



Exploring the Role of a Mindful Eating Module for Emotion Regulation and Behavioural Change: A Qualitative Study among Female University Students

Shaira Parveen Hamilin¹, Siti Norazilah Mohd Said^{*2}, Aina Razlin Mohammad Roose², Janet Ann Fernandez² & Nisha Nurshazwani Baharom³

¹ Sekolah Kebangsaan Tansau, 88200 Sabah, Malaysia.

² Faculty of Cognitive Sciences and Human Development, Universiti Malaysia Sarawak, 94300 Sarawak, Malaysia.

³ Jabatan Kesihatan Negeri, 70300 Negeri Sembilan, Malaysia.

ABSTRACT

Malaysia is facing a growing obesity crisis, particularly among women, due to unhealthy eating habits and lifestyle patterns. Despite global interest, limited research exists on mindful eating interventions in Southeast Asia, especially among university-aged females, who are vulnerable to body image concerns and emotional eating. This study addresses that gap by providing insight into a culturally relevant, gender-sensitive intervention tailored to Malaysian female university students. This qualitative study explores the influence of "The Journey to Healthier Me" (TJHM), a mindfulness-based eating module, in fostering emotion regulation and behavioural change among female university students. Mindful eating, which involves focusing on the sensory and emotional experience of eating, has been recognised as a promising approach to reducing emotional eating and promoting healthier food choices. Ten female participants aged 22–25 completed the module and were interviewed to explore their lived experiences. Thematic analysis revealed four key areas of impact: eating habits, emotion regulation, concentration, and healthier lifestyles. The findings show that mindful eating enhances emotion regulation and self-restraint, thereby reducing stress-related eating behaviours. The TJHM module shows potential in promoting long-term healthy eating habits and emotional well-being. These findings may inform future mindfulness-based interventions in higher education and public health.

Keywords: mindful eating, thematic analysis, emotion regulation, behavioural change

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Email address: mssnorazilah@unimas.my (Siti Norazilah Mohd Said)

*Corresponding author

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1 INTRODUCTION

According to the World Health Organization (2024), the proportion of children and adolescents aged 15 to 19 who are obese increased four times between 1990 and 2022, from 2% to 8%. Meanwhile, the proportion of adults over the age of 18 who are obese has more than doubled, rising from 7% to 16%. This alarming trend spans across genders, age groups, and socioeconomic statuses, with significant implications for public health, economies, and quality of life. This rising prevalence can be attributed to lifestyle changes, including increased calorie intake coupled with a decline in physical activity. The lack of an effective response from the health system to identify excessive weight gain and fat deposition in the early stages accelerates the development of obesity. In recent years, the prevalence of overweight and obesity in Malaysia has reached alarming levels. Unfortunately, Malaysia is ranked as having one of the highest obese populations in Southeast Asia, at 19.7% (World Population Review, 2025), with an average body mass index of 26 (Wong et al., 2024).

Furthermore, a nationwide survey conducted in 2019 revealed a rising trend in obesity prevalence, increasing from 15.1% in 2011 to 17.7% in 2015 and finally to 19.9% in 2019 (Chong et al., 2023). Another study demonstrated that the prevalence of overweight among adults in Malaysia was 50%, with females being more at risk of being overweight (Chong et al., 2023). Past studies have uncovered that females have a greater risk of having a higher-than-average body mass index due to factors such as pregnancy, hormones, and genetic differences (Muscogiuri et al., 2024). Females are more likely to experience stress and emotional eating, which can lead to weight gain (Dakanalis et al., 2023). This is particularly relevant as they try their best to balance work, family, and social obligations.

These shocking facts and figures highlight the urgent need for comprehensive strategies to address obesity in Malaysia. Commendably, the Malaysian government has developed a wide array of programmes to combat this modern epidemic. For instance, My Body is Fit and Fabulous at home (MyBFF@home) was administered to overweight and obese female homemakers from lower socioeconomic backgrounds. This programme included strategies involving healthy dietary intake and physical exercise (Mohamad Nor et al., 2018). However, this modern era calls for a novel approach to not only facilitate but also maintain weight loss. Beyond the traditional methods of losing weight, mental health professionals can establish specific intervention strategies to help individuals, especially females from all walks of life, adopt a healthier lifestyle.

