

THE RELATIONSHIP BETWEEN BODY DISSATISFACTION AND EATING DISORDER SYMPTOMS AMONG FEMALE STUDENTS IN A HIGHER EDUCATION

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ABSTRACT

It is common for females to be conscious of their bodies, but the abnormal evaluation regarding their bodies can turn into body dissatisfaction. The problem commonly arises from the discrepancy feeling with an individual's weight and shape, and it has become a prevalent issue in the recent decades. Given the constant pressure in meeting the society's unrealistic beauty standards, particularly on females' body shape and weight, previous findings found them to be closely related to changes of eating behaviour that may result in eating disorder symptoms, particularly among females undergoing the transition of young adulthood. However, the relationship between body dissatisfaction and eating disorders among young adult females in Malaysia is still understudied compared to the studies of its correlation conducted overseas. Hence, this quantitative correlational study aims to investigate the relationship between body dissatisfaction and eating disorder symptoms among young adult females, particularly undergraduate females aged 18 to 26 years old in a higher education institution through the convenient

sampling method that has been participated by 372 female students. The instruments used were the Body Shape Questionnaire (BSQ-34) and Eating Attitude Test (EAT-26). Based on the correlation results of this study, there is a significant relationship between body dissatisfaction and eating disorder symptoms found, despite the low correlation. In conclusion, it is recommendable for future researchers to expand the sample size to other program levels in the higher institutions in order to provide more meaningful data.

Keywords: body dissatisfaction, eating disorder symptoms, body weight and shape, female students

INTRODUCTION

Naturally, females are raised to live up to unrealistic beauty standards, particularly on body weight and shape put upon them by the society. According to Groesz et al. (2002), these unrealistic and unattainable beauty standards expected females to appear in a certain way and own a certain body type that revolves around unrealistic facial features, perfect and fair skin, slim waists, larger breasts, and long and slender legs. As images of female models being close to perfection and almost flawlessly-like are plastered all over the media, it had placed a great burden on females nowadays as they are constantly reminded of the idea of thinness (Mingoia et al., 2017). Thus, with the ongoing distress and burden to fit into the beauty standards, specifically female students categorised under young adult females aged between 18 and 26 years old, as marked by Bonnie et al. (2015) at this stage are challenging.

Though it is common for females at this age to be conscious of their bodies, the abnormal evaluation regarding their bodies, as found by Vartanian (2012), could turn into body dissatisfaction that arises from the discrepancy feeling with an individual's weight and shape. Also seen as a prevalent concern in the recent decades, body dissatisfaction was found to remain over time and increase as one go through the transition of young adulthood

(Bucchianeri et al., 2013).

According to Kilpela et al. (2015), the transition of young adulthood among females includes a shift in torso body fat distribution and adipose (fat) tissue increases. They also mentioned changes in color, firmness and elasticity of their skin followed by weight and shape changes. These factors contributed to the development of body dissatisfaction in young adult females. Sari et al. (2022) stated that young adult females' dissatisfaction with their bodies was due to the transition to adulthood, as they become more sensitive to the pressure of meeting the high standards of appearance.

Thus, the social atmosphere of these female students has fostered a greater sensitivity of social norms regarding appearance and attractiveness, which raises their risk of pursuing undesirable body-change methods (Grossbard et al., 2011). Undeniably, the negative perceptions about a person's body might lead to the development of self-destructive behaviours, where these behaviours are often surrounded by food intake changes as an attempt to control weight, which provoke the development of eating disorders (Silva et al., 2020).

Eating disorders can be recognised as serious mental health issues that can lead to actions that are harmful to one's health. Prolonged disruption of eating or eating-related behaviour can lead to a modified food intake or ingestion, and negatively impact physical or psychosocial functioning of a person characterised with disruptions in body weight and shape (Castellini et al., 2014). To date, 14% of Malaysian university students are at a heightened risk of developing the disorder (S. N. Chua et al., 2022).

According to Eisenberg et al. (2011), females are more affected than males. Moreover, young adult females with excessive concern about their body weight and shape are often linked to changes in eating behaviours. Heiman and Olenik-Shemesh (2019) found that they had a tight dietary rule that is pressured by the drive for thinness. This was done on top of other health-compromising weight-reduction techniques such as

dieting, dysfunctional exercising, purging, laxative abuse and more that are closely related to eating disturbances (Neumark-Sztainer et al., 2018). These dietary practices may also result in the emergence of serious eating disorders such as anorexia nervosa and bulimia nervosa (Gonsalves et al., 2014). Despite eating disturbances being seen as a prevalent health problem, they primarily affect young females, which can be manifested as full-blown eating disorders (Hilbert et al., 2012).

Furthermore, it was proposed that the depiction of ‘thin ideal’ among females had significantly resulted in the association between body dissatisfaction and eating disorder symptoms (Buote et al., 2011; Kelly et al., 2014). Aligned with earlier studies on the issue published by Klemchuk et al. (1990), it was also found that the tie between body dissatisfaction and eating disorders was becoming more prevalent, particularly among female undergraduate students on campus and the correlation was expected to elevate across the years. However, the relationship between body dissatisfaction and eating disorders among young adult female graduates who aged 18 to 26 years old in Malaysia is still understudied, which concurred with the findings of Tan and Yew (2012).

Despite the numerous studies conducted overseas, empirical studies on the prevalence of this issue in Malaysia remain limited. Hence, this study aims to learn more about the relationship between body dissatisfaction and eating disorder symptoms among female students in a higher education institution, as the findings derived from this study could provide an insight to the issues discussed, particularly in a local university setting.

