

# Depressive Symptoms Differentially Affect the Impact of Thin-Ideal Images on Body Image Dissatisfaction in Males and Females

Yalda Yaqoobi, Mark Moss\*

Department of Psychology, Faculty of Health and Life Sciences, Northumbria University, Newcastle upon Tyne, UK  
Email: \*mark.moss@unn.ac.uk

**How to cite this paper:** Yaqoobi, Y., & Moss, M. (2025). Depressive Symptoms Differentially Affect the Impact of Thin-Ideal Images on Body Image Dissatisfaction in Males and Females. *Open Journal of Depression, 14*, 67-78.

<https://doi.org/10.4236/ojd.2025.144005>

**Received:** August 7, 2025

**Accepted:** October 8, 2025

**Published:** October 11, 2025

Copyright © 2025 by author(s) and Scientific Research Publishing Inc.  
This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

---

## Abstract

Body image dissatisfaction and depressive symptoms have previously been shown to be significantly linked, and the media is a contributing risk factor for body image dissatisfaction. The present study investigated whether acute exposure of males and females to “thin-ideal” images would induce a significant decrease in body image satisfaction, and whether any effect would be further influenced by depressive symptoms. In a repeated measures design, ninety-six participants completed a depression inventory followed by body satisfaction questionnaires before and after an intervention exposing them to ‘thin-ideal’ body images. Data analysis revealed an overall significant negative correlation between depressive symptoms and the change in body image satisfaction scores from pre- to post-exposure to “thin-ideal” bodies. Further analysis indicated that this effect was greater for males than females. The current results demonstrate that those with more depressive symptoms are increasingly vulnerable to the negative effects of the media portrayal of “ideal” bodies and that this effect is gender-specific. Future research could consider replicating this study in different countries in order to establish cross-cultural differences and further inform interventions worldwide.

## Keywords

Depression, Body Image Dissatisfaction, Thin Ideal, Gender Differences

---

## 1. Introduction

Body image dissatisfaction (BID) has become an increasing concern, especially

with the rise in popularity of social media (Perrin, 2015), where exposure to “thin-ideal” bodies may cause an increase in BID (Tiggemann & Slater, 2004). This is particularly pertinent given the link between BID and depression (Kostanski & Gullone, 1998), a serious worldwide problem, with a global prevalence rate from 2001 to 2020 of 34% (Shorey et al., 2022).

The idea of body image refers to our mental representation of the shape, size, and form of our bodies. Two components constitute body image: The “perceptual component” refers to the accuracy of the estimation of body size, and the “attitudinal component” represents the feelings one may have towards one’s body (Slade, 1988). Failure to accurately estimate one’s body size or negative attitudes and feelings towards one’s body can result in BID, the negative evaluation of one’s body, either as a whole or of specific parts of the body (Bessenoff, 2006). BID has been conceptualised by some as a distortion of body size estimation, perceiving that the body is larger than it is (McCabe et al., 2006). Others have emphasised the discrepancy between accurate perceptions of reality versus those of a “thin ideal” (Szymanski & Cash, 1995), with Hawkins et al. (2004) reporting that images of “thin-ideals” in magazines increased BID and negative mood while decreasing self-esteem. Many individuals have reported experiencing BID at least once in their lifetime, causing them to strive to change their body shape and size via exercising or dieting (Anton et al., 2000; Furnham et al., 2002). Although prolonged BID can lead to the development and maintenance of eating disorders (Stice & Shaw, 2002), the vast majority of individuals who suffer BID at some point in their lives do so without developing such problems (Hughes & Gullone, 2011).

Previous research has found that BID is linked with other mental health problems, specifically depression (Terence et al., 2024). Depression is typically associated with a sense of self-depreciation, as sufferers will report low levels of self-esteem and confidence. The combination of somatic and psychological symptoms in those who suffer from depression suggests that BID is an additional concern in these individuals (Marsella et al., 1981). Evidence indicates that those who suffer from depression are much more likely to experience BID (Gavin et al., 2010). Equally, Paxton et al. (2006) found that increased BID was a risk factor for depression and linked with negative mental health effects such as low self-esteem. Such cross-sectional data make causal links hard to infer, but Taylor and Cooper (1992) carried out a repeated measures, experimental study employing 85 female participants. They reported that low, depressed mood plays a vital role in exacerbating disturbances in body size perceptions, suggesting that depression may be a causal factor for BID. The current study will extend this by investigating whether females and males with higher levels of depressive symptoms are more likely to experience a change in BID, following exposure to “ideal body” images.

