

#### ADVANCE SOCIAL SCIENCE ARCHIVE JOURNAL

Available Online: <a href="https://assajournal.com">https://assajournal.com</a>

Vol. 04 No. 01. July-September 2025.Page#.2612-2622

Print ISSN: 3006-2497 Online ISSN: 3006-2500 Platform & Workflow by: Open Journal Systems https://doi.org/10.5281/zenodo.16903553



# Exploring Body Image, Self-Objectification, Self-Esteem, and Psychological Problems in University Students

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## **Abstract**

The present study investigates the interrelationships among body image dissatisfaction, self-objectification, self-esteem, and psychological problems, specifically symptoms of depression, anxiety, and stress, among university students. Grounded in objectification theory and self-esteem frameworks, this study investigates how self-objectification and self-esteem mediate the relationship between body dissatisfaction and psychological outcomes. A sample of 300 university students participated by completing standardized self-report questionnaires measuring body image perception, self-objectification, global self-esteem, and psychological problems. The results revealed significant positive correlations between body image dissatisfaction, self-objectification, and psychological problems, and a negative correlation with self-esteem. Mediation analyses demonstrated that the relationship between body image dissatisfaction and psychological problems was significantly explained by self-objectification and self-esteem. These findings highlight the psychological vulnerability of university students facing appearance-related pressures and underscore the need for mental health interventions that target body image, promote self-worth, and reduce self-objectifying tendencies.

**Keywords:** Body image, self-objectification, self-esteem, psychological problems **Introduction** 

Body image (BI) encompasses multiple facets, including perceptual, emotive, and cognitive aspects, which involve features about one's own body and the bodies of others. BI perception comprehends body size evaluation (how a person views his or her body), body attractiveness appraisal (what form of body a person considers most appealing), and perceptions about one's

body shape and size. Thus, physiological, cognitive, and social interactions contribute to body image formation (Toselli et al., 2023). Body image disturbances tend to start developing in early adolescence, yet fail to receive adequate attention, leaving them to become longstanding issues that may transition into psychological problems. The severity of body image disturbances leads to various serious outcomes, which include depression, anxiety, and stress (Linardon et al., 2021). People across different fields have shown significant interest in both the root causes and psychological consequences of body image issues that affect mental health. According to Dion and colleagues (2015), young people's discontent with their bodies runs high, numbering 65% of the population. There is plenty of proof linking body dissatisfaction to psychological problems. Even after adjusting for depression, body dissatisfaction has been connected to other detrimental psychological consequences, such as low mood and an increase in attempts and thoughts of suicide in people. In addition, it seems that body dissatisfaction has an impact on health behaviors as well as negative psychological outcomes. In particular, it has been linked to increased inappropriate weight-control behaviors, depression, stress, smoking actions, anxiety, and less exercise in men and women during their adolescence and early twenties (Harriger et al., 2023).

In today's era of social media, digital media, where they expound about unrealistic beauty standards, by using snap chat Instagram filters and edited videos and because of that people are constantly exposed to perfect gym figures for men and women, clear glass skin, and specifically white color, as in Asia, especially people living in India, Bangladesh and Pakistan already have beauty standard that person with white color is more beautiful than dark color. Moreover, on social media platforms, if people don't like their color, nose, chin, eyes, or lip shape, they get surgery and then get the desired body. All these factors lead to a biased perception of an individual's physical features that an individual built over time for himself. It encompasses various features involving bodily vigor, health, body shape, size, and presentation (Shang et al., 2021).

When evaluating one's self-concept, researchers have frequently linked body image to self-objectification. Fredrickson and Roberts developed the objectification theory. They contended that in sociocultural contexts where people internalize foreigners' views of their bodies and constantly evaluate their bodies according to these viewpoints. According to empirical research, self-objectification is largely influenced by giving value to only the presumed presentation by electronic media, which places an immense value on being physically appealing to others, rather than their competence and functionality. As stated by objectification theory, sociocultural experiences might influence psychological predisposing factors that foster negative BI. Furthermore, researchers also indicated that those who pay too much attention to their body shape and who are exposed to too much media on their ideal body shape are likely to develop negative self-esteem.

