



## Body image and weight-control behaviors among adolescent girls with low-mid socioeconomic background<sup>☆</sup>



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### KEYWORDS

Body image;  
Weight-control;  
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### Abstract

**Objective:** This study was aimed to describe the body image and weight-control behavior among adolescent girls with low-mid socioeconomic background.

**Methods:** A cross-sectional study with 148 adolescent girls from low-rank public senior high school were conducted. Figure Rating Scale was used to measure body image, and a self-administered questionnaire was distributed to collect information on weight-control behavior. Data then analyzed descriptively.

**Results:** It was found that 56.1% of the respondents have negative body image, in which 35.8% of respondents desired to have a smaller body, and 20.3% of respondents desired to have a heavier body. The majority of respondents were ever tried to lose and avoid weight gain (50%) or gain and avoid weight loss (23.0%). The most frequent healthy weight loose behavior performed by respondents were exercised and ate more fruits and vegetables. Moreover, the most frequent unhealthy weight loss behavior has skipped the meal and ate little food. In addition, some of the respondents were tried to gain weight by changing eating patterns, physical activity, and use supplementation.

**Conclusions:** Body dissatisfaction is prominent among adolescent girls with low-mid socioeconomic background. The form of dissatisfaction is not limited to the desire to be thinner but also the desire to look heavier. Further intervention is needed to build positive body image and promote healthy eating behavior among adolescent girls from the low-mid socioeconomic background.

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## Introduction

Various physical and psychosocial changes that occur during adolescents play significant roles in the development of body image.<sup>1</sup> Adolescents, especially adolescent girls, often have negative body image and dissatisfied with their body.<sup>2</sup> This situation is enforced by the cultural expectation of beauty that emphasizes being thin and lean with large breasts as promoted in various media, including print media, television, and social media.<sup>1</sup> On the other hand, during adolescence, girls are experiencing rapid increases in adiposity and widening of hips.<sup>1</sup> As a result, adolescent girls tend to not satisfied with their bodies and desire to have leaner body.<sup>1</sup>

The dissatisfaction of body weight often leads to weight-control behavior, which can be both healthy or unhealthy.<sup>1,3</sup> The previous study shows that 50.3% of adolescent girls in the USA reported weight-control behavior during the study.<sup>3</sup> In addition, 30.4% of them were reported to have unhealthy weight-control practices such as fasting, skip meals, use of diet pills or laxatives, and self-induced vomiting.<sup>3</sup> Another study shows that healthy weight-control behavior among adolescent girls is associated with better social-economic status.<sup>4</sup> Adolescents from the low-mid socioeconomic background are susceptible to develop unhealthy weight-control behavior due to the limited knowledge and inability to purchase healthy food. In the long term, unhealthy weight-control behavior potentially resulting in negative consequences to health and nutritional status, which will lead to higher economic costs.<sup>5</sup>

Most of the current evidence of body weight and weight-control behavior was from developed and western countries where obesity is prevalent. Weight status is strongly associated with body image, where greater body weight increases the risk of heightened weight concerns.<sup>1</sup> Therefore, different conditions of body image and weight-control related behavior might be found in developing countries who were facing the dual burden of malnutrition (the coexistence of undernutrition and overnutrition problems).<sup>6</sup> In addition, adolescents in developing countries are exposed to the idea of thinness as a standard of beauty as the impact of globalization, which might influence their body image.<sup>7</sup>

Our study aims to determine the body image and weight-control behavior among adolescents with a low-socioeconomic background in Indonesia.

## Methods

A cross-sectional study was conducted among 148 female students from a low-ranks public senior high school located in a slum area in Makassar city, Indonesia. Body image was assessed using the Figure Rating Scale by Sherman et al.,<sup>8</sup> which contains 9 figures. Figures 1 and 2 were categorized as underweight, figures 3 and 4 as normal, figure 5 as slightly overweight, 6 as overweight, and figures 7–9 as obese. Respondents were asked to choose the figure which they believe represents their body size and their ideal body size. The difference between these two figures was referred to as the current-ideal discrepancy and considered as a measure of dissatisfaction. Negative discrepancy score was interpreted as their desire have smaller body while positive

discrepancy score represents their desire to have a heavier body. Weight-control behavior was assessed using a questionnaire that contains a range of questions about their unhealthy and healthy effort to achieve their ideal body size in the past year (yes or no for each method). Questions were constructed based on EAT (Eating Among Teens) survey,<sup>9</sup> and relevant questions were selected and modified to ensure the appropriateness with the local context. Data were analyzed descriptively.