Recently, mindful eating has emerged as a promising approach to a healthy lifestyle. Mindful eating involves paying full attention to the experience of eating, including the taste, texture, and aroma of food, as well as recognising physical hunger and satiety cues (Tapper, 2022). This practice is garnering popularity as it encourages individuals to develop a healthier relationship with food, reducing the tendency to eat in response to emotional triggers and external cues. Mindful eating is rooted in the broader practice of mindfulness, which has its origins in Buddhist meditation and has been adapted for use in various therapeutic approaches in secular contexts (Tapper, 2022). In fact, a systematic review highlighted that mindful eating programmes resulted in significant weight loss and improvements in eating behaviours such as reduced binge eating and emotional eating (Olson & Emery, 2015). A similar trend is observed in Malaysia, where mindful

eating practice is significantly associated with lower body mass index (Talib et al., 2023; Thew et al., 2023).

Mindful eating is rooted in mindfulness, which emphasises present-moment awareness, non-judgemental acceptance, and intentional focus on eating experiences (Aoun et al., 2024). It is also employed in Mindfulness-Based Cognitive Therapy (MBCT), Acceptance and Commitment Therapy (ACT), and Dialectical Behaviour Therapy (DBT), each offering complementary strategies. MBCT helps individuals break automatic eating habits and disengage from negative thought patterns about food. For example, a study by Macht (2022) showed that MBCT reduced emotional and external eating, improved emotion regulation skills, and enhanced enjoyment of food, indicating a positive shift away from dysfunctional thought patterns. In addition, ACT introduces the concept of accepting cravings without impulsively acting on them, encouraging individuals to eat in alignment with their values rather than emotions (Di Sante et al., 2022). Research supports ACT and mindfulness as an effective approach for binge eating disorder, emotional eating, and disordered eating patterns (Di Sante et al., 2022). Furthermore, mindfulness is used in DBT to help individuals regulate emotions, manage cravings, and make balanced food choices. Past studies have shown that DBT's structured approach teaches skills that reduce binge eating and emotional eating (de Souza et al., 2019; Karapatsia et al., 2024). Together, these frameworks create a comprehensive approach to mindful eating, promoting self-awareness, emotional balance, and a healthy relationship with food.

Remarkably, research has also shown that mindful eating can improve emotion regulation, such as reducing stress (Cherpak, 2019), anxiety (Zervos et al., 2021), and depression (Winkens et al., 2019), which are often linked to unhealthy eating behaviours. Emotion regulation refers to an individual's capacity to monitor, assess, and modify emotional responses to achieve personal goals (Gross, 1998). Difficulties in regulating emotions, particularly stress, anxiety, and sadness, have been consistently linked to maladaptive eating behaviours, such as emotional eating, binge eating, and dietary restriction (Evers et al., 2010). Among university students, these issues are often intensified by heightened academic demands, social pressures, and developmental transitions, which can contribute to disordered eating patterns and poor nutritional choices (Gan et al., 2011). Female students may be particularly susceptible, given the interplay of body image dissatisfaction and sociocultural norms surrounding femininity and appearance (Poh et al., 2010).

While mindful eating has demonstrated potential in improving both eating behaviours and emotion regulation (Kristeller & Wolever, 2010), limited empirical attention has been paid to this relationship in the Malaysian context. Addressing this gap is critical for informing culturally sensitive interventions aimed at enhancing psychological well-being and fostering sustainable, health-promoting eating behaviours in this population. Specifically, producing a mindful eating intervention for females acknowledges the unique differences between sexes. For instance, women tend to have different eating patterns and more body image issues than men (Abdoli et al., 2024). They also tend to engage in stress-related eating and binge eating more often than men. By tailoring this intervention to the female population, we can address the specific needs and challenges faced by them, leading to more effective and sustainable outcomes in weight management and overall well-being. Therefore, the purpose of this study is to explore the benefits of the mindfulness eating intervention based on The Journey to Healthier Me: Be Mindful, Be Healthy, & Be Happy (TJHM) module.

