

The Relationship Between Eating Behavior and Body Image in Students of The Batch of 2022 at Stikes Maharani Malang

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ABSTRACT

Introduction: Excessive concern about body image among women results in body shape dissatisfaction that will affect psychological well-being, and eating behavior becomes inadequate. **Method:** The research design used a correlational design with a cross-sectional approach. The total sample consisted of 67 respondents. The sampling technique used was Proportionate Stratified Random Sampling. This study used an eating behavior scale questionnaire (Chairiah, 2008) and the MBSRQ-AS (Azminada, 2022) to assess body image. **Results:** The results showed good eating behavior in students, which was 95.5%, followed by good body image with a total of 94%. The results of the analysis of the Spearman Rho test obtained a p value of 0.000. The result of the correlation value ($r = 0.555$) shows a positive and strong relationship between eating behavior and body image, which means that the better the eating behavior, the more positive the body image of female students of Batch 2022 STIKes Maharani Malang. **Conclusion:** A person with a negative body image will experience dissatisfaction with his body, which will lead to self-evaluation of the appearance of the body, which will result in changes in eating behavior.

Introduction

Early adulthood is a time when individuals experience changes in physical, intellectual, social and psychological roles that accompany reduced productive abilities (Hurlock, 2009). The early adulthood period is a transition from adolescence which is still living a careless life to a period full of responsibility. Early adulthood is a period of adjustment to new life patterns and new social expectations (Becker, 1963). Early adulthood begins when a person reaches the age of 19 to 25 years.

In the early adulthood phase, a person will face various kinds of developmental tasks that are influenced by attraction physically so that the need to appear beautiful in front of other people begins to emerge, one of which is looking for and finding a life partner (Princess, 2018). To find and find a life partner, early adulthood, especially women, will try to show their ideal physical appearance. Early adult women try hard to fulfill the impression of a woman with an ideal, slim body, one of which is being inattentive when choosing the food to be consumed, limiting food intake, many even hold back hunger or not eat for a certain period of time to meet the body's criteria. ideal (Kurniawan et al, 2022). This is because they think that if they don't eat something they will become slim and lose weight which will cause the individual to become malnourished, even because they hold back their appetite for food until they die. This physical problem is quite a big problem for some early adult women because body shape and appearance are mandatory standards that will be seen by other people.



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The World Health Organization (WHO) concludes that someone can be said to be overweight if their BMI is 25.0-29.9, while someone can be said to be obese if their BMI is 30.0-34.9. In Indonesia itself, the obesity rate among adults according to Basic Health Research (Riskesdas) in 2018 increased by 21.8%. The prevalence of obesity in East Java according to the East Java Health Service (Dinkes Jatim) in 2018 reached 1,163,118 or 16% of the population. As many as 15.7% of women are overweight and 33.78% are obese. In line with the large amount of data on overweight and obesity, many women experience dissatisfaction with their body shape. Research conducted in several countries such as China at 33%, Australia 34.9%, Brazil 45%, and the United States 73.3% still shows dissatisfaction with body image. Study carried out by (Laksmi et al., 2018) The results showed that someone who was dissatisfied with their body image was 27.6 times more likely to have deviant eating behavior.

Individual eating behavior can change, depending on time of day, hunger, emotions, and the amount of food available. The frequency of eating in young adults is usually 3 times a day. They tend not to get used to breakfast so they will consume more food at the next meal. There are 3 aspects according to VanStrien, (1986) which are known to influence a person's eating behavior, namely restraint eating, emotional eating and external eating. Someone who has restricted eating or implemented certain diet conditions and then does not follow the diet will eat more than usual, which is called restraint eating. One of the factors that influence eating behavior in adults is nutritional knowledge. If the level of nutritional knowledge is lacking, the impact will be poor or deviant eating behavior (Wulandari et al., 2021).

Deviant eating behavior or what is usually called eating disorder is increasing rapidly, especially in young women in their 20s. Deviant eating behavior is a group of syndromes characterized by eating behavior and psychological disorders followed by changes in body weight or social disturbances that cause a very significant impact on quality of life. (Eprillia, 2022). A person with an eating disorder can develop severe somatic complications leading to a high risk of suicide. Deviant eating behavior also turns out to be an issue of identity and self-concept which is influenced by many factors, one of which is the image and views related to self-acceptance of the physical body, called body image. (Kristjánsdóttir et al., 2019).

