

## Brief Report

# Identification of Body Image Problem: Implications for Promoting Body Image Resilience in Female College Students

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The aim of this study was to describe and identify body image problems in non-clinical female university students in Surabaya. Participants were female university students ( $N = 143$ ) aged 18 to 21 years old, obtained through purposive sampling. This survey used Likert type scale (2 scales) and a pictorial scale as the research instruments. The data collected were analyzed with descriptive statistics and cross tabulation of demographic questionnaire. The results showed that there was a gap between the desired body perception and the real one. The prominent behavior was compulsive behavior. Body image problems, which comprised of body image dissatisfaction, cognitive distortion, and body image compulsive behavior were also experienced by some young women in normal population even when their body mass index were normal.

*Keywords:* body image concern, body image behavior, body image cognitive distortion

Tujuan penelitian ini adalah untuk mendeskripsikan dan mengidentifikasi masalah citra tubuh pada mahasiswi (non-klinis) di Surabaya. Sampel studi ini ( $N = 143$ ) adalah mahasiswi berusia 18-21 tahun. Peserta berpartisipasi melalui purposive sampling. Survei menggunakan skala Likert (dua skala) dan satu skala piktorial. Data penelitian ini diproses dengan teknik deskriptif dan tabulasi silang dari aspek demografik. Hasil penelitian menunjukkan adanya kesenjangan antara tubuh yang diinginkan dan yang senyatanya. Perilaku yang tampak menonjol adalah perilaku kompulsif. Masalah citra tubuh yang terdiri atas ketakpuasan citra tubuh, distorsi kognitif, perilaku kompulsif citra tubuh dialami oleh mahasiswi pada populasi normal meskipun indeks massa tubuh mereka normal

*Kata kunci:* keprihatinan citra tubuh, perilaku citra tubuh, distorsi kognitif citra tubuh

Body image problem should become our concern because time after time the number of this problem has been increasing. Body image problem is closely related to eating behavior disorder, which has also been increasing. Based on the research in the last ten years, the number of eating disorders has increased from 31 percent to 42 percent and this was found among female teenagers (Cash, 2002). Another impact of body image problem are social

anxiety, difficulty in building relationship, and low self esteem (Cash & Flemming, 2002).

Dev, Permal, and Fauzee (2009) have found that body image problem is more obvious in teenagers in the urban areas than in other areas. The underlying factor is believed to be due to the economic status, i.e. it is of higher status in the urban areas compared to those in the rural areas. With higher economic status, female teenagers in the urban areas do not find difficulties in meeting food necessities. On the other hand, they are facing risks to be overweight. Following that, female teenagers tend to be engaged in an extreme diet to overcome dissatisfaction of their bodies. Luo, Parish, and Laumann (2005) suggested that body image problem also tends to occur among educated young ladies.

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According to Erikson's theory (as cited in Hall & Lindzey, 1993), a student in early adulthood has intimacy versus isolation development tasks. It means that they dream of an intimate relationship and are ready to build commitment with a spouse. Failure to this stage will lead to an 'isolation' condition, that is avoidance of an intimate relationship. Some professionals indicated that in this stage, women compete to get the right partner which increases body image problem, particularly dissatisfaction to body (Ferguson, Winegard, & Winegard, 2011).

Survey and interview results of 21 female teenagers in junior high schools and universities in the late 2011 by the authors showed that there were only two teenagers who were satisfied with their bodies while the others reported to be dissatisfied. It is known from the gap between real body perception and the ideal one. From the interview results, it was noted that body image problem was more obvious among university female students. Another fact is that many university female students ate only once a day and took slimming pills in order to get an ideal body. This study's initial survey and interview results also showed that 15 out of 20 university female students went on unhealthy diet.

Cash and Flemming (as cited in Cash & Pruzinsky, 2002) stated that body image is an accumulated set of imagination, fantasy, and meaning of body parts and their functions. Body image is often referred to as body image scheme, which is a cognitive structure that represents a group of experiences about body size, competence, and body function (White, 2000). Body image problem, according to White (2000), will arise if there is a discrepancy between appearance, function, or real body and the ideal perception. The incongruity of perception between the ideal body and the real one may affect one's emotions and behavior. In short, body image problem consists of three things (a) cognitive scheme and structure, (b) emotions, and (c) behavior. The example of a person who suffers from a body image problem is "beauty is the only way to get accepted in the social environment (cognitive scheme), I feel ashamed of my body (emotion), so that I do not want to join any activities so that people will not see my body (behavior)." White's explanation applies cognitive behavior approach because it is more understandable and applied to a research.

The Statistics Centre (Badan Pusat Statistik, 2010) showed that there were 264,521 people in Surabaya aged 20-24 years old, with 137,654 females and

126,867 males. That number is the second highest after the 25-29 years old group. These two groups are in the productive age range who are expected to be independent, healthy, smart, skillful, achievers, and have competitive skills. As a young generation, female teenagers take part in realizing this government vision. In the productive age range, teenagers should be encouraged to keep actualizing themselves. However, it can be hindered if those teenagers suffer from body image problems and only focused to deal with this problem. A child who was born by a mother with psychological problems, including a problem caused by body image effect, may also suffer from psychological or physical problems. This condition may develop to be a latent danger to Indonesians. Thus, positive body image development program becomes relevant. Choate (2007) suggested a theme about the importance of body image resilience.

