

Association Between Emotional Intelligence, Eating Behavior and Body Mass Index Among Girls in the Age Group of 17-24 Years in Chennai

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Abstract - Empirical data abound on stress eating, binge eating, eating disorders and its association with the emotional state of an individual. Interventions in such conditions focus on emotional perception, understanding, and emotional regulation for enhancing health and well-being. Emotional intelligence or EI is predictive of different indicators of physical and psychological health. However, there has been no significant contribution by way of research on EI and food pattern for understanding and developing strategies for therapeutic intervention. The current study was carried out to study the association between EI, eating patterns and body mass index among young girls in a cosmopolitan city like Chennai. The study revealed a correlation between emotional intelligence and body mass index. Though no association could be established in the current study between food pattern and emotional intelligence, the impact eating pattern has on certain components of emotional intelligence cannot be ignored. Taking cognizance of food consumption patterns is essential for developing effective interventions.

Index Terms - Emotional Intelligence, eating disorder, Eating attitude, Body mass index.

1.INTRODUCTION

Food and nutrition play a pivotal role in the promotion of health - be it physical or mental, general wellbeing and disease prevention. Eating disorders and problems with weight often appear early in life and have a significant impact on health in later years. Numerous aspects of human eating behavior are significant for determining practical measures for treatment/prevention of diseases such as diabetes, obesity or metabolic syndrome. Physiological mechanisms, sensory factors and psychological characteristics have been shown to significantly affect food consumption behavior (Bellisle, 2003). Food is used as a coping mechanism by many for dealing with

feelings such as anxiety, stress and boredom. Eating to ease out stress is almost always associated with regret, guilt and heightened sense of negativity. Psychological management involves behavioral treatment to identify the person's eating pattern and devise ways to favorably alter it.

Empirical data support the fact that shortfalls in processing and controlling of emotions affect food patterns (Polivy and Herman, 1993). Several studies have suggested that emotional intelligence (EI) plays a significant role in the onset of eating disorders (Peláez-Fernández MA, 2021). Emotional intelligence can best be described as the ability to monitor one's own and other people's emotions, to discriminate between different emotions and label them appropriately, and to use emotional information to guide thinking and behavior (Kalpana Srivastava, 2013).

Studies have shown that those with high levels of disordered eating have significantly lower EI than the general population. Individuals with high EI are better equipped to deal with difficult life events because they have more emotional resources; emotionally intelligent people can perceive, interpret, and understand emotional and situational cues better than those with low EI, and are thus better prepared to manage and effectively regulate emotional states and engage in adaptive problem solving. (Foye.U et al.,2019)

Although the impact of unpleasant emotions on eating behaviors has been extensively studied, it is difficult to predict how emotion will affect people's eating habits due to its variety. Specific emotions, such as anger, fear, sadness, and joy, as well as longer lasting and enduring moods, have been observed to affect meal responses throughout the swallowing process in several studies. (Romero-Meso, J et al., 2020)

The purpose of this study was to investigate whether emotional intelligence has a direct impact on college students' BMI and eating behavior.

OBJECTIVES

- To elicit information on the eating attitude of the subjects.
- To analyze the impact of emotional intelligence on eating behavior among college girls.
- To determine if there is correlation between emotional intelligence and BMI of subjects.

2. METHODOLOGY

The purpose of this study was to investigate whether emotional intelligence has a direct impact on college students' BMI and eating pattern.

2.1 Design of the Study

A survey design was employed to elicit information about eating behavior and emotional intelligence among college girls in the age group of 17-24 years in Chennai. A self-designed, structured questionnaire was created using google forms. The questionnaire was divided into 3 sections. Section A questions pertained to demographic data. Section B focused on the subjects' food pattern. The Schutte Self-Report Emotional Intelligence Test (SSEIT) was included in Section C to measure the EI scores of the participants. The SSEIT consists of 33 questions, three of which are reverse scored, employing four sub-scales: emotion perception, utilizing emotions, managing self-relevant emotions, and managing others' emotions. It is a self-report on a 5-point Likert scale, scored as 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree. Confidential treatment of information was assured. It was a close ended questionnaire to ensure reliability.

2.2 Sampling technique

Convenience sampling was employed for collecting the study data. The area chosen was Chennai due to familiarity and easy accessibility. Questionnaire was shared with the subjects through Google forms. Instructions on how to fill the questionnaire were given.

2.3 Pilot Study: A pilot study among 10% of the study population was carried out to determine the feasibility and validity of the questionnaire. Based on the

feedback obtained, suitable modifications were carried out in the questionnaire.