PURPOSE OF THE STUDY

The intensity of physical and developmental changes followed by the constant pressure to meet the standardised beauty ideals could contribute to negative thoughts and feelings about one’s body among young adult, specifically female students in high education institutions that attempt to engage in destructive eating behaviour

in order to control weight and shape. This attempt may lead to the onset of eating disorder symptomatology. Thus, this paper was designed with the aim to determine the level of body dissatisfaction and the level of eating disorder symptoms, and investigate the association between body dissatisfaction and eating disorder symptoms among female students in a higher education institution.

LITERATURE REVIEW

Body Dissatisfaction

Seen as a phenomenon that is often developed in late childhood and adolescence stage, body dissatisfaction has increased in prevalence on a worldwide level (Alharballeh & Dodeen, 2021). According to Cash and Szymanski (1995), body dissatisfaction refers to a person's negative thoughts and feeling that often circulated around their body size, weight, shape and attractiveness. Body dissatisfaction is highly associated with the thin-ideal internalisation that children as young as four and adults regularly find slender female bodies to be more beautiful and attractive, rather than 'normal' bodies (Saunders & Frazier, 2017). Throughout the years, many studies have been conducted on the widespread of body dissatisfaction among females, specifically in regards with their body weight and shape that remained stable across age (Runfola et al., 2013; Tiggemann & Zaccardo, 2015). According to a study published by Buchanan et al. (2013), it was found that females had reported a high level of concern regarding their weight and shape, compared to males. Additionally, based on their findings of the study, Buchanan et al. (2013) also found that the issues related to the concern about body weight and shape have resulted in the spread of body dissatisfaction, as well as eating pathology symptoms, dietary restrictions, excessive worry on eating and binge eating.

A study by Japil et al. (2017) with a sample of 181 female adolescence aged 16 years old recorded a high significance level of body dissatisfaction among the respondents. Based on the data gained, it was suggested that the intensifying physical changes

throughout the stage as well as development changes have contributed to dissatisfaction with their bodies (Japil et al., 2017). Moving to another group stage of ages, a study conducted by Quittkat et al. (2019) revealed that the high levels of body dissatisfaction among females, involving 942 of sample aged 16 years old and above, have shown that they are most particular in regards of their lower body area.

Additionally, their research also discovered that females would spend more time for their appearance, regardless of their ages (Quittkat et al., 2019). Moreover, female young adults aged between 18 and 25 years old are also found to be highly dissatisfied with their body, specifically in terms of weight and shape (Chng & Fassnacht, 2016). In short, it is consistent with a study published by Bucchianeri et al. (2013), where it was found that body dissatisfaction in females has increased between middle and high school, and it elevated even more during the transition to young adulthood.

In relation to the emergence of body dissatisfaction, particularly among female students, a study by Latiff et al. (2018) has supported the study's finding by Japil et al. (2017), where it was found that the level of body dissatisfaction involving female adolescence students aged between 11 and 12 years old in a randomly selected primary schools is also a concern. This is because body dissatisfaction among them is recorded at a high rate of 66.1%. The finding of study conducted by Latiff et al. (2018) indicated that those who are overweight and obese have a higher level of body dissatisfaction compared to the respondents who are of normal weight.

This is consistent with Balluck et al. (2016) study results with a sample of 104 female adolescences, where it was found that those who are overweight desire a thinner body, which is indicated as dissatisfaction with their bodies with a percentage of 90.9. Another recent study conducted by Medina-Gómez et al. (2019), involving female students in University of Burgos, Spain, aged 17 years old and above, also had shown a significant level of dissatisfaction with their bodies. Through research that have been

conducted, body dissatisfaction is shown to affect females regardless of their ages. Majority of the results indicated that females with high body dissatisfaction are concerned with their weight and shape, which results in a desire for thinner body.

Besides, studies in Malaysia conducted among females in higher education institutions also found a significant proportion of body dissatisfaction level, concerning their body weight and shape (Hashim et al., 2022; K. et al., 2016). According to Kamaria et al. (2016), majority of the female students aged 18 to 25 years old had a high desire for a thinner body with a percentage of 48.1. It was found that the traditional belief of slimness had posed a great pressure on the respondents to lose weight (K. et al., 2016). Moreover, results based on a study by Hashim et al. (2022) also had shown that female students were greatly concerned with their body, as it indicated that 56.3% were dissatisfied with their body, particularly about shapes, which suggested that they were affected by interaction regarding their physical appearance without them realising. This is supported with a study finding by Jiotso et al. (2021), as females may experience bad sentiments through the interaction over other people's physical that influenced their negative body image.

In relation to that, Vartanian and Dey (2013), through their study conducted in a public university in Australia, found that body dissatisfaction recorded among undergraduate female students was also high, where the results gained implied that the level of body dissatisfaction may be encouraged by the constant comparison to one's body. In summary, body dissatisfaction has been studied by previous researchers and majority of the findings have recorded that the level of body dissatisfaction among female students in higher education institution are a concern due to the high rates recorded, which brought to the need of further investigation of this issue, particularly in a local setting.

Eating Disorder Symptoms

According to American Psychiatric Association (2013), eating disorders are distinguished by a chronic disturbance of eating or eating related behaviour that results in a changed food intake and

absorption that severely damages physical health or psychosocial wellbeing of a person. A study conducted by Strumia (2013) has described eating disorders as the psychiatric diseases characterised by multiple organ dysfunctions as a result of malnutrition, bingeing, purging and excessive compulsive activity, which lead to the development of serious and life-threatening medical complications.