Previous research about improving body image resilience have been very limited. Therefore, this study focuses on improving body image resilience with cognitive behavior approach. Cognitive behavior training model is intended to be a preventive action for the spreading impact of body image problem. According to WHO (as cited in Paxton, 2002) there are three kinds of preventive actions comprising of (1) universal preventive actions to the society through government regulation or media campaign, (2) selective campaign which is a preventive action to high-risk communities who suffer from a certain problem, in this case female teenagers, (3) special target preventive action which is a preventive action through communities that show early symptoms in certain cases. In order to make this preventive action suits to respondents' needs, an early survey was needed. The aim of this study was to identify body image problem suffered by university female students in Surabaya and then employ it to promote body image resilience.

## Method

The data collection in this quantitative research was conducted by handing out questionnaires to participants who were selected through purposive sampling. A number of 143 female university students aged 18 to 21 years old had completed the questionnaires and the data were analyzed descriptively. The instruments used in data collection were:

## Demographic Section

This questionnaire was aimed to collect the participants' profile based on age, height, weight, education, relationship status, and other supporting information.

## Body Image Behavior Inventory III (BIBI III)

Body Image Behavior Inventory III (Engle, 2009) comprised of two parts that measure ritualistic body image behaviors and body image avoidance with a total of 49 items. The avoidance scale measure an individual's effort to reduce threatening body image thoughts or feelings by avoiding contexts in which these dysphoric experiences may occur (e.g. avoiding beach, pool, and avoiding wearing some revealing clothing). The compulsive scale assess the ritualistic or repetitive efforts one engaged in with the goal of reducing or controlling negative emotions related to appearance (e.g. checking and fixing behaviors including one's hair, stomach, bottom, thighs) (Engle, 2009). This questionnaire was designed to measure body image problem in general, not specifically for those who suffer from severe problems. Hence, this instrument is suitable to obtain the aim of the study. Some researches that have used BIBI III showed good reliability of this scale. In this study the reliability rate ( $\alpha$ ) was shown to be .76, specifically .77 for compulsive actions scale and .76 for avoidance behaviors scale.

## Body Image Cognitive Distortion

This questionnaire comprised of 18 items that measure cognitive distortion in body image context in different situations. This questionnaire was developed by Cash, Melynck, and Hrabosky (in Jakatdar, Cash, & Engle, 2006). The respondents were asked to choose between 0 to 4, where 0 shows *unlike me*, while 4 shows *like me*. The reliability ( $\alpha$ ) in this study was .78. One of the items is, "Imagine that you are not comfortable with your appearance, and you ask your friend to give comment on your appearance. Your friend says that your appearance is all right. You do not think that your friend's comment is true because you know that your uncomfortable-feeling is more true/more proper."

## Pictorial Scale

There are various instruments used to identify an individual's body image, one of which is by using

picture, or pictorial. The most recent pictorial scale is the one developed by Harris in 2008 (as cited in Amburgey, 2009). Pictorial scale developed by Harris is considered to be most suitable because it considers body mass index so that the photo taken shows high precision. Ten photos that are shown represent body mass index category, that is from underweight to obese level III. However, their study used linear regression which is inaccurate in predicting respondent's body mass index using the pictorial scale (Baptiste-Roberts, as cited in Amburgey, 2009). Despite this limitation, this pictorial scale has its own strength that is considered to be the most suitable for the purpose of this study. The results of this instrument were used as supporting data in the early screening stage.

## Results

### Demographic Part

The participants in this study were 143 female students, aged 18 to 21 years with a mean of 19 years old. The mean of weight was 51.5 kg and the mean of height was 159 cm with BMI mean of 19.82. Based on BMI category, 65.64 percent were categorized as normal and 29.77 percent as underweight. Based on the relationship status, 69.93 percent were single and 27.97 percent were in a relationship. The number of respondents who lived in a boarding house and in their parents' house were balanced; that is 44.05% were staying in their parents' house and 46.15% were staying in a boarding house; 82.51% respondents did not go to the gym and 83.2% had never gone to a nutritionist. Table 1 reveals the demographic data of the respondents of this study.

### Body Image Behavior Inventory

**Body image behavior (compulsive).** The compulsive scale assesses the ritualistic or repetitive efforts one engages in with the goal of reducing or controlling negative emotions related to her appearance (e.g. checking and fixing behaviors including one's hair, stomach, bottom, thighs) (Engle, 2009). Table 2 shows that there were 55 respondents (38.5%) who behave moderately compulsive, 19 respondents (13.3%) who behave highly compulsive, and 5 respondents (3.5%) were very highly compulsive. In summary, the respondents who were categorized as medium to high were 79 girls (55.3%).

