

Summary

The Relationship Between Instagram Use, Body Image and Muscle Dysmorphia in Male Emerging Adults: The Moderating Role of Perfectionism and Narcissism

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While studies have been conducted on the potential negative effects of women's exposure to idealised models on social media (e.g., Vall-Roque et al., 2021), research on its effects on men is more limited (Lonergan et al., 2021). Emerging adulthood is a period in which individuals continue to develop their body image (Rodgers et al., 2017). Social media is an important tool for individuals in this period to explore their identity (Bjornsen, 2018). Especially for men, frequently encountering muscular content in the media can cause them to view their own bodies more negatively and lead to muscle dysmorphia. The negative effects of social media do not affect everyone to the same extent (Imperatori et al., 2022). An individual's existing personal characteristics and pathologies can determine how susceptible they are to these effects (Kross et al., 2021; Naslund et al., 2020).

Men are exposed to socio-cultural influences from various sources, such as the media, parents, and friends, regarding the desire to be more muscular (Tyłka, 2021). The increasing interest in bodybuilding has reduced the men's satisfaction with their bodies (Mosley, 2009). Studies have shown that individuals who engage in bodybuilding have more negative body images (Stapleton et al., 2016). However, findings on this topic are inconsistent (Jankauskiene et al., 2007; Sayaca & Sevgili, 2020). Also, it has been found that individuals who engage in bodybuilding have higher muscle dysmorphia compared to others (Mitchell et al., 2017).

The frequent emphasis on ideal appearances in the media can lead perfectionist individuals to compare themselves negatively and increase their dissatisfaction with their bodies (Dryer et al., 2016). They may develop exercise addiction by setting unrealistic goals for themselves to achieve these ideal standards (Miller & Mesagno, 2014). In addition to perfectionism, researchers have noted that narcissism may also be associated with body

image and muscle dysmorphia (Kandemir et al., 2024; Miller & Mesagno, 2014). Vulnerable narcissistic individuals may appear shy and fragile on the outside (Purton et al., 2018), but they have grandiose expectations on the inside (Dickinson & Pincus, 2003). The relevant literature indicates that the relationship between muscle dysmorphia and narcissism varies depending on the type of narcissism (Littrell et al., 2021) and that vulnerable narcissistic individuals are at greater risk of developing muscle dysmorphia (Devrim-Lanpir et al., 2023). In addition to personality traits, various contextual characteristics such as social media are also being investigated for their potential effects on body image (Chatzopoulou et al., 2020). Instagram, which is more visual than other social media platforms, may cause young individuals to make more social comparisons about their appearance (Engeln et al., 2020). Experimental studies show that men are also negatively affected by social media (Paulson, 2020; Prowten, 2023).

In line with the relevant literature summarised above, the main aim of this study is to examine the relationship between Instagram use, negative body image and muscle dysmorphia symptoms in male emerging adults and to address the moderating roles of perfectionism, grandiose narcissism, and vulnerable narcissism in this relationship. The second aim of this study is to examine the relationship between bodybuilding and following bodybuilding-related content on social media with body image and muscle dysmorphia.

Method

Sample

The study included 195 adult males aged 18-29 (mean = 23.4, S = 3.5). 73.8% of the participants were university students or graduates, 95.4% were single, and

47.7% were employed, 41% of participants reported engaging in bodybuilding, 96.4% reported using Instagram, and 27.2% reported following bodybuilding and related content on Instagram.

Measures

The data collection tools used in the study were the Instagram Usage Reasons Scale (Anlı et al., 2020), the Pathological Narcissism Inventory (Büyükgüngör, 2016), Frost Multidimensional Perfectionism Scale (Kağan, 2011), Muscle Deficiency Scale (Yıldız, 2015), Body Perception Scale (Hovardaoğlu, 1992), and a demographic information form.

Procedure

Research data were collected online using the Qualtrics programme.

Results

Descriptive Analyses

Participants were compared using an independent t-test to determine whether there was a significant difference in muscle dysmorphia symptoms and body image scores based on bodybuilding status. According to the analysis results, individuals who engage in bodybuilding ($M = 47.73$, $S = 10.93$) have higher muscle dysmorphia scores than those who do not ($M = 33.38$, $S = 10.18$). In terms of body image scores, bodybuilders ($M = 150.53$, $S = 23.15$) had higher body image scores than non-bodybuilders ($M = 138.23$, $S = 21.91$).

To determine whether there is a difference in body image and muscle dysmorphia symptoms based on content followed on all social media platforms, including Instagram, MANOVA was used. Participants interested in bodybuilding and other areas including sports were grouped as 'body' ($n=53$), participants interested in other areas outside of bodybuilding and sports were grouped as "sports" ($n=78$), and participants not interested in either bodybuilding or sports were grouped as 'other' ($n=64$). According to the analysis results, individuals who follow bodybuilding content had significantly higher muscle dysmorphia scores ($M = 47.26$, $S = 10.03$) than both the sports group ($M = 36.23$, $S = 11.37$) and the other group ($M = 36.58$, $S = 13.33$). Additionally, the body image scores of individuals who follow bodybuilding content ($M = 149.77$, $S = 22.65$) were significantly higher than those of the sports group ($M = 140.00$, $S = 23.23$).

