

## BODY IMAGE PERCEPTIONS AND WEIGHT LOSS BEHAVIOR AMONG YOUNG ADULTS

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### ABSTRACT

**Introduction:** University students tend to be more concerned on their body image and body shape concerns because of the surrounding. The present study was conducted among undergraduate students at the International Islamic University Malaysia (IIUM) Kuantan with the aim to identify the body image perceptions, body shape concerns and weight loss behaviors. **Methods:** A total of 135 participants comprising of 50 male and 85 female undergraduate students were recruited from six Kulliyah in IIUM Kuantan. The Contour Drawing Rating Scale, Body Shape Questionnaire (BSQ-16) and Weight Loss Behavior Scales (WLBS) were used as assessment tools. **Results:** The result showed 73.3% of students had normal BMI status, 6.7% were underweight and the remaining were overweight or obese. More than 50% of the participants were somewhat concern about their body shape. In addition, more than half of the participants (54.8%) were dissatisfied with their body image and had desired to be thinner. The most preferred weight loss behavior among the participants was exercise compared to other weight loss approaches. The result shows that concerns to dieting and weight have a significant association with BMI status. Meanwhile, body shape concerns are found to be significantly associated with concern to dieting and weight, as well as avoidance of fatty and sweet foods. However, there was no association between body shape concerns and exercise. **Conclusion:** Based on the findings, more tailored intervention programs that lead to healthy body image and weight loss behavior are needed among young adults.

**KEYWORDS:** Body, image, perception, Shape, Body mass index, Weight, Loss

### INTRODUCTION

Young adults are overtly concern about physical appearance and aesthetic value of oneself. They are rather easily being distracted with their own perception of their body image and wanted to be thin like an international model. Body image perception is very subjective, and it is somehow related to culture, career and value. Body image can be defined as the way people think or judge about their own bodies (Khor, Cobiac & Skrzypiec, 2009) that include perceptions, thoughts, and behaviors related to one's appearance (Boltan et al., 2010). Based on this definition, body image includes multidimensional aspects that represent individual's overall self-image.

In addition, people tend to adopt thin ideal as a standard acceptable physical appearance for all. Particularly, young adults may have thin-ideal internalization of public figures or celebrities, who frequently appear in the social media and media mass. For example, an ideal body figures for male are toughness and muscularity while for female is thinness and hourglass shape (Vilhjalmsson, Kristjansdottir & Ward, 2012). Failure to have such body ideals may result in dissatisfaction and being preoccupied with body image. Body image dissatisfaction can be identified when individuals have body weight misperception (Lim & Wang, 2013). For example, individuals who are having an average body shape and weight may feel unhappy with the current weight and wanted to pursuit thinness because they feel that they have an excessive body fat.

University students are identified as one of the population affected by body image related issues, including body image dissatisfaction. For example, it was found that more than half of the females preferred their ideal figure to be underweight, whereas about 30% males chose an overweight figure as their ideal model (Kuan, Ho, Shuhaili, Siti & Gudum, 2011). This finding shows that females were generally more concerned about body weight and body shape. In another study, among subjects who were categorized as underweight, majority of them 72.7% perceived themselves as underweight, 24.2% subjects perceived themselves having normal weight, whereas 3.0% as overweight and no one perceived themselves as being obese (Yeng & Sedek, 2012). The researchers also found that 62% of the participants were dissatisfied with their body shape, particularly females were found to have higher body dissatisfaction and intended to become thinner than males.

Most of the previous studies have examined the relationship between body mass index (BMI) and body weight perception among young adults (e.g: Cilliers, Senekal & Kunneke, 2006; Jaworowska & Bazylak, 2009). However in Malaysia, very few research exists regarding the relationship between body image perceptions and weight loss behaviors. Previous studies suggested that body image and body shape concerns have a significant influence on weight loss behaviors practice and play a significant role in weight management (Rahman & Berenson, 2010; Wharton, Adams & Hampl, 2008). Kuan et al. (2011) found that Universiti Malaysia Sarawak (UNIMAS) students engaged in dieting more frequently, had self-induced vomiting, and used laxatives and exercise as their weight-loss strategies. These findings portrayed that young adults are at risk to be involved in unhealthy weight loss behaviors. Therefore, the present study aimed to identify the BMI, body image perceptions, body shape concerns and weight loss behavior among the International Islamic University (IIUM) undergraduate students in Kuantan.