Research exploring the impact of social factors in causing BID has indicated roles for the media such as magazines, music videos, advertisements, and social media (de Vaate et al., 2023). The media predominately portray “thin ideal” figures of women (Stice et al., 1994). This notion is of an ideal female body shape

characterised by a small waist and minimal amounts of fat around the body, legs, and face. Tiggemann and Slater (2004) investigated the effect of idealised images from the media on BID of young women and found that exposure to such idealised images in music videos induced concerns regarding body appearance. The authors suggest that the media mediates social comparison tendencies, which result in BID. Tiggemann and Slater (2013) furthered this by exploring the effects of social media, such as Facebook, on the BID of teenage girls, reporting that the teenage girls who used Facebook were more likely to have BID compared to those who did not.

For males, the “ideal body” type portrayed by the media is a toned muscular figure characterised by large defined muscles, a V-shaped upper body where the shoulders are broader than the waist and low body fat (Blond, 2008). It has been identified that in magazines, male models have become increasingly more muscular and toned over time (Leit et al., 2001). Previous research has indicated that 68% to 95% of adult males experience BID with their higher-than-preferred amounts of body fat and/or lack of preferred muscularity (Jung et al., 2010). An experimental study by Galioto and Crowther (2013) found that exposure to media presentations of muscular and slender men led to an increase in BID in males. Barlett et al. (2008) carried out a meta-analysis of experimental studies that employed male participants. They reported significant, negative effects indicating that pressure from the mass media was linked with BID, excessive exercise, self-esteem, and depression within this population.

The present study aims to investigate whether pre-existing levels of depressive symptoms influence the potential impact of acute exposure to “ideal body” stimuli on BID. The second aim is to investigate whether any effect is the same in males as in females.

## 2. Method

### 2.1. Design

The current study utilised a repeated measures design. The repeated measures factor was the measurement of BID pre- and post-exposure to ‘ideal body’ stimuli. The predictor variable was the baseline level of depressive symptoms. The outcome variable was the change in BID from pre- to post-exposure. The between-groups factor was the gender of the participant.

### 2.2. Participants

A G \* Power analysis with an alpha of 0.05 and power of 0.80 indicated that a minimum of 100 participants were required in order to identify a moderate effect size of 0.2. In total, 96 participants completed the study. Seventy-six were females ( $M_{\text{Age}} = 22.91$ ,  $SD = 6.55$ ) and 20 were males ( $M_{\text{Age}} = 19.85$ ,  $SD = 2.62$ ). Participants were recruited via social media, for example, Facebook, Instagram, Snapchat and Twitter. All participants were from the UK.

### 2.3. Materials

#### *Beck Depression Inventory (BDI)*

This questionnaire measures participants' levels of depressive symptoms. Previously stated to have a Cronbach's alpha of 0.93 (Beck et al., 1996), this study also found a Cronbach's alpha of 0.93. The BDI has a 21-item format with a 4-point Likert scale ranging from 0 (not present) to 3 (severe). Example statements include "sadness", "sense of failure" and "loss of interest in sex". Higher scores indicate a greater level of depressive symptoms.

#### *Body Esteem Scale (BES)*

The second questionnaire was the physical/sexual attractiveness items from the Body Esteem Scale (BES). Previously stated to have a Cronbach's alpha of 0.81 (Franzoi & Shields, 1984), this study found it to be 0.92, indicating a higher internal consistency. There are 36 items, with factor loadings of physical/sexual attractiveness, upper body strength/weight concern, and physical condition. However, for the purpose of this study only the statements within the physical/sexual attractiveness factor loading were used as these were the most appropriate in measuring BID. These statements included: "body scent", "lips", and "chest or breasts". Higher scores indicate greater body satisfaction.

#### *Body Appreciation Scale (BAS)*

The Body Appreciation Scale (BAS) also measured body image satisfaction. Previously reported to have a Cronbach's alpha of 0.94 (Avalos et al., 2005), the current study confirmed this with a calculated value of 0.95. The BAS consists of 13 items employing a 5-point Likert scale. One example of an item within this questionnaire is: "I do not focus a lot of energy being concerned with my body shape or weight". Higher scores indicate greater body satisfaction.

#### *Ideal body presentation*

For the "thin-ideal" body intervention process, participants were given a mock memory test in an attempt to distract them from the real purpose of the study and to encourage engagement with the stimuli. Female participants were presented with pictures of 12 female models representing the "ideal" body to remember. Male participants were presented with 12 male models representing the "ideal" body to remember. All the images were found on online shopping websites. The faces of the models in the images were cropped out, and all the models were in underwear in order to show their bodily features to best effect.