Eating disorders have been classified into different types, where the criteria continue to evolve over time and followed with another revised edition through the recent classification of eating disorder, as described through the publishment of the Fifth Edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (Galmiche et al., 2019). Under the revised category of 'Feeding and Eating Disorders', only anorexia nervosa, bulimia nervosa and binge eating disorder are recognised as the main types of the disorders, while *other specified feeding or eating disorder* and *unspecified feeding or eating disorder* are the residual categories of the disorders (American Psychiatric Association, 2013; Machado et al., 2013).

The widespread of eating disorders, as stated by Garner et al. (1983), were no longer uncommon ever since decades ago, with a notably high prevalence rate among females. Despite the lack of historical data on eating disorders and its case descriptions to allow certain diagnosis, Bynum (1988) has claimed that self-starvation, and self-induced vomiting combined with asceticism and religious preoccupation are the leading symptoms of the disorder during the Middle Ages. In addition, Striegel-Moore (1997) has described that eating disorders among females are often regarding unhealthy behaviours that include restrictive dieting, overeating, and the adoption of dangerous weight-control practice such as vomiting.

Undeniably, Treasure et al. (2010) further stated that these unhealthy behaviours are also recognised as the psychopathology symptoms of eating disorders, particularly driven by disturbances with body image that are caused by an overly concern on shape and weight. The over-evaluation regarding weight and shape that

is common among females, as stated by Coelho et al. (2012), is considered one of the primary elements that sustains the eating disorder pathology in the population, which is aligned with the basis of the transdiagnostic cognitive behavioural model developed by Fairburn et al. (2003).

Numerous studies have been carried out to signify congruous findings in relation to the level of eating disorder symptoms. According to Zam et al. (2018), eating disorders affect everyone regardless of their gender, age, status and cultural backgrounds. Moreover, the start of university for people transitioning into the young adulthood stage also may coincides with the development of eating disorders, due to the ongoing physical, psychological and social development that results in the emergence of eating disorders among them (Herpertz-Dahlmann et al., 2015; Potterton et al., 2020).

The prevalence of eating disorder also appeared to be more common in females, particularly female college students compared to males (Lipson & Sonnevile, 2017), which can be explained by earlier findings on the issues found that females tend to practise dieting to manage their weight, which is one of the characteristics of anorexia nervosa and bulimia nervosa development (Hsu, 1989). Anorexia and bulimia nervosa are also reported to be strongly correlated, which are common among young female students that have an excessive worrying over their weight and appearance (Vila-Martí et al., 2021)

Further study published by Jáuregui Lobera (2016) with a sample of 57 female dancers aged 18 to 32 years old, through the application of Eating Attitude Test (EAT-26) questionnaire, has indicated a high-level risk of suffering from eating disorders among them. Another study involving unhealthy weight control practice conducted by Hymowitz et al. (2017) among 598 undergraduate students aged between 18 and 24 years old have reported that 26.4% of them had engaged in harmful weight-controlling practices such as vomiting, fasting, enormous exercise, laxatives or usage of diuretics at least once in a week, which are high symptoms of developing the disorder. Besides,

based on a study conducted by Bankoff et al. (2013), 20.7% of the female respondents in university had engaged in compensatory weight-control behaviours during the previous year. Reis et al. (2014) conducted study on a sample of 154 female students in a private university located at Montes Claros, Brazil, and found a high prevalence of being at risk of developing eating disorders recorded at 76.5%, which is due to poor self-perceptions on body image, followed by dietary habits, skipping breakfast and interval snacking, which are linked to the increasing risk factor of developing the disorders.

Moreover, a study published by Iyer and Shriraam (2021) also had shown that a high proportion of students in a Medical College Hospital, South India, have a high risk of developing eating disorders. One of the risk factors identified in the study that has shown a significant link to eating disorders is peer pressure that has brought to compensatory behaviour, where it can be associated with interpersonal environment of the transdiagnostic theory of eating disorders due to the concern on eating caused by their surroundings (Fairburn et al., 2003; Iyer & Shriraam, 2021).

Ultimately, eating disorders have been studied by previous researchers and majority of the findings found that eating disorder symptoms among female students can be identified as a huge concern. Given the concern and its lacking data studied in a local study, specifically female students in universities, as stated by Nor et al. (2019), have brought the urgency of gathering comprehensive data in the country.

Relationship between Body Dissatisfaction and Eating Disorder Symptoms

The negative implications of body dissatisfaction are also marked with the association of eating disorder symptoms in females (Quick et al., 2013). It is also found that the depiction of *thin ideal* has significantly resulted in the association between body dissatisfaction and eating disorder symptoms (Buote et al., 2011; Kelly et al., 2014). Following a study's finding by Goldschmidt et al. (2018) involving a sample of females aged between 6 and 18

years old, it is found that symptoms of concern on appearance, particularly in dissatisfaction with weight and shape, are strongly related to eating disorder symptoms.

Another study conducted by Rosewall et al. (2018) involving a sample of 231 adolescent girls aged 14 to 18 years old chosen from 3 public high schools in Christchurch, New Zealand, also had found that the relationship between body dissatisfaction and eating pathology is stronger among them. Based on the findings gathered, Rosewall et al. (2018) stated that perfectionist girls that are dissatisfied with their bodies may be more inclined at risking the development of an eating disorder through the participation in pathological eating behaviours.

Furthermore, Chen et al. (2021) through the publishment of their studies involving a sample of 365 female students in a metropolitan city located in Central China had found that body dissatisfaction is directly correlated with the presence of eating disorder symptoms. According to Chen et al. (2021), the impact of westernisation and modernisation has contributed to the linkage of body dissatisfaction and eating disorder symptoms found in their studies. This is consistent with a study by Pike and Dunne (2015), where the *thin body ideal* and Western ideas of body indicator that are transmitted to non-Western civilisations through the increased access to the West, has resulted in a growing body dissatisfaction, dieting as well as eating disorders.

