

## Self Body-Management and Thinness in Youth: Survey Study on Italian Girls'

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**Short title:** thinness in youth

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### Abstract

Psychological wellbeing can be impacted substantially by changes in body image during youth, which can be a predictive factor for positive or negative attitudes, such as for self-esteem and satisfaction. In this study, adherence to the thinness model and to healthy behaviours were analysed in terms of the emotional patterns and body management of the young female Italian population (N = 2287). Skinny girls fitting better with the thinness model tended to develop higher positive emotional patterns, but their body management was low. Findings suggest the urgent need for preventive programmes to enhance awareness of healthy behaviours against appearance models.

*Keywords:* thinness, girls, youth, body satisfaction, body mass index

## Introduction

In youth, self-esteem and acceptance are crucial and can be impacted positively/negatively along with growth. Body satisfaction can be viewed as a key indicator of psychological wellness; weight and shape are two substantial concerns for young people that dramatically rise throughout their development, so living through a continuous process of change and body image acceptance can be predictive factors for negative impact on body satisfaction and self-awareness [1, 2, 3, 4]. In fact, body image is central to adolescent girls' self-definition as an important basis for self-evaluation and for evaluation by others [5]. Body satisfaction is a subjective evaluation, considered the affective component of the multi-dimensional construction of body image [6]. Several researchers have investigated the negative impacts of body dissatisfaction or displeasure with one's weight or shape. Girls seem to suffer more from body dissatisfaction following puberty; indeed, Runfola et al. [7] suggested that concern is rather common among women and girls. Moreover, Smink et al. [8] highlighted that a small percentage of children and adolescents with body dissatisfaction engage in disordered eating, which can quickly become a major health concern. High levels of body dissatisfaction and weight concerns are particularly likely to occur during adolescence and early adulthood. Lucena-Santos [9] suggested that psychological flexibility of body image is a mediator of lasting pathological implications (i.e. physical and mental disorders) of body dissatisfaction. According to Hill et al. [10], body image flexibility is a protective factor against eating disorders in girls with low body mass index (BMI). In fact, among girls and women, being underweight is a physical risk factor of such disorders and is even more detrimental if it develops at an early age. The strong sociocultural emphasis on appearance has been considered a major risk factor of adherence to the thinness model, which can propel adolescents and youth into a dysfunctional life and behavioural style, such as taking dramatic measures to alter their

appearance, cosmetic surgery, and steroid use. The meta-analysis of Dittmar & Howard [11] investigated the impact of thinness as a cultural ideal of female beauty. The studies evidenced that the exposition of the thin model appeared to be a negative factor for the mental health of women; they tend to feel worse about their bodies and then develop body dissatisfaction and psychological weakness. These are all associated with emotional distress and psychiatric disturbances, such as depression and eating disorders [12, 13, 14].

Pathological behaviour patterns can be affected by psychological and behavioural problems with more lasting effects [15, 16].

Few studies have sought to understand the factors that increase the risk of body image concerns among girls and women [17]. Clay et al. [18] highlighted adolescence as the age group particularly susceptible but not vulnerable to the sociocultural factors involved in body satisfaction and self-esteem. Puharic et al. [19] have studied in depth the factors influencing the attitudes of adolescents about their body and appearance satisfaction; findings have evidenced that skinny girls are less susceptible to appearance as a social standard. So far, research interests have been focused on the external variables influencing self-perception and wellness in order to analyze the psychological features in eating disorders (i.e. anorexia, obesity, bulimia); particularly, research was conducted on overt symptoms and/or pathologies.

Moreover, thinness is a widespread model in the female population because it reflects the best features for social success in appearance culture. Few studies have investigated the impact of behaviors, including adherence to the thinness model, on psychological wellness.

The present study aimed to investigate how behavioural attitudes relate to self-body management in youth and emerging adulthood. Specifically, we wanted to analyse the relationship between emotional pattern and body management according to age and BMI.