Early adult women who have a negative body image of their bodies will blame food for making their bodies fat, ugly, not ideal and unattractive, thus causing deviant eating behavior. Research on 384 female students in India shows that body image influences psychological well-being, where female students with negative body image tend to have anxiety and even depression. (Ali et al, 2022). Research conducted by (Kapoor et al., 2022) 180 female students also stated that female students who had problems with being overweight would be in line with dissatisfaction with their body image and were identified as being at high risk of experiencing deviant eating behavior and having low self-esteem. So it is important for health workers to understand how eating behavior is related to body image, especially in adult women, in order to prevent the emergence of mental health problems in the future.

A preliminary study conducted on February 11 2023 on 6 students of STIKes Maharani Class of 2022 obtained results, namely 4 people stated that their appearance was less attractive to the opposite sex, they were less satisfied with their middle body, their weight was also not the ideal weight. 4 out of 6 people say they worry about getting fat. Some of them always make time for breakfast and lunch, but they don't consume enough fruit and vegetables and they also don't follow a diet in consultation with a nutritionist. All female students answered that they did not drink slimming tea or herbs to become slim. The aim of this research is to identify eating behavior in female student class of 2022 STIKes Maharani Malang. Based on this, researchers are interested



in studying the relationship between eating behavior and body image in female students class of 2022 at STIKes Maharani Malang.

Methods

Based on the operational framework, it is known that the population in this study is 205 students from the Class of 2022 STIKes Maharani Malang. The sampling technique used is Proportionate Stratified Random Sampling, carried out by dividing the population into sub-populations or strata proportionally and carried out randomly. The inclusion criteria are: the respondent is female, the respondent is at least 19 years old, the respondent is an active student at Stikes Maharani Malang, willing to be a respondent. Exclusion criteria are: students who were respondents during the preliminary study, students who were not present when sharing the online questionnaire link (google form).

Samples were taken using the Slovin formula and the results were 67 respondents. The research design uses a correlation design with a cross sectional approach to determine the relationship between eating behavior variables and body image variables. The results of calculating the validity of the eating behavior scale showed results ranging from 0.242 to 0.707 with $p < 0.05$. And the results of calculating the validity of the body image scale showed results ranging from 0.78 to 0.90 with $p < 0.05$ (Azminada, 2022). Reliability test on the eating behavior and body image scales carried out by (Purwaningrum, 2008) Using the Hyot variance analysis technique, a reliability figure of $r = 0.931$ was obtained. And the body image scale in (Azminada, 2022) This questionnaire was found to be reliable because the Cronbach's Alpha value processed using SPSS was 0.834. Data were collected using a questionnaire and the data was processed using the Spearman rho test with the help of the SPSS program so that an explanation of the research results could be obtained and conclusions could be drawn.

Results

Table 1 Frequency Distribution Based on Respondent Age

Age	Frequency	Percentage (%)
19 years old	39	58%
>19 years old	28	42%
Total	67	100%

Based on the results presented in table 1, it can be seen that the majority of respondents aged 19 years were 39 female students (58%).

Table 2 Frequency Distribution Based on Respondent's BMI

BMI	Frequency	Percentage (%)
Underweight	15	23%
Normal	45	67%
Overweight	7	10%
Total	67	100%

Based on the results from table 2, it was found that the majority had a normal BMI, namely 45 female students (67%).



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Table 3 Frequency Distribution Based on Respondents' Place of Residence

Residence	Frequency	Percentage (%)
With parents	30	45%
Alone	37	55%
Total	67	100%

Based on the results from table 3, it was found that the majority of respondents lived alone with 37 female students (54%).

Table 4 Frequency Distribution Based on Respondent Study Program

Study Program	Frequency	Percentage (%)
Bachelor's Degree in Nursing	39	58%
D3 TLM	18	27%
D3 Midwifery	10	15%
Total	67	100%

Based on the results of table 4, it is known that the majority of respondents had a Bachelor of Nursing study program, 58%.