1.1 The Journey to Healthier Me: Be Mindful, Be Healthy, & Be Happy (TJHM) Module

The Journey to Healthier Me: Be Mindful, Be Healthy, & Be Happy (TJHM) module is a specialised mindfulness programme designed specifically for overweight and obese females by Said et al. (2017). It is based on several mindfulness-based therapies, including Mindfulness-Based Cognitive Therapy (MBCT), Acceptance and Commitment Therapy (ACT), and Dialectical Behaviour Therapy (DBT). Additionally, elements of Cognitive Behavioural Therapy (CBT) were integrated into the module, providing a holistic approach to mindfulness and healthy living. The primary objective of this module is to impart knowledge, improve well-being, and promote the practice of a healthy lifestyle among the participants.

Table 1. Content of the TJHM module.

Sub-modules	Objectives	Activities
1 Introduction to Mindfulness	To provide basic knowledge of mindfulness to participants.	The origin, concept, definition, and benefits of mindfulness were explained in detail to participants via a lecture and discussion.
2 Mindfulness Techniques	To teach participants five basic techniques in mindfulness.	Participants were introduced to five basic techniques of mindfulness and were trained through exercise.
3 Emotion, Women, and Food	To provide knowledge to participants about how emotion, women, and food are interrelated.	Participants were provided with information about the concept of women's emotion and the relationship between emotion, women, and food via a lecture and discussion.
4 Mindful Eating	To teach participants the concept of mindful eating and its techniques.	Participants were exposed to the concept of mindful eating and its techniques via a lecture, discussion, and exercise.
5 I Love Myself	To encourage participants to be committed to practising mindful eating in daily life.	Participants were encouraged to commit to practising mindful eating through a diary or journal. They were shown some examples of the diary contents.

The development of the TJHM mindfulness module followed several meticulously planned phases adapted from the Sidek Module Development Model (SMDM) by Noah (2005). The beginning phase involved a thorough analysis of the content and requirements necessary for the module. This initial step ensured that all relevant aspects of mindfulness and healthy living were comprehensively addressed. Table 1 summarises the sub-modules, objectives, and activities of the TJHM module.

Following the content analysis, the design phase focused on structuring and detailing the module's content. This phase incorporated various mindfulness therapies and techniques to create a comprehensive and effective programme. The next critical phase was the evaluation of the module's validity, conducted to ensure that it met the desired standards and objectives before its implementation. Two main phases were conducted to assess the suitability of the TJHM mindfulness module for the target population. The first phase is the validation process, which involved evaluations by four expert panels. These experts were selected for their expertise in teaching, research, and clinical experience in counselling module development and mindfulness. The TJHM module obtained a content validity score of 85% based on evaluations from the four expert panels. A five-point Likert scale was used for assessment, resulting in an average score of 21.25 out of 25. By applying Noah and Ahmad's (2005) formula, the content validity of the TJHM module is notably high, achieving a score of 85%. As a score above 70% is considered high, the module demonstrated strong content validity, confirming its suitability. This indicates that the module effectively encompasses all necessary aspects of mindfulness and healthy living. This high score was followed by the refinement of the module based on feedback and suggestions from the expert panels. This initial step ensured that all relevant aspects of mindfulness and healthy living were comprehensively addressed.

This was followed by the second phase, the reliability measuring process, where a pilot study was conducted to assess the module's effectiveness and feasibility. This pilot study included eighteen female students from a local university, of whom ten completed the entire programme. While most participants were identified as overweight, one participant was underweight. The primary motivation for joining the programme among most participants was to learn about a healthy lifestyle and to lose weight, whereas the underweight participant aimed to learn healthy living through mindfulness practices. In order to assess the reliability of the TJHM module, the participants were given a set of reliability forms consisting of 25 items after the completion of the TJHM session. The items in the reliability form covered mindfulness topics such as the definition of mindfulness, mindfulness techniques, emotional eating, mindful eating, and also the participants' future plans relating to mindfulness. The data obtained were analysed using Cronbach's Alpha, yielding a reliability score of 0.95, reflecting good consistency in measuring the intended outcomes (Said et al., 2017).