The aim was to provide evidence and observe trends in a wide age range including young

girls and emerging adults; we intended to investigate the self-management of body satisfaction along 2 periods of life of female youth when body satisfaction and self-acceptance represent key indexes of quality of life. We detected the Italian girls' cognitions and behaviours related to adherence to thinness and appearance needs by conducting a survey study on large-scale evaluation.

## **Method**

### *Participants*

Participants were 2287 Italian girls aged 15–25 years old ( $M = 22.2$ ,  $SD = 2.11$ ). All participants were living in the North ( $N = 832$ ; 36.4%), Middle ( $N = 712$ ; 31.1%), or South of Italy ( $N = 743$ ; 32.5%). The participants have been distributed into n. 2 groups: a) a Girls group composed of n. 486 young girls ( $M = 19.1$ ,  $SD = 1.1$ ); b) a Young Women group composed of n. 1801 women ( $M = 23.1$ ,  $SD = 1.4$ ). Among Girls, 188 (8.2%) were living in the North of Italy, 172 (7.5%) in the Middle, and 126 (5.5%) in the South; among Young Women, 644 (28.2%) were from the North, 540 (23.6%) from the Middle, and 617 (27%) from the South.

Weight and height data were obtained to calculate BMI (weight in kilograms divided by squared height in metres), and we divided the Girls and Young Women groups into 7 subgroups of BMI based on the criteria of the World Health Organization: severely underweight (BMI < 16.00), underweight (BMI 16.00–18.49), normal (BMI 18.50–24.99), overweight (BMI 25.00–29.99), obese class 1 (BMI 30.00–34.99), obese class 2 (BMI 35.00–39.99), and obese class 3 (BMI  $\geq 40.00$ ). Table 1 reports demographic data of the participants.

Recruitment was carried out using social media involving mainly medical doctors. The inclusion criteria were as follows: a) female, b) aged 15–25 years, and c) gave written informed consent.

Insert Table 1 here

### *Instruments*

Trained medical doctors collected the sociodemographic characteristics of participants, such as age, residential area, weight, and height, using a sociodemographics inventory. A self-report questionnaire was used to analyse psychological factors of body satisfaction and the related body management.

*Body satisfaction and behaviour.* We used an experimental self-report questionnaire containing two subscales: a) emotional pattern and b) body management. Both variables were rated on a four-point Likert-type scale ranging from ‘never’ to ‘always’. The entire scale consisted of 6 items equally divided between the 2 factors. Figure 1 shows the self-report questionnaire and scoring procedure.

Insert Figure 1 here

The ‘emotional pattern’ factor assessed participants’ feelings about their own weight and was composed of 3 items: fear of gaining weight (Item 1), importance of knowing their own weight (Item 5), and influence of weight on mood (Item 6). The ‘body management’ factor assessed participants’ behaviour in taking care of their own bodies to manage the shape and also consisted of 3 items: frequency of sport practice (Item 2), adoption of a restrictive diet (Item 3), and self-control when eating (Item 4). The Body Satisfaction and

Behaviour report was applied in a previous pilot study. The internal reliability was good for both subscales (respectively  $\alpha = 0.91$  and  $\alpha = 0.89$ ).

### *Procedure*

The individuals were recruited using snowball sampling, a non-randomized method of sample selection. Participants were contacted using social media (Facebook).

The first time, we involved medical doctors in the study via mailing enrolling. They were trained in the collection of BMI index, and then, they recruited the eligible participants.

Our staff provided a digital and online form of self-report. Afterward, the self-report questionnaire was linked on the Facebook post, and participants could access it after giving written informed consent. Informed consent was obtained from each participant, and the study adhered to the Declaration of Helsinki. Girls less than 18 years old were also asked to deliver the informed consent form to their parents, who had to then decide if they would consent to their adolescents taking part in the study. Young Women 18 years old or older were asked to provide informed consent themselves.