Table 5.5 Distribution of Category Results for Respondents' Eating Behavior Scores

Eating Behavior	Frequency	Percentage (%)
Good	64	95.5%
Bad	3	4.5%
Total	67	100%

Based on table 5 above, almost all female students at STIKes Maharani Malang have good eating behavior, namely 64 female students (96%).

Table 6 Distribution of Respondents' Body Image Score Categories

Body Image	Frequency	Percentage (%)
Positive	63	94%
Negative	4	6%
Total	67	100%

Based on table 6 above, the majority of female students at STIKes Maharani Malang who have a positive body image are 65 female students (96%).

Table 7 Cross Tabulation Between Eating Behavior and Body Image of STIKes Maharani Malang Female Students Class of 2022

Behavior Eat	Body Image		Total
	Positive	Negative	

	f	%	f	%	f	%
Good	62	97	2	3	64	100
Bad	1	33	2	67	3	100

Based on the results obtained in table 7 above, namely the results of cross tabulation, it can be concluded that almost all or as many as 62 students (97%) of students with good eating behavior have a positive body image.

Table 8 Analysis of Relationships Between Variables

Analysis of Relationships Between Variables	p	r	N
Eating behavior and body image among students of STIKes Maharani Malang Class of 2022	0,000	0.555	67

Based on the results Spearman Rho test that is, the value $p =$ is obtained (0.000) < (0.05). Analysis of the relationship between eating behaviour and body image obtained a value of $p = 0.000$, so it can be concluded that the hypothesis decision H_a is accepted and H_0 is rejected, namely that there is a significant relationship between eating behaviour and body image in students of STIKes Maharani Malang Class of 2022. Next is the correlation value (r) is 0.555 which means that the correlation has a positive direction and a strong correlation, meaning that the better the eating behavior, the more positive the body image they have and the worse the eating behavior, the more negative the body image the students of the Maharani College of Health Sciences, Malang, have. 2022.

Discussion

Identification of Eating Behavior in Female Students Class of 2022 STIKes Maharani Malang

This research obtained data results that showed that almost all female students, namely 64 female students (95.5%) had good eating behavior and 4 female students (4.5%) had bad eating behavior. Good eating behavior is very important and needed by everyone. The food we eat is a reflection of our eating behavior. Eating behavior will have an impact on a person's health. The theory put forward by Cash & Purinsky, (2002) states that women will tend to have a tendency to watch what they eat because they pay more attention to body shape. The impact of good eating behavior on physical condition is that a healthy physical condition will provide energy to carry out activities and achieve the growth process. Researchers are of the opinion that female students have good eating behavior because they pay more attention to their body shape and they are also very selective when choosing food. Researchers also think that women understand diet knowledge better because women pay attention to their body shape,

This research obtained data results that showed that the majority, namely 36 female students (56%), 19 year old Maharani College of Health Sciences, Malang, had good eating behavior and as many as 3 female students had bad eating behavior. There are 28 students (44%) who are over 19 years old who have good eating behaviour. Patcheep, (2011)said that age is a factor in eating behavior. A person aged 18-30 years is less concerned about their Health and an older person will choose food based on their health problems. Research conducted by Almirra, (2018)also produced data that the majority of adults have good eating habits, namely eating 3 times a day and consuming snacks once a day, and consuming fruit and vegetables.



Bailey, (2014) said risky eating behavior usually occurs in women aged twenty years or during adolescence because physical and mental changes often occur as well as environmental changes towards adulthood. The prevalence of risky eating behavior appears to begin to increase during young adulthood or late adolescence. In female students, stress is also a factor that influences deviant eating behavior. The researcher's opinion in this case is that female students are a stage of early adulthood where they experience lifestyle changes such as going to college, where this period is a period of stabilizing their life stance. Female students also do not have big responsibilities which causes limited time to eat so they have good eating behavior.

This research obtained data on body mass index, namely 44 female students (69%) with normal BMI had good eating behavior and 1 female student (33%) with normal BMI had bad eating behavior. 15 students (23%) who have an underweight body mass index also have good eating behavior. Furthermore, of the female students who had an overweight body mass index, 5 female students (8%) had good eating behavior, but 3 female students (67%) had bad eating behavior. The results of this research are in line with research conducted by Rahmatika, et al. (2023) Which stated that 72.7% of respondents with poor eating behavior where respondents with poor eating behavior were overweight due to their behavior of eating non-nutritious food and also lack of physical activity. Research conducted by Putri, (2014)also stated that 77.3% of female students who had a normal BMI had good eating behavior.