2 METHODS

2.1 Design

This study adopted a qualitative approach as it provides the richest and most descriptive data (Creswell & Poth, 2024). This is an appropriate research process for eliciting perceptions and lived experiences. The use of semi-structured interviews also facilitates participants' self-disclosure of their experiences practising mindful eating and benefits that they perceived they had gained.

2.2 Participants

The purposive sample consisted of 10 participants who successfully attended a two-day programme of 'The Journey to Healthier Me.' All participants were female university students, aged between 22 and 25 years. The demographic characteristics of the participants are presented in Table 2. Given the homogeneity of the sample, namely, female university students aged 22–25, 10 participants were deemed sufficient to reach data saturation, where no new themes were emerging. This sample size aligns with recommendations in qualitative research literature, which suggests that a sample of six to 10 participants is adequate for identifying meaningful patterns and themes, particularly in studies involving semi-structured interviews and focused research objectives (Braun & Clarke, 2013).

Table 2. Demographic characteristic of participants (N=10).

Characteristic	N (%)
Age (years)	
22	1 (10%)
23	2 (20%)
24	1 (10%)
25	6 (60%)
Ethnicity	
Malay	6 (60%)
Indian	2 (20%)
Chinese	1 (10%)
Iban	1 (10%)
Highest Education Level	
STPM	4 (40%)
Diploma	6 (60%)
Body Mass Index	
Underweight	1 (10%)
Normal	4 (40%)
Overweight	4 (40%)
Obese	1 (10%)

The majority of participants were 25 years old, with a mean age of 24.2 years. In terms of ethnicity, the largest proportion of participants identified as Malay (60%), followed by individuals from other ethnic backgrounds. Regarding educational qualifications, most participants held a diploma. The Body Mass Index (BMI) distribution indicated that half of the participants (50%) fell within the overweight or obese category, highlighting a significant prevalence of weight-related concerns within the sample.

2.3 Interview Protocol

An interview protocol was carefully designed to explore the benefits of the mindfulness module on participants' well-being outcomes. The protocol guided participants to share their experiences practising mindful eating and to reflect on the specific benefits they gained from the intervention programme. The questions were systematically organised and presented in a semi-structured interview protocol sheet to ensure consistency and depth in the data collection process.

2.4 Procedure

After attending TJHM, participants were given two weeks (14 days) to practise and experience mindfulness techniques before the interview session. A two-week duration strikes a balance between allowing participants sufficient time to engage with and internalise the mindfulness practices while also minimising potential attrition or disengagement that may arise from longer waiting periods. This time frame is consistent with prior mindfulness-based interventions that have demonstrated positive outcomes within short durations (Howarth et al., 2019). After 14 days, potential participants were contacted to schedule the date, time, and venue for face-to-face interviews. Semi-structured interviews, lasting between one and two hours, were conducted to gather in-depth insights. Each interview was recorded and transcribed verbatim to ensure accuracy in capturing participants' experiences. A total of ten interviews were conducted. To protect confidentiality, pseudonyms were used throughout this paper.

2.5 Data Analysis

Thematic analysis was used to analyse the 10 verbatim transcripts in this study, following the six-step framework by Braun and Clarke (2006). Each interview transcript was thoroughly read, and the texts were analysed to extract the main data. The summative descriptions of the participants' narratives and translations were noted in the left margin, and the interpretation of the statements was written in the right margin. The key ideas for each question were identified to generate initial codes and provide themes.

3 RESULTS

The thematic analysis revealed four major themes related to the benefits participants gained from practising mindfulness through the TJHM module, namely healthier eating habits, better emotion regulation, improved focus and concentration, and healthier lifestyles.

3.1 Theme 1: Healthier Eating Habits

A key benefit that emerged from the participants' practice of mindfulness was significant changes in their eating habits as a result of practising mindfulness. The module helped them break free from their previous patterns, encouraging healthier, more intentional eating. As they became more mindful, they developed a heightened awareness of their internal hunger and fullness cues, allowing them to eat in a way that was both physically and emotionally beneficial. By paying closer attention to their food choices and eating behaviours, participants found themselves making

decisions that were no longer driven by stress or emotions but by a genuine understanding of their body's needs.