## **MATERIALS AND METHODS**

A total number of 135 male and female participants have participated in this cross-sectional study. They were recruited using convenience sampling from early April until September 2016. The participants were from six different Kulliyahs in IIUM Kuantan which include the Kulliyah of Allied Health Sciences (KAHS), Kulliyah of Pharmacy (KOP), Kulliyah of Medicine (KOM), Kulliyah of Nursing (KON), Kulliyah of Dentistry (KOD) and Kulliyah of Sciences (KOS).

### **Ethical Approval**

Prior to data collection, approval to conduct the study has been obtained from the Kulliyah Postgraduate and Research Committee (KPGRC) of KAHS, IIUM Kuantan. In addition, consent was also obtained from the participants at the beginning of data collection

## Measures

A set of questionnaires were distributed among undergraduate students in IIUM Kuantan. The questionnaires comprised of four sections including demographic data, body image perceptions, body shape concerns (BSQ-16) and weight loss behaviors (WLBS). The questionnaires were prepared in English. The following sections were included in the questionnaires:

### *Demographic and Anthropometric Data*

Demographic data includes age, gender, marital and health status, year of education, course, and anthropometric data includes height and weights were assessed in the questionnaires. All participants were measured for height (in meters) and weight (in kilograms). Body weight was taken using an analog weighing scale (DEXA) with one decimal place. Subjects were weighed bare-footed in order to obtain accurate readings. Height was measured to the nearest 0.01 meter (m) using a portable stadiometer (Seca 213). The participants' Body Mass Index (BMI) was calculated and classified based on formulation outlined by World Health Organization, WHO (1995). The BMI category was initially divided into four categories which were underweight, normal, overweight and obese. Overweight and obese were arranged in a single category and considered as unhealthy excess body weight.

### *Body Image Perceptions*

The male and female versions of the Contour Drawing Rating Scale (Thompson & Gray, 1995) were used in order to assess participants' perceptions of body images and body satisfaction. Participants were asked to indicate which picture (range from 1 = *very thin* to 9 = *very overweight*) they thought looked like them and which picture they would like to look like. These scores were used in analyses to indicate participants' own and desired bodies. Body satisfaction was calculated using discrepancy scores: the "figure they would like to look like" minus the "figure that most looked like them." Satisfaction scores ranged from -8 to +8. Positive scores indicated that participants were dissatisfied and wanted to be heavier, zero indicated satisfaction, and negative scores indicated that participants were dissatisfied and wanted to be thinner.

### *Body Shape Concerns*

For body shape concerns, the questionnaire was adapted from Body Shape Questionnaire (BSQ) developed by Cooper, Taylor, Cooper, and Fairburn (1987) and scored using Likert scale (never, rarely, sometimes, often, very often, always). Numerous researchers have used the tool to establish body shape satisfaction and perception of body size. In this study, body shape questionnaires (BSQ-16) were used instead of full BSQ-34 questionnaires. It is currently reasonable to convert those cutting points on the full BSQ to get the cutting points for the 16 item versions by multiplying the BSQ cutting points by 16/34. That gives these cutting points for the 16 item short forms. Generally, a higher score indicates that participants were very concern with their current body shapes whereas a lower score means that participants were not concern about their body shapes (Cooper et al., 1987). The sum of the response generated a score which was interpreted as below:

**Weight Loss Behaviour**

A modified version of weight loss behavior questionnaires was used in this study. The original questionnaire was adapted from weight loss behavior scale (WLBS; Smith, Williamson, Womble, Johnson, & Burke, 2000). The original WLBS consist of 35-item questionnaire designed to be a brief measure of changes in eating and exercise habits over the course of weight loss treatment. The modified version of WLBS used in this present study consisted of three subscales measuring concern for dieting and weight, exercise, and avoidance of fattening foods and sweets. For the scoring, a higher score indicates that the students were prone to engage in weight loss behavior whereas a lower score shows the students were less likely to take action for weight loss.

