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Is there any Difference between Males and Females in Mindful Eating?

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Abstract

Mindful eating is a way of paying attention to food momentarily, without judgment, with a calm feeling that focuses on individual sensory and food experiences. Thus, this research investigates students' awareness of eating between females and males from secondary school. The participants are 95 students of VIII and IX grades in one public school. This research was conducted in the even semester of the 2023/2024 academic year. The method is descriptive data. The research subject completed to fulfill the Mindful Eating Questionnaire (MEQ). The dimensions of the mindful eating questionnaire are disinhibition, awareness, external cues, internal emotional response, and distraction. The average mindful eating dimension is disinhibition in males (58.24) and females (52.95), awareness in males (78.57%) and females (72.14%), External cues in males (75.42%) and females (72.14%), emotional response in males (76%) and g, (76.14%), and distraction in males (64.71%) and females (69.11%). Gender differences were found in mindful eating dimensions, with males having higher scores than females. However, emotional response and distraction dimensions are higher in females.

Keywords: males, females, Mindful Eating

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INTRODUCTION

Today's life has developed from time to time and experienced changes, especially in students' eating patterns. Activity is one part of life that affects health. The study of eating activities is increasingly developing in scientific disciplines, especially in education, because current student consumption is not only in quantity but quality, which can be implemented in female' and male' daily life (Hilmia & Zamroni, 2020). Good eating quality includes several aspects, namely mindful eating (Clementi et al., 2017; Widodo et al., 2023). Food is essential to improve health sustainability (Farida et al., 2018). The biggest challenge is realising a healthy diet. It was found that more than half of the population lacked food, had a low-quality diet, and consumed unhealthy food. This unhealthy eating pattern can increase morbidity and mortality (EAT-Lancet Commission, 2019).

Academic problems can provide challenges in maintaining healthy eating behaviour. Data shows that students eat unhealthily because they lack vegetables and fruits and consume too many calories and fat (Deliens et al., 2014). Students often consume unhealthy foods repeatedly or in small amounts, which can cause obesity. This is because students engage in excessive eating patterns before and after meals (Mantzios et al., 2018). Several individuals found low mindful eating in seeking information to maintain weight and looking for information (Adams et al., 2010). It was found that some teenagers did not care because they did not necessarily access the internet and look for information about it. Low awareness of

eating is reflected in food consumption patterns that are excessive, lacking, and not nutritionally balanced (Abdul, 2016).

Emotional eating activities are caused by hunger and external factors that make the individual less aware of eating activities (Howard, 2013). In addition, compounded by the impact of easily accessible technology on unhealthy food is the effect of food advertisements that tend to make students eat it (Framson et al., 2009). If this condition is carried out wisely, it will impact strong awareness that encourages individuals to become consumptive (Hilmia & Zamroni, 2020). Individuals who have consumptive behaviour tend to lack concentration. When using total concentration while eating, the individual needs to experience awareness of eating (Putri et al., 2020).

Secondary students are in a critical period to control their eating habits. Eating problems can affect the emotional mindset, such as increasing anxiety in teens, adolescence, and adulthood. Disordered eating can be observed, which may affect mindless eating or bulimia nervosa and obesity in the future (Köse & Çıplak, 2020). This disordered eating includes unhealthy eating and compulsive calories and can risk body weight in psychological features such as emotional instability, stress, and low self-esteem. Emotion cannot face stressful circumstances affecting eating patterns that cause increased weight gain (Ersöz Alan et al., 2022).

Young adults (13-16 years old) have a crucial period with physical and mental appearance changes and learning social relationships with friends. Due to the increasing changes in adolescence, they face several social and personal life problems such as anxiety, depression, emotional irritability, and word abuse between males and females. These teenagers have many changes in their mental aspects than conflicts with peers. They experience mental issues because their physique resembles body image (Galvao et al., 2014). Body image can represent their feelings, thoughts, and behaviour toward themselves. This period of puberty can interfere with female students' eating because they think about their body image and self-esteem, which can cause changes in appearance and size (Klassen, 2017).