Apart from changes in eating habits, extreme exercises that were driven by dissatisfaction with one's body and shape also are highly associated with eating disorder symptoms (Tan & Yew, 2012). Besides that, Castellano et al. (2021) had found a positive relationship between body dissatisfaction and eating attitudes that are linked with eating disorder symptoms, based on the study that has been conducted involving 112 female fashion models aged between 15 and 24 years old. Based on their findings, Castellano et al. (2021) stated that the association between body dissatisfaction and eating disorder symptoms among the models are also mediated by the level of stress that have influenced them to engage in bulimic-related attitudes, as well as the constant

exposure of thin women has been indicated as the prevalence of body dissatisfaction level being high.

The study's findings by Nomura et al. (2021) is also in consistent with the concept of the discrepancy theory (Higgins, 1989), as described by Vartanian (2012) through his study, he has revealed that discrepancy with oneself is a crucial element in body image, where it often leads to one's dissatisfaction with their own bodies, which also results in appearance-related behaviour such as limited dietary intake.

Moving on to the local's findings on the issues discussed, a study by Nor et al. (2019) that is conducted in University of Malaysia Terengganu involving a sample of 218 undergraduate female students aged between 19 and 25 years old have revealed that the relationship between body dissatisfaction and eating disorder symptoms are highly correlated. The study findings suggested that higher levels of body dissatisfaction among the respondents involved are linked to severe signs of eating disorder symptoms (Nor et al., 2019). Additionally, another study conducted by Sinnappan et al. (2021) involving young adult women aged between 18 and 39 years old from Kuala Lumpur has shown that high level of body dissatisfaction are due to high exposure to slimming advertisements, which has influenced them to exhibit unhealthy eating behaviour or purging habits.

In conclusion, earlier research has studied the connection between eating disorders and body dissatisfaction. The publishment of their studies have proven the high association between body dissatisfaction and eating disorder symptoms that appeared to be affecting females, regardless of their ages. To date, Chen et al. (2021) stated that the connection between body dissatisfaction and eating disorder symptoms is still far from being evident, despite numerous research conducted on the topic. Additionally, to the researcher's knowledge, such approaches have failed to address the relationship between these variables among young adult females, particularly in Malaysian universities. Hence, the researcher will aim to determine the relationship between body dissatisfaction and eating disorder

symptoms among female students in a higher education institution in the country.

Hypothesis 1: There is a significant relationship between body dissatisfaction and eating disorder symptoms among female students in a higher education institution.

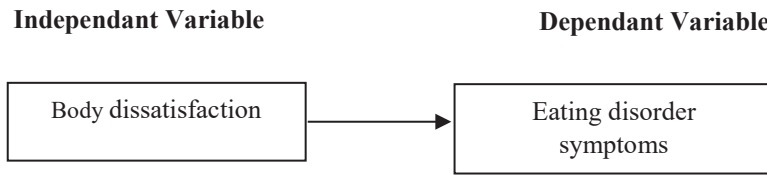


Figure 2.1: Framework of the study

As presented in Figure 2.1 above, the independent variable of this study is body dissatisfaction, while the dependant variable is eating disorder symptoms. The framework model shown is adapted from the self-discrepancy theory developed by Higgins (1987), where it is reported through previous studies that discrepancy between a person’s body and ideal body can negatively results in dissatisfaction with one’s body and significantly related to eating pathology behaviours such as dieting, bulimia, food preoccupation and oral control that contribute to the development of eating disorder symptoms (Vartanian, 2012).

METHODOLOGY

Research Design

The research design for this study is quantitative approach, which is a descriptive and correlational study. It aids in providing direction for the study to measure the relationship between body dissatisfaction and eating disorder symptoms among female students in a higher education institution in order to meet the objectives of this study.

Population and Sampling

The sample of the targeted respondents for this study will be young adult females, specifically undergraduate students in Universiti Teknologi Malaysia aged between 18 and 26 years old. The sample was selected through a non-probability sampling method, specifically convenience sampling that allows the researcher to obtain samples depending on their availability and accessibility. The criteria inclusion of this is not only based on the convenience, because females in this age range were found to become increasingly dissatisfied with their body (Bucchianeri et al., 2013). Questionnaire used in this study was distributed through online platforms such as emails, Telegram and WhatsApp. In total, 372 participants took part in the study.

Measures

- **Body Shape Questionnaire (BSQ-34)**

The Body Shape Questionnaire (BSQ-34) developed by Cooper et al. (1987) is a self-assessment questionnaire that is used to determine the level of dissatisfaction regarding one's body in this study, which also is recognised as the independent variable of this study. There are 34 items included in the questionnaire, which are related to people's perception towards their own body weight and shape over the past four weeks. Each item is rated on a scale of 1 to 6, with 1 denoting 'never' and 6 denoting 'always'. The total of 34 items, ranging from 34 to 204, makes up the overall score. The BSQ-34 is shown to have a high internal consistency reliability with Cronbach's Alpha score of 0.97, which indicates the significant value of the instrument reliability (Pook et al., 2008).