2.4 Sample size: In all, 205 girls in the age group of 17-24 years completed the questionnaire. The study was carried out over a period of one month to ensure that enough time was given to respondents to fill the questionnaire and reduce sampling error.

3. RESULTS AND DISCUSSION

The study was carried out among females in the age group of 17-24 years. A total of 205 participants completed the survey. Nearly 61% of the subjects were in the age group of 20-22 years.

3.1 BMI status of the subjects

Body mass index (BMI) was calculated from the participants' height and weight (self-reported). The BMI was calculated by dividing weight (kg) by height (in meter squared). Respondents were divided into four categories: Underweight (<18.5 kg/m²), normal weight (18.5- 24.9 kg/m²), overweight (25 - <29.9 kg/m²), and obese (>30 kg/m²). A majority of the participants (58%) had normal BMI, 13% were underweight, 24% were overweight, and 5 % were obese. Figure 1 gives the subjects' BMI distribution.

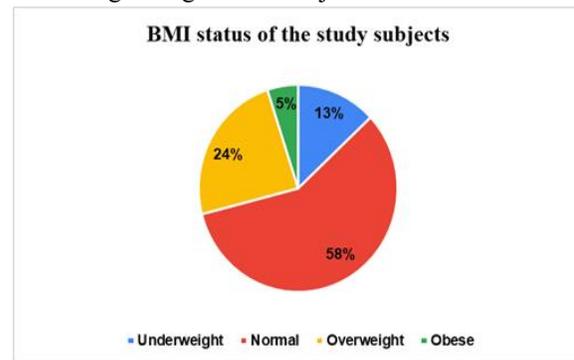


Fig 1: BMI status of the study subjects

3.2 Food consumption pattern

Nearly 52% of the subjects reported consuming at least one serving of fruits a day. As depicted in figure 2, nearly 78% of the subjects reported consuming at least one serving of vegetables on a daily basis. Forty two percent of the subjects said that they considered their weight while deciding what to eat.

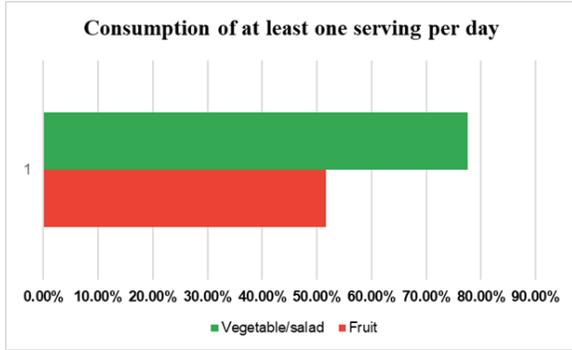


Figure 2: Percentage of population consuming at least one serving of fruit and vegetable/salad

Figure 3 depicts the eating behavior of the subjects. Nearly 37% of the subjects confessed that they felt compelled to eat when annoyed. Most of the subjects (62.4%) reported that they had the tendency to eat when bored/restless. Nearly 85% of the subjects said that they were tempted to eat rightaway after seeing delicious food. More than half of the study population reported an impulsive snack buying tendency.



Figure 3: Eating behavior of the study subjects

Figure 4 depicts the choice of soft drinks for the subjects. Only 16.6% of the subjects reported that they specifically preferred diet drinks

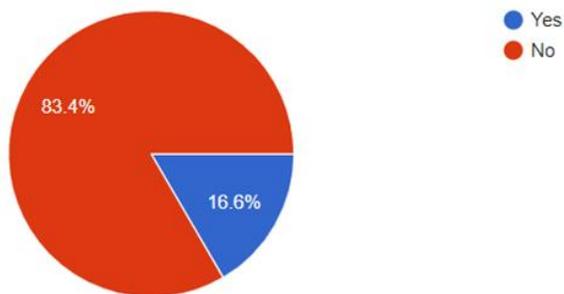


Figure 4: Choice of soft drink

Table 1: Food consumption behavior

Question	Strongly disagree (%)	Disagree (%)	Neither agree nor disagree (%)	Agree (%)	Strongly agree (%)
Before tasting a food, I frequently conclude that I don't like it.	15	27	25	25	7
At first, I am averse to trying new meals.	11	29	23	26	11
I get annoyed if I don't eat.	11	22	19	26	22
At the end of a meal, I frequently leave food on my plate	47	28	13	9	3
I frequently become satiated before I complete my meal.	10	29	34	19	8
I am usually the last one to finish a meal.	20	25	16	19	20

From table 1, it is evident that nearly 32% of the subjects accepted avoiding certain foods even before tasting them and 37% of them were averse to even trying new foods. Nearly 75% of the subjects reported that they avoided leaving food in their plates at the end of the meal.