Eating disorders have many disease examples, such as *bulimia nervosa* (BN), *binge eating disorder* (BED), and other diseases that affect food consumption. Most of these disorders are caused by individuals paying attention to body image, food restriction, and eating habits that are not good, such as increasing weight and preventing excessive weight gain, which can trigger changes in body shape. Many females want a slim body because they assume it is healthy (Pinto-Gouveia et al., 2014). This is a reason to maintain a social life and also be able to make friends. This reason is also reinforced by the fact that disordered thinking harms emotional well-being (Klassen, 2017).

The concept of eating awareness is essential to help raise awareness among individuals about the importance of eating patterns. Eating awareness is a concern for improving and maintaining a healthy diet (Michaelidou & Hassan, 2008). Health awareness and attention to food safety will influence healthy eating behaviour. Awareness of eating is a powerful predictor of healthy eating behaviour (Kutresnaningdian, 2012). Eating awareness means awareness about their diet and motivation to improve health and quality of life to prevent disease (Simanjuntak, 2015). Awareness of eating responds to readiness to engage in healthy eating actions/behaviours. This awareness can make individuals ready to take steps to be healthy and control their eating patterns (Chen, 2009).

Individuals need to improve their physical and mental health through eating in the globalisation era, which is a challenge for society, especially for secondary students who depend on their parents' buying and cooking. These conditions influence students' behaviour eating by growing the culinary industry among female students. Female students had more dynamic eating conditions than males because of social culture, environment, food served by parents, emotions, lifestyle, and eating habits—challenges in applying mindfulness among students to be considered in characteristics (Alam et al., 2022). The previous data found that unhealthy eating behaviour happens in school students (Caso et al., 2020; Sogari et al., 2018).

Most current research investigates mindful eating in an individual with an eating disorder, adults, children, and senior high school students. To the authors' knowledge, no studies are available to examine gender in mindful eating among secondary students. This research aims to determine the difference between female and male secondary students in mindful eating. The benefits for students are being aware of what foods they consume and paying attention to healthy food choices. Furthermore, it can identify mindful eating percentages between females and males.

METHOD

The research is a descriptive method. The participants are from VIII grades from one of the public schools in Bandung. The research subjects were 95 students. The sampling used purposive sampling, in which students participated in filling out a mindful eating questionnaire. The socio-demographics of participants can be seen in Table 2.

Table 1. Demographic participant

Age (years), mean	14.5 years old
Gender, n (%)	
Male	43 (45.2)
Female	52 (54.7)
Educational level, n (%)	
Secondary school	95 (100)

Students received a paper-based survey. The student's mindful eating questionnaire was used in Indonesian; it needed 20 minutes to complete. The number of items is 41 items. The dimensions are disinhibition (Inability to stop eating), awareness (Awareness pays attention to feelings and physical senses towards foods), external cues (environmental cues evoke eating behaviour), internal emotional response (eating response caused by negative emotions), and distraction (other activities that interfere with eating) (Román & Urbán, 2019). The questionnaire has acceptable validity and reliability with reliable internal consistency in each dimension. Mindful eating dimensions (MEQ) show appropriate consistency; 41 items showed sufficient reliability (0.87). All items demonstrate acceptable standardised factors; every five dimensions indicated a good correlation. The data analysis techniques used were quantitative. The data is processed with descriptive statistics by using the SPSS 23 version. Data analysis in the form of quantitative data obtained from the results of filling out mindful eating questionnaires by female and male students. Mindful eating indicators are described quantitatively with percentages. The indicators analysed were disinhibition, awareness, external cues, emotional response, and distraction (other activities that interfere with eating).

RESULTS AND DISCUSSION

As expected, there is a positive correlation between mindful eating dimensions and gender. Mindfulness in eating includes noticing thoughts and events without judging, paying attention to focus, and using supporting skills to avoid distraction from external factors (Sumantry & Stewart, 2021). Mindfulness improves concentration by managing attentional skills and efficiently removes unhealthy foods. Mindfulness allows one to perceive attention in tasting food as a mental experience. It can distract attention from stimuli and enable self-regulation (Hussain et al., 2022). Females and males in mindful eating can be seen in Figure 1.