The online self-report questionnaire could be completed in about 15 minutes; after filling it in, participants submitted it online. The data were collected on a dedicated server. Prof. Di Giacomo (Principal Investigator) was responsible for the sensible data.

### *Statistical analyses*

All data were carefully double-checked for possible miscoding, the distribution of values, and updating of missing values prior to analysis (some items had missing data, which we replaced using the series mean method).

The participants were grouped according to BMI and age range. Descriptive statistics, multivariate analysis of variance (MANOVA), and the least significant different (LSD) test

(as a post hoc test) were carried out using SPSS Statistics 22.0. The significance level was fixed at  $\alpha < 0.05$ .

## Results

Statistical analyses were conducted on collected data.

Table 2 shows the distribution of both groups Girls and Young Women by BMI categories. There was a high frequency in the normal category (69.6%) and low frequencies in the underweight (10.4%) and overweight (14.1%) categories. Table 3 shows the data collected using the self-report questionnaire by BMI distribution.

Insert Table 2 here

Insert Table 3 here

A MANOVA ( $3 \times 7 \times 2$ ) was conducted to examine differences in body satisfaction variables according to BMI and age. Wilks' lambda indicated a significant effect of BMI group ( $F[1,6] = 7.45$ ;  $p = 0.001$ ;  $\eta^2 = 1.00$ ), but there was no interaction or effect of age group. The within-subjects effect tests indicated significant differences in emotional pattern ( $p < .001$ ;  $\eta^2 = 1.00$ ) and body management ( $p < .007$ ;  $\eta^2 = 0.90$ ) as well as in the overall score for body satisfaction and behaviour ( $p < .001$ ;  $\eta^2 = 1.00$ ).

Figures 2 and 3 show the distributions of the examined variables.

Insert Figure 2 here

Insert Figure 3 here

Post hoc analyses (using the LSD test) revealed significant differences in the emotional pattern variable for the following comparisons: severely underweight vs. obese class 2 ( $p = 0.02$ ); underweight vs. normal ( $p = 0.001$ ), overweight ( $p = 0.000$ ), obese class 1 ( $p = 0.001$ ), and obese class 3 ( $p = 0.001$ ); and normal vs. overweight ( $p = 0.001$ ), obese class 1 ( $p = 0.02$ ), and obese class 2 ( $p = 0.002$ ). As for the body management variable, significant

differences were found for normal vs. underweight ( $df = -0.25$ ;  $p = 0.004$ ), overweight ( $df = -0.20$ ;  $p = 0.009$ ), and obese class 3 ( $df = -0.21$ ;  $p = 0.02$ ) and for severely underweight vs. underweight ( $p = 0.003$ ).

Finally, the total body satisfaction and behaviour score significantly differed in the comparison of underweight vs. overweight ( $p = 0.000$ ), normal ( $p = 0.001$ ), obese class 1 ( $p = 0.001$ ), obese class 2 ( $p = 0.001$ ), and obese class 3 ( $p = 0.03$ ) as well as for normal vs. overweight ( $p = 0.01$ ).

### **Discussion and Conclusion**

The study aimed to analyse the impact of behaviour including adherence to the thinness model on psychological wellness; we wanted to evaluate how female body satisfaction and related behaviours differed according to age and BMI in the Italian young and emerging adulthood population.

Our results showed that participants exhibited higher emotional pattern scores (i.e. positive feelings about their own bodies) when their weight and shape corresponded to the thinness model. Particularly, skinny girls felt positively about their bodies even if they did not manage to take care of their bodies adequately (i.e. less sports engagement and a more restrictive diet). This is an important point: women and girls, both in youth and emerging adulthood, tend to view themselves positively when skinny but do not focus much attention on improving their health. According to Dittmar & Howard [11], when the weight and shape of body image reflect a thin image ideal, it can have a positive psychological effect; nevertheless, in our opinion, the process highlighted hazardous living habits because their behaviours do not suggest healthy daily practice, and, rather, they manage their appearance only due to aesthetic or social reasons. Conversely, girls with a normal BMI, despite being in good shape and having a body that fits positively to the appearance, had negative