Table 1  
*Demography*

Data	Category	Total (n; %)
BMI Level		
	Underweight	39 (29.77)
	Normal	86 (65.64)
	Overweight	0 (0)
	Pre-Obese	4 (3.05)
	Obese I	2 (1.52)
	Obese II	0 (0)
	Obese III	0 (0)
	Total	131 (100)
Relationship Status		
	Single	100 (69.93)
	Has boyfriend/girlfriend	40 (27.97)
	Other	3 (2.097)
	Total	143 (100)
Accommodation Status		
	Parent's house	63 (44.05)
	Kin's house	6 (4.19)
	Dormitory	0 (0)
	Boarding house	66 (46.15)
	Rent	2 (1.39)
	Others	6 (4.19)
	Total	143 (100)
Going to Gymnasium		
	No	118 (82.51)
	Yes, every day	4 (2.79)
	Yes, once a week	2 (1.39)
	Yes, once a month	3 (2.097)
	Yes, occasional	16 (11.1)
	Total	143 (100)
Nutrition Consultation		
	No	119 (83.2)
	Yes, in the past week	3 (2.097)
	Yes, in the past month	4 (2.79)
	Yes, in the past six months	6 (4.19)
	Yes, more than six months ago	11 (7.69)
	Total	143 (100)

**Body image behavior (avoidance).** The avoidance scale measures someone's effort to reduce threatening body image thoughts or feelings by avoiding contexts in which these dysphoric experiences may occur (e.g. avoiding beach, pool, avoiding wearing some revealing clothing) (Engle, 2009). Table 2 reveals that respondents who displayed moderate avoidance behavior were 6 girls (4.2%), there were no respondents who displayed high avoidance behavior, and there were 2 respondents categorized as very high (1.4%). In summary, respondents who were categorized as medium to high were 8 girls (5.6 %).

Table 2  
*Body Image Behavior Inventory*

Data	Category	n	(%)
BIBI III			
	Very low	32	(22.4)
	Low	89	(62.2)
	Medium	19	(13.3)
	High	3	(2.1)
	Very high	0	(0)
	Total	143	(100)
BIBI III: Compulsive Actions			
	Very low	20	(14)
	Low	44	(30.8)
	Medium	55	(38.5)
	High	19	(13.3)
	Very high	5	(3.5)
	Total	143	(100)
BIBI III: Avoidance Behaviors			
	Very low	111	(77.6)
	Low	24	(16.8)
	Medium	6	(4.2)
	High	0	(0)
	Very high	2	(1.4)
	Total	143	(100)

Table 3  
*Body Image Cognitive Distortion Percentage*

Data	Category	n	%
	Very low	14	9.8
	Low	60	42
	Medium	58	40.6
	High	8	5.6
	Very high	3	2.1
	Total	143	100

Table 4  
*Pictorial Scale Percentage*

Category	Description	n	%
A	Feel fatter 3-4 level	9	(6.3)
B	Feel fatter 1-2 level	80	(56.3)
C	Body perception suits with real body	25	(17.6)
D	Feel thinner 1-2 level	28	(19.7)
E	Feel thinner 3-4 level	0	(0)
Total		142	(100)

### Body Image Behavior (Total)

Table 2 describes that respondents who behave avoidantly and compulsively in medium category were 19 girls (13.3%), respondents who behave avoidantly and compulsively in high category were 3 girls (2.1%) and none were categorized as very high. In summary, respondents who have avoidance and

**Table 5**  
*Body Image Behavior (Compulsive) and Demography*

Data	Data Category	BIBI III: Compulsive Actions Category					Total n (%)
		very low n (%)	low n (%)	moderate n (%)	high n (%)	very high n (%)	
Diet	Yes	8 (14.3)	17 (30.4)	17 (30.4)	9 (16.1)	5 (8.9)	56 (100)
	No	12 (13.8)	27 (31)	38 (43.7)	10 (11.5)	0 (0)	87 (100)
BMI Level	Underweight	7 (17.9)	12 (30.8)	16 (41)	4 (10.3)	0 (0)	39 (100)
	Normal	10 (11.6)	29 (33.7)	33 (38.4)	11 (12.8)	3 (3.5)	86 (100)
	Overweight	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
	Pre-Obese	0 (0)	1 (25)	2 (50)	1 (25)	0 (0)	4 (100)
	ObeseI	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)	2 (100)
	ObeseII	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
	ObeseIII	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
Relationship Status	Single	14 (14)	37 (37)	37 (37)	10 (10)	2 (2)	100 (100)
	Has boyfriend/girlfriend	6 (15)	6 (15)	18 (45)	8 (20)	2 (5)	40 (100)
	Other	0 (0)	1 (33.3)	0 (0)	1 (33.3)	1 (33.3)	3 (100)
Accommodation Status	Parent's house	11 (17.5)	14 (22.2)	25 (39.7)	10 (15.9)	3 (4.8)	63 (100)
	Kin's house	1 (16.7)	2 (33.3)	3 (50)	0 (0)	0 (0)	6 (100)
	Dormitory	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
	Boarding house	6 (9.1)	27 (40.9)	24 (36.4)	8 (12.1)	1 (1.5)	66 (100)
	Rent	0 (0)	0 (0)	2 (100)	0 (0)	0 (0)	2 (100)
	Others	2 (33.3)	1 (16.7)	1 (16.7)	1 (16.7)	1 (16.7)	6 (100)
Going to Gymnasium	No	18 (15.3)	38 (32.2)	46 (39)	15 (12.7)	1 (0.8)	118 (100)
	Yes, every day	0 (0)	1 (25)	3 (75)	0 (0)	0 (0)	4 (100)
	Yes, once a week	1 (50)	1 (50)	0 (0)	0 (0)	0 (0)	2 (100)
	Yes, once a month	0 (0)	0 (0)	1 (33.3)	0 (0)	2 (66.7)	3 (100)
	Yes, occasionally	2 (6.2)	4 (25)	5 (31.2)	4 (25)	2 (12.5)	16 (100)

compulsive behavior related to body image were 21 girls (15.4%).