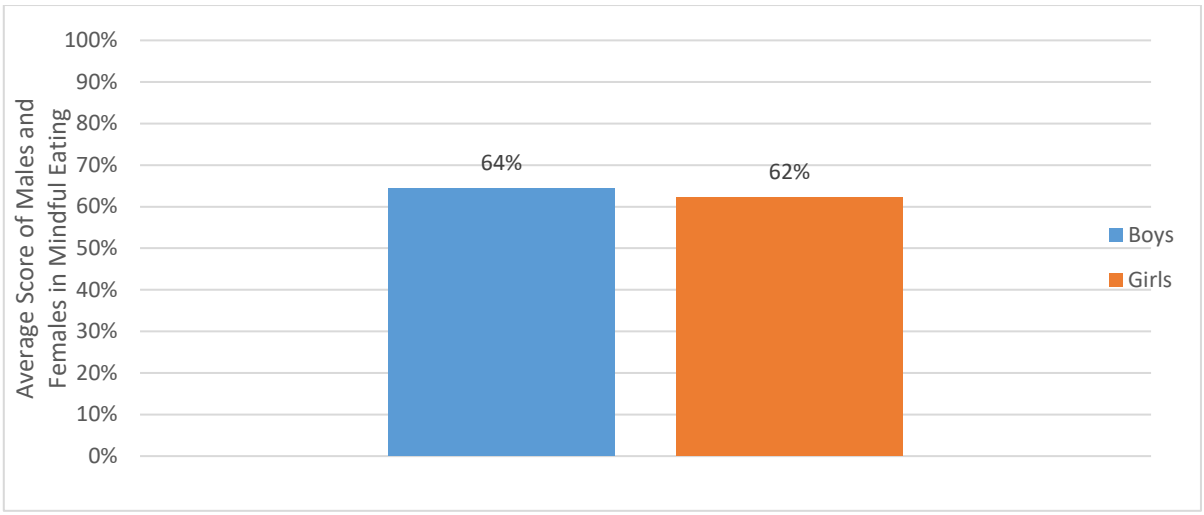

Figure 1. Males and females in mindful eating

Figure 1 shows that males have more mindful eating aspects than females. Males are linked to many positive health outcomes; they care about their health. Mindfulness describes awareness of the physical and emotional sensations while eating (Framson et al., 2009). Thus, male students are aware of the moment when one is eating, paying attention to the effects of food on the senses and detecting physical and emotional sensations in response to eating (Warren et al., 2017). They are also concerned about being better and motivated to improve and maintain their diet and quality of life by adopting a healthy lifestyle (Michaelidou & Hassan, 2008). Male students are encouraged to improve their health and quality of life to prevent disease (Simanjuntak, 2015). The role of eating awareness is to support healthy body maintenance. It increases students' sensitivity to hunger, eating rate, satiety, and food-eating environment.