### 2.4. Procedure

The study gained ethical approval from the Faculty of Health and Life Sciences ethics committee at Northumbria University. Participants accessed the study online via a link provided on social media. Participants were required to confirm informed consent to progress onto the rest of the study. Participants first completed both the BDI, BAS, and the BES. After this, the "ideal body" intervention took place in the form of a mock memory test. In the encoding phase, participants

were asked to remember six images of same sex models. Each image was shown for 5 seconds. In the recognition phase, they were presented with 12 images (6 original and 6 novel) sequentially and asked to state whether each model was the same as one shown previously by clicking on a “yes” or “no” button. Finally, participants completed the BES and BAS once more. The study took approximately 15 minutes to complete.

### 3. Results

#### 3.1. Treatment of Data

The data was exported from Qualtrics to SPSS version 25 to carry out the analysis. The Likert scales for the BID, BES, and BAS were automatically converted into numerical form, and no items from the questionnaires required reverse scoring. Following removal of incomplete data sets, the total score for each questionnaire was computed for each participant, and these were used for the following statistical analysis.

#### 3.2. Relationships between Variables at Baseline

Pearson correlations were computed between the baseline scores on the three variables: Beck Depression Inventory, Body Esteem Scale, and Body Appreciation Scale; see **Table 1**. These are then evaluated based on Cohen’s effect size criteria.

**Table 1.** Pearson correlation coefficients between pairs of variables for all participants at baseline (N = 96). BDI = Beck Depression Inventory; BES = Body Esteem Scale; and BAS = Body Appreciation Scale. \*\*\* signifies  $p < .001$ .

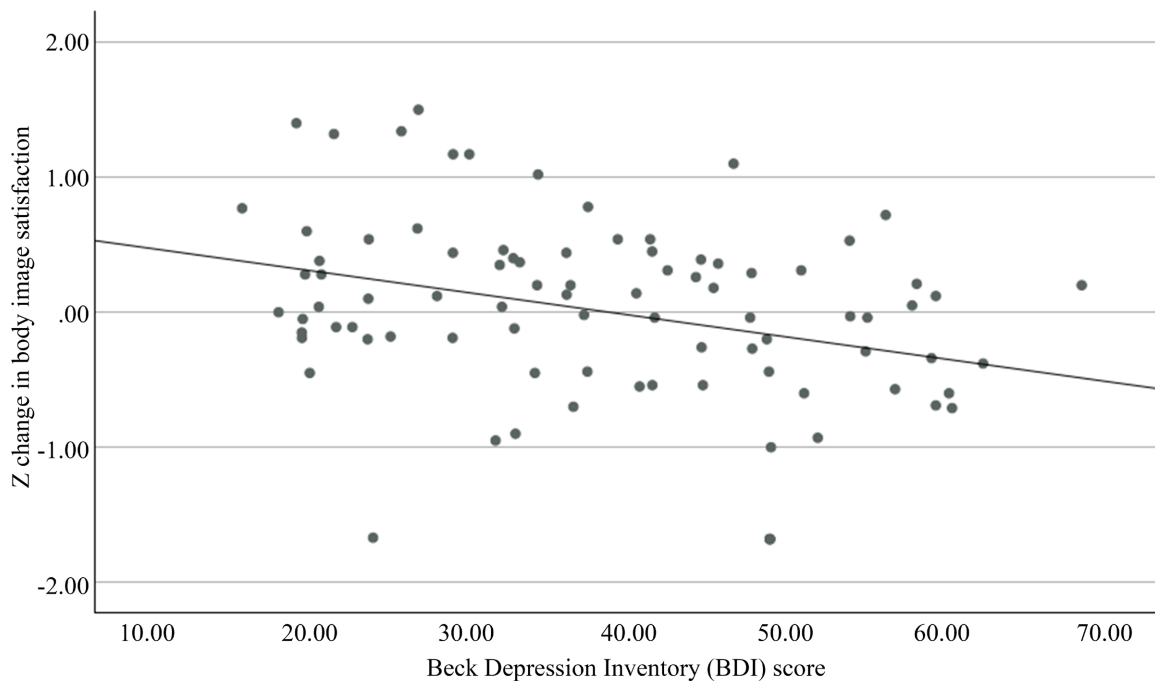
	BES	BAS
BDI	-.477***	-.720***
BES		.709***

The depression (BDI) scores were significantly negatively correlated with body esteem (BES),  $r(94) = -.477, p < .001$ , a medium to large effect. In addition, the depression scores were significantly negatively correlated with body appreciation (BAS),  $r(94) = -.720, p < .001$ , a large effect. This demonstrates that before the “ideal body” intervention, overall participants with higher levels of depressive symptoms had higher levels of body image dissatisfaction. The two body satisfaction scales were significantly positively correlated with a large effect size,  $r(94) = .709, p < .001$ . This gives reassurance that they are measuring similar but not identical constructs. As such, the two scales were combined to form a single body satisfaction scale for further analysis.

