

Research Article

Relationship Between Physical Changes and Teen Confidence During Puberty

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ORCIDTri Lestari Handayani: <https://orcid.org/0000-0002-8375-1752>**Abstract.**

During puberty, adolescents experience changes both physically and psychologically. This study aimed to understand the relationship between physical changes and self-confidence during puberty. This study is a quantitative study with a correlational approach, the population of young women is 60 people. The sampling technique used was purposive sampling (n=40), and the data analysis was done using the Chi-Square Test. This study shows that there is a relationship between physical changes and self-confidence during puberty in relation to: BMI (P value 0.007; OR: 0.104), breast enlargement (P value 0.001; OR: 0.071,) acne on the face (P value 0.040; OR: 5.067) and hip and waist circumference (P value 0.004; OR: 0.059). The results of the analysis of 40 female adolescent respondents during puberty show that there is a relationship between physical changes and self-confidence during puberty. They were provided education about a healthy lifestyle (regular diet and exercise) and caring for and maintaining facial skin to prevent acne from arising.

Keywords: physical changes, confidence, puberty teensCorresponding Author: Tri
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Knowledge E

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Selection and Peer-review under the responsibility of the ICMEDH Conference Committee.

1. Introduction

The teenager is an individual who experiences a period of growth and development from childhood to adulthood (1) in the growth and development phase experiencing puberty, and puberty is marked by physical changes, including changes in BMI, breast enlargement, acne on the face, hip and waist circumference, increased skin oil, facial acne, skeletal maturation and pubic hair growth (2,3). These physical changes trigger a disturbance of self-concept where having an ideal body is the desire of all young women, but when there is a change in their body shape, young women often find it difficult to accept it (4).

Self-concept is an idea, belief, and assessment of how adolescents assess themselves in their entirety, physically, emotionally, intellectually, socially, and spiritually that can affect adolescent interactions with the environment. In contrast, the components of

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self-concept are self-identity, self-image (body image), ideal self (self-ideal), self-role (self-role), and self-esteem (self-esteem), where the five components are interrelated (5,6).

When young women get bullied and kept away from the association, it might result in young women experiencing impaired self-confidence. If the above is allowed to continue, it will cause more dangerous problems, such as the incident in Baturraden, Central Java, an 18-year-old girl who dared to end her life by drinking insect poison, allegedly due to lack of confidence with acne that never healed on her face (7).

This study aimed to determine the relationship between physical changes and adolescent self-confidence during puberty and take preventive and promotive actions to prevent the occurrence of adolescent self-confidence due to physical changes during puberty.

2. Materials and method

The design of this study is a quantitative study using a correlation approach because it seeks a relationship between variables of physical changes (weight and height (BMI), breast enlargement, acne on the face, hip and waist circumference (WHR)) with self-confidence, where the type of data is data categorized numeric (Hastono, 2021). The sample in this study amounted to 40 of the 60 population of adolescent girls in Tegalrejo Village, Selopuro District, Blitar Regency.

There are inclusion criteria in this study: Women aged: 10-15 years (Early Teenagers, according to RISKESDAS 2010) have experienced menstruation and are willing to be research respondents. Exclusion criteria in this study are: Age: > 15 years, have not experienced menstruation, not willing to be a research respondent. The research was carried out from December 29, 2021, to January 15, 2022. Measure weight and height (BMI) using a weight scale and meter line, breast enlargement using a meter line, and penlight used to see the condition of acne on the face, hip, and waist circumference using a meter line. Measuring self-confidence using a Likert scale (7).

The data in this study include the independent variables, namely weight and height (BMI), breast enlargement, acne on the face, hip and waist circumference (WHR), and the dependent variable of self-confidence. The independent and dependent variables are included in the categorical data scale, so the test is carried out with the Chi-Square test.

3. Results

The BMI category in the normal category (thin and average) experienced a lack of self-confidence. There were 10 (38.5%) people and 16 (61.5%) confident people. There are 12 (85.7%) people in the more than-normal category (overweight and obese) who have low self-confidence, and 2 (14.3%) people have self-confidence. From the results of the data analysis obtained, the value of the Fisher Exact Test Asymp count. Sig (0.007) <0.05, it can be concluded that there is a relationship between physical changes in BMI and adolescent self-confidence at puberty.

TABLE 1: The Relationship of Weight and Height (BMI) with Adolescent Confidence in Puberty.

BMI	Confidence				Total		OR (95% CI)	P value
	Less confident		Self-confident		n	%		
	n	%	n	%				
Normal (thin and average)	10	38.5	16	61.5	26	100	0.104 0.019-0.566	0.007
More than Normal (overweight and obese)	12	85.7	2	14.3	14	100		
Total	22	55	18	45	40	100		0.007

There were 8 (33.3%) people in the standard (small and medium) breast enlargement category who experienced a lack of self-confidence and 16 (66.7%) self-confidence. There are 14 (87.5%) people in the more than normal category (large and extra large) who have low self-confidence, and 2 (12.5%) people have confidence. From the results of the data analysis obtained, the value of the Fisher Exact Test Asymp count. Sig (0.001) <0.05, it can be concluded that there is a relationship between physical changes in breast enlargement and adolescent self-confidence at puberty.