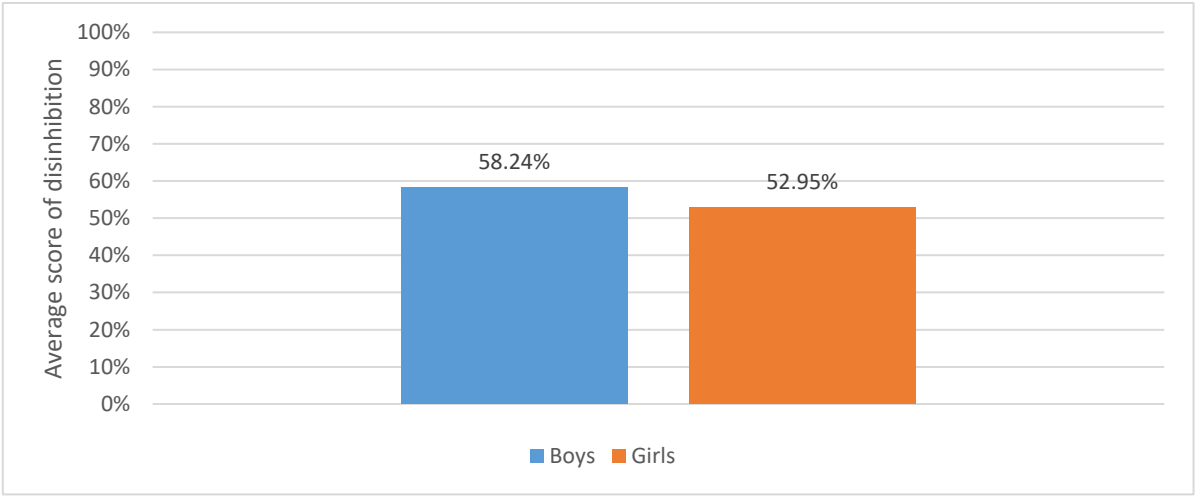

Figure 2. Disinhibition

Based on Figure 2, males have high disinhibition. The disinhibition dimension defines the incapacity to stop eating when full. For example ("I eat my food, and I don't know when it is enough") (Román & Urbán, 2019). It identified that students could manage their satiety cues and hunger (Knol et al., 2020). Disinhibited eating is caused by a negative emotional state, cognitive process, and high-calorie food (Ogden et al., 2017). Based on disinhibition, males eat more without thinking than females (Köse & Çıplak, 2020). Thus, males have excess weight. Disinhibition is a tendency to overeat in response to negative responses while incapable of resisting temptation. Habitual disinhibition is eating in response to environmental signals pursued by emotional disinhibition. Disinhibition is correlated to unhealthy food quality, poor

health, and bad eating behaviour. Higher disinhibition is connected to weight gain and poor health status (Serban et al., 2022).

Male students can't control eating even though it is their favourite food, such as junk food. Males did not feel guilty about eating junk food (Taylor, 2011). When the females consume junk food (eating fattening foods), they feel guilty. Males can eat much more when they can take it much. Males eat junk food regularly at school because kitchen vendors sell fried chicken, french fries, spaghetti, and snacks. Males do not worry about their body weight. Males could not eat much even though the food was low. Males mostly eat because they want to increase their importance. Their male body image is muscular and masculine appearance (Ryan & Morrison, 2009).

When males eat in restaurants, they cannot control the food. Males don't feel regret after consuming junk food and trade junk foods. For financial reasons, males spend money to buy food for their friends or eat junk food with their friends. When they don't have enough money to buy food, they ask for their friend's food. Males are interested in gaining body weight by buying foods at school, and they do not pay attention to body image. Males often get hungry and eat more through puberty (Albuquerque et al., 2017). It's because their bodies are experiencing a massive growth spurt during adolescence. An extra meal will increase your child's nutrition and energy to support their growth and development.

Even though there is food on the table, they still eat. Students understand that junk food is closely related to body weight. Male teenagers cannot resist the temptation to eat junk food because there is so much of it at school. Males find it challenging to maintain weight because they have a higher appetite than females (Bédard et al., 2015). However, male and female students struggle to eat healthy foods, but they still eat foods. Female students often maintain weight more than male students (Alkazemi, 2019). In comparison, males eat more savoury foods, such as meat, eggs, and fish, than females (Hallama et al., 2016). However, female students prefer snacks and fast food in cafés near their schools (Bastami et al., 2019). Figure 3 shows Males and females in the awareness dimension of mindful eating.