In general it can be seen that behavior that seems to be salient in those respondents are compulsive behavior, which accounted for 55.3%. Meanwhile, avoidance behavior was only 5.6%.

**Body Image Cognitive Distortion**

Table 3 reveals that respondents who have cognitive distortion in medium category were 58 girls (40.6%) , 8 girls in high category (5.6%), and 3 people in very high category (2.1%). In summary, respondents who were categorized as medium to high were 69 girls (48.3%).

**Pictorial**

Table 4 reveals that the number of respondents who felt fatter 3-4 levels were 9 girls (6.3%), 80

girls (56.3%) felt fatter 1-2 levels, 28 girls (19.7%) felt thinner 1-2 levels. Meanwhile, those respondents whose body perception suit to the real condition were 25 girls (17.6%). In total, the number of respondents who had a gap between body perception and real condition were 117 girls (82.3%).

In general, based on the pictorial results, most of respondents had a gap between body perception and their real body. Specifically, cognitive aspect and compulsive behavior tend to be at a moderate level, and the avoidance behavior aspect tends to be low.

**Body Image Behavior (Compulsive) and Demographic Cross Tabulation**

Table 5 shows cross tabulation between body image behavior (compulsive) and demographic data. This analysis aimed at finding possibilities related compulsive body image behavior. The data used in the analyses were only those that were

relevant, i.e. data from the moderate to very high categories.

**Body image behavior (compulsive) and diet behavior.** Table 5 reveals that there were 31 participants (55.4%) who displayed compulsive behavior (medium to very high category) and were dieting, while those who have compulsive behavior and were not dieting were 48 girls (55.2%). It shows that respondents who have compulsive behavior who were dieting and not dieting were balanced.

**Body image behavior (compulsive) and BMI.** Table 5 reveals that the number of respondents with compulsive behavior whose body mass index were categorized as normal were 47 girls (54.7%), whilst 3 girls (75%) were categorized as obese. It shows that respondents who were categorized as pre-obese tend to have higher compulsive behavior. However, respondents whose BMI were categorized as normal show high compulsive behavior percentage (54.7%).

**Body image behavior (compulsive) and relationship status.** Table 5 reveals that respondents with single status and had compulsive behavior were 49 girls (49%), while the number of respondents who were in a relationship and displayed compulsive behavior were 28 participants (70%). In proportion, more of those who were in a relationship were engaged in compulsive behavior compared to those who were single.

**Body image behavior (compulsive) and accommodation status.** Table 5 reveals that the number of respondents who live in their parents' house and have compulsive behavior were 38 girls (60.4%), and the number of respondents who live in a boarding house and have compulsive behavior were 33 girls (50%). It shows that the percentage of respondents who live in their parents' house and have compulsive behavior is higher than that of those who live in a boarding house.

**Body image behavior (compulsive) and go-to-gym behavior.** Table 5 reveals that respondents who were exercising in a gym once a month and have compulsive behavior were 3 girls (100%), there were 3 respondents who went to gym every day (75%), and 62 girls who did not go to gym (52.5%). It means that the percentage of compulsive behavior in respondents who routinely go to gym was higher than those who did not go to gym.

### **Body Image Cognitive Distortion and Demographic Cross Tabulation**

**Body image cognitive distortion and diet behaviour.** The data show that respondents who had cognitive distortion and went on a diet were 28 participants

(50%), and those who did not go on a diet were 41 participants (47%). It shows a relatively balanced proportion of those who were engaged in a diet behavior and those who were not dieting amongst respondents who suffer from cognitive distortion.

**Body image cognitive distortion and BMI.** The data show that from those with cognitive distortion: 3 participants were categorised as pre-obese (75%), 1 participant was obese (100%), and 21 participants were underweight (53.8%). However, it was also found that participants whose BMI were categorized as normal were shown to suffer from cognitive distortion as well ( $n = 38, 44.2\%$ ).

**Body image cognitive distortion and relationship status.** The data show that 24 girls (60%) with cognitive distortion were in a relationship and 44 girls (44%) were single. The percentage of cognitive distortion in respondents who were in a relationship was higher than that of the single ones.

**Body image cognitive distortion and accommodation status.** The data show that 32 participants (50%) with cognitive distortion were staying in their parents' house and 31 girls (47%) were staying in a boarding house. It shows that the percentage of cognitive distortion in respondents who live either in parents' house or in a boarding house were balanced.