## Results

### Sociodemographic characteristics

The majority of the respondents were middle-adolescent girls or aged between 16 and 17 years old (98.6%), while 1.4% of the respondents were in the late adolescent category. Furthermore, the majority of them were having Makassarnese and Buginese ethnicity, 58.8%, and 28.3%, respectively (Table 1).

### Body image

A total of 35.5% of respondents desired to have a slimmer body, while 20.3% of respondents aimed to have a heavier body. Most of the respondents felt they have normal and slightly overweight bodies, each 37.2%. Furthermore,

**Table 1** Sociodemographic characteristics of respondents.

Characteristics	Total	
	<i>n</i>	%
<i>Age</i>		
15 years old	31	20.9
16 years old	79	53.4
17 years old	36	24.3
18 years old	2	1.4
<i>Father's employment</i>		
Civil servant	15	10.1
Entrepreneur	24	16.2
Private sector	51	34.5
Retired	3	2.0
Unemployed	4	2.7
Others	51	34.5
<i>Mother's employment</i>		
Civil servant	5	3.4
Entrepreneur	10	6.8
Unemployed	127	85.8
Others	6	4.1
<i>Ethnicity</i>		
Buginese	42	28.3
Javanese	6	4.1
Makassarnese	87	58.8
Torajanese	7	4.7
Others	6	4.1
Total	148	100

**Table 2** Body image and weight-control behavior among adolescent girls.

Variable	Total	
	<i>n</i>	%
<b>Discrepancy score</b>		
<i>Desire to have a smaller body</i>	53	35.8
<i>Satisfy with the current body</i>	65	43.9
<i>Desire to have a heavier body</i>	30	20.3
<b>Perceived body image</b>		
<i>Underweight</i>	32	21.6
<i>Normal</i>	55	37.2
<i>Slightly overweight</i>	55	37.2
<i>Overweight</i>	6	4.1
<b>Ideal body image</b>		
<i>Underweight</i>	47	31.7
<i>Normal</i>	71	48.0
<i>Slightly overweight</i>	30	20.3
<b>Past year</b>		
<i>Did not do anything with current weight</i>	40	27.0
<i>Tried to lose weight</i>	41	27.7
<i>Tried to avoid weight gain</i>	33	22.3
<i>Tried to gain weight</i>	30	20.3
<i>Tried to avoid lose weight</i>	4	2.7
<b>Past year weight-loose behavior</b>		
<i>Healthy</i>		
Exercised	63	35.4
Ate more fruits and vegetables	51	28.7
Ate less high-fat foods	39	21.9
Ate fewer sweets	25	14.0
<i>Unhealthy and extreme</i>		
Fasted (did not eat anything)	12	10.7
Ate little food	40	35.7
Used a food substitute	14	12.5
Skipped meal	43	38.4
Took diet pills	1	0.9
Took diuretics	1	0.9
Took laxatives	1	0.9
<i>Past year weight-gain behavior</i>		
Changed eating patterns	35	55.6
Changed physical activities	21	33.3
Others	7	11.1

4.1% of them felt that they were overweight, while 21.6% of them feel that they were underweight. Respondents tend to choose a normal body as their ideal body (48.0%). However, a total of 31.7% and 20.3% of respondents choose underweight and slightly overweight body as their ideal body size (Table 2).

### Weight-control behavior

Half of the respondents were ever tried to lose weight or avoid weight gain in the past year. On the other hand, 23.0% of the respondents were ever tried to gain weight or avoid lose weight in the past year. The most frequent healthy

weight loose effort reported by respondents were exercised and eat more fruits and vegetables, 35.4%, and 28.7%, respectively. Furthermore, the most frequent unhealthy weight loose effort reported by respondents was eating little foods and skipped meals, 35.7 and 38.4, respectively. A small amount (0.9%) of respondents use extreme effort to lose weight, such as taking diet pills, diuretic, and laxatives. In addition, the most frequent behavior used to gain weight were changed eating patterns (55.6%) followed by changed physical activity (33.3%) and other (11.1%), which include the use of supplementation (Table 2).

