



Original Article

THE RELATIONSHIP BETWEEN OBESITY AND SELF-ESTEEM IN FEMALE ADOLESCENTS IN GRADE XII MAN I, KOTA BANDA ACEH

Auna Putri¹, Eva Purwita¹, Cut Nurhasanah², Irma Seriana²

^{1,2,3}: Department of Midwifery, Poltekkes Kemenkes Aceh, Aceh Besar, Indonesia

*Corresponding author: irma.seriana@poltekkesaceh.ac.id

Abstract

Background: Obesity is the accumulation of excessive fat in adipose tissue that can cause health problems among adolescents; untreated obesity can impact their psychological well-being. Obesity affects the psychological development of adolescents. The psychological issues that arise include self-esteem disorders related to their perception of their appearance. Issues with self-esteem lead to feelings of dissatisfaction with oneself, low self-confidence, feelings of being distanced by peers, and even depression.

Subject and Method: This study is observational with a cross-sectional approach. The sample consists of 56 female adolescents in the twelfth grade at MAN 1 Banda Aceh, using a total sampling technique. Data analysis employed the chi-square test.

Result: The research findings indicate that 29 individuals (56.8%) of female adolescents experience obesity I (BMI 25-29.9) and have low self-esteem. Female adolescents with obesity II exhibit low self-esteem in 5 cases (100%). A significant relationship exists between obesity and self-esteem among the twelfth-grade female adolescents at MAN 1 Banda Aceh, with a p-value of 0.000 ($p < 0.005$).

Conclusion: Obesity causes a decrease in self-esteem among the twelfth-grade female adolescents at MAN 1 Banda Aceh.

Keywords: Obesity, Self-Esteem, Female Adolescents

Background

Adolescence involves significant physical changes, including the risk of obesity, which is the excessive accumulation of fat that can lead to health issues. If not addressed, obesity can negatively affect adolescents both physically and psychologically, resulting in feelings of inferiority and potential discrimination.

According to the World Health Organization (WHO), over 390 million children and adolescents aged 5-19 experienced overweight or obesity in 2022. In Indonesia, the Basic Health Research (Riskesdas) reported alarming obesity rates: 20% of school-age children, 14.8% of teenagers, and 35.5% of adults were affected in 2018. Prevalence varies across regions in Aceh, with Langsa having the highest at 32%.

Obesity contributes to existing malnutrition problems, creating a "triple burden of nutritional issues." Indonesia faces a rapid rise in obesity, especially among low-income

households. Riskesdas indicates obesity prevalence among adults rose from 10.5% in 2007 to 21.8% in 2018.

Government initiatives include promoting a balanced diet and increasing physical activity while limiting sedentary behaviors and unhealthy food consumption.

Health consequences of obesity include chronic diseases like diabetes and cardiovascular issues, with significant psychological impacts such as low self-esteem and depression among affected adolescents. Self-esteem issues can lead to bullying and feelings of inferiority, emphasizing the need to address this serious problem during adolescence.

Government initiatives include promoting a balanced diet and increasing physical activity while limiting sedentary behaviors and unhealthy food consumption. Health

consequences of obesity include chronic diseases like diabetes and cardiovascular issues, with significant psychological impacts such as low self-esteem and depression among affected adolescents. Self-esteem issues can lead to bullying and feelings of inferiority, emphasizing the need to address this serious problem during adolescence.

Obesity impacts health and psychology. The health impacts of obesity include chronic diseases, diabetes, cardiovascular diseases, and cancer. (5) Women suffering from obesity have a hypertension risk 3-6 times higher compared to women with normal weight. Overweight is associated with a 20-30% mortality rate due to cardiovascular diseases. Adolescents with obesity are more than twice as likely to die from coronary heart disease in adulthood. (3) The psychological impact of obesity on adolescents includes low self-esteem related to self-perception. Low self-esteem leads to feelings of dissatisfaction, low confidence, social isolation, and depression. According to research conducted by Rahayu and Husnina (2019), obesity can negatively affect the psychology of adolescents and self-esteem issues. Obese female adolescents tend to experience lower self-esteem, and the reverse is also true. This can result in psychological issues such as school bullying, depression, and feelings of inferiority among adolescents with unattractive physical appearances.

Self-esteem is a judgment based on analyzing how far one's behavior meets aspirations, goals, or desired values. Those with weak self-esteem often have a negative self-image and a poor self-concept, frequently punishing themselves for their inadequacies and drowning in regret. Adolescent self-esteem can become unstable as they are highly attentive to others' perceptions. The self-esteem issue among adolescents revolves around the need for approval from others. This is also influenced by the adolescents' ability to take the perspective of others—that is, the ability to infer others' viewpoints.

The most prominent change in adolescent development is physical and psychosocial transformation, with physical changes occurring faster than psychosocial processes, making adolescent girls more sensitive. Several studies indicate that obese adolescents have lower self-esteem compared to those with normal weight.