Research conducted by Sulistyowati, (2006) in Nugroho et al., (2016)students stated that there was a relationship between diet and body mass index, due to the idea that poor diet was a factor causing excess body weight. This is in line with the theory in the research conducted Fajryani, (2022)which states that obesity is one of the factors that causes a person's body image to be negative which will cause a person's eating behavior to be bad. This states that Body Mass Index will influence the eating behavior of students at Maharani Health Sciences College, Malang. The researchers' opinion is that this can happen because in early adulthood there is still a process of growth and development so that early adulthood will experience physical changes so that female students maintain a balanced diet for fear of being overweight.

The characteristics of respondents based on place of residence in this study were that most of them lived alone, 34 female students (53%) had good eating behavior and 3 female students had bad eating behavior. There are 30 female students who live with their parents (47%) who have good eating behavior. The results of this research are in line with the theory of Deliens, et al. 2014 in Almirra, (2018)where the factors of food availability, accessibility and food supplies will influence a person's eating behavior because if students have to cook and prepare meals it will take a long time, they tend to be lazy and it is better to use their time for other activities such as doing assignments or something else.

Theory Patcheep, (2011)It is said that costs or pocket money will be a factor because in early adulthood it is still the responsibility of the parents, but they have the right to choose and also look for food with their own decisions. On the social environmental factors proposed by Deliens, et al (2014) parental guidance and education at home will influence an individual's eating behavior because guidance and education will become a habit and will increase awareness in the individual. According to Hong, (2013), it is explained that there is a relationship between individual awareness of healthy eating attitudes and behavior in students, which means that students who live alone will have a high level of awareness so they tend to have good eating behavior, regardless of their surrounding environment. Researchers in this case assume that students who live alone will live in a campus area where there will be many sellers of ready-made food, students will also have the freedom to choose what food to eat. However, freedom in

choosing food will be a problem. Students who choose food carelessly, such as fast food, will have bad impacts.

Research conducted by Laksono et al., (2022) said that it not only causes dangerous diseases such as diabetes, heart disease and cancer. Those who eat fast food will feel that after they eat fast food their throat feels itchy, they feel sleepy, and they also gain weight. Female students with family guidance will also lead to good eating behaviour, this is because the family remains a reference that has a role in controlling female students' eating habits. McLaughlin Theory and Media 2014 in (Almirra, 2018) One of the bad effects of bad eating behavior is weight gain and insulin retention, which if not treated will cause diabetes, obesity and also decreased brain function. The impact of good eating behavior will also increase the nerve cells that regulate mood, which will help regulate their emotions. Researchers believe that someone who has good eating behavior will have a positive body image.

Identification of Body Image in Class of 2022 Female Students at STIKes Maharani Malang

This research produced data on almost all female students at the Maharani Malang College of Health Sciences, namely 63 (94%) had a positive body image and 4 female students (6%) had a negative body image. Research conducted (Martinez et al., 2019) that is, women report high levels of body dissatisfaction and consistent concerns about deviant eating behavior. Apart from that, this research also shows how body dissatisfaction and the desire to achieve an ideal body appear to be universal among female students. Researchers are of the opinion that every woman dreams of having an ideal body shape, if the ideal body shape is not achieved it will cause various disorders which will give rise to negative body image perceptions. The consequence is that individuals find it difficult to accept their body shape (negative body image).

This research produced data that most of the 19 year old Maharani Health Sciences College students in Malang, namely 36 students (57%) had a positive body image and 3 students had a negative body image. 27 female students aged over 19 years (43%) have a positive body image and 1 female student has a negative body image. This research is supported by research conducted by Pramesti et al., (2022) which states that it is known that 73.7% of respondents have a positive body image, where body image is a feeling of satisfaction or dissatisfaction of a person or group of people regarding their body and can give rise to positive or negative assessments of their body. Research conducted by Lumele et al., (2021) also obtained data results (82.9%) of students whose average age was 19 years and over had a positive body image, students tried to form a positive body image so that they looked attractive by looking at the desired ideal body standards.