P1, for instance, described how mindfulness transformed her eating experience. She began focusing on the quality of her meals, making sure to include at least one balanced meal each day. As she savoured each bite, she became more conscious of her food choices.

“...I am more aware of the food I put in my mouth. I insist on having at least one balanced meal a day. Eating the food and enjoying the taste.”

Mindful eating also helped her reduce emotional eating, a habit she had previously struggled with.

“Reducing the frequency of my emotional eating. When I feel stressed, I choose to do some other things to relieve my stress instead of grabbing something to eat.”

In addition to improving her meals, P1 incorporated mindfulness into her hydration routine.

“...I put in my mindful plan that I want to drink 2 litres of water a day. So, every time I drink water, I am reminded to drink three bottles of water in one day.”

Other participants echoed similar experiences of change. P2 shared that after completing the programme, she became more mindful of when and how much she ate.

“After attending this programme, I noticed changes in my eating habits. I've started stopping before I feel completely full. I also pay more attention to the ingredients used in the food, whether they're healthy or not.”

This attentiveness also led P3 to slow down while eating, allowing her to appreciate the process and recognise fullness sooner.

“...I also feel full more quickly, and my eating pace has slowed down because I'm savouring the food. I'm more mindful about what I eat now and think twice before buying or eating something.”

Participants like P4 noted a shift in her food-purchasing decisions, where mindfulness influenced her choices.

“...I feel more mindful than before. When I buy food, I start thinking about what's important and what's not necessary to eat at that moment.”

For P5, the practice of mindful eating also meant eliminating distractions during meals. She stopped using her phone while eating, allowing her to focus fully on the act of eating.

“...no phone during eating. When I practised this, I was able to focus more on my meal.”

Other participants, like P6, found that mindfulness led to more gratitude and portion control.

“I appreciate what I eat more... I've reduced the quantity of food I eat.”

P7, too, began paying closer attention to her daily calorie intake.

“I've started controlling the amount of calories I consume each day. Before, I would buy anything I wanted to eat.”

P8 shared a similar shift in her mindset, where she now buys food only when necessary, resisting the temptation to indulge in food simply because it's available.

“I only buy food when I need it. If I'm not hungry but there's delicious food in front of me, I won't buy or eat it.”

P9 expressed how mindfulness helped her overcome a previous difficulty with eating. She explained:

“...before this, I had trouble eating even when I was hungry. Now, I try to appreciate the food more.”

Overall, participants found that mindful eating not only helped them make healthier choices but also fostered a deeper connection with their food. By being present in the moment and attuned to their body's signals, they were able to cultivate healthier, more balanced eating habits that aligned with their personal needs and values.

3.2 Theme 2: Better Emotion Regulation

Participants in the mindfulness programme reported significant improvements in their ability to manage emotions, particularly in coping with aversive emotions such as anger and stress. By adopting a mindful attitude, they became more aware of their emotional triggers and learnt how to respond to these emotions in healthier, more constructive ways. Instead of reacting impulsively or allowing aversive emotions to dictate their behaviour, participants found alternative, more positive outlets for their feelings.

For P1, mindfulness helped her become more attuned to her emotional state and choose healthier ways to cope with stress. She explained how, instead of turning to unhealthy behaviours like stress-eating, she now consciously seeks support.

“I am more mindful of my current stress level. When I feel I cannot handle the stress, I would try to talk about it with someone I trust, instead of using other unhelpful behaviour to handle it, like eating junk food.”

This shift in behaviour was a common theme among participants. By being mindful, they became more aware of the early signs of emotional distress and were able to intercept negative reactions before they spiralled. P8 noted how this newfound calm allowed her to savour and enjoy moments more profoundly.

“...when I'm calm, I enjoy the moment more.”

Others, like P2, discovered simple yet effective mindfulness techniques to manage her emotions in the heat of the moment. P2 described how mindfulness helped her remain composed in situations that previously would have triggered her temper.

“I used to be quick to anger, but after attending this programme, whenever something makes my emotions flare, I close my eyes, take deep breaths for 60 seconds, and then continue with my work.”