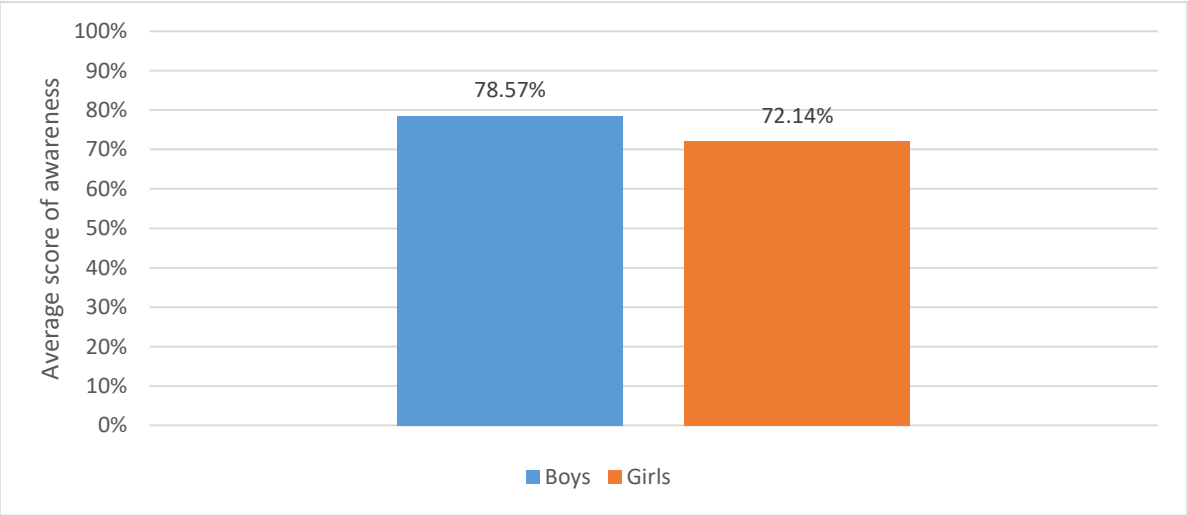

Figure 3. Awareness dimension

Figure 3 shows when the students eat, they think about the struggles of people preparing food. Based on gender, male students think more about how parents struggle to prepare food than females. Male students prefer food from their parents, while only a few females like it (Ratih et al., 2022). Sometimes, females don't value food because they take it from the restaurant and eat it at home (Febry & Destriatania, 2013).

The students think about whether the food consumed can fulfil their daily nutrition. Male students think more about foods that contain nutrients and are suitable for their health than females (Conklin et al., 2005). Because females tend to think about food based on desire and hunger. Male students are aware of and buy foods that contain fruits and vegetables, which are

nutritious foods. While female students tend to prefer to snack on the food they want rather than think about whether the food is healthy or not. Thus, most male students are more aware of what they eat than females. Female students consume many foods containing high salt and sugar, which can cause disease and weight gain.

Many factors influence student food intake, such as dishes made by parents, places such as restaurants and cafeterias, economic conditions, and money. Males couldn't waste the food because they remembered that many people couldn't eat. So, more males spend on food than females (Aurino, 2017). Some females cannot finish their food because they are full and diet. When male students overeat, they remember their parents' command not to overeat. Males usually don't tend to overeat because their parents usually set the rules for eating. However, female students struggle to resist the temptation of not buying food outside. Male students think about where the food came from. Male students eat more than those served by their parents rather than buying food outside. However, females buy more food in shops, restaurants, and canteens (Mensah & Oyebode, 2022). Figure 4 can be seen by females and males on external cues.