The examination of the moderating role of perfectionism, vulnerable narcissism, and grandiose narcissism in the relationship between Instagram use and

body image: A regression analysis was conducted to examine the moderating roles of perfectionism, vulnerable narcissism, and grandiose narcissism in the relationship between Instagram use and body image. The results revealed that bodybuilding ($\beta=.18$, $p<.05$) and grandiose narcissism ($\beta=.38$, $p<.001$) positively predicted body image, while vulnerable narcissism ($\beta=-.43$, $p<.001$) and the interaction between Instagram use and perfectionism ($\beta=-.25$, $p<.01$) negatively predicted body image.

Examining the moderating role of perfectionism, vulnerable narcissism, and grandiose narcissism in the relationship between Instagram use and muscle dysmorphia: In a regression analysis conducted to examine the moderating roles of perfectionism, vulnerable narcissism, and grandiose narcissism in the relationship between Instagram use and muscle dysmorphia, it was found that following bodybuilding content on social media ($\beta=.15$, $p<.05$), engaging in bodybuilding ($\beta=.47$, $p<.001$) and perfectionism ($\beta=.27$, $p<.001$) positively predicted muscle dysmorphia.

Discussion

The study found that individuals who engage in bodybuilding exhibit more symptoms of muscle dysmorphia than those who do not, but also have a more positive body image. Accordingly, the findings indicate that although individuals who engage in bodybuilding are more satisfied with their bodies than those who do not, they still do not find their muscle mass sufficient, indicating that they are at greater risk of muscle dysmorphia. While the relevant literature reports that individuals who engage in bodybuilding have a negative body image (e.g., Stapleton et al., 2016), there are also findings indicating that they have a positive body image (e.g., Sayaca & Sevgili, 2020). Although individuals who engage in bodybuilding may have a certain level of satisfaction with their bodies compared to others, they may still not find their muscle mass sufficient because they have not yet reached their idealised goals. In line with this view, studies have reported that individuals engaged in bodybuilding have a high desire for muscularity (Silva et al., 2015) and do not consider their muscle mass sufficient (Jankauskiene et al., 2007).

The study found that participants who followed bodybuilding-related content had a greater tendency toward muscle dysmorphia than participants who followed other types of content, and had a more positive body image than participants who followed sports-related content. Related literature also reports that exposure to idealised (Schoenberger & Martin, 2020) and muscular content on social media predicts symptoms of body dysmorphia (Grieve, 2007). On the other hand, the fact that

participants who follow bodybuilding-related content have a more positive body image may be due to the fact that these individuals also engage in bodybuilding. In this context, they may have a more positive body image because they receive positive feedback from their social environment due to their muscular and fit appearance.

The analyses revealed that grandiose narcissism predicts body image positively, while vulnerable narcissism and the interaction between Instagram use and perfectionism predict body image negatively. Perfectionism, on the other hand, was found to predict muscle dysmorphia positively. Considering the characteristics of grandiose narcissism, such as individuals seeing themselves as better than they are (Krizan & Herlache, 2017), it is expected that this trait would predict positive body image. On the other hand, vulnerable narcissism was found to be negatively related to body image. Similarly, it has been found that vulnerable narcissists feel more ashamed of their bodies (Gioia et al., 2020). As an expected result, they also have a critical attitude towards their own bodies (Cain et al., 2008).

The study found that perfectionism positively predicts muscle dysmorphia. Perfectionistic individuals often have a critical attitude toward themselves (Macedo et al., 2014), and this critical attitude is also directed toward their own bodies (Dryer et al., 2016). Consistent with these findings, other studies have also found a positive relationship between perfectionism and muscle dysmorphia (Murray et al., 2013; Nonahal et al., 2014).

Research results indicate that the relationship between Instagram use and body image varies depending on the level of perfectionism; as perfectionism increases, Instagram use more strongly predicts negative body image. Increased social media use during emerging adulthood increases the likelihood of making social comparisons with others (Stapleton et al., 2017). At this point, perfectionist individuals' tendency to evaluate themselves negatively (Macedo et al., 2014) and their tendency to make negative social comparisons when using social media (Dryer et al., 2016) may be related to their being at greater risk of having a negative body image.

Analyses have found that grandiose and vulnerable narcissism do not play a moderating role in the relationship between Instagram use and body image or muscle dysmorphia. In grandiose narcissism, because of these individuals' defence strategies developed as a result of their past experiences (Kernberg, 1998), they may perceive idealised body images on social media as insignificant. On the other hand, although vulnerable narcissists differ from grandiose narcissists in certain aspects (Purton et al., 2018), they also have grandiose fantasies in their inner worlds (Dickinson & Pincus, 2003), so even if they are exposed to ideal models on social media, the

possible negative effects may be eliminated.

It would be useful to consider the various limitations of the study. First, the measurement chosen to measure Instagram use in this study does not provide clear information about the extent of exposure to ideal models on Instagram. Second, although individuals who engage in bodybuilding through sports centres were also reached in the study, their total number was insufficient to conduct separate analyses on these individuals. Third, the research data was collected while the COVID-19 pandemic was still ongoing; therefore, it is possible that this situation had a direct or indirect unforeseen effect (e.g., increased social media use) on the research data.