Score of equivalent cutting points for 16 item short forms	Indications
Less than 38	No concern with shape
38 to 51	Mild concern with shape
52 to 66	Moderate concern with shape
Over 66	Very concern with shape

**RESULTS**

**Demographic Characteristics of the Participants**

Table 1 shows the demographic data of the participants. One hundred and thirty five students in IIUM Kuantan campus participated in this study with a response rate of 97.8%. More than half of the participants were females (63%, n=85) and male participants made up of 37% (n= 50). The mean age was 22.3 years old (SD= 1.45). According to BMI classification, 73.3% (n=99) of participants were in normal BMI category followed by 20% (n=27) as overweight or obese.

**Table 1** Descriptive analysis of demographic characteristics of the participants

Characteristics	n (%)	Mean (±SD)
Gender		
Male	50(37)	
Females	85(63)	
Age (year)		22.3 (1.45)
18	1(0.7)	
19	3(2.2)	
20	20(14.8)	
21	11(8.1)	
22	27(20)	
23	52(38.5)	
24	17(12.6)	

25	4(3)	
BMI Classification		22.3 (3.5) kg/m <sup>2</sup>
Underweight	9(6.7)	
Normal	99(73.3)	
Overweight/Obese	27(20)	

**Body Shape Concerns and Body Image Perceptions**

Based on Table 2, more than 50% of the participants were somewhat concern about their body shape. Specifically, 27.4% reported mild concern followed by 16.3% with moderate concern and 11.1% were really concern with their current body shape.

**Table 2** Body shape concerns

Body shape concerns	n (%)
No concern with body shape (<38)	61(45.2)
Mild concern of body shape (38 to 51)	37(27.4)
Moderate concern of body shape (52 to 66)	22(16.3)
Very concern with body shape (>66)	15(11.1)

While for body image perceptions using figure rating scale, more than half of the participants (54.8%) were dissatisfied with their body images and with intention to be thinner. There were 23% of them who were also dissatisfied with their current body images but with intention to become heavier. However, only 22.2% were satisfied with their current body images (Table 3).

**Table 3** Body image perceptions

Body image perceptions	n (%)
Dissatisfied and want to be heavier	31(23.0)
Satisfied with body image	30(22.2)
Dissatisfied and want to be thinner	74(54.8)

**Weight Loss Behavior Practices**

According to Table 4, the participants were more likely to engage more in exercise (3.75 ± 0.682) followed by dieting (2.83 ± 0.846) and avoidance of fattening and sweet foods (2.52 ± 0.645).

**Table 4** Weight loss behaviors practiced by the participants

Weight loss behaviors	Mean ( $\pm$ SD)
Concern with dieting and weight	2.83(0.846)
Exercise	3.75(0.682)
Avoidance of fattening and sweet foods	2.52(0.645)

Correlation between Body Image Perceptions and Weight Loss Behavior Practices, BMI and Weight Loss Behaviors and Body Shape Concern and Weight Loss Behaviors

The Table 5 shows that there was a significant association between body image perceptions and weight loss behavior practice of avoidance of fattening and sweet foods. The results revealed negative correlation between the two variables ( $r = -0.404$ ,  $p$ -value = 0.001). However, this study found that there was no association between body image perceptions with concern with dieting and weight and exercise.

**Table 5** The relationship of body image perceptions, BMI and body shape concerns with weight loss behaviors

Characteristics	p-value	Correlation, $r$
Body image perceptions and concern with dieting and weight	0.001*	-0.404
Body image perceptions and exercise	0.373	-0.077
Body image perceptions and avoidance of fattening and sweet foods	0.121	-0.134
BMI and concern with dieting and weight	0.012*	0.215
BMI and exercise	0.121	0.134
BMI and avoidance of fattening and sweet foods	0.088	0.147
Body shape concerns and concern with dieting and weight	0.001*	0.522
Body shape concerns and exercise	0.729	-0.030
Body shape concerns and avoidance of fattening and sweet foods	0.001*	0.299

\* $P < 0.05$ , significantly different (2-tailed)

These findings also indicated that there was a weak significant association between BMI status and concern with dieting and weight ( $p = 0.012$ ,  $r = 0.215$ ). The results also revealed that there was no association between BMI status with exercise and avoidance of fattening and sweet foods. In addition, Table 6 also demonstrated a significant association between body shape concerns with concern with dieting and weight. ( $p = 0.001$ ,  $r = 0.522$ ) and avoidance of fattening and sweet foods. ( $p = 0.001$ ,  $r = 0.299$ ).