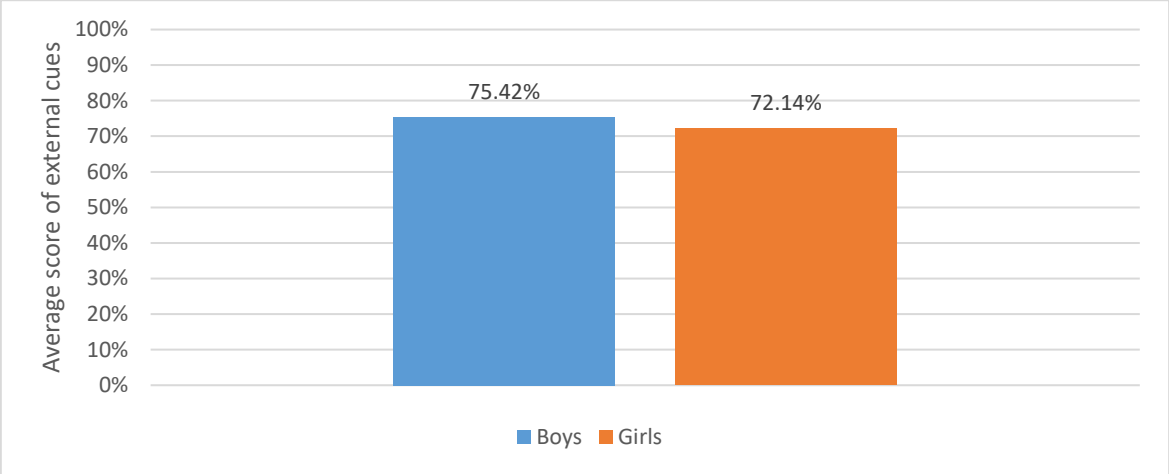

Figure 4. External cues dimension

External cues explain that suitable environment signals are induced by eating behaviour (e.g., "I pay attention that I eat candy because candy is there"). It showed that male student can control their mood when they are going to eat. External cues can be factored by food packaging, which students focus on sensory experience. Overeating may reflect a non-mindful reliance on environmental or external cues (for example, packaging size) so that the signals decrease the subject's ability to self-monitor the food they eat (Warren et al., 2017). They are more likely to notice what they eat and be conscious of the feelings and physical effects of food (Moor et al., 2013). Eating quality increases in youth and is likely to improve attention during eating. Nowadays, teens take a food picture before eating, which requires physical and feeling senses. Physical senses encourage students to be more conscious of food frequency (Giannopoulou et al., 2020). Therefore, the food picture might increase an individual's eating awareness (Ahmad et al., 2019). Furthermore, students can also pay attention to textures, colours, tastes, and flavours through physical senses such as the nose, eye, and mouth (Knol et al., 2020).

Based on the result, students can control eating caused by external factors such as food advertisements on T.V. or cellphones, food that is around, watching movies and in the canteen tend to want to eat, and friends who bring food. The food environment can distract someone's attention from food increasing and interrupting eating. Individuals usually eat in moderate-high, fast, and inexpensive restaurants. In that case, they are affected by factors such as music, plate type, time, interior decoration, environment, and food variety that have been discovered to be "binge eating." Further research showed that individuals eat with people up to 50% more food intake than those eating alone. Other research found that females eat more in fast-food cafeterias (Brindal et al., 2015).

Figure 4 shows that males claimed that food spreads everywhere, getting food wherever and whenever. At school, they see sweets, snacks, fried chicken, french fries, iced tea, and orange juice (Oncini, 2021). They can eat or buy those snacks and beverages. Males usually buy coffee and snacks at the supermarket. However, they often buy snacks at school because they go to school every Monday to Friday. They often purchase food after school, band, and extracurricular activities (Araby et al., 2021). Pizza and chips are in the canteen, but most students buy them more than they consume fruit. Schools rarely provide healthy food, and it is difficult for male students to find healthy food because there is unhealthy food around them. The canteen offers fried foods, chips, candy and biscuits.

Females are pressured to show personal responsibility in a school food environment where food is available (Islam et al., 2017). Female students are more able to control their food intake. Most females fail to limit unhealthy eating at school. Female students are worried about consuming food because it is high in calories and saturated fat. After all, they cannot resist the temptation of these foods. They are sometimes responsible for maintaining their weight by following a diet such as saving money, not snacking on random food at school, sharing food with their friends, and bringing lunch from home. Emotional eating on genders can be seen in Figure 5.