- **Eating Attitude Test (EAT-26)**

The Eating Attitude Test (EAT-26) was developed by Garner et al. (1982), where it assesses the level of eating disorder symptoms, the dependent variable of this study. It contains 26 items on a self-report scale that assesses unusual eating patterns and attitudes. The 26 items version was constructed based on the 40 items version of the Eating Attitude Test (EAT-40) developed by Garner and Garfinkel in 1979. Each item is rated through a six-point likert scale ranged from 'always' to 'never'. The level of eating disorder symptoms ranged between 0 and 78 will be classified as low and

high. However, Garner et al. (1982) claimed that its results do not offer a diagnosis, rather they show the presence of symptoms that are consistent with a possible eating disorder. Additionally, EAT-26 is shown to have a high internal consistency reliability with Cronbach's Alpha score of 0.85 (Rivas et al., 2010).

Data Analysis

- **Descriptive Analysis**

In Section A, the demographic information of respondents will be analysed using frequency and percentage. The items included in this section are age, race, year of the study, height and weight. In addition to height and weight, respondents' Body Mass Index (BMI) is also measured. In Section B, the level of body dissatisfaction will be determined by the score gained. The score is ranged between 34 and 204 points, classified as no concern with shape, mild concern with shape, moderate concern with shape and marked concern with shape as the dissatisfaction indicator level. Meanwhile, in Section C, the level of eating disorder symptoms is ranged between 0 and 78, and was classified as low and high, which will also be determined by the cut-off score calculated.

- **Inferential Analysis**

In Pearson Correlation was employed to test the significance of the relationship between body dissatisfaction and eating disorder symptoms among female students in a higher education institution. According to Gregory (2016), the correlation coefficient by the symbolisation of the letter r is recognised as the indicator level of the linear relationship obtained by an individual between two sets of score that can be expressed as positive or negative, where in this study, it refers to the magnitude of body dissatisfaction and eating disorder symptoms.

- **Pilot Study**

Before the actual study took place, approximately 29 female students from the institution aged between 18 and 26 years old, categorised as young adults, were selected randomly and both of the instruments analysed shown an excellent reliability results, in which they have Cronbach's Alpha value of 0.97 and 0.91, respectively. As a result, both instruments were acceptable and

reliable, and can be used in this study.

- **Ethical Consideration**

Throughout the data collection process, an informed consent was attached in the questionnaire, where the participants were required to give their consents before they start to fill in the questionnaire through the Google Form provided. The participants were given the freedom to withdraw at any time from answering the questionnaire as long as they have not submitted the response. Additionally, the responses gathered will be kept as confidential and utilised solely for the study. The questionnaire did also not include any of their personal details such as name or address in order to respect their privacy.

RESEARCH FINDINGS

Table 2.1: Distribution of respondents based on age group

Age group	Frequency	Percentage
18-20 years old	168	45.2
21-23 years old	176	47.3
24-26 years old	28	7.5
Total	372	100

Table 2.1 presents the distribution of respondents' age of this study. In relation to that, 176 respondents aged between 21 and 23 years old made up the highest percentage (47.3%) recorded out of the total of 372 respondents. In addition, 168 respondents aged between 18 and 20 years are recorded as the second highest percentage (45.2%), while the other 28 respondents aged between 24 and 26 years old are found to be the lowest percentage recorded (7.5%). Based on the findings, it can be concluded that the largest group of respondents is the age group of 21 to 23 years old.

Table 2.2: Distribution of respondents based on race

Race	Frequency	Percentage (%)
Malay	275	73.9
Chinese	50	13.4
Indian	14	3.8
Others	33	8.9
Total	372	100

Table 2.2 summarises the distribution of respondents based on race. The results indicated that 275 female respondents (73.9%) participated in the study are Malay, followed by 50 Chinese respondents with a sample percentage of 13.4. Besides, 33 respondents from other ethnic groups such as Kadazan and Iban made up 8.9% of the study, while Indian respondents are the lowest number of participants recorded at 14 respondents (3.8%). Based on the findings, it can be concluded that majority of the respondents participated in this study is Malay.

Table 2.3: Distribution of respondents based on year of study

Year of Study	Frequency	Percentage (%)
Year 1	154	41.4
Year 2	78	21.0
Year 3	77	20.7
Year 4	63	16.9
Total	372	100

Table 2.3 displays the distribution of respondents based on year of study. Based on the data gathered, 154 first year students of the respondents have the highest percentage with 41.4% recorded, followed by second year students with 78 respondents (21.0%), while 63 fourth year students have the lowest percentage among all years of study, with only 16.9%. Thus, it can be concluded that the largest group of respondents participated in this study came from Year 1.

Table 2.4: Distribution of respondents' body mass index

BMI	Frequency	Percentage (%)
Severely underweight	23	6.2
Underweight	48	12.9
Normal weight	215	57.8
Overweight	52	14.0
Obesity	34	9.1
Total	372	100

Table 2.4 shows that body mass index of the respondents is derived from their height and weight. Based on the findings proposed, 23 of the respondents (6.2%) are severely underweight, while 48 of them (12.9%) are underweight. Additionally, normal weight among the 215 respondents recorded a highest percentage with 57.8%. Furthermore, 52 of the respondents (14.0%) are reported as overweight and there is 34 out of the respondents (9.1%) are found to have obesity. Thus, it can be concluded that majority of the respondents participated in this study have a normal weight compared to other categories of body mass index.

Table 2.5: Total score of body dissatisfaction

BSQ-34 Total scores	Frequency	Percentage (%)	Level
Less than 80	89	23.9	No concern with shape
80 to 110	71	19.1	Mild concern with shape
111 to 140	95	25.5	Moderate concern with shape
Over 140	117	31.5	Marked concern with shape
Total	372	100	

Table 2.5 presented above is the total score of body dissatisfaction among the respondents participated in the study. 117 of the respondents (31.5%) scoring over 140 are found to be marked with a high concern with their shape. In addition, 95 of the respondents (25.5%) are marked with moderate concern with their shape with the score between 111 and 140. However, it is also found that 89 of the respondents (23.9%) scored less than 80, which showed that they have no concern with their shape.

