

The Relationship between Body Image and Self-Esteem with the Tendency of Body Dysmorphic Disorder (BDD) Among Adolescents Using Social Media

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ABSTRACT

This study aims to analyze the relationship between Body Image and Self-Esteem with the tendency of Body Dysmorphic Disorder (BDD) among adolescents using social media. The study involved 115 respondents aged 16–18 who were active social media users. A quantitative method with multiple linear regression was employed. Results indicate a significant relationship between Body Image and Self-Esteem on BDD tendencies ($F = 50.669$; $p < 0.05$). Partially, Body Image showed a significant positive relationship with BDD tendencies ($t = 8.468$; $p < 0.05$), while Self-Esteem had a significant negative relationship ($t = -2.652$; $p < 0.05$). Body Image contributed 40.4%, and Self-Esteem contributed 7.1%, with a combined total contribution of 47.5%. These findings demonstrate that nearly half of the variability in BDD tendencies can be explained by Body Image and Self-Esteem. The study highlights the role of social media in exacerbating body perception and self-esteem issues, particularly through unrealistic beauty standards. This study suggests the importance of social media literacy, improving Self-Esteem, and promoting positive Body Image to reduce BDD risk among adolescents.

Keywords: Body Image, Self-Esteem, Body Dysmorphic Disorder (BDD), Adolescents, Social Media.

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INTRODUCTION

Social media has become an integral part of adolescents' lives, with platforms such as Instagram, TikTok, and Facebook being used for communication, sharing experiences, and building social identities. However, excessive use of social media can have negative impacts, including increased social pressure, exposure to unrealistic standards of beauty, and the risk of cyberbullying. Research indicates that excessive social media use significantly influences adolescents' social and emotional development (Blanchard et al., 2023). Furthermore, social media often becomes a platform for self-comparison, which can lower self-esteem, particularly concerning physical appearance and achievements. The pressure to gain social validation through "likes" or comments exacerbates feelings of inadequacy.

Several studies reveal that intensive social media use can increase the risk of anxiety, depression, and social isolation among adolescents (Marengo et al., 2018).

A survey conducted by Aufiyana (2023) found that 98.4% of adolescent girls among 64 respondents enjoyed viewing posts on Instagram, 62.5% compared their physical appearance to others, 53.1% focused on their physical flaws, and 79.7% sought to improve their appearance to look perfect. This demonstrates that adolescent girls in the Greater Jakarta area often compare themselves to others on social media, particularly on Instagram, and strive to achieve perfection in appearance. Adolescents following beauty vloggers, celebrities, or influencers on Instagram are also more easily influenced by the beauty concepts presented, which can reshape their perceptions of beauty. Moreover, adolescents tend to pursue standards of perfection, which can develop into an obsession, especially regarding physical appearance, one of the most critical aspects of social interaction (Scully et al., 2020).

Crone and Konijn (2018) state that media can instill unrealistic views about ideal body types and the perfection expected by society in adolescents. Consequently, adolescents are often indoctrinated with distorted ideals of beauty, which eventually increase the risk of developing poor body image. This condition encourages individuals to become more obsessed or focused on perceived flaws (Himanshu et al., 2020). Adolescents tend to find ways to cover up what they perceive as physical inadequacies (Indrati & Aprilian, 2018). Supporting this, a preliminary survey by Aufiyana (2023) among 64 late-adolescent Instagram users in Greater Jakarta revealed that 80% of adolescents strive to improve their physical appearance to achieve perfection.

A study reported that the prevalence of Body Dysmorphic Disorder (BDD) in the general population ranges between 0.7% and 2.4% (Bjornsson et al., 2010). Another study by Vaele and Neziroglu (2008) indicated that approximately 1–1.5% of the world's population exhibits tendencies toward BDD, with a higher prevalence in cultures that emphasize physical appearance. Research by Enander et al. (2018) revealed that the tendency toward BDD is most prevalent among individuals aged 15 (49%), followed by ages 18 (39%) and 20–28 (37%). Generally, the tendency for BDD in adolescents occurs in both males and females. Around 1.7% of adolescents are likely to experience BDD tendencies, with no significant gender differences (Scheinder et al., 2016).