### Discussion

In this study, we found that more than half of adolescent girls were experiencing dissatisfaction with their body size (56.1%). In contrast with the evidence from developed countries, our findings show that adolescent girls were not only desired to have a thinner body but also desired to have a heavier body. However, more adolescent girls were found willing to have a thinner body than to have a heavier body (35.8% vs. 20.3%). This might be influenced by their current body size. Some of the adolescents (21.6%) perceived their body as thin, and 41.3% of adolescent girls perceived their body as overweight. On the other hand, 20.3% of adolescent girls identify slightly overweight as their ideal body image, while 48.0% of the girls choose a normal body, and 31.7% choose underweight as their ideal body image.

These findings are consistent with the previous study from a developing country, which shows that a total of 29.7% of adolescent girls in South Africa were desired to be fatter while 55.9% of adolescent girls desired to be thinner.<sup>10</sup> They also found that although normal silhouettes are considered as the best, adolescent girls have a more positive perception toward overweight/obese body silhouettes than toward underweight silhouettes. Majority of the girls associated overweight with having more respect, being strongest, and happiest while underweight silhouettes were associated with being clumsy, weak, and unhappy.<sup>10</sup> In many low middle-income countries, obesity is often perceived as a sign of prosperity and well-being and reflected higher social strata.<sup>11,12</sup> Other studies from Indonesia found that obesity is positively associated with happiness and higher economic status.<sup>12,13</sup>

Despite the perception of obesity as a desired body image and symbol of prosperity, the concept of thinness as a symbol of beauty is continuously growing in non-western countries, including Asian countries.<sup>7</sup> The previous study from China shows that a total of 28.2% of adolescent girls perceived their body weight as relatively heavy and too heavy.<sup>14</sup> Furthermore, in urban areas, the number of adolescent girls who perceived their body weight as heavy is higher compared to rural areas. This urban-rural differences might occur due to different level of exposure to the media.<sup>14</sup> A similar trend was found in India, where the concept of attaining thin body image is growing among adolescent girls urban areas.<sup>7</sup> Our study was conducted in urban areas; therefore, the exposure to media might also explain the high number of adolescent girls who identified underweight as their body image and desired to be thinner.

The tendency to perceived their selves as overweight potentially increases the risk of adolescent girls to develop unhealthy weight-control behavior.<sup>1</sup> Our study found that half of the adolescent girls who participated in this study have ever tried to lose their weight or avoid weight gain. Furthermore, healthy and unhealthy behavior to lose or avoid weight gain were identified in this study. The most frequent healthy weight-control behavior performed by adolescent girls were exercised and eating more fruits and vegetables, 35.8%, and 28.7%, respectively. These findings are similar to the previous study; a study in the US shows that 70% of adolescent girls have ever tried to lose or maintain their body weight.<sup>9</sup> Furthermore, the most common healthy weight control performed by adolescent girls were exercised, and eating fruits and vegetables.<sup>9</sup>

Extreme weight-control behavior, such as the use of diet, diuretics, and laxatives, is reported very low in this study. Furthermore, the most frequent unhealthy weight-control behavior was skipped meals and ate little food. These findings are consistent with previous studies. The previous study in India found that no adolescent girl was found to consume diet, diuretics, and laxatives.<sup>15</sup> Moreover, a study among adolescent girls in Ethiopia also shows a low number of laxatives/diuretics use (0.6%).<sup>16</sup> Studies also found that among unhealthy weight-control, skipping a meal, extended fasting, and ate less are the most frequent weight-control method performed by adolescent girls.<sup>16,17</sup> Skipping meals is correlated with a low-quality of diet since it could promote a higher intake of sodium and calories from added sugars.<sup>18</sup>

On the other hand, some adolescent girls (23.0%) were reported to have tried to gain weight or avoid lose weight in the past year by changing eating patterns, changed physical activity patterns, and other efforts, including the use of supplementation. This number is higher compared to a study conducted in a developed country, which found only 7% of adolescents were tried to gain weight.<sup>9</sup> With the current situation where developing countries are experiencing nutrition transition to a more westernized diet that high in salt, fat, and sugar, unhealthy weight gain behavior might cause obesity in later life.<sup>19,20</sup>

This study had several limitations, including the bias that might appear from the use of a self-administered questionnaire. Moreover, this study is more focused on weight loss behavior; limited questions are available to address weight gain behavior. Further study is needed to examine weight gain behavior among adolescents.

## Conclusion

Many adolescent girls with a low-socioeconomic background in developing countries have negative body image, which reflected in the desire to have a thinner body or heavier body. Most adolescent girls tried to either lose weight or gain weight using a range of healthy and unhealthy efforts. Further intervention is needed to build positive body image and healthy eating behavior among adolescent girls.

## Conflict of interest

The authors declare no conflict of interest.

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