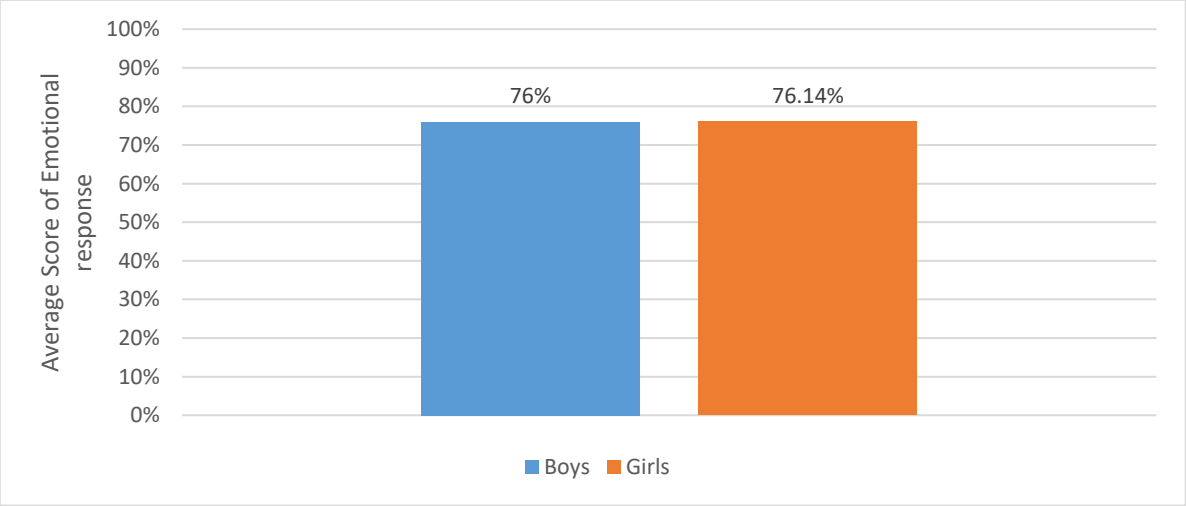

Figure 5. Emotional response

Figure 5 shows mindful students are involved in less emotional eating because it controls feelings and mood. Emotional response describes negative emotional eating effects on eating reactions. (e.g.," When I'm depressed, I eat to be happy.”). The results find that chocolate, sweet beverages, ice cream, food, noodles, meatballs, coffee, carbonated drinks, milk, and local foods tend to be eaten when a student feels depressed, sad, angry, and bored. Some are salty, sweet, and spicy as their favourite food when emotionally imbalanced (Hilmia & Zamroni, 2020). Most findings show that females eat a lot in an unstable emotional mood. A diversion of emotional states through eating does not always have a positive impact because it increases potential individuals' eating (excessive eating) or disorder eating that interferes with students' physical and mental. This condition affects mindless eating, which is characterised by an emotional response that makes the individual incapable of controlling eating. Despite that, eating is caused by emotional impulses carried out in daily life with various preferences.

As a group, more susceptible to psychological disorders and stressors originating from the academic and non-academic in the female student population can trigger uncontrolled binge eating, whether characterised by excessive eating. On the other hand, there is a tendency for self-image as an identity in male groups in forming ideal body proportions, which is often contradictory to implementing a good diet and eating activities that are driven by certain emotional conditions, not because of hunger trigger the domination of external factors which sometimes make individuals less aware of the activities being carried out.

Females are concerned about appearance, signals, stress, and body image concerns. Excessive consumption of food can cause disease. Female students consume unhealthy food, eat out of control, snack a lot outside of meal times, and this causes a large amount of food consumed. This is caused by anxiety, boredom, and mood-driven eating, which can increase eating patterns. Many females often consumed late because of activities at night. Some students said that fear and anxiety can affect the quantity of food, such as excess food and loss of appetite (Araby et al., 2021).

Female students often eat foods that contain sugar, such as ice cream and brownies (Andonova, 2018). After eating the brownies, they think they shouldn't eat them because it makes them fat. However, female students still consume it until it runs out. Furthermore, female students were worried about verbal ridicule, such as fat talk. This is a criticism from friends regarding foods that can be fattening. Distractions in females and males while eating can be seen in Figure 6.