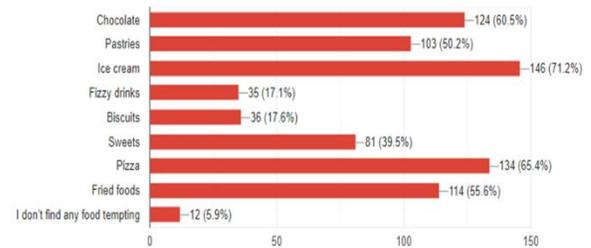


Figure 5: Preference towards junk foods

Figure 5 depicts the study subjects' preferences towards junk foods. The study revealed that among the different junk foods, a majority of the subjects had a temptation for consuming pizza (65%), chocolates (61%), pastries (50%) and ice creams (71%).

Table 2: Food perception and attitude of the subjects (Approach)

Question	Never (%)	Rarely (%)	Sometimes (%)	Often (%)	Always (%)
I give up on my eating goals far too easily.	11	24	44	15	6
I'm really adept at avoiding tempting foods.	15	25	43	12	4
I'm really adept at avoiding tempting foods.	15	28	37	19	1
If I'm not eating the way I want to, I make changes.	11	20	38	22	9
It's difficult for me to recall what I've eaten throughout the day.	37	24	26	6	6

From table 2, it can be inferred that nearly 44% of the subjects gave up on their eating goals at times, and 6 % of the subjects found it difficult to recall what they've eaten throughout the day. Nearly 19 % of the study population revealed that they were adept in avoiding tempting foods.

Table 3: Food preferences of the subjects

Question: It is important to me that the food I eat on a typical day	Not at all important (%)	A little important (%)	Moderately important (%)	Very important (%)
Tastes good	3	20	28	48
Smells nice	5	24	40	31
Is low in calories	20	34	33	14
Helps me cope with stress	22	28	26	24
Makes me feel good	6	15	28	51
Keeps me healthy	2	14	25	59
Looks nice	9	37	31	23
Contains no artificial ingredients	10	32	22	36
Is high in fibre and roughage	11	26	40	24

Table 3 shows the food preferences of the subjects. Nearly 59 % of the population revealed that the food they ate on a typical day tasted good and was healthy. Nearly 37% of the subjects emphasized that visual appeal of the product was also an important attribute. Ten percent of the study subjects said it made no difference whether the food they consumed contained artificial ingredients or not.

3.2 Emotional intelligence

Emotional intelligence was measured using the Schutte Self Report Emotional Intelligence Test (SSEIT). The SSEIT is a method of measuring general emotional intelligence using four sub-scales namely emotion perception, utilizing emotions, managing self-relevant emotions, and managing others' emotions. Scores below 111 or above 137 are considered unusually low or high (Malouf, 2014). In the current study, the mean EI score was 116.2.

A Chi square value of 0.042 (<0.05) obtained indicated an association between EI and BMI. Also no association was noted between food wastage behavior and EI.

4.DISCUSSION

The purpose of this study was to analyze and understand the association between food consumption behavior, emotional intelligence and body mass index among girls in the age group of 17-24 years. In the last two decades, the worldwide prevalence of ED has increased from 3.5 to 7.8% (Galmiche et al., 2019), and the rate remains significantly higher among females (American Psychiatric Association (APA), 2013). Disordered eating behaviors can develop as a result of a person's inability to regulate their emotions in response to stressors or triggering events. The EI subscales were examined to gain a better understanding of how EI deficits influence eating disorder development and maintenance. The results of this study found that there was no association noted between food wastage behavior and EI (>0.05) and there is an association between EI and BMI. When BMI is within normal ranges, individuals may have a good understanding of their own and others' emotions. (Wong.F.V, 2011)

Inclusion of EI training, self-esteem promotion, and anxiety management programs in school curricula could reduce the onset and persistence of ED in the child-adolescent population. Similarly, clinicians

could incorporate EI training and psychoeducation on how emotions relate to ED symptoms, which could help patients improve their understanding and management of their emotional states. (Pelaez-Fernandez.et al, 2021)

The study's future direction will be to develop methods to improve emotional intelligence based on a review of adopting an empathic attitude toward others. Emotion management is essential for success in all aspects of life (Rai.A.et al, 2014).

eating behaviors among college students. Unknowledge.

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