodies. The researchers attempted to create a more immersive experience for the player by instructing them to make their own character as similar to them as possible. The players played the video game for 15 min, either with a muscular opponent, or an obese opponent that acted as a control. As predicted, men with the muscular opponent reported decreased body satisfaction, as well as decreased positive attitudes towards muscularity. It is important to note that the muscularity manipulation focused on the player's computer-controlled opponent rather than the avatar controlled by the player, thus likely, limiting presence and Proteus Effect.

Considering the evidence that video games have a psychological effect on players, the aim of the current study was to investigate the effect of playing a vivid, technologically advanced video game with visibly muscular avatars on male body image. This study extends the work of Bartlett and Harris (2008) by manipulating the player's avatar to more directly target the immersive effects of video game play on one's self-image. Thus, we hypothesized that men who play a highly realistic game with a hypermuscular (mesomorphic) avatar will report decreased body satisfaction and decreased positive attitudes towards muscularity, compared to those who play with an avatar of average build.

2. Method

2.1. Participants

Participants were 51 undergraduate students from a large public university in the Northeast United States. One participant was excluded because he did not complete the study, leaving a final sample of 50 participants. The participants ranged in age from 18 to 24 (M = 19.76, SD = 1.49). The participants' self-reported ethnicity was primarily Caucasian (86.3%), with four minority participants (one each reporting Hispanic, African American, Lebanese, and mixed ethnicity) and three participants who chose not to respond.

3. Materials and procedures

3.1. The rosenberg self-esteem scale

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is a 10-item scale measuring feelings of global self-esteem. Items are