Although no gender differences exist in the likelihood of adolescents developing tendencies toward BDD, data show that BDD is more common among adolescent girls, accounting for approximately 70%, with most cases emerging before the age of 18 (Wahyudi, 2018). Research by Enander et al. (2018) also revealed that clinical prevalence of BDD is higher in females than in males. The high prevalence of BDD during adolescence is generally attributed to dissatisfaction with physical appearance. Dissatisfaction often arises during puberty, when bodily changes may not align with desired ideals, influencing psychological development (Santrock, 2012). Hurlock (1980) also notes that only a few adolescents feel satisfied with their bodies during this period.

The use of social media, especially image-based platforms like Instagram and TikTok, is significantly associated with an increase in BDD tendencies, including preoccupation with perceived physical flaws. Features like face filters and photo editing reinforce unrealistic beauty standards, exacerbating body dissatisfaction among young

users (Khan et al., 2022). Moreover, excessive social media use leads to symptoms such as anxiety, low self-esteem, and unhealthy behaviors, including frequently checking one's appearance in mirrors or excessively editing photos, with more severe effects on users spending over four hours daily on social media (Peng et al., 2023).

Adolescents with BDD tendencies demonstrate preoccupations with specific physical features they perceive as unattractive or inadequate. Bjornsson et al. (2010) reported that the most commonly complained-about body parts include skin (73%), hair (56%), and nose (37%). Although these are the most frequently cited concerns, other body parts, such as teeth, legs, breasts, lips, stomach, height, chin, arms, hips, thighs, eyes, hands, and various facial areas, also contribute to dissatisfaction (Schulte et al., 2020).

BDD tendencies can escalate into severe disorders if not effectively addressed. BDD is a psychological condition where individuals experience excessive anxiety about their physical appearance due to perceived flaws. This condition can lead to reduced brain function (Nurlita & Liliswanti, 2016). The disorder is often triggered by thoughts or delusions that others will criticize or ridicule their appearance. According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5, 2013), BDD is characterized by obsessions over physical imperfections that are either unnoticeable or appear minor to others. These obsessions are often accompanied by repetitive behaviors, such as constantly checking the mirror, over-grooming, or attempting to conceal perceived flaws.

METHOD

This study employs a quantitative correlational approach to examine the relationship between body image, self-esteem, and the tendency towards Body Dysmorphic Disorder (BDD) among social media users. The study uses a correlational design to assess how two independent variables body image and self-esteem are related to the dependent variable, BDD tendency. The study population consists of adolescents aged 16–18 years living in Surabaya and actively using social media. The sampling technique was determined based on the requirements of statistical analysis, calculated using G-Power, resulting in a sample size of 115 participants, with a medium effect size ($\rho = 0.3$), a significance level of 0.05, and a power of 0.95. The inclusion criteria include adolescents aged 16–18 years who actively use social media. Data collection was conducted using three Likert-scale instruments: the Body Image Scale, the Self-Esteem Scale, and the Body Dysmorphic Disorder Tendency Scale. Each scale consists of a series of statements with response options ranging from 1 (strongly disagree) to 5 (strongly agree). The instrument validity was tested using the corrected item-total correlation method, while reliability was assessed using Cronbach's Alpha.

RESEARCH RESULT

Descriptive The simultaneous regression analysis aimed to test the first hypothesis: "Body image and self-esteem predict the tendency of Body Dysmorphic Disorder in adolescents." The analysis results indicate an F coefficient of 50.669 with a p-value of 0.000 ($p < 0.05$), signifying statistical significance. These results demonstrate a significant

correlation between body image and self-esteem with the tendency for Body Dysmorphic Disorder. Therefore, the first research hypothesis is accepted.

Simultaneous Regression Analysis Results

F	p	Description
50.669	0.000	Significant (p<0.05)

Partial regression analysis was conducted to examine the second and third research hypotheses:

- Hypothesis 2: "Body image predicts the tendency of Body Dysmorphic Disorder in adolescents."
- Hypothesis 3: "Self-esteem predicts the tendency of Body Dysmorphic Disorder in adolescents."