#### 3.3. Impact of the “Thin-Ideal” Intervention

The BES and BAS scores for both pre- and post-assessments were then converted into z-scores and combined additively to produce a single body satisfaction scale

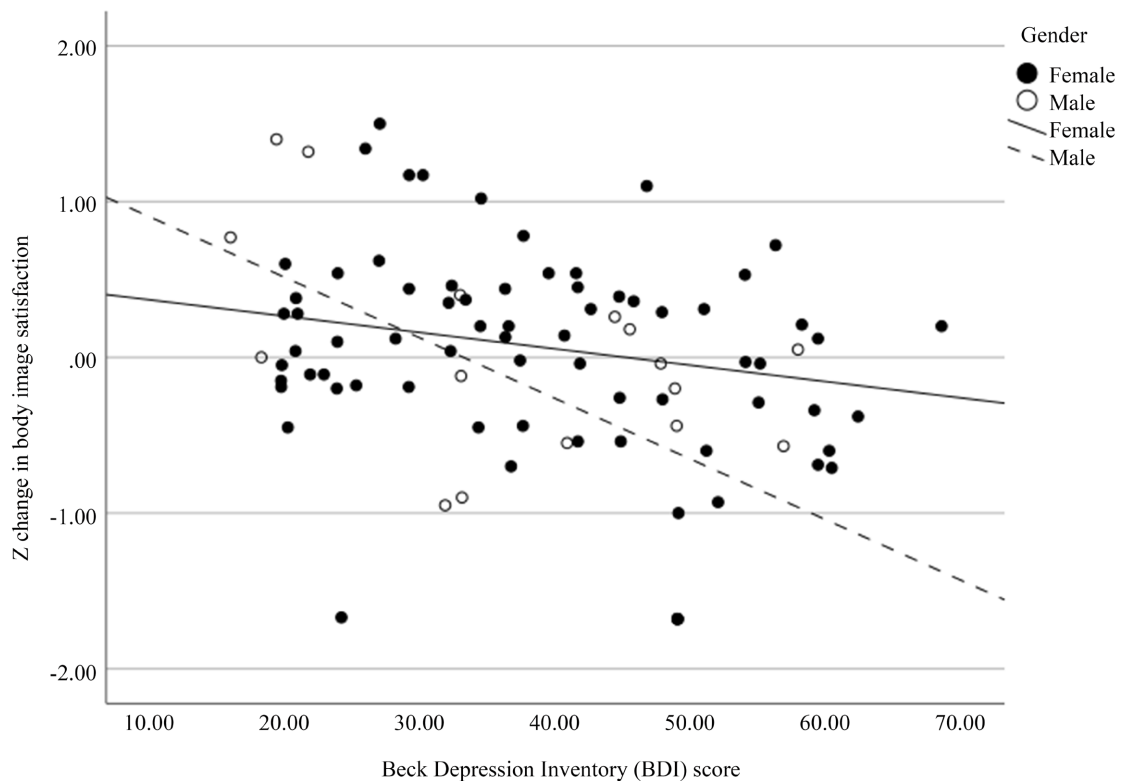
score for both pre- and post-intervention time points. A change in these pre- to post- z-scores was then computed as a separate variable such that a negative z-score change indicates a decrease in body satisfaction from pre- to post-intervention. These scores were then correlated with the participants' pre-existing depression scores (BDI). This Pearson correlation was found to be negative and significant with a medium effect size,  $r(94) = -.294, p = .004$ . This indicates that participants with higher pre-existing depressive symptoms experienced a greater drop in body satisfaction as a consequence of the "thin-ideal" intervention task.



**Figure 1.** Scatterplot of change in body satisfaction scores against depressive symptoms ( $N = 96$ ). Removal of the outlying data point did not change the relationship, and so the individual was left in the analysis.