### **Body Image Cognitive Distortion and Body Image Behavior (Compulsive) Cross Tabulation**

Table 7 reveals that 10 participants (50%) were categorised in very low compulsive behavior and moderate cognitive distortion. Respondents whose compulsive behavior and cognitive distortion were medium were 25 girls (45.45%) and whose compulsive behavior was high and cognitive distortion was medium were 7 girls (36.84%). It shows that the compulsive behavior level/category does not always reflect the cognitive distortion level/category.

### **Body Image Cognitive Distortion and Body Image Behavior (Avoidance) Cross Tabulation**

Table 8 indicates that there were 15 participants (62.5%) fell within very low avoidance behavior and moderate cognitive behavior category, 3 participants (50%) within moderate category in both avoidance behavior and cognitive distortion, and 1 participant (50%) with very high avoidance behavior and moderate cognitive distortion. It shows that the avoidance behaviour is not always followed by cognitive distortion, or vice versa.

**Table 6**  
*Cross Tabulation for Body Image Cognitive Distortion and Demography*

Data	Data Category	Body Image Cognitive Distortion Category					Total n (%)
		very low n (%)	low n (%)	moderate n (%)	high n (%)	very high n (%)	
Diet							
	Yes	6 (10.7)	22 (39.3)	25 (44.6)	1 (1.8)	2 (3.6)	56 (100)
	No	8 (9.2)	38 (43.7)	33 (37.9)	7 (8)	1 (1.1)	87 (100)
BMI Level							
	Underweight	1 (2.6)	17 (43.6)	16 (41)	5 (12.8)	0 (0)	39 (100)
	Normal	11 (12.8)	37 (43)	32 (37.2)	3 (3.5)	3 (3.5)	86 (100)
	Overweight	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
	Pre-Obese	1 (25)	0 (0)	3 (75)	0 (0)	0 (0)	4 (100)
	ObeseI	0 (0)	0 (0)	2 (100)	0 (0)	0 (0)	2 (100)
	ObeseII	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
	ObeseIII	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
Relationship Status							
	Single	10 (10)	46 (46)	37 (37)	6 (6)	1 (1)	100 (100)
	Has boyfriend/girlfriend	3 (7.5)	13 (32.5)	20 (50)	2 (5)	2 (5)	40 (100)
	Other	1 (33.3)	1 (33.3)	1 (33.3)	0 (0)	0 (0)	3 (100)
Accommodation Status							
	Parent's house	4 (6.3)	27 (42.9)	28 (44.4)	2 (3.2)	2 (3.2)	63 (100)
	Kin's house	1 (16.7)	2 (33.3)	3 (50)	0 (0)	0 (0)	6 (100)
	Dormitory	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
	Boarding house	8 (12.1)	27 (40.9)	25 (37.9)	5 (7.6)	1 (1.5)	66 (100)
	Rent house	0 (0)	1 (50)	0 (0)	1 (50)	0 (0)	2 (100)
	Others	1 (16.7)	3 (50)	2 (33.3)	0 (0)	0 (0)	3 (100)

**Table 7**  
*Cross Tabulation for Body Image Cognitive Distortion and BIBI III: Compulsive Actions*

BIBI III: Compulsive Actions Category	Body Image Cognitive Distortion Category					Total n (%)
	very low n (%)	low n (%)	moderate n (%)	high n (%)	very high n (%)	
Very low	4 (20)	6 (30)	10 (50)	0 (0)	0 (0)	20 (100)
Low	5 (11.3)	25 (56.8)	14 (31.8)	0 (0)	0 (0)	44 (100)
Medium	4 (7.27)	22 (40)	25 (45.45)	4 (7.27)	0 (0)	55 (100)
High	0 (0)	6 (31.57)	7 (36.84)	4 (21.05)	2 (10.52)	19 (100)
Very high	1 (20)	1 (20)	2 (40)	0 (0)	1 (20)	5 (100)

**Table 8**  
*Cross Tabulation for Body Image Cognitive Distortion and BIBI III: Avoidance Behaviors*

BIBI III: Avoidance Behaviors Category	Body Image Cognitive Distortion Category					Total n (%)
	very low n (%)	low n (%)	moderate n (%)	high n (%)	very high n (%)	
Very low	14 (12.6)	53 (47.7)	39 (35.1)	4 (3.6)	1 (0.9)	111 (100)
Low	0 (0)	6 (25)	15 (62.5)	2 (8.3)	1 (4.2)	24 (100)
Medium	0 (0)	1 (16.7)	3 (50)	1 (16.7)	1 (16.7)	6 (100)
High	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Very high	0 (0)	0 (0)	1 (50)	1 (50)	0 (0)	2 (100)

**Pictorial Scale and Demography Cross Tabulation**

**Pictorial with BMI level.** Table 9 shows that 60 participants (70.6%) felt that they were fatter by

1-2 levels even that their BMI level was normal. On the other hand, there were 21 participants (53.8%) reported to be thinner by 1-2 levels compared to their actual BMI level of underweight. Similarly, 3 res-