This practice of pausing and breathing was echoed by several participants who found it a powerful tool in managing stress and emotional overload. P3 shared how mindfulness helped her stay calm when faced with multiple tasks, improving her ability to concentrate.

“When I'm stressed and have many things to complete at once, I practice mindfulness. I notice it helps me stay calm and see which tasks need my attention first.”

P5 also found that applying the mindfulness techniques she learnt, particularly the "Just Breathe" exercise, helped her regain control during moments of intense emotion.

“When I'm angry, I try applying the 'Just Breathe' technique. It was hard at first because I was so mad, but I took the time to really feel the emotion and kept breathing until I calmed down.”

Similarly, P4 emphasised how simply taking a breath during an unpleasant situation allowed her to regain her composure.

“Just take a breath. In situations that are upsetting, I'll take a deep breath and calm myself first. After that, I always feel more at peace.”

Through these experiences, it became clear that mindfulness not only helped participants regulate their emotions but also fostered a sense of self-restraint in stressful or threatening situations. They were able to approach their emotions with greater clarity and calmness, reducing internal conflict and enhancing their overall emotional well-being.

3.3 Theme 3: Improved Focus and Concentration

Participants reported that the practice of mindfulness enhanced their sense of concentration. As they engaged with the module, many began to notice how their focus and awareness shifted, allowing them to respond more thoughtfully to their surroundings and interactions. For some, this newfound concentration started with a heightened awareness of their senses. P1, for example, shared how she became more attuned to the world around her.

“I try to focus on my senses more when I am alone, like smelling the grass, watching something carefully.”

This deeper connection to her environment allowed her to experience moments more vividly and mindfully. This sense of focus extended beyond just sensory experiences. P1 also realised how mindfulness affected her daily interactions, particularly in communication. She reflected on how mindful attention to her words made her more cautious and conscious. Through this practice, she became more sensitive to the emotional impact of her speech and more deliberate in her conversations with others.

"I am also more aware of the words I use to communicate with people. I realised my words can heal or hurt someone, so I must pick the words carefully, as I do not want to hurt people."

For other participants, this increased concentration led to improvements in their daily routines and tasks. P4, for instance, described how mindfulness helped her stay focused on activities.

"I am more focused when doing something," she shared, noting that she felt more present and engaged in her actions.

Similarly, P10 found that mindfulness encouraged her to direct her attention more effectively. This focused attention enabled her to manage tasks with greater clarity and effectiveness.

"Mindfulness helps me to focus on one thing at a time."

P5, meanwhile, experienced the benefits of mindfulness in her academic life. She tried applying mindfulness during her classes, focusing intently on the lecturer's words. Unlike her usual routine of notetaking, she chose to fully immerse herself in listening, and this shift had a profound impact on her memory. This experience highlighted how mindfulness practice not only sharpened her concentration but also enhanced her retention of information.

"During class, I tried practising mindfulness. I focused on every word the lecturer said and didn't do anything else, not even taking notes. And I was able to remember what the lecturer said in class very well."

Across these experiences, participants described how mindfulness helped them cultivate a deeper level of concentration. Whether through sensory awareness, improved focus in communication, or better attentiveness in everyday tasks, the practice allowed them to engage more fully with their surroundings and respond with greater intention.

3.4 Theme 4: Healthier Lifestyles

Attending the TJHM programme also had a significant impact on participants' approach to self-care and overall health. The mindfulness techniques they learnt encouraged them to take proactive steps in maintaining their physical well-being. Many participants reported incorporating regular movement and hydration into their daily routines, recognising these habits as essential components of a healthier lifestyle.

For P1, mindfulness inspired her to be more conscious of her hydration and physical activity. She created a mindful plan to ensure she drank enough water each day, a habit she had previously overlooked.

“...I put in my mindful plan that I want to drink 2 litres of water in a day. So, every time I drink water, I am reminded to drink three bottles of water in one day.”

P1 also found a way to weave exercise into her everyday life by turning her daily walks into an opportunity to stay active.

“...I try to incorporate exercising moments in my everyday life, which is by walking to and from my house and university.”