### 3.4. Gender Differences

To investigate gender differences, separate bivariate correlations were computed. For males to err on the side of caution, one outlying data point was removed as it significantly strengthened the observed relationship. One removed, there was a significant negative correlation with a large effect size between the change in body satisfaction z-scores and depressive symptoms (BDI),  $r(17) = -.498, p = .025$ . By comparison, for females there was a non-significant negative correlation with a medium effect size,  $r(74) = -.212, p = .066$ . This would suggest that males with higher levels of depressive symptoms are more vulnerable and negatively impacted by the "thin-ideal" intervention with regard to their body satisfaction compared to females. See **Figure 2**. However, when calculating the significance of the difference between the two correlations of males and females, the difference was not statistically significant,  $z = -1.25, p = .211$ . Therefore, this assumption cannot be verified.



**Figure 2.** Scatterplot of change in body satisfaction scores against depressive symptoms for males ( $N = 19$ ) and females ( $N = 76$ ). Removal of the outlying data point did change the relationship for males, and so the individual was excluded from the analysis.

#### 4. Discussion

The first aim of the present study was to investigate whether existing levels of depressive symptoms would influence the decrease in body satisfaction following exposure to thin-ideal images. Overall, the data revealed a significant, negative correlation between levels of depressive symptoms and the change in body image satisfaction. Individuals who reported having higher levels of depressive symptoms were more vulnerable to the negative effects of the “ideal” bodies they were exposed to during the intervention. The second aim of the study addressed possible gender differences and revealed that although there was a stronger negative correlation between depressive symptoms and the decrease in body satisfaction for males than for females, this difference was not statistically significant. This finding is potentially influenced by the small male sample size and the result should be viewed as a potential trend until a larger sample is employed to confirm the possible difference.

The results presented here provide support for those of previous studies, e.g., Hawkins et al. (2004), Paxton et al. (2006), and strengthen the knowledge base as a consequence of the improved methodologies employed compared to previous studies. For example, Stice et al. (1994) did not measure body image satisfaction prior to the intervention where they showed ‘ideal’ body images. Therefore, it can be argued that participants may have had low body image satisfaction prior to the

study, and that this was not caused by the intervention itself. In the current study, the assessment of depressive symptoms at baseline and the pre- and post-intervention assessment of body image satisfaction allowed us to quantify the change in body image satisfaction as a direct result of the intervention and then correlate it with pre-existing depressive symptoms. The statistically significant results reported here with medium to large effect sizes are evidence that this method was successful in its aims as well as providing support for the previous findings of [Stice et al. \(1994\)](#).

[Rierdan and Koff \(1997\)](#) carried out a meta-analysis of correlational studies in young girls and found that weight satisfaction and weight concerns were significantly correlated with higher levels of depressive symptoms, with small effect sizes. The current study improved on this as it looked at the more global construct of body image satisfaction. This takes into account all aspects of body satisfaction, such as the size, shape, and weight of the body, and noted medium to large effects. These findings further highlight the importance for individuals who are depressed and suggest restricting their engagement with idealised body images, which could potentially exacerbate their body image dissatisfaction. Such a finding is not novel, however. [Mable et al. \(1986\)](#) reported that depression showed a significant relationship with body image dissatisfaction, albeit with a small effect size. The improvement demonstrated here is through the repeated measures of BDI assessment and the inclusion of the intervention.

The findings of the present study clearly suggest that exposure to ‘ideal’ body images leads to a decrease in body image satisfaction, and that this effect might be greater in those who have higher levels of depressive symptoms. Such findings highlight that the media portrayal of such “ideal” body types as those to be aspired to may be a risk factor for significant body image dissatisfaction ([Altabe & Thompson, 1996](#); [Heinberg & Thompson, 1995](#)). The majority of previous studies have investigated this link between exposure to “ideal” bodies and body image dissatisfaction in females. For example, [Tiggemann and Slater \(2004\)](#) found that the exposure to idealised images in music videos induced concerns about body image in women. These researchers furthered this by looking at other platforms such as social media sites, the findings indicating similar relationships ([Tiggemann & Slater, 2013](#)). An important addition to knowledge reported here is that the effects for males are as large and potentially larger than those for females, especially when levels of depression are accounted for. However, as noted above the failure of the gender comparison to reach statistical significance indicates a possible trend that requires confirmation from a larger sample.