Self-esteem is defined as a person's overall appraisal of their worth or value. Comparable to self-confidence, it shapes one's beliefs about personal abilities and self-respect. It communicates how secure individuals are in their expertise and qualities. Having a strong sense of self-worth plays a vital role in shaping a person's drive, mental well-being, and overall quality of life. SE is an individual element that shields teenagers from major psychological issues, such as suicidal

thoughts, according to a wealth of research. The way a person sees is known as their self-esteem. (Preston & Rew, 2021). On the one hand, existing literature indicates that individuals with elevated self-esteem tend to report higher levels of psychological well-being (Orth & Robins, 2022). Established on the factually supported data above, it looks reasonable to hypothesize that a complicated association can exist between body image, self-objectification, self-esteem, and psychological problems.

#### Literature review

Yun (2018) conducted a large-scale study involving 49,180 adolescents to examine the impact of body image distortion on mental health outcomes. Results demonstrated that adolescents who reported distorted body image perceptions showed a significantly greater likelihood of experiencing stress, depression, and suicidal thoughts than their counterparts with more accurate body perceptions.

Solatni et al. (2017) conducted a study among university students during the 2016 academic year to investigate the relationship between body image and mental health. The researchers recruited 372 students. Data were collected through a demographic questionnaire and standardized assessment tools. The results revealed a significant inverse relationship between body image and psychological problems, indicating that students with more negative body image perceptions were more likely to experience mental health issues.

Rafique and Khan (2024) examined the relationship between body image dissatisfaction, self-objectification, and eating behaviors among adults. The study aimed to assess how body image concerns and self-objectification relate to disordered eating patterns. A total of 200 adult participants were included in the study. Using the Pearson correlation method, the researchers found a significant positive correlation between self-objectification and body image dissatisfaction, indicating that higher levels of self-objectification were associated with greater dissatisfaction with one's body. Additionally, the findings revealed no statistically significant gender differences in eating behaviors, body image dissatisfaction, or self-objectification levels. Pop (2016) carried out a study exploring how body image perception relates to self-esteem among college students. The study specifically focused on young female participants and aimed to determine the association between body image dissatisfaction and self-esteem levels. The results indicated a significant negative correlation, suggesting that higher body dissatisfaction was associated with lower self-esteem among young women.

Musharaf et al. (2022) investigated the indirect relationships among self-esteem, mental health, and body dissatisfaction in a sample of Lebanese adolescents. The study found that higher levels of psychological distress and lower self-esteem were significantly associated with greater body dissatisfaction. Additionally, depression showed a strong direct association with body dissatisfaction. Notably, the relationships between stress and body dissatisfaction, as well as anxiety and body dissatisfaction, were found to be indirectly mediated by self-esteem, suggesting that adolescents with higher self-esteem may be less vulnerable to the negative impact of stress and anxiety on body image.

# **Hypothesis**

- 1. The study proposes that significant associations exist between body image, self-objectification, self-esteem, and psychological problems such as depression, anxiety, and stress.
- 2. Self-objectification and self-esteem are expected to serve as mediators in the link between body image and psychological problems.

#### Methodology

# **Participants**

The study utilized purposive sampling to identify and select participants who met the research criteria. A sample of 300 university students was selected for the current research from various educational institutions in Faisalabad and Bhakkar. The participants were between 18 and 30 years old.

#### **Inclusion and Exclusion Criteria**

Inclusion criteria consisted of undergraduate, graduate, and postgraduate university students between the ages of 18 to 30 years, younger adults who voluntarily gave their informed consent to participate in the present research. Students who have any physical disability or have been seriously diagnosed with psychiatric problems were excluded.

#### Measures

The following measures were used in the present research.

#### The Body Self-Image Questionnaire- Short Form (BSIQ-SF)

This scale has 27 items, which originated from the 51-item BSIQ. The BSIQ-SF employed a 5-point Likert scale, with response options ranging from "not true" to "completely true." The overall score on the scale can vary between 27 and 135, with higher scores reflecting greater body image concerns. It has nine sub-scales which evaluate appearance, physical fitness influence, investment in ideals, evaluation of physical fitness, and attention to grooming. There is also dissatisfaction about height, evaluation of fatness, negative mood, and social dependence. Overall, Cronbach's alpha is 0.83.

#### The Self-Objectification Beliefs and Behaviors Scale (SOBBS)

Self-objectification was measured by using The Self-Objectification Beliefs and Behaviors Scale. This scale consists of 27 items, which were rated on a five-point Likert scale, ranging from "strongly disagree" to "strongly agree." If the scores are high, it indicates more self-objectification. The SOBBS's internal consistency was 0.91.