Table 2.6: Total score of eating disorder symptoms

EAT-26 Total scores	Frequency	Percentage (%)	Level
1-19	241	64.8	Low
Above 20	131	35.2	High
Total	372	100	

Table 2.6 shows the descriptive statistics on respondents' eating disorder symptoms score. Majority of the respondents (64.8%, f=241) scored between 1 and 19 in EAT-26, showing that they had a low level of eating disorder symptoms, which can be indicated as at low risk of developing the disorder. In comparison, 131 of the respondents are reported to have a high level of eating disorder symptoms by scoring over 20 (35.2%). This can be indicated as at high risk of the emergence of eating disorder symptoms among them.

Table 2.7: Relationship between body dissatisfaction and eating disorder symptoms

		Eating Disorder Symptoms
Body dissatisfaction	Pearson	0.432**
	Correlation	
	Sig. (2-tailed)	0.000
	N	372

*Note. ** Correlation is significant at the 0.01 level (2-tailed)*

Table 2.7 above summarises the relationship between body dissatisfaction and eating disorder symptoms through the two-tailed significance value that was found at 0.000, which is $p < 0.05$, indicating that the relationship is significant. It is revealed that the relationship between body dissatisfaction and eating disorder symptoms among female students in a higher education institution was significant, with the correlation coefficient 0.432. Through the finding recorded, it demonstrates that there is a significant positive and low relationship between body dissatisfaction and eating disorder symptoms ($r = 0.432$, $p < 0.05$). Between the two variables, it can also be indicated that the higher body dissatisfaction level, the higher the level of eating disorder symptoms among female students in a higher education institution.

DISCUSSION

Research Objective 1: To identify the level of body dissatisfaction among female students in a higher education institution

A high level of body dissatisfaction was found among female students in a higher education institution participated in this study's findings as they showed a marked concern with their own shape. The result gathered is consistent with several findings from previous studies that revealed that female students in a higher education do feel dissatisfied with their body and shape at a higher level, which has become a prevalence among the population (Chng & Fassnacht, 2016; Hashim et al., 2022; Medina-Gómez et al., 2019). The exposure of thin ideals body has been one of the major contributing factors of dissatisfaction with one body for decades, it may develop as early as in the childhood (Alharballeh & Dodeen, 2021; Aparicio-Martinez et al., 2019).

This exposure caused the need to attain the unrealistic beauty standards pressured on females, which explains the results obtained. Besides, thinness is associated with attractiveness, therefore it is deemed desirable by society, while overweight is highly disapproved of and may also contribute to body

dissatisfaction found in this study (Goswami et al., 2012; Thompson & Smolak, 2001).

Given that most of the students are now required to be back in campus to attend their classes, it is most likely for these female students to compare themselves with other students, as demonstrated by previous studies that females are more prone to compare themselves with other individuals that are seen as attractive in their daily lives. This constant comparisons has negatively affected their body image (Fardouly et al., 2017; Leahey et al., 2011; Ridolfi et al., 2011). In relation to that, Fardouly and Vartanian (2015), through their study involving 227 female university students, found that body image concern, particularly on body dissatisfaction among them, is driven by the frequent comparison of appearance between their own bodies and peers, close friends as well as celebrities.

This situation can be associated with the self-discrepancy theory developed by Higgins (1989) with the terms actual self, ideal self and the ought self, as mentioned by Lantz et al. (2018) that self-discrepancy in females is frequently linked to the feelings of discrepancy between their current, and desired or ideal body shapes.

Moreover, seeing how female students in this study are aged between 18 and 26 years old, a period of personal development process that is so delicate as they may be constantly switching peer groups, there are results from previous findings that female do experience body dissatisfaction during this stage at any age and is expected to increase, regardless of their level of education (Alharballeh & Dodeen, 2021; Scales et al., 2016). The changes of biological, emotional, cognitive as well as social experienced during this stage may also be tough for them, where Gattario and Frisén (2019) marked it as the onset of negative body image development given their attention is concentrated on their shifting physical bodies.

In conclusion, this study is consistent with the previous study's findings regarding the level of body dissatisfaction among female students in a higher education institution, which is demonstrated as a marked concern on shape and can be indicated as a high level of dissatisfaction with their own bodies. There are many contributing factors to the development of body image concern, specifically body dissatisfaction that is shown to be high among the respondents participated, seeing from the experiences they faced during their young adulthood stage as they continue to deal with the constant changes in terms of physical, biological, emotional, cognitive and social.

Research Objective 2: *To identify the level of eating disorder symptoms among female students in a higher education institution*

Through the identification of the level of eating disorder symptoms among female students in a higher education institution conducted, the findings of this study revealed that 35.2% of the respondents participated in this study are at risk of developing the disorder, given their high score on the EAT-26 assessment by using the cutoff score of 20. The high level of eating disorder symptoms results gained in the current study is also somewhat greater than a recent study conducted in Saudi Arabia at 32.9%, as the female students achieved scores above the cut off level through the same measuring instrument (Fallatah et al., 2015), whereas a local study conducted among female students in a leading premier university located in Kuala Lumpur resulted at 45.4% were at risk (Chan et al., 2020).