One of the main premises of the current research has been that existing levels of depression might affect the impact of “ideal” body images on body dissatisfaction. However, an alternative perspective must be considered. [Bornioli et al. \(2021\)](#) conducted a prospective study that demonstrated that levels of body dissatisfaction predicted the onset of depression in adolescent males and females. It is possible that in the current study the exposure to the ideal body images in-

creased the level of depressive symptoms experienced by the participants. Given that we only measured depression on one occasion, it is not possible for us to evaluate the possibility that our intervention significantly impacted both body satisfaction and depression, and indeed that those with higher levels of body image dissatisfaction would respond to the intervention with a greater impact on depression than those with low levels of body image dissatisfaction. As such, the current study adds little to the understanding of potential causal influences between these variables. Further research is required to clarify this situation. Such research could employ a longitudinal design measuring both variables at multiple time points to better clarify the directional relationship between depression and body dissatisfaction.

Despite the amount of research documenting the relationship between body image dissatisfaction and depression, few studies have taken a cross-cultural perspective, with most being based in the UK or the USA. As exceptions, [Xie et al. \(2010\)](#) found that Hispanic adolescents reported slightly higher levels of body image dissatisfaction compared to Asian adolescents. Furthermore, the association between BID and depression was found to be slightly stronger in American adolescents than in Korean adolescents ([Choi & Choi, 2016](#)). Future research would benefit from drawing on a wider range of cultures in order to inform a worldview of the problem. Furthermore, therapeutic interventions in different countries may also benefit from knowledge informing treatment plans by potentially helping individuals suffering from depression, by recognizing the negative effects the “ideal” body images in the media can have on them, and how they can possibly protect themselves from this.

The current study’s primary limitation is the small and unbalanced sample (76 females, 20 males), which limits statistical power for the gender comparison that formed a core hypothesis. The small sample of males severely hampers the ability to draw firm conclusions about gender and it is important that the suggested difference is confirmed through replication with a larger sample. Even numbers of males and females would also strengthen the reliability of the statistical analysis.

In conclusion, our findings support those of previous studies and further the current knowledge within this research area. The demonstration of a strong, significant, negative correlation between the change in body image satisfaction and levels of depressive symptoms following exposure to “ideal” body images strengthens our understanding of the relationships between these variables. With previous research being somewhat contradictory in terms of gender differences ([Brausch & Muehlenkamp, 2007](#); [Wood et al., 1996](#)), the present study suggests that depressed males may be more sensitive to the impact of “ideal” bodies than are females, although the small sample size here precludes the confident reporting of such an effect. A larger replication would be of benefit. Research of this nature may prove valuable for informing psychologists and helping to improve therapies provided by them for those who suffer from depression and have high levels of body image dissatisfaction.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Altabe, M., & Thompson, J. K. (1996). Body Image: A Cognitive Self-Schema Construct? *Cognitive Therapy and Research*, *20*, 171-193. <https://doi.org/10.1007/bf02228033>
- Anton, S. D., Perri, M. G., & Riley III, J. R. (2000). Discrepancy between Actual and Ideal Body Images: Impact on Eating and Exercise Behaviors. *Eating Behaviors*, *1*, 153-160. [https://doi.org/10.1016/s1471-0153\(00\)00015-5](https://doi.org/10.1016/s1471-0153(00)00015-5)
- Avalos, L., Tylka, T. L., & Wood-Barcalow, N. (2005). The Body Appreciation Scale: Development and Psychometric Evaluation. *Body Image*, *2*, 285-297. <https://doi.org/10.1016/j.bodyim.2005.06.002>
- Barlett, C. P., Vowels, C. L., & Saucier, D. A. (2008). Meta-Analyses of the Effects of Media Images on Men's Body-Image Concerns. *Journal of Social and Clinical Psychology*, *27*, 279-310. <https://doi.org/10.1521/jscp.2008.27.3.279>
- Beck, A. T., Steer, R. A., Ball, R., & Ranieri, W. F. (1996). Comparison of Beck Depression Inventories-Ia and -II in Psychiatric Outpatients. *Journal of Personality Assessment*, *67*, 588-597. [https://doi.org/10.1207/s15327752jpa6703\\_13](https://doi.org/10.1207/s15327752jpa6703_13)
- Bessenoff, G. R. (2006). Can the Media Affect Us? Social Comparison, Self-Discrepancy, and the Thin Ideal. *Psychology of Women Quarterly*, *30*, 239-251. <https://doi.org/10.1111/j.1471-6402.2006.00292.x>
- Blond, A. (2008). Impacts of Exposure to Images of Ideal Bodies on Male Body Dissatisfaction: A Review. *Body Image*, *5*, 244-250. <https://doi.org/10.1016/j.bodyim.2008.02.003>
- Bornioli, A., Lewis-Smith, H., Slater, A., & Bray, I. (2021). Body Dissatisfaction Predicts the Onset of Depression among Adolescent Females and Males: A Prospective Study. *Journal of Epidemiology and Community Health*, *75*, 343-348. <https://doi.org/10.1136/jech-2019-213033>
- Brausch, A. M., & Muehlenkamp, J. J. (2007). Body Image and Suicidal Ideation in Adolescents. *Body Image*, *4*, 207-212. <https://doi.org/10.1016/j.bodyim.2007.02.001>
- Choi, E., & Choi, I. (2016). The Associations between Body Dissatisfaction, Body Figure, Self-Esteem, and Depressed Mood in Adolescents in the United States and Korea: A Moderated Mediation Analysis. *Journal of Adolescence*, *53*, 249-259.
- de Vaate, N. A. B., Veldhuis, J., & Konijn, E. A. (2023). The Impact of Seeing and Posting Photos on Mental Health and Body Satisfaction: A Panel Study among Dutch and Japanese adolescents. *Computers in Human Behavior*, *148*, Article ID: 107906.
- Franzoi, S. L., & Shields, S. A. (1984). The Body Esteem Scale: Multidimensional Structure and Sex Differences in a College Population. *Journal of Personality Assessment*, *48*, 173-178. [https://doi.org/10.1207/s15327752jpa4802\\_12](https://doi.org/10.1207/s15327752jpa4802_12)
- Furnham, A., Badmin, N., & Sneade, I. (2002). Body Image Dissatisfaction: Gender Differences in Eating Attitudes, Self-Esteem, and Reasons for Exercise. *The Journal of Psychology*, *136*, 581-596. <https://doi.org/10.1080/00223980209604820>
- Galioto, R., & Crowther, J. H. (2013). The Effects of Exposure to Slender and Muscular Images on Male Body Dissatisfaction. *Body Image*, *10*, 566-573. <https://doi.org/10.1016/j.bodyim.2013.07.009>
- Gavin, A. R., Simon, G. E., & Ludman, E. J. (2010). The Association between Obesity, Depression, and Educational Attainment in Women: The Mediating Role of Body Image Dissatisfaction. *Journal of Psychosomatic Research*, *69*, 573-581.