# Rosenberg self-esteem scale

Self-esteem in the present study was measured using the Rosenberg Self-Esteem Scale, initially designed to assess high school students. Since its inception, the scale has been applied across diverse populations, including adults, with normative data established for many of these groups. After reverse-scoring the negatively worded items, the scale is scored by calculating the sum of all individual four-point items. The RSE has a Guttman scale coefficient of reproducibility of .92, reflecting a high level of internal consistency. Test—retest assessments conducted over a two-week interval yielded correlations of .85 and .88, demonstrating strong stability.

Depression Anxiety Stress scale (DASS-21)

It is a psychometric tool that estimates three psychological problems, including depression, anxiety, and stress. It is a short version of the original DASS-42, created by Lovibond & Lovibond (1995). It consists of 21 items, divided into three subscales, and each subscale has 7 items. The depression subscale measures depressed mood, motivation loss, and self-worth difficulties; the anxiety items estimate physiological arousal and fear responses; and the stress items analyze chronic tension, impatience, and trouble relaxing (Lovibond & Lovibond, 1995). It is a Likert scale having 4 points, including 0= ("Did not apply to me at all") to 3= ("most of the time"), representing symptom severity over the previous week. It has significant psychometric features, including a high internal consistency and test-retest reliability. Cronbach's alpha coefficients for depression ( $\alpha$  =.81-.94), anxiety ( $\alpha$  =.70-.85), and stress ( $\alpha$  =.81-.91) show good to outstanding reliability (Henry & Crawford, 2005; Osman et al., 2012).

#### **Procedure**

Before data collection began, institutional permission was obtained from university authorities. Participants received a detailed briefing on the study's objectives and confidentiality measures. Participation was entirely voluntary, with the freedom to withdraw at any time. Written informed consent was obtained before proceeding. Participants completed standardized psychological measures. Surveys were completed independently, with assistance available if needed, ensuring confidentiality and anonymity throughout the process.

#### **Data analysis**

Data was analyzed thoroughly with the help of SPSS software. For demographics and scales scores, summary descriptive statistics were applied through SPSS. To examine the association between BI, SO, SE, and PP. Pearson correlation was implemented, it helps to identify the direction of their relationship, whether it is negative or positive. To determine the impact of body image, SO, SE on Psychological problems, a Regression analysis was conducted.

# **Table 1**Table 1: Frequency and percentage of participants (N=300)

Demographic variable	F	%	М	SD	Min	Max
Age			23.57	2.82	18	30
18-30	300	100.%				
Gender						
Male	125	41.7%				
Female	175	58.3%				
Education						
Undergraduate	106	44.2%				
Graduate	151	52.6%				
PhD	43	3.2%				

Note. M=Mean; SD= Standard Deviation

The sample consists of 300 participants, including 175 females and 125 males, measured four significant psychological constructs: BI, SO, SE, and PP. Analysis revealed that the BI scale scores

range from 49 to 126 (M = 88.9, SD = 23.3), SO ranges from 10 to 45 (M = 31.9, SD = 10.2), SE ranges from 14 to 28 (M = 20.7, SD = 3.23), and PP ranges from 0 to 52 (M = 27.9, SD = 17.4). **Table 2:** Descriptive statistics, Reliability coefficients, and Pearson correlation among variables.

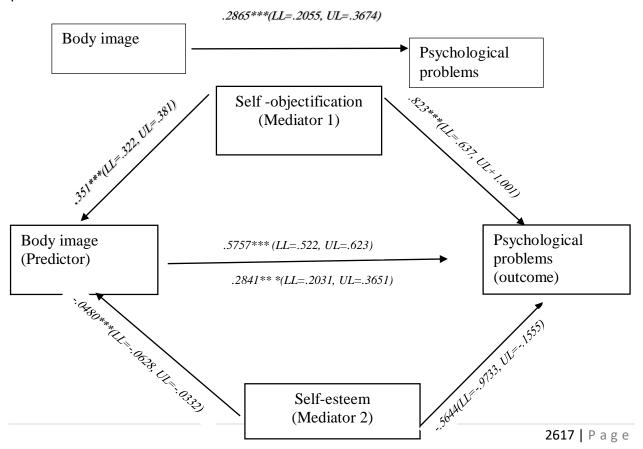
Variables	No. of	M(SD)	α	1	2	3	4
	Items						
BI	27	88.9(23.3)	0.83		.806**	347**	.775**
SO	14	31.9(10.2)	0.91			399**	.794**
SE	10	20.7(3.23)	0.92				361**
PP	21	27.9(17.4)	.90				

Note. p < .05, p < .01. M = Mean; SD = Standard Deviation;  $\alpha = Cronbach's alpha$ 

Correlation analysis revealed that body image is significantly positively correlated with feelings of self-objectification and psychological problems in terms of depression, anxiety, and stress; however, self-esteem is found to be significantly negatively correlated with body image, self-objectification, and psychological problems.