The consistency of this study's findings is also aligned with previous studies conducted overseas involving female students in higher education institution, as results gained showed that this population is at risk of developing the disorder (Alberton et al., 2013; Alwosaifer et al., 2018; Reis et al., 2014). According to Christian et al. (2020), eating disorders frequently develop throughout adolescence and early stages of adulthood, which they can remain, arise or recur at any point in one's life. Therefore, it may be another factor contributing to this study's findings. Recent study by Izydorczyk and Sitnik-Warchulska (2018) involving

females of different age groups found that the youngest Polish girls aged between 12 and 15 years old are at the highest risk of developing eating disorders compared to other age groups, influenced by the internalisation of beauty standards.

Another study's findings by Abd El-Azeem Taha et al. (2018) through the involvement of undergraduate female students aged 17 to 33 years old in Saudi Arabia found that 35.4% of them were identified as at risk of developing the disorder, which is brought on preoccupation by the desire to be thinner as they were pressured by the media and society. Through these findings, eating disorder do affect females regardless of ages, which is often driven by the pressure of society in being thin and various media messages on appearance.

Furthermore, according to Yun et al. (2018), the high level of eating disorders among female students in universities is also found to be more common among female students in the young adulthood stage, as they become more self-reliant in their food decisions as many of them would be living away from home for the first time. Thus, giving them the freedom to choose their diets whether healthy or unhealthy. In relation to that, the results of this study revealed that most of the respondents appeared to be practising dieting, which Papini et al. (2022) referred it to practices like going on diets, consuming diet food, and staying away from sugary or high-carbohydrate foods as part of their eating habits, which are driven by the desire to control weight and shape compared to other methods.

Despite having a normal BMI, this current study found that most of the respondents with normal weight are reported to be practising dietary behaviour the most, compared to other BMI groups. It is also consistent with a study by Samman et al. (2012), as their findings reported that 78% college females that possess a healthy BMI still practise dieting in their lives. To conclude, the level of eating disorder symptoms among female students in a higher education institution participated along with the findings gathered in this study are aligned with previous studies results, despite majority of the respondents showed to be low in eating

disorder symptoms level.

According to the developer of EAT-26, Garner et al. (1982) explained that denial may be a contributing factor to the low scores obtained on self-report screening instruments filled out by the respondents, but it does not necessarily imply the absence of clinically significant eating disorder symptoms, or a formal eating disorder is not present, whereas the high scores revealed can be indicated as concerns about the respondents' physique, weight, body shape and eating habits, but do not always indicate an eating disorder, thus explaining the low results of eating disorder symptoms among female students in this study.

Research Objective 3: *To identify the relationship between body dissatisfaction and eating disorder symptoms among female students in a higher education institution*

Based on the findings of this study, it is revealed that there is a significant correlation between body dissatisfaction and eating disorder symptoms investigated among female students in a higher education institution. This finding is consistent with most of recent studies conducted both local and overseas (Castellano et al., 2021; Nor et al., 2019; Sinnappan et al., 2021). One of the contributions of this study's consistency results may be factored by the overevaluation and unfavorable judgements of one's body that were found to be the causes of self-destructive behaviours, where it often involves food intake changes that provoke the evolution of eating disorders (Silva et al., 2020).

According to the transdiagnostic cognitive-behavioural model of eating disorders, Fairburn et al. (2003) stated that this condition can be described as a dysfunctional system of self-evaluation as it is highly dependent on the maintenance of eating disorders through overseeing eating, weight or shape. Exaggeration of the significance of weight and shape has reinforced dietary restraint attempts that were defined of a person's self-worth (Fairburn et al., 2003). In fact, overevaluation of weight and shape is one of the key diagnostics of anorexia nervosa (Byrne et al., 2015).

Aligned with that, American Psychiatric Association (2013) through the DSM-5 stated that fear of gaining weight, distorted perceptions of one's body and excessive emphasis on appearance can be considered few of the characteristics that contribute to the rise of eating disorder symptoms in females. Based on previous findings, female students in universities were found to be dissatisfied with their figure and believed that they were carrying too much fat, particularly on their hips, abdomen or thigh, despite their body weight to be healthy, which can be considered the key factor influencing dietary preferences and way of life (Wronka et al., 2013). Similar with Wronka et al. (2013)'s findings, this study reveals that majority of female students participated always felt that their thighs, hips or bottom were too large in comparison with their body, perceiving themselves as fat despite them having a normal BMI. This condition may be explained as the discrepancies between actual weight and weight perception as they often to inaccurately perceive weight, which thinness is considered having less weight (Sirang et al., 2013).

Apart from that, a study by Chen et al. (2021) also found that body dissatisfaction is directly linked to the presence of eating disorder that is impacted by westernisation and modernisation pressure on beauty standards that promote thin ideal body. According to Stewart and Ogden (2021), although current beauty ideals were constantly changing, a lean, feminine figure with a small waist and less body fat is still favourable.

The expectation to be thin comes in a variety of forms, such as the glorifying of ultra-thin fashion models or peers and explicit signals to lose weight. Moreover there are more unconscious demands to correspond to the current thin-ideal body advocated among females. This has resulted in body dissatisfaction that elevated into weight-related behaviours such as controlled eating, purging, intense exercise which is accounted for the development and emergence of bulimic and anorexic disorders (Benowitz-Fredericks et al., 2012; Polivy & Herman, 1985; Stice & Shaw, 2002).