Not only in early adulthood, research conducted by (Yan et al., 2018) also stated that female teenagers tend to have problems with their body image. Cultural perspective is a strong factor in influencing body image in adult women, in line with research conducted (Kilpela et al., 2015) states that Western culture not only emphasizes ideal and slim as the standard of female beauty, but also the ideal of being slim and young. Western culture equates youth with beauty. The researchers' opinion is that early adult women will try to form a positive body image so that they look attractive by looking at the desired ideal body standards. Women also pay great attention to their body shape and appearance so they have a positive body image.

Body mass index research data produced in this study resulted in 43 students with a normal BMI (69%) having a positive body image and 2 students with a normal BMI having a negative body image. A total of 15 female students (23%) who had an underweight body mass index had a positive body image. 5 female students (8%) have an overweight body mass index and 2 female students have a negative body image. This is confirmed by research Karwati et al.,



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(2022) which stated that 44 students (59.5%) had a normal Body Mass Index and also had a positive body image. Students with a positive interpretation of body image have their own satisfaction and acceptance of their bodies. The results of this research are in line with research conducted by Wati et al., (2019) getting results, a person with an ideal BMI will have a positive body image because dissatisfaction with appearance is focused on the specific shapes of a teenager's body or on overall appearance.

The results of research conducted by Kapoor et al., (2022) this concludes that Female students who have overweight problems will be in line with dissatisfaction with their body image and are identified as being at high risk of experiencing deviant eating behavior and having low self-esteem. The researchers' opinion is that BMI can influence a person's body image because a student's body image is seen from the level of satisfaction with their physical condition. This is because it is possible that students with an overweight body mass index will think they are unattractive and therefore have a negative body image.

Characteristics of respondents based on place of residence and body image resulted in 35 female students (56%) who lived alone having a positive body image and 2 female students who had a negative body image. 30 female students who live with their parents (44%) have a positive body image and 2 female students have a negative body image. This is in line with the theory according to Cash & Purinsky, (2002) in Fajryani, (2022) It is said that the family is one of the factors causing dissatisfaction with body image. Body image can also be caused by the culture in which we live and are raised which has a big influence on the formation of attitudes. Research conducted by Nasarre et al., (2021) stated that parents influence body image satisfaction and dissatisfaction.

Researchers argue that parents will teach and encourage them to live a healthy lifestyle. Parents will also model how to dress or look good so that young adult women will instill it in themselves. Researchers assume that family views will influence the good and bad of a person's body image, because the importance of pressure from the family influences the way they are taught how they model eating habits and self-confidence.

A positive body image will have a positive impact, such as motivation to care for and look after their body, those who have a positive body image will also tend to have good eating behavior. Conversely, those who have a negative body image will also have poor eating behavior (Kadek et al., 2021). The researcher's opinion in this case is A positive body image is very important to have. A person with a positive body image will accept themselves so that they have self-esteem and confidence in themselves. The need for self-esteem is included in the main human needs in Maslow's needs theory.

Researchers believe that a negative body image will have a negative impact in the form of depression due to negative comments from those around you. Research conducted by Nurmalita, (2016) said that negative body image will also result in mental disorders such as Body Dysmorphic Disorder, where sufferers will feel that they are lacking in physical appearance, making the individual feel unattractive, unworthy, anxious, embarrassed, and also depressed because of the weaknesses they have which will interfere with and makes it difficult to carry out daily activities. Researchers assume that by forming a positive body image, a person will feel comfortable, confident, accept themselves, not compare themselves with other people, choose a good environment, and will know their eating schedule and not worry about food that can make them fat.

Relationship between Eating Behaviour with Body Image among Female Students of Maharani Health Sciences College, Malang, Class of 2022



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The results of the analysis of the relationship between eating behavior and body image among students at the Maharani Malang College of Health Sciences Class of 2022 showed that 62 female students (97%) had good eating behavior and therefore had a positive body image and 2 female students (3%) with good eating behavior had negative body image. A total of 2 female students (67%) with bad eating behavior will have a negative body image and 1 female student (33%) with bad eating behavior will have a positive body image. The statistical test results obtained a value of $p = 0.000$, so it can be concluded that there is a significant relationship between eating behavior and body image in students of the Maharani Malang College of Health Sciences, Class of 2022. From the results of the correlation value, a value of 0.555 was also obtained, which can be interpreted as that the correlation has a strong relationship, This means that the better eating behavior, the more positive a person's body image will be.