Similarly, P7 shared how mindfulness prompted her to dedicate more time to physical exercise, an activity she previously hadn't prioritised:

“...I also started setting aside time for exercise.”

Through the mindfulness practices learnt in the programme, participants became more mindful of their bodies' needs and more committed to taking care of their health. This focus on regular movement and hydration laid the foundation for healthier, more sustainable habits, ultimately contributing to an improved sense of well-being.

4 DISCUSSION

The findings from this study demonstrate the profound benefits of mindfulness practices, particularly in the context of The Journey to Healthier Me (TJHM) programme. Participants reported significant improvements across four key areas: healthier eating habits, better emotion regulation, improved focus and concentration, and healthier lifestyles.

First, multiple studies consistently highlight the efficacy of mindfulness interventions in improving eating habits among females (Balciuniene et al., 2021; Salvo et al., 2022). For example, a study by Salvo et al. (2022) demonstrated that mindfulness training enhances individuals' ability to recognise internal hunger and satiety signals, thereby fostering healthier eating patterns. Furthermore, females engaging in mindfulness techniques such as mindful breathing (Soriano-Ayala et al., 2020) or body scanning (Khoshkerdar & Raeisi, 2020) before meals exhibited greater awareness of portion sizes and nutritional content, leading to more balanced dietary choices. The positive outcomes of mindfulness on eating habits are especially significant in addressing societal pressures on females to conform to certain body standards. By promoting self-acceptance and healthier eating behaviours, mindfulness programmes not only improve physical health but also enhance psychological well-being, making them a valuable tool in combating disordered eating patterns.

The second significant finding of the present study was the improvement in emotional awareness, underscoring the role of mindfulness in fostering more adaptive emotion regulation strategies. Participants in this study reported greater self-awareness of their emotions, which enabled them to manage stress and aversive emotions more effectively. Similarly, past studies have highlighted mindfulness as an effective intervention for addressing emotional eating by promoting emotional awareness and enhancing emotion regulation (Tapper, 2022). Mindfulness training can mitigate emotional eating by reducing stress and promoting emotional resilience. For instance, a study by Lattimore (2020) revealed that mindfulness interventions decreased emotional eating by encouraging individuals to observe and accept their emotions without acting on them impulsively. Additionally, mindfulness practices improve emotional awareness by fostering an individual's ability to observe and describe emotions without over-identifying with them. This heightened awareness enables individuals to identify subtle emotional cues and manage them in a more adaptive manner, which is essential for effective emotion regulation.

Third, the findings of this study revealed that mindfulness improved the participants' concentration. Numerous studies have investigated the effects of mindfulness on concentration, providing strong evidence of its benefits (Baena-Extremera et al., 2021; Bamber & Schneider, 2022; Kinsella et al., 2018). These studies span various populations, including students (Baena-Extremera et al., 2021), healthcare professionals (Chmielewski et al., 2021), and individuals with attention difficulties (Gabriely et al., 2020), and highlight the effectiveness of mindfulness-based interventions in enhancing cognitive performance. Collectively, these studies illustrate mindfulness's capacity to enhance concentration through improved attention control, reduced stress, and decreased mind-wandering. Research also highlights that mindfulness reduces stress and anxiety (Bamber & Schneider, 2022), both of which can impair concentration. A calmer mind is better able to process information and remain focused on complex or prolonged tasks. The participants' ability to concentrate better, whether in academic settings or during everyday tasks, suggests that mindfulness fosters not only mental clarity but also a heightened awareness of internal and external experiences. This could have broader implications for improving work productivity and academic performance across diverse populations.

The fourth theme, healthier lifestyles, further highlights the broad-reaching effects of mindfulness on participants' lifestyles. Participants reported being more mindful of their physical health, incorporating regular exercise and hydration into their routines. A systematic review by Yang and Conroy (2020) highlighted the positive association between mindfulness and physical activity, finding that individuals who practised mindfulness were more likely to engage in regular physical activity. This was attributed to increased self-regulation and the ability to focus on the intrinsic enjoyment of exercise, rather than external pressures or distractions. Moreover, individuals who practised mindful drinking, paying attention to the act of drinking, showed improved fluid intake (Kose & Bas, 2024). Mindfulness helped participants recognise their body's hydration needs and reduced the likelihood of neglecting these signals amidst daily distractions. These studies highlight mindfulness' potential as a practical tool for improving physical health. The integration of mindfulness into daily life appears to motivate individuals to take more responsibility for their physical health, suggesting that mindfulness could be a valuable tool in preventive healthcare.