Besides, while body dissatisfaction is revealed to be common among those who have been diagnosed with an eating disorder, Moreno-Domínguez et al. (2019) stated that adolescent girls and women in the United States as well as other high-income countries tend to exhibit some measure of body dissatisfaction and the desire to be slimmer, which force changes in dietary habits to occur more often among them. Consistent with that, Shagar et al. (2021) found that body dissatisfaction is greater among Australian women with higher thin ideal internalisation, thus resulted in more controlled eating attitudes, while Baillie and Copeland (2013) discovered that Caucasian female students showed a higher dissatisfaction with their bodies compared to Chinese and Malaysians female students. Following a local study involving young adult females in Kuala Lumpur conducted by Sinnappan et al. (2021), they found that the association between body dissatisfaction and eating disorders tendency is adopted by the standards of thinness and body image prevalent in Western culture that was illustrated by the slim images of young women in the media.

Furthermore, through the significant positive relationship results gained in present study, it can be seen that the higher body dissatisfaction level, the higher symptoms of eating disorder. However, this study found that among majority of the respondents, their body dissatisfaction was high, whereas their eating disorder symptoms were low, which explains the low correlation results gained between two of the variables in this study. Thus, it contradicts from a local study conducted by Nor et al. (2019), where they suggested that severe signs of eating disorder symptoms shown are contributed by a higher level of dissatisfaction with one's body.

In relation to the low correlation gained, Rosewall et al. (2018) found that eating disorder symptomatology in females is not solely caused by high levels of body dissatisfaction, but it also was driven by perfectionism, self-esteem, negative emotions as well as perceived media pressure on them. Apart from that, Musaiger et al. (2013) and Sanchez-Ruiz et al. (2019) also found that peer pressure, academic difficulty, residential environment,

relationships, social contact as well as high aspirations for future among these female students in high education institutions are also the increasing risk factors of high eating disorders development level in a person.

In conclusion, the overevaluation on body weight and shape pressured by the needs to attain the standardised beauty ideals can be seen as the mark of body dissatisfaction, which eventually led to eating disturbances as an attempt to control weight, resulted in the emergence of eating disorders in females.

IMPLICATIONS

The information presented in this study may be beneficial for the higher education institution involved. In order to face challenges that may arise in near future, it is imperative for the institution involved to ensure that these students' physical and mental health are in a good form, seeing how these two components are vital in their overall wellbeing. However, previous studies found that body dissatisfaction, referring to negative feelings and perceptions among female students regarding body weight and shape, was highly associated with mental condition, particularly eating disorders.

Thus, given the association between body dissatisfaction and eating disorder symptoms found in this study, the institution involved could be the driving force to bring the issues discovered to light. For instance, spreading an awareness through the institution's social media platforms or holding prevention programs which would be a new knowledge that is not only limited to female students, but other individuals as well, including males.

LIMITATION

Despite the primary objectives of this study, there were still some restrictions or drawbacks that were unavoidable that should be

addressed in order to resolve the theoretical and methodology issues, where the gaps can be filled by future research. First and foremost, the involvement of only undergraduate female students in UTM as part of the study's sample can be seen as a limitation. Given the limited sample size, the results of this study might not accurately represent the population of the higher education institution involved, which is UTM. Furthermore, the institution involved also offers a broad level of programs that goes from foundation to postgraduate level, which made the results obtained cannot be generalised.

Besides, the demographic of the respondents should also be considered part of the limitations as it may contribute to the difference in results obtained. For instance, most of the respondents participated in this are Malay. Therefore, it does not accurately portray the experiences of other ethnic groups such as Chinese and Indian. Additionally, the percentage of age groups reported in this have resulted in imbalance as majority of them are aged between 21 and 23 years old, compared to other age groups. Thus, the difference in the upbringing of the respondents, living experience as well as their environment may influence their perspective of ideal body itself, which may contribute to their differences in eating habits as well.

Apart from that, due to adopting a non-probability sampling method, where responses obtained are depended on the respondents' accessibility and availability, rather than specifying the sample into females with the components investigated, also has limited this study, which has resulted in the low level of eating disorder symptoms found. Despite the anonymous responses, the participant might have answered with dishonesty as they did not want to reveal their concerned level of body dissatisfaction and eating disorder symptoms. Thus, predisposing the findings. In short, current results of the study may be at odds with some of previous studies for the reasons listed above.

SUGGESTION

In addressing the limitations of this study, and to provide more reliable and valid outcomes for future studies, a few suggestions for further research are made. Firstly, it is recommendable for future research to expand the size of the research population since eating disorder symptoms may impact both genders as well from another program levels, and not only undergraduate female students in UTM. On top of that, after seeing the majority of female students participated in this study were Malays, there should also be more involvement in the study by more students from different universities and ethnic groups. By doing this, the findings' generalisability may be guaranteed.

Undeniably, there is a strong relationship between body dissatisfaction and eating disorder symptoms, as shown by previous study's findings. Hence, studies to determine the cause and effect that are crucial in contributing to the relationship between two of the variables can be conducted in the future. Additionally, future studies could also apply a mixed-method approach instead of solely focused on quantitative method. Through the combination of quantitative and qualitative approaches, it may provide future research with more in-depth findings, as the procedure may involve other methods such as semi-structured interviews and focus groups to determine the level of body dissatisfaction and eating disorder symptoms among the students.

CONCLUSION

To conclude, results obtained from this study shows that there is a significant association between body dissatisfaction and eating disorder symptoms that was conducted among female students in a higher education institution. On top of that, majority of these students also appeared to be dissatisfied with their body weight and shape at a marked concern level that can be indicated as high, while the level of eating disorder symptoms among them is shown to be lower. The atmosphere and environment these females were

in played a crucial role in affecting their satisfaction towards their body shape and weight, and if it has become excessive, eating disorders may arise if one goes through changes in their dietary habits. While these issues were found to be common in females transitioning into young adulthood stage, it would also be beneficial if future research could investigate this concern among male students in a higher education institution.

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