There are 19 (65.5%) people in the non-acne category (mild acne) who have low self-confidence and 10 (34.5%) self-confidence. There are 3 (27.3%) people with acne (moderate-very severe) who have low self-confidence and 8 (72.7%) with self-confidence. From the results of the data analysis obtained, the value of the Fisher Exact Test Asymp count. Sig (0.040) <0.05, it can be concluded that there is a relationship between physical changes in facial acne and adolescent self-confidence during puberty.

The hip and waist circumference categories in the normal category (very good and good) had 11 (39.3%) self-confidence and 17 (60.7%) self-confidence. There are 11 (91.7%) people in the more than normal category (average and at risk) who have less self-confidence and 1 (8.3%) confident. From the results of the data analysis obtained, the

TABLE 2: The Relationship of Breast Enlargement with Adolescent Confidence at Puberty.

Breast Enlargement	Confidence				Total		OR (95% CI)	P value
	Less confident		Self-confident		n	%		
	n	%	n	%				
Normal (small and medium)	8	33.3	16	66.7	24	100	0.071 0.013-0.394	0.001
More than normal (large and extra large)	14	87.5	2	12.5	16	100		
Total	22	55	18	45	40	100		0.001

TABLE 3: The Relationship of acne on the face with Adolescent Confidence in Puberty.

Acne on Face	Confidence				Total		OR (95% CI)	P value
	Less confident		Self-confident		n	%		
	n	%	n	%				
No acne (light)	19	65.5	10	34.5	29	100	5.067 1.09-23.44	0.040
acne (medium-very heavy)	3	27.3	8	72.7	11	100		
Total	22	55	18	45	40	100		0.040

value of the Fisher Exact Test Asymp. Sig. (0.004) < 0.05, it can be concluded that there is a relationship between physical changes in hip and waist circumference (WHR) with adolescent self-confidence at puberty.

TABLE 4: The Relationship of waist circumference with Adolescent Confidence in Puberty.

Waist Circumference	Confidence				Total		OR (95% CI)	P value
	Less confident		Self-confident		n	%		
	n	%	n	%				
Normal (very good and good)	11	39.3	17	60.7	28	100	0.059 0.007-0.522	0.004
More Than Normal (average and risk)	11	91.7	1	8.3	12	100		
Total	22	55	18	45	40	100		0.004

4. Discussion

A previous study by Hermiati & Ramlis entitled "The Relationship between Body Weight and Body Image in SMAN 1 Bengkulu City Students" obtained BMI data in the underweight, normal, and over categories. The relationship between body weight and negative body image (57%) and positive body image (43%) (8).

Based on the results of research that has been done and previous research shows that changes in weight and height can affect the picture of body image and self-confidence of adolescent girls during puberty. Adolescent girls in this study experienced changes in BMI due to irregular eating patterns and lack of exercise. Therefore, the provision of education about diet, healthy living, and changes in body size such as height and weight at puberty is conveyed to young women, so that young women are ready to accept changes in body shape and young women can prevent feelings of lack of self-confidence that arise. A previous study entitled "The Relationship between Breast Size Perception and Self-Concept with Self-Confidence in Early Adult Women" obtained data analysis (p value = $0.000 < 0.01$) the results of the analysis showed that the variables of breast size perception and self-concept can be used as benchmarks. self-confidence in early adult women (9).

Based on the results of research that has been done and previous research shows that breast enlargement can affect the self-confidence of adolescent girls at puberty. The young women in this study who experienced changes in breast enlargement made the clothes they wore narrow. Therefore, providing education about changes in breast size before and after puberty is conveyed to young women, so that young women are ready to accept changes in breast shape and young women can prevent feelings of lack of confidence that arise.

Based on the results of research that has been done and previous research shows that acne on the face of adolescent girls at puberty can affect self-confidence. Young women in this study who experienced changes in facial acne due to lack of awareness of taking care of an irregular face. Therefore, providing education on how to take care of the face to prevent acne from appearing and education on changes in acne on the face before and after puberty is conveyed to young women, so that young women are ready to accept when puberty has acne problems and young women can prevent feelings of lack of confidence that arise.

Previous research by Rahayu & Husnia, entitled "Obesity with Self-Esteem in Teenage Girls Class X SMK YP 17 Pare Kediri". In this study obesity or not measured by the ratio of waist to hip circumference (RLPP). Therefore, it was obtained that the RLPP data of

obese students had low self-esteem (26.4%) in contrast to students who were not obese (10).

Based on the results of research that has been done and previous research shows that the size of the hip and waist circumference of adolescent girls at puberty can affect self-confidence. Young women in this study who experienced changes in waist circumference due to lack of diet and exercise resulted in obesity and had an effect on hip and waist size, widening in size resulted in narrow clothes worn. Therefore, providing education about changes in waist hip width before and after puberty is conveyed to young women, so that young women are ready to accept when puberty has problems with differences in waist size and young women can prevent feelings of lack of confidence that arise.

5. Conclusion

The results of the data analysis showed that there was a relationship between physical changes and self-confidence. It was found that as many as 40 young women during puberty experienced a lack of self-confidence when there were changes in their physical appearance (BMI, breast enlargement, acne on the face, hip and waist circumference). The data analysis results showed no relationship between age and level of education with adolescent self-confidence at puberty.

5.1. Ethical approval and consent to participate

The ethics of this research are contained in the fundamental ethical principles No.E.5.a/056/KEPK-UMM/III/2022.

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