# **Mediation Model**

Mediation effect of self-objectification and self-esteem between Body image and psychological problems.



#### Discussion

The present research was designed to find out the relationship among body image, self-objectification, self-esteem, and psychological problems, including depression, anxiety, and stress. Results indicated that body image has a significant positive correlation with self-objectification and psychological problems. However, self-esteem has a significant negative relationship with all three variables.

The findings reinforce the framework proposed by objectification theory (Fredrickson & Roberts, 1997), which posits that individuals internalize an observer's perspective on their bodies, leading to chronic body surveillance, increased self-objectification, and negative psychological outcomes. The findings of this study reinforce the significant and multifaceted relationship between body image and mental health. Consistent with prior literature, individuals with negative body image reported low self-esteem and higher levels of psychological distress, including symptoms of depression, and anxiety (Grabe, Ward, & Hyde, 2008; Alleva et al., 2015). These results highlight body image as not merely a superficial or aesthetic concern but a central psychological construct that influences emotional well-being and overall quality of life.

Body image encompasses not only how individuals perceive their physical appearance but also the emotional and cognitive responses they associate with those perceptions (Cash & Pruzinsky, 2002). When individuals experience body dissatisfaction, they are more likely to engage in negative self-evaluation, appearance-based comparisons, and internalization of unattainable beauty standards, all of which contribute to emotional distress and mental health decline. The data from this study support this pattern, showing a strong relationship between body dissatisfaction and mental health indicators.

The current findings provide compelling support for the role of self-objectification as a mediator in the relationship between body image dissatisfaction and psychopathological symptoms, including depression, anxiety, and psychological distress. This mediating effect aligns with the central tenets of objectification theory (Fredrickson & Roberts, 1997). Consistent with prior research, the results indicate that body dissatisfaction significantly predicts self-objectification, which, in turn, is associated with greater psychopathological outcomes (Moradi & Huang, 2008; Tiggemann & Slater, 2001). This pattern suggests that self-objectification functions as a cognitive-affective pathway linking physical appearance concerns with broader mental health challenges. Individuals who hold negative attitudes toward their bodies may be more likely to monitor their appearance, feel shame or anxiety when their bodies do not meet internalized cultural ideals, and ultimately experience heightened psychological distress.

The present study also investigated the mediating role of self-esteem in the relationship between body image dissatisfaction and psychological problems, including symptoms of depression, anxiety, and general psychological distress. The findings provide empirical support for the hypothesis that self-esteem partially mediates this relationship, indicating that body dissatisfaction undermines global self-worth, which in turn increases vulnerability to psychological difficulties.

This result is consistent with previous research demonstrating that individuals with negative body image are more likely to experience low self-esteem (Tiggemann, 2005; Cash & Pruzinsky,

2002), and that diminished self-esteem is a key predictor of various mental health issues, particularly depression and anxiety (Sowislo & Orth, 2013). From a theoretical standpoint, this supports the diathesis-stress model, wherein body dissatisfaction acts as a chronic psychological stressor, while low self-esteem functions as a vulnerability factor that predisposes individuals to psychopathology.

The observed mediation effect suggests a mechanistic pathway: individuals who are dissatisfied with their bodies may internalize negative evaluations and self-critical beliefs that erode their sense of self-worth, leaving them more susceptible to emotional distress. In this way, self-esteem operates as a psychological filter, shaping how individuals interpret and cope with body-related concerns. Importantly, this mediation model adds nuance to our understanding of the body image-mental health connection by highlighting self-esteem not merely as an outcome, but as an active psychological process. It also offers a clearer target for intervention: while improving body satisfaction is one avenue, enhancing self-esteem—through self-affirmation, cognitive restructuring, or compassion-focused interventions—may provide an effective buffer against the mental health consequences of body dissatisfaction (Neumark-Sztainer et al., 2006; Tylka, 2004). The results also have implications in sociocultural contexts, where idealized body standards are heavily emphasized, particularly via mass media and social media platforms. Individuals exposed to unrealistic body ideals may experience body dissatisfaction, which, if internalized, can lower self-esteem and contribute to psychological strain (Perloff, 2014). These findings support the growing need for media literacy interventions that not only challenge unrealistic beauty norms but also foster intrinsic self-worth based on non-appearance-related qualities.