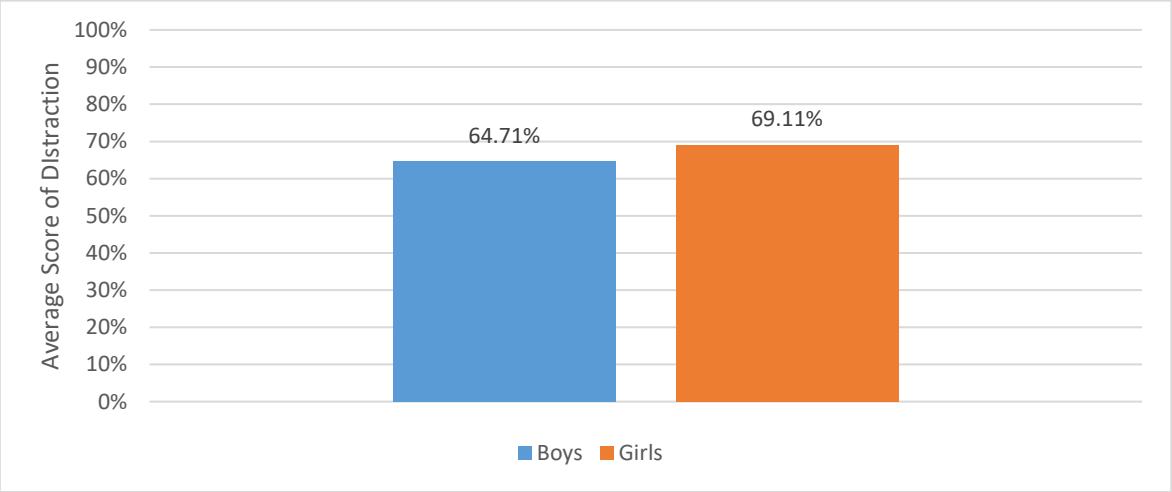

Figure 6. Distraction dimension

Distraction is another activity that interferes with eating. Some students seldom eat with watch gadgets, T.V., and computers (Ogden et al., 2017). activities that can interfere with eating are doing assignments, studying while eating, listening to music, and watching videos. Advances in technology facilitate access to various services to fulfil daily needs as well as the quick entry of food information and promotions. Technological developments do not consistently negative impact, but the limited availability of sufficient information about healthy eating patterns cannot be denied in this era (Ganasegeran et al., 2012). If these conditions are not addressed wisely, it will weaken self-awareness to become consumptive (Fanelli Kuczmarski et al., 2017). Eating food while watching TV can be an increased distraction and overeating. Individuals increase energy by 71% during T.V. viewing. So, students need to focus on eating as a non-distracting condition. There is a significant between calorie intake and watching gadgets and T.V. than driving and communicating with friends (Ogden et al., 2017). Research shows that listening to music, watching films or movies, and playing video games can increase energy intake.

Figure 6 shows that they often have lunch in the cafeteria or a restaurant near a school not too far away from their friends to buy snacks and fresh drinks. Generally, female students want to purchase food from beverage packaging and advertisements. Thus, it attracts female students to buy the food (Araby et al., 2021). Female students chose unhealthy foods over healthy foods because unhealthy foods are more delicious and promoted at a discount. Food advertisements can affect students' purchases. Study shows a relationship between the amount of food students consume and the activity of students watching television. The environment can affect obesity because they only watch TV and play gadgets while eating. Attractive flavour chips can increase consumer interest than fruit and vegetables (Zhao et al., 2022). The

marketing principle focuses on the food being sold looks attractive. Students not only eat delicious food, but students can also increase a pleasant lifestyle with the products purchased by students.

CONCLUSION

Based on the conclusion, students' mindful eating is negatively related to binge eating in secondary students. Male students are higher in most dimensions of mindful eating, which are disinhibition, awareness, and external cues, than females. Female students are high on emotional response and distraction. Males have an excellent understanding of eating, emotions during eating, and external factors that can influence eating. Low dimensions in males are disinhibition and distraction. Most students still cannot control eating or overeating, and technology is still disturbing students' eating, such as watching videos and T.V. while eating. In the future, male and female students can control eating patterns by consuming vegetables and fruit and reducing calorie foods.

RECOMMENDATION

Next researchers should investigate students' eating awareness in terms of nutrition concepts, healthy lifestyles, and healthy food consumption.

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