Data from the Banda Aceh Education Office in 2020 shows that there are 27 SMA/MAN/MAS

with 10,775 students. MAN 1 Banda Aceh has the highest number of students, totaling 2,157. A field survey conducted among 144 female students in twelfth grade revealed that 56 were classified as obese based on weight, height, and BMI measurements. Interviews with 10 of these obese students showed that 7 of them had low self-confidence due to obesity. Therefore, it is necessary to analyze the relationship between obesity and self-esteem among female students in twelfth grade at MAN 1 Kota Banda Aceh.

Subjects and method

1. Study Design

This research is an observational study with a cross-sectional approach. The study was conducted at MAN 1 Banda Aceh on February 7, 2022.

2. Population and Sample

The population of this study consisted of 144 female students in twelfth grade at MAN 1 Banda Aceh. The sample for this study included 56 students who met the study criteria.

3. Study Variables

The dependent variable in this study is adolescent self-esteem, while the independent variable is obesity.

4. Operational Definition of Variables

Self-esteem is a measurement that reflects acceptance or rejection of oneself and indicates how far an individual believes they can succeed, feel important, and feel valuable. Obesity is a condition characterized by an excessive accumulation of body fat leading to a significantly above-average weight.

5. Study Instruments

The instrument used in this study is a questionnaire containing closed questions modified from Rosenberg's research. The Rosenberg's Self-Esteem Scale (RSES), created by Rosenberg, has an internal reliability of 0.92. The questionnaire consists of 10 items evaluated using a Likert scale, where favorable responses are coded as strongly agree (3), agree (2), disagree (1), and strongly disagree (0) for items 1, 3, 4, 7, and 10. Meanwhile, unfavorable responses are coded as strongly agree (0), agree (1), disagree (2), and strongly disagree (3) for

items 2, 5, 6, 8, and 9. The scale is unidimensional, focusing solely on self-esteem.

6. Data Analysis

Data analysis in this study employs the Chi-Square test with a significance level set at $p < 0.005$.

7. Research Ethics

This research is conducted with attention to research ethics through the following stages:

- Informed Consent: Respondents willing to participate must sign a consent form after being informed about the purpose and objectives of the research.

- Anonymity: The researcher does not include the names of respondents but provides codes or initials when collecting data for the research results.

- Confidentiality: The researcher guarantees the confidentiality of the information provided by the informants; only specific groups of data will be presented in the thesis as the final assignment.

Results

1. Sample Characteristics

The results indicate that most respondents are in the age category of 17 years, totaling 45 individuals (80.3%) (table 1).

Table 1. Frequency distribution of respondents by the age of twelfth-grade girls at MAN I Banda Aceh

No	Age	Total	Percentage
1.	17 years old	45	80,3
2.	18 years old	11	11,6
		56	100

The study also shows that the majority of twelfth-grade girls at MAN I Banda Aceh have

a nutrition status of obesity I with a BMI (25-29), amounting to 51 individuals (91%) (table 2).

Table 2. Frequency distribution of respondents by nutritional status of twelfth-grade girls at MAN I Banda Aceh

No	Age	Total	Percentage
1.	Obesity I (BMI 25-29,9)	51	90
2.	Obesity II (BMI >30)	5	9
		56	100

Table 3. Frequency distribution of respondents by self-esteem of twelfth-grade girls at MAN I Banda Aceh

No	Self- Esteem	Total	Percentage
1.	High	22	39,2
2.	Low	34	60,7
		56	100

2. Bivariate Analysis

Statistical tests using chi-square indicate a significant relationship between obesity and self-esteem among twelfth-grade girls at MAN I Banda Aceh, with a p-value of 0.000

($p < 0.005$). Among girls with obesity i, the majority exhibit low self-esteem, totaling 29 individuals (56.8%). All individuals with obesity 2 have low self-esteem, totaling five individuals (100%) (table 3).

Tabel 4: The Result of Bivariate Analysis: The relationship between obesity and self-esteem

No	Nutritional Status	Self- esteem				Total		p-value
		High		Low		f	%	
1.	Obesity I (IMT 25-29,9)	f	%	f	%	f	%	0.000
2.	Obesity II (IMT >30)	22	43,1	29	56,8	51	100	
		0	0	5	100	5	100	

Discussion

The research findings reveal that out of 56 respondents who are twelfth-grade girls experiencing obesity, all five individuals (100%) exhibit low self-esteem. In contrast, among those with obesity I, 29 individuals (56.8%) demonstrate low self-esteem. The results from the chi-square statistical test show a significant relationship between obesity and self-esteem in twelfth-grade girls at Man 1 Banda Aceh with a p-value of 0.000 ($p < 0.005$).

These findings align with research conducted by [source], which indicates a correlation between obesity and self-esteem among twelfth-grade girls at SMK YP 17 Pare Kediri, showing a p-value of 0.000 ($p < 0.05$). Furthermore, research by [source] has also indicated a significant relationship between obesity and self-esteem with a p-value of 0.001 ($p < 0.05$). Additional studies by [source] demonstrate a relationship between obesity and self-esteem with a p-value of 0.023 ($p < 0.05$) and an odds ratio (OR) of 7.4, suggesting that adolescents who are obese are 7.4 times more likely to have low self-esteem.