- <https://doi.org/10.1016/j.jpsychores.2010.05.001>
- Hawkins, N., Richards, P. S., Granley, H. M., & Stein, D. M. (2004). The Impact of Exposure to the Thin-Ideal Media Image on Women. *Eating Disorders, 12*, 35-50.  
<https://doi.org/10.1080/10640260490267751>
- Heinberg, L. J., & Thompson, J. K. (1995). Body Image and Televised Images of Thinness and Attractiveness: A Controlled Laboratory Investigation. *Journal of Social and Clinical Psychology, 14*, 325-338. <https://doi.org/10.1521/jscp.1995.14.4.325>
- Hughes, E. K., & Gullone, E. (2011). Emotion Regulation Moderates Relationships between Body Image Concerns and Psychological Symptomatology. *Body Image, 8*, 224-231.  
<https://doi.org/10.1016/j.bodyim.2011.04.001>
- Jung, J., Forbes, G. B., & Chan, P. (2010). Global Body and Muscle Satisfaction among College Men in the United States and Hong Kong-China. *Sex Roles, 63*, 104-117.  
<https://doi.org/10.1007/s11199-010-9760-z>
- Kostanski, M., & Gullone, E. (1998). Adolescent Body Image Dissatisfaction: Relationships with Self-Esteem, Anxiety, and Depression Controlling for Body Mass. *The Journal of Child Psychology and Psychiatry and Allied Disciplines, 39*, 255-262.  
<https://doi.org/10.1111/1469-7610.00319>
- Leit, R. A., Pope, H. G., & Gray, J. J. (2001). Cultural Expectations of Muscularity in Men: The Evolution of Playgirl Centerfolds. *International Journal of Eating Disorders, 29*, 90-93. [https://doi.org/10.1002/1098-108x\(200101\)29:1<90::aid-eat15>3.0.co;2-f](https://doi.org/10.1002/1098-108x(200101)29:1<90::aid-eat15>3.0.co;2-f)
- Mable, H. M., Balance, W. D. G., & Galgan, R. J. (1986). Body-Image Distortion and Dissatisfaction in University Students. *Perceptual and Motor Skills, 63*, 907-911.  
<https://doi.org/10.2466/pms.1986.63.2.907>
- Marsella, A. J., Shizuru, L., Brennan, J., & Kameoka, V. (1981). Depression and Body Image Satisfaction. *Journal of Cross-Cultural Psychology, 12*, 360-371.  
<https://doi.org/10.1177/0022022181123007>
- McCabe, M. P., Ricciardelli, L. A., Sitaram, G., & Mikhail, K. (2006). Accuracy of Body Size Estimation: Role of Biopsychosocial Variables. *Body Image, 3*, 163-171.  
<https://doi.org/10.1016/j.bodyim.2006.01.004>
- Paxton, S. J., Neumark-Sztainer, D., Hannan, P. J., & Eisenberg, M. E. (2006). Body Dissatisfaction Prospectively Predicts Depressive Mood and Low Self-Esteem in Adolescent Girls and Boys. *Journal of Clinical Child & Adolescent Psychology, 35*, 539-549.  
[https://doi.org/10.1207/s15374424jccp3504\\_5](https://doi.org/10.1207/s15374424jccp3504_5)
- Perrin, A. (2015). *Social Media Usage. Pew Research Center*. 52-68.  
<http://www.pewinternet.org/2015/10/08/2015/Social-Networking-Usage-2005-2015/>
- Rierdan, J., & Koff, E. (1997). Weight, Weight-Related Aspects of Body Image, and Depression in Early Adolescent Girls. *Adolescence, 32*, 615-624.
- Shorey, S., Ng, E. D., & Wong, C. H. J. (2022). Global Prevalence of Depression and Elevated Depressive Symptoms among Adolescents: A Systematic Review and Meta-Analysis. *British Journal of Clinical Psychology, 61*, 287-305.  
<https://doi.org/10.1111/bjc.12333>
- Slade, P. D. (1988). Body Image in Anorexia Nervosa. *British Journal of Psychiatry, 153*, 20-22. <https://doi.org/10.1192/s0007125000298930>
- Stice, E., & Shaw, H. E. (2002). Role of Body Dissatisfaction in the Onset and Maintenance of Eating Pathology: A Synthesis of Research Findings. *Journal of Psychosomatic Research, 53*, 985-993. [https://doi.org/10.1016/s0022-3999\(02\)00488-9](https://doi.org/10.1016/s0022-3999(02)00488-9)
- Stice, E., Schupak-Neuberg, E., Shaw, H. E., & Stein, R. I. (1994). Relation of Media Exposure to Eating Disorder Symptomatology: An Examination of Mediating Mechanisms.