Table 9  
Cross Tabulation for Pictorial Scale Percentage and Demography

Data	Data Category	Pictorial Scale Category					Total n (%)
		A n (%)	B n (%)	C n (%)	D n (%)	E n (%)	
<b>BMI Level</b>							
	Underweight	0 (0)	9 (23.1)	9 (23.1)	21 (53.8)	0 (0)	39 (100)
	Normal	4 (4.7)	60 (70.6)	15 (17.6)	6 (7.1)	0 (0)	85 (100)
	Overweight	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Pre-Obese	1 (25)	3 (75)	0 (0)	0 (0)	0 (0)	4 (100)
	ObeseI	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)	2 (100)
	ObeseII	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	ObeseIII	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Relationship's Status</b>							
	Single	7 (7.1)	55 (55.6)	17 (17.2)	20 (20.2)	0 (0)	99 (100)
	Has boyfriend/girlfriend	1 (2.5)	24 (60)	8 (20)	7 (17.5)	0 (0)	40 (100)
	Other	1 (33.3)	1 (33.3)	0 (0)	1 (33.3)	0 (0)	3 (100)
<b>Nutrition Consultation</b>							
	No	5 (4.2)	67 (56.8)	24 (20.3)	22 (18.6)	0 (0)	118 (100)
	Yes, in the past week	1 (33.3)	1 (33.3)	0 (0)	1 (33.3)	0 (0)	3 (100)
	Yes, in the past month	2 (50)	2 (50)	0 (0)	0 (0)	0 (0)	4 (100)
	Yes, in the past six months	0 (0)	3 (50)	1 (16.7)	2 (33.3)	0 (0)	6 (100)
	Yes, more than six months ago	1 (9.1)	7 (63.6)	0 (0)	3 (27.3)	0 (0)	11 (100)

Note. Pictorial information (A = feels fatter 3-4 level; B = feels fatter 1-2 level; C = congruency between body perception and reality; D = feels thinner 1-2 level; E = feels thinner 3-4 level).

Table 10  
Cross Tabulation for Pictorial Scale Percentage and BIBI III: Compulsive Actions

BIBI III: Compulsive Actions Category	Pictorial Scale Category					Total n (%)
	A n (%)	B n (%)	C n (%)	D n (%)	E n (%)	
Very low	2 (10)	10 (50)	5 (25)	3 (15)	0 (0)	20 (100)
Low	1 (2.3)	25 (56.8)	9 (20.5)	9 (20.5)	0 (0)	44 (100)
Medium	2 (3.7)	31 (57.4)	10 (18.5)	11 (20.4)	0 (0)	54 (100)
High	1 (5.3)	12 (63.2)	1 (5.3)	5 (26.3)	0 (0)	19 (100)
Very high	3 (60)	2 (40)	0 (0)	0 (0)	0 (0)	5 (100)

Note. Pictorial information (A = feels fatter 3-4 level; B = feels fatter 1-2 level; C = congruency between body perception and reality; D = feels thinner 1-2 level; E = feels thinner 3-4 level).

Table 11  
Cross Tabulation for Pictorial Scale Percentage and BIBI III: Avoidance Behaviors

BIBI III: Avoidance Behaviors Category	Pictorial Scale Category					Total n (%)
	A n (%)	B n (%)	C n (%)	D n (%)	E n (%)	
Very low	3 (2.7)	64 (57.7)	22 (19.8)	22 (19.8)	0 (0)	111 (100)
Low	2 (8.7)	14 (60.9)	1 (4.3)	6 (26.1)	0 (0)	23 (100)
Medium	4 (66.7)	2 (33.3)	0 (0)	0 (0)	0 (0)	6 (100)
High	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100)
Very high	0 (0)	0 (0)	2 (100)	0 (0)	0 (0)	2 (100)

Note. Pictorial information (A = feels fatter 3-4 level; B = feels fatter 1-2 level; C = congruency between body perception and reality; D = feels thinner 1-2 level; E = feels thinner 3-4 level).

pondents (75%) were pre-obese and felt that they were fatter by 1-2 levels and 2 respondents (100%) were at obese level I and felt fatter by 3-4 levels. It

shows a gap between objective BMI and respondents' body perceptions. Respondents who were underweight felt thinner and those with normal weight,

Table 12  
*Cross Tabulation for Pictorial Scale Percentage and Body Image Cognitive Distortion*

Body Image Cognitive Distortion Category	Pictorial Scale Category					n (%)
	A n (%)	B n (%)	C n (%)	D n (%)	E n (%)	
Very low	1 (7.1)	10 (71.4)	3 (21.4)	0 (0)	0 (0)	13 (100)
Low	3 (5)	29 (48.3)	15 (25)	13 (21.7)	0 (0)	60 (100)
Medium	4 (7)	36 (63.2)	6 (10.5)	11 (19.3)	0 (0)	57 (100)
High	1 (12.5)	2 (25)	1 (12.5)	4 (50)	0 (0)	8(100)
Very high	0 (0)	3 (100)	0 (0)	0 (0)	0 (0)	3(100)

Note. Pictorial information (A = feels fatter 3-4 level; B = feels fatter 1-2 level; C = congruency between body perception and reality; D = feels thinner 1-2 level; E = feels thinner 3-4 level).