The research indicates that obesity has serious psychological impacts on adolescent girls, one of which is the decline in self-esteem. Self-esteem is a reflection of an individual's self-assessment or attitude towards themselves, and it is a fundamental aspect of mental health. Low self-esteem can lead to negative psychological effects in adolescents, such as depression, anxiety, loneliness, as well as problem behaviors including suicidal thoughts, substance abuse, and risky sexual activities during adolescence.

Adolescent girls who are dissatisfied with their body image tend to develop low self-esteem. Deep dissatisfaction with oneself can escalate into body hatred, reflecting a state of low self-

esteem. Obesity not only leads to general health issues but also results in psychological problems. It can diminish adolescents' self-confidence and self-esteem. Many young people aspire to be perfect, often equating that with having a slim and proportional body. Adolescents with obesity may feel that their low self-esteem and lack of confidence make them targets for ridicule by peers. They often believe they are the subjects of discussions relating to their weight among their peers, which further diminishes their self-esteem. Consequently, adolescents with obesity may withdraw from social interactions with their peers who maintain an ideal weight.

Adolescents suffering from obesity frequently feel shy and lack confidence, which can affect their ability to interact with others. They may be reluctant to socialize with friends and fear being ostracized. Such conditions can disrupt an adolescent's psychology, leading them to withdraw socially. During the age range of 17-20 years, individuals are often in a critical period of identity formation, seeking to establish themselves as intellectually, personally, and physically admirable. Yet, those suffering from obesity might struggle to meet these self-imposed standards.

Financial support and sponsorship

None

Acknowledgement

The author expresses gratitude to the lecturer of the Midwifery Department who has assisted in the implementation of this research.

Conflict of interest

There is no conflict of interest in this research.

World Health Organization. Obesity and overweight 1. 2024. p. 1-7.

References

1. Taurisiawati Rahayu D, Husnina L. Obesitas dengan Harga Diri pada Remaja Putri Kelas X SMK YP 17 Pare Kediri. *Gizi KH*. 2019;2(1):1-7.
2. UNICEF. Analisis Lanskap Kelebihan Berat Badan dan Obesitas di Indonesia. 2019. p. 1-139.
3. Ratna M, Nazhira V, Ramadhaniah A. Determinan Kejadian Obesitas Pada Siswa / i SMA Negeri 2 Kota Banda Aceh. *AN-*
4. NUR J Kaji dan Pengemb Kesehatan Masy. 2021;1(2):147-60.
5. Kementerian Kesehatan RI. *Pedoman Umum Gentas Gerakan Bermanfaat Obesitas*.pdf. 2017. p. 1-29.

6. Fiqroh N, Setiyowati N. The Relationship Between Body Image and Self-Esteem in Obese Late Adolescents at the State University of Malang. 2020. p. 1–10.
7. Farsani ZK. The Psychological Consequences of Obesity in Adolescent Girls : A Causal-Comparative Study. *J Kermanshah Univ Med Sci.* 2020;24(2).
8. Gong WJ, Yee D, Fong T, Wang MP, Lam TH, Wai T, et al. Late-onset or chronic overweight / obesity predicts low self-esteem in early adolescence : a longitudinal cohort study. *BMC Public Health.* 2022;22(31):1–9.
9. K.Moha M, Bidjuni H, Lolong J. HUBUNGAN OBESITAS DENGAN HARGA DIRI PADA REMAJA DI SMA NEGERI 1 LIMBOTO KECAMATAN LIMBOTO KABUPATEN GORONTALO. *J Keperawatan.* 2017;5(1).
10. Bhadouria S, Bhadoria D. A study of adolescent girls ' self -esteem in Ballereau M, Chahdi S, Escudero L, et al. Obesity in Childhood and Adolescence : The Role of Motivation for Physical Activity , Self-Esteem , Implicit and Explicit Attitudes toward Obesity and Physical Activity. *MDPI.* 2023;10(1177):1–13.
11. Hidayah N, Bari S, Bachtiar A. KONSEP DIRI REMAJA YANG MENGALAMI OBESITAS DI RUMAH SEHAT HERBALIFE. *Medica Majapahit.* 2015;7(1):23–40.
12. Nisa F, Hasanah U, Borualogo IS, Wahyudi H, Bandung UI, Behavior C, et al. EFEKTIVITAS COGNITIVE BEHAVIOR ART THERAPY UNTUK MENINGKATKAN SELF-ESTEEM REMAJA OBESITAS YANG MENJADI KORBAN PERUNDUNGAN. *J Psychol Sci Prof.* 2017;1(1):9–20.
13. Byth S, Frijters P, Beaton T. The relationship between obesity and self-esteem : longitudinal evidence from Australian adults. *Oxford Open Econ.* 2022;1(October):1–14.
14. Scotto S, Martinent G, Popa-roch M,
15. Almasith YK, Lanti Y, Dewi R, Wekadigunawan CSP. Path Analysis on the Psychosocial Impact of Obesity or Overweight in Adolescents in Surakarta , Central Java. *J Epidemiol Public Heal.* 2018;3(2):105–17.