In line with research conducted by Sholekhah et al., (2018) which states that body image has a significant relationship on eating behavior in adolescent girls. Eating behavior itself is actually not a problem that is only related to food, body shape and weight, but issues of identity and self-concept are also problems that influence eating behavior in adolescents. The supporting theory was put forward by Cash & Purinsky, (2002) who said that gender influences a person's body image. Body dissatisfaction occurs more often in women than men. Family factors also influence a person's body image because bad comments from the family will lead to a negative body image. The theory put forward by Dwi, (2013) also states that age will be a factor in body image, because as one gets older, a person's physique will also change and at each stage of development there will be developmental tasks. The theory put forward by Deliens, (2014) also states that body image is one of the factors that influences a person's eating behavior because it is related to the ideal sociocultural image.

Researchers are of the opinion that if someone has good eating behavior, they will have a positive body image. Women tend to experience body dissatisfaction compared to men. The reason why women are more likely to experience dissatisfaction with their bodies is because women more often experience a crisis regarding their body shape and some women will compare themselves to models in the mass media. Indirectly, they instill how women will be considered attractive, giving them a reason to self-evaluate their appearance.

Female students who live alone will get good eating behavior and a positive body image because they will be free to choose what to eat. Researchers are of the opinion that they will eat according to what they think is healthy. Female students who live alone are also free from bad comments about body image from their families which causes them to have good eating behavior and also a positive body image. Verbal and nonverbal views as well as expectations originating from the family will influence body image itself because parents are an important reference in the socialization process so that the child's body image will be influenced through instructions and feedback.

Body mass index will also influence eating behavior and body image in female students. Researchers assume that female students who have an overweight body mass index with bad eating behavior and negative body image can be caused by several factors, one of which is poor social behavior. In line with the theory of Cash & Purinsky, (2002) which states that mass media, family, and interpersonal relationships are factors that influence a person's body image. Female students who have a body mass index will tend to have good eating behavior and a positive body image, this happens because society's point of view assumes that having a thin body is the same as having an ideal body, therefore female students who have an underweight body mass index are more confident. than female students who have an overweight body mass index.



College student is a phase where someone has reached adulthood or early adulthood and will experience a task where they will look for or find a life partner Hurlock, (1996). Researchers assume that female students who have entered early adulthood will show a physical side that is as ideal as they think.

Conclusion

1. Almost all female students 95.5%STIKes Maharani Malang Class of 2022 behaves well when eating.
2. Almost all female students 94%STIKes Maharani Malang Class of 2022 has a positive body image.
3. The results of the analysis of the relationship between eating behavior and body image obtained a value of $p = 0.000$, the results of the correlation value ($r = 0.555$) which can be interpreted as meaning that the correlation has a positive direction and is strong. This means that there is a relationship between eating behavior and body image, where if a person's eating behavior is good, they will have a positive body image, and vice versa.

Ethics approval and consent to participate

Based on the letter of passing the ethical review test from the Health Research Ethics Commission of the Health Polytechnic of the Ministry of Health of Malang with number 564/IV/KEPK POLESMA/2023, it was declared ethically appropriate according to 7 (seven) WHO 2011 Standards, namely 1) Social Value, 2) Scientific Value, 3) equal distribution of burdens and benefits, 4) risks, 5) inducement/exploitation, 6) confidentiality and privacy, and 7) consent after explanation, which refers to the 2016 CIOMS Guidelines.

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1. For institutions

It is hoped that the results of this research can become good learning material for students, especially in psychiatric nursing courses for the STIKes Maharani Malang institution regarding eating behavior and body image.

2. For future researchers

It is hoped that research will be carried out by weighing and measuring body height for research because body mass index is also related to eating behavior and body image. Apart from that, future researchers are expected to add other factors such as mass media, pocket money, family guidance, social environment, and also gender.

3. For research subjects

Considering that the results of this research show that there is a relationship between eating behavior and body image, it is hoped that every female student will try to improve eating behavior and also improve body image through a positive perspective.

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