The behavioural changes observed among participants can be attributed to the foundational principles of mindfulness, which encourage individuals to become more attuned to their bodily needs. Through practices such as mindful breathing and eating, participants cultivated greater awareness of internal hunger and satiety cues, enabling more intentional food choices. Additionally, mindfulness enhanced participants' capacity to plan and sustain healthy routines by fostering present-moment awareness and self-regulation, allowing them to remain committed to hydration and physical activity goals. The repetition of mindful actions also reinforced healthier habits over time, promoting consistency and behavioural transformation. Collectively, these findings suggest that structured mindfulness modules like TJHM can foster holistic well-being among female university students, offering a sustainable, non-pharmacological approach to addressing health and psychological challenges in higher education contexts.

Given the promising results of this study, there are several implications for future practice and research. The findings highlight the potential of mindful eating as a practical intervention for enhancing emotion regulation and promoting healthier eating behaviours among female university students. Considering its effectiveness in reducing emotional eating, raising self-awareness of hunger and satiety indicators, and fostering a positive relationship with food, future practice should integrate mindful eating into university-based wellness programmes and psychological counselling services. Mental health professionals can incorporate mindfulness-based interventions into student support systems to address stress-related eating patterns, food preoccupation, and body image concerns. Mindful eating can be effectively incorporated into various psychotherapies such as Mindfulness-Based Cognitive Therapy (MBCT), Acceptance and Commitment Therapy (ACT), and Dialectical Behaviour Therapy (DBT), each offering unique yet complementary strategies. MBCT integrates mindfulness to help individuals break automatic eating patterns and reduce emotional eating by disengaging from negative thought cycles. ACT applies mindful eating by encouraging individuals to accept cravings and distressing food-related thoughts without impulsively reacting to them while making values-based food choices. DBT, widely used for emotion regulation, utilises mindfulness skills to increase awareness of hunger and fullness cues, manage distress without resorting to food, and build healthier relationships with eating. By combining mindful eating with these therapies, practitioners can offer a holistic, evidence-based approach to managing emotional eating, ultimately fostering long-term behavioural change and improved emotion regulation.

Moreover, future research may expand this mindfulness programme to different populations, such as male university students, school students, or employees in high-stress occupations, which could provide further insight into its broader applicability. Additionally, future research could explore the long-term sustainability of the behavioural changes observed in this study, particularly in relation to health outcomes such as weight management, emotional stability, and stress reduction. Future research should also consider using a larger sample size and integrating quantitative measures to assess specific outcomes such as stress levels, body mass index, or cognitive performance. This would provide a more comprehensive understanding of the physiological and psychological benefits of mindfulness practices. Finally, it would be valuable for future research to investigate the role of cultural factors in shaping participants' experiences of mindfulness, particularly in non-Western contexts where mindfulness may be practised or understood differently. Exploring how cultural backgrounds influence mindfulness engagement could offer important insights into how to tailor interventions to be more culturally sensitive and effective.

In conclusion, this study explored the implementation and impact of The Journey to Healthier Me (TJHM) mindful eating module among female university students. The findings demonstrate that the module significantly enhanced participants' eating behaviours, emotion regulation, concentration, and overall lifestyle habits. This module aligned with the study's objective of imparting and improving well-being and promoting the practice of healthy lifestyles. The TJHM module fostered self-awareness and intentional behavioural change, equipping participants with practical skills to manage stress-related eating and develop healthier habits. Given the increasing prevalence of obesity and emotional eating among young Malaysian women, these findings suggest that the TJHM module holds promise as a viable, evidence-based intervention. As such, the integration of structured mindful eating modules into higher education, whether as part of wellness programmes, co-curricular offerings, or counselling services, could serve as a valuable preventive and reactive strategy, promoting both physical and emotional well-being among university students.

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