emotional patterns and engaged in less body management. The normal group also seemed to exhibit more negative body management behaviours when compared with the overweight group. Finally, the overweight and obese groups displayed highly negative emotional patterns but were more focused on managing their bodies. Regarding the overall body satisfaction and behaviour index, scores were higher for the underweight group than for others. Surprisingly, no age differences were found, suggesting the need for urgent educational interventions focused on better managing the health of the overall female population toward to healthy attitude. In other words, our results highlighted that age cannot be considered a protective factor with young women showing the same pattern as girls. This finding is relevant, suggesting that Italian girls and women (in youth and/or emerging adulthood) adhere to social and media-based suggestions for physical appearance at the expense of their own health (actual and future). Moreover, our findings are in line with Grabe et al.'s [4] suggestion that, '...in many ways, body dissatisfaction has emerged as a core aspect of women's physical and mental health...' (p. 460).

In sum, this study clearly demonstrates that appearance and adherence to the thinness model are strong factors influencing the perceived wellness of Italian girls and women but likely cannot be considered protective factors; thinness seemed to increase the vulnerability of youth for the development of maladaptation toward to healthy body management, becoming a strong risk factor for future adulthood.

Our study has identified a severe phenomenon widespread among the Italian female population, highlighting the strong impact of sociocultural appearance on youths' emotions but not their wellness attitudes. In fact, underweight girls tended to be more satisfied with their bodies but did not practise sports. Conversely, overweight and obese girls exhibited stronger attitudes toward managing their own bodies and shapes to reinforce their own wellness. Although the normal distribution of girls into the BMI categories within the

sample is representative and provide positive data, girls with ‘normal’ BMI do not appear to engage in much healthy behaviour, and their physical wellbeing appears to be mostly driven by the desire for social acceptance. This finding is contrary to that of Bearman et al. [20], who analysed the increasing body dissatisfaction among girls during growth and found that it was not strictly related to ideal body internalization but, rather, to actual physical changes that deviated substantially from the social ideal.

The strengths of this study are the sample size and the homogeneous geographical area distribution of the sample, so it can be considered representative of the Italian female population in youth and emerging adulthood. The data draw a strong link between social appearance and body satisfaction, suggesting that dysfunctional body satisfaction is a strong risk factor for the healthy growth of the future adult generation.

The limitations of this study are related to the use of self-report. Using a standardized psychological battery might provide a more objective in-depth assessment of personality and related dysfunctional affective and behavioural patterns.

## **Conclusion**

In conclusion, our results suggest that girls and young women wish to be thinner, which leads them to neglect healthy behaviours. They prioritize social acceptance over their own wellness and lifestyle quality. The underweight BMI class can be considered a model to which girls adhere because it fits with the socially desired appearance. These findings can inform prevention and intervention efforts toward girls as a target and their health to reinforce their body satisfaction and behaviour by good practice to ensure positive development and favour the awareness of health as their own priority as well as their own responsibility for future wellness; the self-sufficient body-management focused on one’s

own actual health and more in the expectation of future living should be boosted by the concept of 'health as one's own responsibility'.

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**Table 1** – Demographic data of participants

	<b>Participants</b>					
	<i>Girls Group (n°486)</i>		<i>Young Women Group (n°1801)</i>		<i>Total</i>	
	<i>M</i>	<i>sd</i>	<i>M</i>	<i>sd</i>	<i>M</i>	<i>sd</i>
Age	19.1	1.1	23.1	1.4	22.2	2.1
BMI	21.9	4.4	22.6	4.6	22.4	4.6