The analysis yielded a t coefficient of 8.468 with a p-value of 0.000 (p<0.05) for the correlation between Body Dysmorphic Disorder tendency and body image, indicating a significant correlation. Thus, the second hypothesis is accepted.

Additionally, the analysis showed a t coefficient of -2.652 with a p-value of 0.009 (p<0.05) for the correlation between Body Dysmorphic Disorder tendency and self-esteem, confirming a significant correlation. As a result, the third hypothesis is also accepted.

Partial Regression Analysis Results

Variable Relationship	t	p	Description
Body Dysmorphic Disorder – Body image	8.468	0.000	Significant (p<0.05)
Body Dysmorphic Disorder – Self-esteem	-2.652	0.009	Significant (p<0.05)

The derived regression equation is as follows:

$$Y = 52.348 X_0 + 0.430 X_1 - 0.155 X_2$$

Where:

- Without the influence of body image and self-esteem, the Body Dysmorphic Disorder tendency score is 52.348.
- An increase of 1 point in body image corresponds to an increase of 0.430 in Body Dysmorphic Disorder tendency.
- An increase of 1 point in self-esteem corresponds to a decrease of 0.155 in Body Dysmorphic Disorder tendency.

Multiple regression analysis provides two types of effective contributions: the joint contribution of both independent variables to the dependent variable and the individual contribution of each independent variable to the dependent variable.

The combined effective contribution of body image and self-esteem to the tendency of Body Dysmorphic Disorder is $R^2 = 0.475$ or approximately 47.5%, which is considered moderate.

The effective contribution of each independent variable is calculated as follows:

- Body image contributes 40.4% to Body Dysmorphic Disorder tendency.
- Self-esteem contributes 7.1% to Body Dysmorphic Disorder tendency.

Effective Contribution of Each Independent Variable

Variable	Coefficient β	Cross Product	Regression of Squares	Sum	Effective Contribution (SE)	Total SE (R ²)
Body image	0.430	21882.643	11051.462		0.404	0.475
Self-esteem	-0.155	-10662.217			0.071	

These results indicate that body image has a stronger influence on Body Dysmorphic Disorder tendency compared to self-esteem, although both variables play a significant role.

DISCUSSION

This study's results show a significant relationship between body image, self-esteem, and the tendency for Body Dysmorphic Disorder (BDD) among social media-using adolescents. The simultaneous regression analysis indicates that body image and self-esteem together significantly predict BDD tendencies, with an F coefficient of 50.669 and a p-value of 0.000 ($p < 0.05$). This finding suggests that both variables have a significant influence on BDD tendencies in adolescents. The partial regression analysis reveals that body image has a positive and significant relationship with BDD tendencies ($t = 8.468$, $p = 0.000$), meaning that the more negative the adolescents' body perception, the higher their tendency to experience BDD. On the other hand, self-esteem has a negative and significant relationship with BDD tendencies ($t = -2.652$, $p = 0.009$), indicating that the higher the adolescent's self-esteem, the lower their tendency to develop BDD.

The regression equation derived from this study is $Y = 52.348 + 0.430X_1 - 0.155X_2$. This indicates that without the influence of body image and self-esteem, the initial score for BDD tendency is 52.348. A one-point increase in body image raises the BDD tendency by 0.430, while a one-point increase in self-esteem reduces the BDD tendency by 0.155. These regression analysis results indicate that body image contributes more significantly to BDD tendencies than self-esteem. The contribution of both variables to BDD tendencies is 47.5%, with body image contributing 40.4% and self-esteem contributing 7.1%.

The sample in this study consisted of 115 adolescents aged 16–18 who actively use social media, with the majority being female (67%). Previous studies have confirmed that females are more vulnerable to the influence of social media regarding body image, especially due to stricter beauty standards and more frequent objectification of their bodies (Fredrickson & Roberts, 1997). These findings support Festinger's (1954) social comparison theory, where adolescents actively using social media tend to compare themselves to unrealistic beauty standards promoted on platforms like Instagram and TikTok. This social

comparison worsens body dissatisfaction and lowers self-esteem, which in turn increases the risk of developing BDD. This study also revealed that negative body image has a significant relationship with BDD tendencies, while higher self-esteem acts as a protective factor that reduces the likelihood of developing BDD.