## DISCUSSION

The aim of this study was to examine the body image perceptions, body shape concerns, and weight loss behaviors among undergraduate students. Generally, the participants have a normal BMI

range and approaching ideal BMI range based on WHO recommendation. This finding is consistent with the previous study by Kuan et al. (2011) that reported over half of the respondents (52.3%) had BMI within normal range. In addition, the result that some of the participants satisfied with their body image and did not intend to change their current body image is in line with the study by Jaworowska and Bazylak (2009). They found that 34.4% of female and 37.1% male students were satisfied with their current weight. However, majority of the respondents 77.8% were dissatisfied with their body images. Specifically, respondents who were dissatisfied and intended to become thinner were higher than subjects who were dissatisfied and intended to be fatter. This may be explained by the common desire to have a perfect body and being thin among most women. Moreover, being thin is equally rated with beauty, achievement, and success (Jaworowska & Bazylak, 2009).

In relation to body shape concerns, the majority of the participants reported some degree of concerns on their body shape. This result is similar with another study reported by Yeng and Sedek (2012) among university students. A possible explanation for this could be explained by the belief that thinness may increase social acceptance from others (Mousa et al., 2010) and to gain more self-confidence (Khor et al., 2009). However, this finding should be taken into consideration because Chin and Mohd Nasir (2009) suggested that highly body shape concern may reduce self-esteem and increase the risk of eating disorders. On the other hand, most of participants engaged in exercise as an approach to reduce weight. This finding was in agreement with previous study in which exercise is identified to be one of the most common weight loss strategies among Malaysian adolescents (Zalilah, Khor, Mirnalini, Norimah & Ang, 2006). This finding suggests that university students are more likely to perform physical activity such as exercise than practicing healthy eating due to financial constraint as a student.

This present study also found body image perceptions and body concerns are associated with dieting. These findings were parallel with previous study conducted by Zaborskis, Petronyte, Sumskas, Kuzman and Iannotti (2008). According to Cash, Phillips, Santos and Hrabosky (2004), people are more likely to engage in weight loss behaviors when they have some degree of dissatisfaction towards their body. In addition, the result also revealed that greater BMI status may influence the participants to practice dieting behaviors. It was suggested by previous studies that people with high BMI status have greater intention to lose weight through any form of weight loss behavior, including dieting (Lenhart, Daly & Eichen, 2011; Zainuddin et al., 2014) to be healthy (Khor et al., 2009). Furthermore, the result also showed that participants who have high body shape concerns preferred to avoid fatty and sweets foods. This is because people might believe that fat-rich and sugar-rich foods are associated with weight gain (Drewnowski, & Roig, 2010) and thus avoiding those foods may help them to get the desirable body shape.

## CONCLUSION

In conclusion, the study reveals that although the students have a normal BMI status, they are however experiencing body dissatisfaction and were somewhat concerned about their current body shape and size. In addition, they were more likely to be involved in engaging in exercise as their weight loss practices compared to dieting behaviors. Based on these findings, the present study suggested that some factors related to body image perceptions and body shape concerns should be included in the intervention programs to prevent and overcome body image related issues among young adults. This is important in order to build up a strong and healthy nation in the future. The present study also acknowledged several limitations that should be taken into consideration for future research. Firstly, the small sample size of the study limits the statistical power results. Therefore, in future study larger sample size is needed in order to generalize the results to general populations. This cross-sectional study is also lacking in the ability to show the cause and effect relationships. For example, the reasons behind the population's perceptions and practice on the current weight loss behaviors were not studied. Thus future studies can include these

elements to investigate the causes and the reason behind the practices. Moreover, future studies on gender differences would be an interesting topic to be further explored.

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