#### Conclusion

The present study examined the interrelationship of body image, self-objectification, self-esteem, and psychological problems among university students. The findings showed a significant positive association between BI, self-objectification, and psychological problems. in BO, SO, SE, and PP. The findings illustrate how absorbing appearance-based standards can jeopardize mental health. However, self-esteem is negatively correlated with BI, SO, and psychological problems. In regression analysis, it indicated that body image and self-objectification are strong predictors of psychological problems, but self-esteem is a weak predictor PP, Moreover, gender-based analysis showed no significant differences between males and females. The study emphasizes the necessity of preventive initiatives that address negative BI and foster positive self-worth to lower psychological issues, especially among college and university students.

#### **Implications**

The findings of this research have significant implications for understanding the relationship between body image, self-objectification, self-esteem, and psychological problem outcomes, particularly in the context of university students. The results can contribute to the development of more targeted interventions for improving body image and self-esteem, reducing self-objectification tendencies, and promoting healthier coping mechanisms in response to stress, anxiety, and depression. This research may inform future psychological practices by highlighting the importance of addressing these factors in mental health treatment and well-being programs. Additionally, the study's findings could guide educational institutions in developing support

systems that address the emotional and psychological challenges faced by students, ultimately leading to improved mental health and academic performance.

#### Limitations

Since the sample was limited to university students, it might not be possible that the sample accurately represents the whole young adult population. The results may not apply to older or non-student groups due to cultural and socioeconomic issues specific to the university environment. The study was carried out in a particular social and cultural context; diverse cultures and societies may have rather diverse views on body image, SO, and SE. As a result, the results might not apply to pupils from different cultural backgrounds. The investigation did not monitor changes in BI, SO, SE, and PP over time, so a longitudinal approach would be more suitable for a deeper understanding. This study could not control for several outside variables that could affect psychological issues, including peer interactions, family history, academic stress, and social media use. The results might have been influenced by these unmeasured factors.

# **Conflict of interest**

The authors have no conflict of interest.

## **References**

- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). American Psychiatric Publishing.
- Choma, B.L., Shove, C., Busseri, M.A. *et al.* Assessing the Role of Body Image Coping Strategies as Mediators or Moderators of the Links Between Self-Objectification, Body Shame, and Well-Being. *Sex Roles* 61, 699–713 (2009). https://doi.org/10.1007/s11199-009-9666-9
- Cash, T. F. (2004). Body image: Past, present, and future. *Body Image*, 1(1), 1–5. https://doi.org/10.1016/S1740-1445(03)00011-1
- Duchesne, Annie-Pier & Dion, Jacinthe & Lalande, Daniel & Bégin, Catherine & Émond, Claudie & Lalande, Gilles & McDuff, Pierre. (2016). Body dissatisfaction and psychological distress in adolescents: Is self-esteem a mediator?. Journal of Health Psychology. 22. 1563-1569. 10.1177/1359105316631196.
- Dion, J., Blackburn, M.-È., Auclair, J., Laberge, L., Veillette, S., Gaudreault, M., Vachon, P., Perron, M., & Touchette, É. (2015). Development and aetiology of body dissatisfaction in adolescent boys and girls. *International Journal of Adolescence and Youth*, 20(2), 151–166. <a href="https://doi.org/10.1080/02673843.2014.985320">https://doi.org/10.1080/02673843.2014.985320</a>
- Fredrickson, B. L., & Roberts, T.-A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly,* 21(2), 173–206. https://doi.org/10.1111/j.1471-6402.1997.tb00108.x
- Griffiths S, Hay P, Mitchison D, Mond JM, McLean SA, Rodgers B, Massey R, Paxton SJ. Sex differences in the relationships between body dissatisfaction, quality of life and psychological distress. Aust N Z J Public Health. 2016 Dec;40(6):518-522. doi: 10.1111/1753-6405.12538. Epub 2016 Jul 3. PMID: 27372301
- Harriger, J. A., Thompson, J. K., & Tiggemann, M. (2023). TikTok, TikTok, the time is now:

- Future directions in social media and body image. *Body Image, 44*, 222–226. https://doi.org/10.1016/j.bodyim.2023.01.005
- Linardon, J., Anderson, C., Messer, M., Rodgers, R. F., & Fuller-Tyszkiewicz, M. (2021).