Table 13  
*Diet Option Percentage*

No.	Diet Option	n (%)
1.	Less eating	47 (83.9)
2.	Pills/slimming tea	6 (10.7)
3.	Acupuncture	0 (0)
4.	Others	3 (5.4)
	Total	56 (100)

pre-obese, and obese felt fatter than they really were.

**Pictorial with relationship status.** Table 9 reveals that either they were single ( $n = 55, 55.6\%$ ) or in a relationship ( $n = 24, 60\%$ ), most respondents reported that they were 1-2 levels fatter compared to their real BMI index.

**Pictorial with go-to-nutritionist behavior.** Table 9 reveals that 67 respondents (56.8%) who felt fatter by 1-2 levels did not consult with a nutritionist. On the contrary, there were 7 respondents (63.6%) who felt fatter by 1-2 level went to a nutritionist during the last six months. However, the percentage of respondents who consult with a nutritionist and did not consult with a nutritionist mostly felt fatter by 1-2 levels.

**Pictorial Scale and Compulsive Behavior Cross Tabulation**

Table 10 reveals that respondents who felt fatter by 1-2 levels displayed more compulsive behavior compared to those who felt fatter by 3-4 levels or thinner by 1-2 levels.

**Pictorial Scale and Avoidance Behavior Cross Tabulation**

Table 11 reveals that there were two respondents (100%) whose body perception congruent with the reality were engaged in avoidance behavior, while 4 respondents (66.7%) who displayed moderate avoidance behavior felt fatter by 3-4 levels. It shows that

even with a congruent body perception, an individual may still displays avoidance behavior.

**Pictorial Scale and Body Image Cognitive Distortion Cross Tabulation**

Table 12 reveals that 3 respondents (100%) felt fatter by 1-2 levels and had a very high level of cognitive distortion. It also shows that there were 10 respondents (71.4%) who felt fatter by 1-2 levels reported a very low cognitive distortion level. These results suggest that an individual may feel fatter by 1-2 levels without suffering from cognitive distortion. On the other hand, one may feel fatter by 1-2 levels and has a very high cognitive distortion level.

**Diet Choice**

Table 13 reveals that eating less was the most familiar diet choice for the respondents (47 girls, 83.9%).

**Discussion**

The aim of this study was to identify body image problem suffered by female university students in Surabaya. The results of this study were expected to be the basis for the design in promoting body image resilience. The results showed that 117 girls (82.3%) reported a gap between the desired body and the real one. Those whose weight were above ideal range felt even fatter, and those who were below ideal weight felt thinner. These gaps between the desired body perception with the real one indicate body image dissatisfaction. It is in line with De Villiers research (2006) who stated that girls are the most risky group who suffer from body image problems, specifically body image dissatisfaction. Body image problem is a normative issue for women

at all age groups. Previous research have been focusing on eating disorder such as anorexia and bulimia. However, body image problem may also be suffered by those within the ideal range of weight. It is in line with the previous research (Monteath & McCabe, 1996; Garner, 1997; Cash & Henry, 1995) that found that majority of normal girls have also indicated body image problems, such as body image dissatisfaction.

The results of this current study showed that there were 69 girls (48.3%) with cognitive distortion, and 47 of them (83.9%) were dieting by eating less. Cash (2002) stated that body image problem needs to be addressed as this problem is increasing over time. Body image problem is very closely related to eating disorder which is increasing as well. Based on the research in the last ten years, the number of eating disorders has increased from 31% to 42% in female teenagers (Cash, 2002). The Statistics Centre (Badan Pusat Statistik, 2010) showed that young girls are the second highest population. These females are in their productive age who are expected to contribute in Indonesia's development. However, body image problems may distract them from contributing to the development of the country. Hence, it may lead to be a latent danger for our country.

Based on the body image behavior results of this study, the data showed that respondents did not show significant avoidance behavior. The most prominent behavior was compulsive behavior, which was displayed by 55.3% of the participants. Compulsive behavior refers to a form of repetitive mental act or actual behavior which is experienced/performed by an individual continuously, and this situation may be experienced even by a normal person. Compulsive behavior can waste time, cause distress, and its prolonged existence may disturb work or daily activities (The British Psychological Society & The Royal College of Psychiatrist, 2006). Other consequences include social anxiety, difficulty in building relationship, and low self esteem (Cash & Flemming, 2002).

Compulsive behavior, according to Park (2012), is caused by low self esteem, desire to be perfect, and desire to receive reward, which is obtaining others' respect (The British Psychological Society & The Royal College of Psychiatrist, 2006; Binsale, 2012; Park, 2012). Compulsive behavior was also found to be related to gender. In line with De Viliers' opinion (2006) that body image problem is a normative problem for women, so body image compulsive behavior is also a normative problem for women.