*Journal of Abnormal Psychology*, 103, 836-840.

<https://doi.org/10.1037/0021-843x.103.4.836>

Szymanski, M. L., & Cash, T. F. (1995). Body-Image Disturbances and Self-Discrepancy Theory: Expansion of the Body-Image Ideals Questionnaire. *Journal of Social and Clinical Psychology*, 14, 134-146. <https://doi.org/10.1521/jscp.1995.14.2.134>

Taylor, M. J., & Cooper, P. J. (1992). An Experimental Study of the Effect of Mood on Body Size Perception. *Behaviour Research and Therapy*, 30, 53-58.

[https://doi.org/10.1016/0005-7967\(92\)90096-y](https://doi.org/10.1016/0005-7967(92)90096-y)

Terence, N., Ayub, N., & Kimong, P. (2024). The Factors and Implications of Body Image Dissatisfaction among Adolescents. *Advances in Applied Sociology*, 14, 644-659.

<https://doi.org/10.4236/aasoci.2024.1411042>

Tiggemann, M., & Slater, A. (2004). Thin Ideals in Music Television: A Source of Social Comparison and Body Dissatisfaction. *International Journal of Eating Disorders*, 35, 48-58. <https://doi.org/10.1002/eat.10214>

Tiggemann, M., & Slater, A. (2013). NetGirls: The Internet, Facebook, and Body Image Concern in Adolescent Girls. *International Journal of Eating Disorders*, 46, 630-633.

<https://doi.org/10.1002/eat.22141>

Wood, K. C., Becker, J. A., & Thompson, J. K. (1996). Body Image Dissatisfaction in Pre-adolescent Children. *Journal of Applied Developmental Psychology*, 17, 85-100.

[https://doi.org/10.1016/s0193-3973\(96\)90007-6](https://doi.org/10.1016/s0193-3973(96)90007-6)

Xie, B., Unger, J. B., Gallaher, P., Johnson, C. A., Wu, Q., & Chou, C. P. (2010). Overweight, Body Image, and Depression in Asian and Hispanic Adolescents. *American Journal of Health Behavior*, 34, 476-488.