**Table 2** – BMI data of participants

Age Group	MBI Group	N	%
Girls	Severely underweight	5	0,2%
	Underweight	74	3,2%
	Normal	320	14,0%
	Overweight	67	2,9%
	Obese Class 1	12	0,5%
	Obese Class 2	6	0,3%
	Obese Class 3	2	0,1%
	Total	486	21,3%
Young Women	Severely underweight	7	0,3%
	Underweight	164	7,2%
	Normal	1271	55,6%
	Overweight	255	11,1%
	Obese Class 1	62	2,7%
	Obese Class 2	27	1,2%
	Obese Class 3	15	0,7%
	Total	1801	78,7%
Total	Severely underweight	12	0,5%
	Underweight	238	10,4%
	Normal	1591	69,6%
	Overweight	322	14,1%
	Obese Class 1	74	3,2%
	Obese Class 2	33	1,4%
	Obese Class 3	17	0,7%
	Total	2287	100,0%



**Table 3** – Descriptive statistics of ‘Self-perception and Behavior’ self-report by BMI distribution

BMI groups		Emotional Pattern score	Body Managing score	Self-perception and Behavior score
Severely underweight	Mean	6,58	8,50	15,08
	ds	2,151	1,446	3,232
Underweight	Mean	7,01	9,24	16,26
	ds	1,951	1,239	2,529
Overweight	Mean	5,65	9,20	14,84
	ds	1,832	1,226	2,369
Normal	Mean	6,19	9,00	15,19
	ds	1,892	1,202	2,311
Obese Class 1	Mean	5,68	9,20	14,88
	ds	1,851	1,314	2,087
Obese Class 2	Mean	5,18	9,21	14,39
	ds	1,960	1,536	2,999
Obese Class 3	Mean	5,25	9,71	14,94
	ds	2,017	,772	2,380
Total	Mean	6,16	9,07	15,23
	ds	1,926	1,221	2,381

**Figure 1** – Self report: questionnaire and scoring procedure

<i>Self-report</i>				
<i>Body-satisfaction and Behavior</i>				
Never	Sometime	Often	Always	
a	b	c		

Questionnaire

1. I'm fear to get weight	a	b	c	d
2. I practice sports	a	b	c	d
3. I'm retractive diet	a	b	c	d
4. In the eating, I manage to control myself	a	b	c	d
5. Knowing my weight is important for me	a	b	c	d
6. My weight affects my mood	a	b	c	d