The cross tabulation results of this study mapped the factors that were predicted to be associated with

compulsive body image behavior. Some noteworthy findings are as follows:

(a) Either single or in a relationship respondents felt fatter and dissatisfied with their body image. However, respondents who were in a relationship tend to be more compulsive and showed higher level of cognitive distortion compared to the single respondents. This may be related to an opinion that women need reward (Binsale, 2012; Park, 2012), in this case from their partner. Moreover, according to Erikson (cited in Hall & Lindzey, 1993), those in the early adulthood stage are within intimacy versus isolation development stage. Early adult women were trying to make themselves attractive to able to build relationship with the opposite sex. Women often feel dissatisfied with their body image and think that their partners expect them to look thin. Nevertheless, a previous study indicated that the partners do not always want this (C.N.Markey & P.M. Markey, 2006).

(b) Respondents with ideal and non-ideal BMI were shown to suffer from cognitive distortion and compulsive behavior. It is not in line with Senekal, Steyn, Mashego, and Nel's (2001) research that found that body image problem is significantly related to body mass index, such that women with overweight feel more dissatisfied than those with normal body mass index. However, this study showed that respondents whose BMI is ideal or not ideal (overweight/underweight) both had body image problems. These results support the research conducted by Monteath and McCabe (1996) that found even women with normal body image have some dissatisfaction with some parts of their bodies.

(c) Respondents who were or were not engaged in diet activities both displayed cognitive distortion and compulsive behavior. C. N.Markey and P. M. Markey (2005) stated that a person who goes on a diet is not necessarily overweight. The motive of women who are not overweight to go on a diet is usually caused by unrealistic standard of their bodies. This study's findings support this previous research.

(d) Respondents who were staying in their parents' house were found to be more compulsive, and those in the boarding house and parents' house both had cognitive distortion. This is in accordance with The British Psychological Society and The Royal College of Psychiatrist (2006) that suggested that a family often takes part in maintaining body image compulsive behavior since their childhood and may be carried on until they grow up.

(e) Compulsive behavior does not always reflect the level of cognitive distortion. Although an individual has low cognitive distortion, her compulsive body image behavior can be high. This finding is in contrast with the cognitive behavior professionals' opinion. According to the cognitive behavior approach (Cash, 2011), a person's behavior is determined by her cognition. An example is culture, where certain standards were established through daily life, including what is considered to be attractive/not attractive, pretty or not pretty.

One event that is experienced by an individual could activate her cognition on those standards and as a result, affect their behavior. In other words, one's cognitive distortion will lead to compulsive behavior. However, this study does not support those arguments. This study's finding shows that high compulsive behavior is not always accompanied by high level of cognitive distortion. Overwalle (2009) explained about one's intense behavior. Whilst an individual recognize that her behavior is wrong or unfit with her perspective, she may keep performing a certain behavior. This may be affected by social information which were kept in a more abstract cognitive level in a certain area of the brain.

In this study context, even though one does not have cognitive distortion on her body image, she may keep her compulsive body image behavior due to some information stored in her deeper level of cognition. Izydorczyk (2013) indicated that the expectation that a woman should have an ideal body have been strongly internalized within the culture and is accepted as a social norm. A future research would be needed to clarify this matter.

The results suggested that an intervention may be needed among female university students in Surabaya to improve body image resilience in order to minimize body image problems. Choate (2007) stated that body image resilience can be improved through encouraging protective factors as follows:

**Family and peer group.** Some research have shown that family and peer groups may be the source of incorrect body perception concept, or cognitive distortion. Some efforts that can be done including educating parents and peer groups to not making fun of a person with low body image resilience and facilitate peer support group.

**Satisfaction with gender role.** From time to time, it appears that women are losing their knowledge of their gender roles and demonstrate only partial understanding of the roles, i.e. to have an ideal body and to compete with other women. To address

this problem, education for female teenagers is needed to emphasize the various concepts about beauty from time to time, gender roles in the society, and the meaning of those gender roles.

**Self esteem and physical appearance confidence.** Often, female teenagers were obsessed to own ideal body without noticing the risks of their actions. Some research have shown that the motivation to have an ideal physical appearance tend to drive someone for only a short period of time. Choate (2007) suggested that pure motivation is needed, not only to be thin or own ideal body but also for self-actualization or health-related matters.

**Coping strategy.** Choate (2007) also highlighted the need of redefining the concept of beauty. Furthermore, he suggested that there should be literacy media, i.e. critics to media that show very thin models which can create cognitive distortion to female teenagers about the beauty concept.

## Limitations

Whilst this study contributes to body image problem research and intervention, the limitations should also be considered. It is suggested for future research to increase the number of the participants and to collect data from a more various background, such as respondents from various faculties, instead of psychology students only. In addition, the societal norms role should also be investigated in future studies, as it was indicated that the societal norms may influence body image problems as well.

## Conclusion

Body image problems comprised of body image dissatisfaction, cognitive distortion, and body image compulsive behavior, can affect young women in normal population and it needs to addressed. Even though there are many literatures revealing that obese women tend to have body image problems, this study showed that body image problems affect not only those who are obese. Women may suffer from body image problems although their BMI is normal /ideal. Individuals who live with their parents are in a high risk of suffering body image problems and their family may play an important role to minimize this. It is assumed that the relationship status is related to compulsive body image behavior and cognitive distortion. However, women who are not in a relationship may also suffer the same thing. Intervention can be done through creative education

about societal gender norm, gender bias, body image change from time to time, and body image awareness.

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