  Body image flexibility and its correlates: A meta-analysis. *Body Image, 37*, 188–203. https://doi.org/10.1016/j.bodyim.2021.02.005
- Orth, U., & Robins, R. W. (2022). Is high self-esteem beneficial? Revisiting a classic question. *American Psychologist*, 77(1), 5–17.

  <a href="https://doi.org/10.1037/amp0000922">https://doi.org/10.1037/amp0000922</a> Is high self-esteem beneficial? Revisiting a classic question. *American Psychologist*, 77(1), 5–17.

  <a href="https://doi.org/10.1037/amp0000922">https://doi.org/10.1037/amp0000922</a>
- Petrakaki, E., & Karakasidou, E. (2017). The Effect of Physical Activity and Gender on Well Being and Body Image of Adolescents. Psychology, 8, 1840-1856. https://doi.org/10.4236/psych.2017.811120
- Preston,, A. J., & Rew, L. (2021). Connectedness, Self-Esteem, and Prosocial Behaviors
  Protect Adolescent Mental Health Following Social Isolation: A Systematic Review.
  Issues in Mental Health Nursing, 1–10.
  doi:10.1080/01612840.2021.1948642
- Pop, C. (2016). Self-Esteem and Body Image Perception in a Sample of University Students. Eurasian Journal of Educational Research, 16(64), 31-44.
- Rosenberg, M. (1965). Rosenberg self-esteem scale (RSE). Acceptance and commitment therapy. Measures package, 61(52), 18.https://scholar.google.com.pk/scholar?hl=en&as\_sdt=0%2C5&q=%28Rosenberg%2C+1965%29.&btnG=
- Rosenberg, M. (1979). Conceiving the Self. New York: Basic Books.
- Rowe, D. A. (2005). Factorial validity and cross-validation of the Body Self-Image Questionnaire (Short Form) in young adults. *Health*, 73(81), 49.
- Rafique, M. K., A. Ghaffar, U. Ghani, A. Uddin, A. Khan, and T. Hussain. 2024. "A Key to Innovation: Role of Voice, Emotional Intelligence, and Self-efficacy." *Migration Letters* 21, no. S10: 177–190.
- Shang, Y., Xie, H.-D., & Yang, S.-Y. (2021). The relationship between physical exercise and subjective well-being in college students: The mediating effect of body image and self-esteem. *Frontiers in Psychology, 12*, Article 658935.

  <a href="https://doi.org/10.3389/fpsyg.2021.658935">https://doi.org/10.3389/fpsyg.2021.658935</a>
- Solatni N, Safajou F, Amouzeshi Z, Zameni E. The relationship between body image and mental health of students in Birjand in 2016 academic year: a short report. J Rafsanjan Univ Med Sci. 2017;16(5):479-86. Available from: <a href="http://journal.rums.ac.ir/browse.php?a">http://journal.rums.ac.ir/browse.php?a</a> id=3640&slc lang=en&sid=1&ftxt=1& <a href="http://journal.rums.ac.ir/browse.php?a">httml=1</a>
- Toselli, S., Zaccagni, L., Rinaldo, N., Mauro, M., Grigoletto, A., Maietta Latessa, P., & Marini, S. (2023). Body Image Perception in High School Students: The Relationship with Gender, Weight Status, and Physical Activity. *Children*, *10*(1), 137. https://doi.org/10.3390/children10010137

van den Berg PA, Mond J, Eisenberg M, Ackard D, Neumark-Sztainer D. The link between body dissatisfaction and self-esteem in adolescents: similarities across gender, age, weight status, race/ethnicity, and socioeconomic status. J Adolesc Health. 2010

.Yun HJ. Effect of body image distortion on mental health in adolescents. J Health Inform Stat. 2018;43(3):191-9. <a href="https://doi.org/10.21032/jhis.2018.43.3.191">https://doi.org/10.21032/jhis.2018.43.3.191</a>