These findings are consistent with cognitive psychology theory, which explains that distorted body perception, such as overgeneralization and selective abstraction, can worsen negative body perceptions (Cash & Pruzinsky, 2002). In addition to cognitive factors, cultural factors also play an important role in shaping adolescents' body perceptions. In cultures that prioritize physical aesthetics, as explained by Grogan (2008), unrealistic beauty standards create significant social pressure for adolescents to possess an ideal body. This pressure, if not balanced with healthy coping strategies, can increase vulnerability to BDD. Research by Verrastro et al. (2020) also shows that exposure to ideal body images on social media can worsen body dissatisfaction, which directly contributes to BDD symptoms. Adolescents with negative body perceptions often experience social stigma, which exacerbates their psychological symptoms and reinforces their tendency to develop BDD.

Conversely, self-esteem has a negative and significant relationship with BDD tendencies, indicating that the higher the adolescent's self-esteem, the lower their tendency to develop BDD. Rosenberg's (1965) theory explains that individuals with high self-esteem have a positive evaluation of themselves, which helps protect them from the negative effects of social comparison on social media. A decrease in self-esteem is often caused by dependence on external validation, such as the number of "likes" or comments on social media, reflecting how much social expectations can influence adolescents' self-esteem (Meier & Gray, 2014). This is further exacerbated by the role of social media in creating a social hierarchy based on appearance, which influences how adolescents assess themselves in social contexts.

Previous research by Phillips (2009) indicates that individuals with distorted body perceptions are at a higher risk of developing this disorder. The biopsychosocial model by Holland & Tiggemann (2016) also explains that biological, psychological, and social factors interact to increase the risk of BDD, emphasizing the importance of a holistic approach to understanding and addressing this disorder. The greater contribution of body image compared to self-esteem in this study highlights the need for interventions focused specifically on adolescents' body perception in efforts to prevent and address BDD.

The findings of this study offer several important implications for intervention and prevention. From a psychological perspective, improving self-esteem and body image can help prevent BDD tendencies in adolescents. Moreover, social media literacy education could serve as an effective preventive step to reduce the negative impact of social media exposure on adolescents. Campaigns promoting self-acceptance and awareness of content manipulation on social media can help reduce the internalization of unrealistic beauty standards and improve adolescents' mental well-being (Livingstone & Helsper, 2007).

Overall, this study emphasizes that body image and self-esteem are significant predictors of Body Dysmorphic Disorder tendencies among social media-using adolescents. With body image contributing more significantly (40.4%) compared to self-esteem (7.1%),

these results open up opportunities for interventions focusing more on improving body image and enhancing self-esteem to prevent BDD in adolescents. Despite the limitations of this study, the findings provide valuable insights into the role of social media in shaping adolescents' body image and self-esteem perceptions, and the importance of preventive efforts to mitigate the negative effects of social media.

CONCLUSION

This study examines the relationship between Body Image and Self-Esteem with the tendency of Body Dysmorphic Disorder (BDD) in social media-using adolescents. The research reveals that both Body Image and Self-Esteem are significantly associated with BDD tendencies. Specifically, Body Image has a larger influence, contributing 40.4% to BDD tendencies, while Self-Esteem accounts for 7.1%. A negative Body Image is positively correlated with a higher likelihood of developing BDD, meaning that the more unfavorable an individual's perception of their body, the greater their tendency to develop BDD. On the other hand, higher Self-Esteem is negatively related to BDD tendencies, indicating that individuals with higher Self-Esteem are less likely to experience BDD. The study also highlights the significant role of social media, which exacerbates unhealthy social comparisons and unrealistic beauty standards, thereby worsening negative Body Image and lowering Self-Esteem. This interaction of biological, psychological, and social factors increases the risk of BDD in adolescents. Based on these findings, the study underscores the need for targeted interventions aimed at improving body perception and boosting Self-Esteem as preventative measures against BDD in adolescents. However, the research has limitations, including a sample predominantly composed of female respondents and a geographically limited sample from Surabaya, which may restrict the generalizability of the results. Additionally, the use of self-report questionnaires introduces the potential for social desirability bias.

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