Scoring

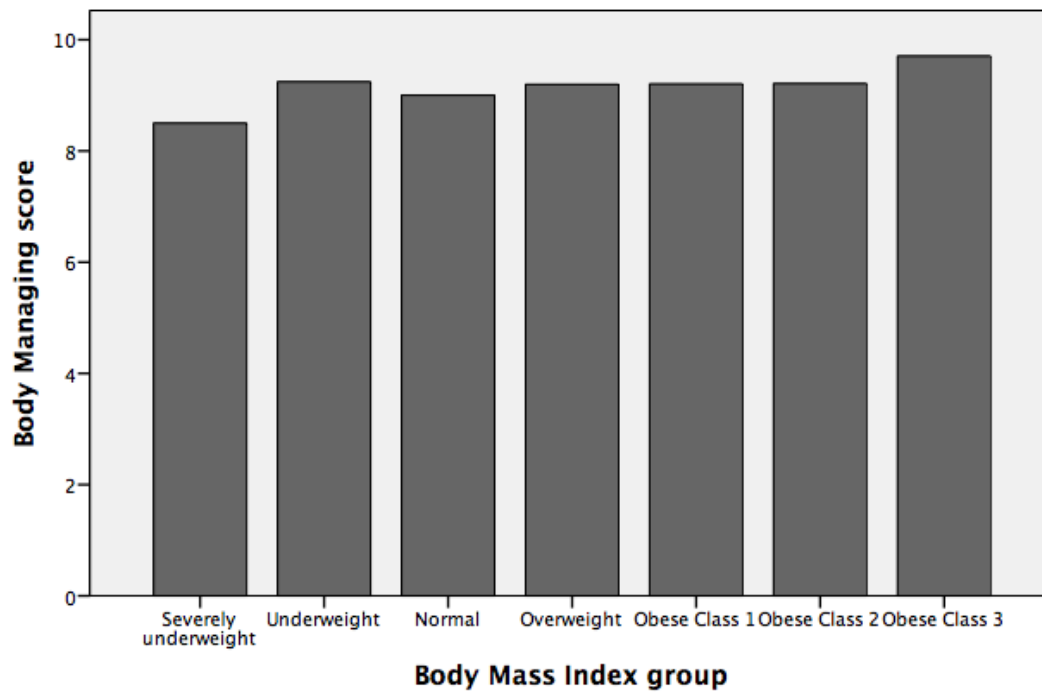
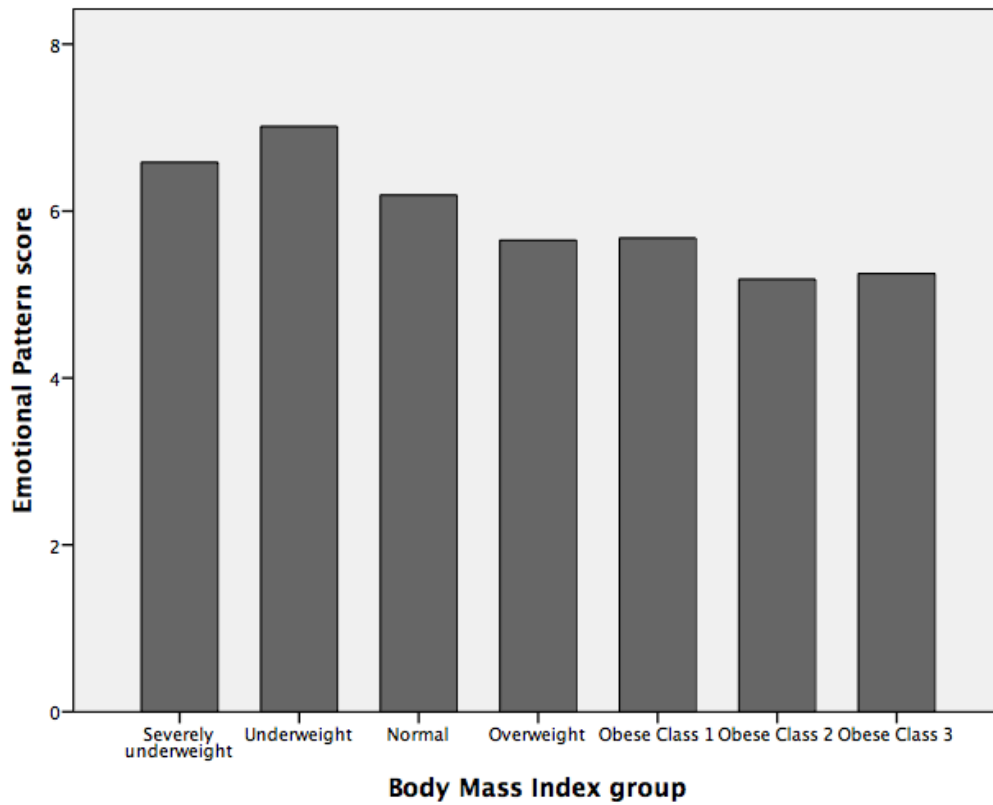
Item	Score			
	a	b	c	d
Item 1	4	3	2	1
Item 2	1	2	3	4
Item 3	4	3	2	1
Item 4	4	3	2	1
Item 5	4	3	2	1
Item 6	4	3	2	1

Scoring

Scoring: Emotional pattern			
Item 1	Item 5	Item 6	Sum

Scoring: Body managing			
Item 2	Item 3	Item 4	Sum

	Score
Emotional pattern	
Body managing	
Total score	

**Figure 2** – Emotional patterns and body management by body mass index group

**Figure 3** – Total body-satisfaction and behaviour mean scores according to body mass index group