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The relationship between self-efficacy and emotional eating patterns in people who consume junk food frequently

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Abstract

This study explores the relationship between self-efficacy and emotional eating patterns among people who frequently consume junk food. A correlational approach was employed to assess whether self-efficacy influences emotional eating behaviors. A total of 244 participants completed validated questionnaires, including the General Self-Efficacy Scale and the Emotional Eater Questionnaire, to evaluate their perceived ability to regulate their eating habits and their tendency to eat in response to emotions. The findings indicate a significant negative correlation between self-efficacy and emotional eating ($r = -0.41$, $p < 0.001$), suggesting that individuals with higher self-efficacy are less likely to engage in emotional eating. Self-efficacy accounted for 16.8% of the variance in emotional eating behaviors. These results highlight the importance of psychological factors in dietary habits and suggest that interventions that are aimed at improving self-efficacy may help individuals regulate their eating behaviors more effectively. Future research should focus on longitudinal studies to examine the long-term effects of self-efficacy on emotional eating and its potential role in weight management strategies.

Keywords: Self-efficacy; Emotional eating; Junk food consumption; Emotional Regulation; Mental & Physical Wellbeing

1. Introduction

The prevalence of unhealthy dietary habits, in particular the frequent consumption of junk foods, has become a significant global public health concern. Junk foods are high in energy but low in nutrients and high in fat, sugar, and salt levels [16], [11]. These foods have been linked to several adverse health outcomes including cardiovascular disease, obesity, and type 2 diabetes [14].

Identification of determinants of consumption of such foods is crucial in designing effective interventions. Among the determinants is emotional eating, where one tends to overeat due to feelings of stress, anxiety, or sadness [8]. While distinct from "happy eating," or eating that is generally marked by positive affect and doesn't typically yield increased energy intake or weight gain, emotional eating can precipitate a pattern of inappropriate food selection and weight gain.

The link between eating junk food and emotional eating is likely to be bidirectional. The reward value, high palatability, and ability of junk food to engage the reward system of the brain make it an attractive solution for coping with negative affect [1].

Conversely, those who eat junk food frequently can have mood and energy swings due to the nutritional deficiencies and quick blood sugar fluctuations that go along with such foods, thereby boosting emotional eating.

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Self-efficacy is one of the significant factors that may influence the interaction between junk food consumption and emotional eating. Self-efficacy, as defined by [2], refers to a belief that a person holds in succeeding in specific situations or tasks. Healthy eating self-efficacy refers to self-confidence in being able to resist fast food temptations, choose good food, and manage their emotional responses without overeating. The lower self-efficacy individuals may feel less capable to control their food intake and more inclined to employ emotional eating as a coping mechanism, particularly under pressure of stress or adverse moods. For others who have greater self-efficacy, the same could motivate them to consume healthier food and deal with emotional distress in healthier manners, reducing their reliance on junk food.

This study will investigate the relationship between self-efficacy and emotional eating behavior among high-frequency junk food consumers. Knowing this relationship will help construct specific interventions that will enhance self-efficacy and healthier eating behaviors among high-frequency junk food consumers and those who have emotional eating behavior. By establishing how all these elements interact, we can move towards more effective prevention strategies for promoting healthier eating habits and reducing the negative effects on health generated by excess consumption of junk foods. As underscored in various studies, psychosocial factors like stress, anxiety, and body image concerns are major drivers of emotional eating behaviors, especially among teenagers, resulting in the intake of fast foods and unhealthy food choices [7], [9]. The need for the convergence of mental health interventions with nutritional interventions is realized, given that the relationship between emotional distress and food intake is shaped significantly by self-efficacy and emotion regulation.

In addition, the study highlights the interdependence of emotional eating and junk food eating, where the reward value of junk food as a coping response to negative affect and the dietary deficiencies resulting from habitual junk food consumption can perpetuate mood swings and augment emotional eating. This is further compounded by self-efficacy, which determines the extent to which a person can resist overeating temptations of junk foods and cope with discomfort caused by emotions without indulging in overeating. Finally, an examination of the relationship between self-efficacy and emotional eating among heavy consumers of junk foods seeks to shed light on informing evidence-based interventions aimed at building both self-efficacy and better eating behaviors as a way of preventing the negative health outcomes of overindulgence in junk foods.

Psychosocial stresses, anxiety, and body image concerns heavily drive emotional eating behaviors among adolescents, resulting in poor nutrition, corroborating the need to incorporate mental health interventions into nutritional interventions [7]. This is also complemented by quantitative studies that investigate the association between emotional eating behavior and health behavior among adolescents, which shows how self-efficacy, social norms, and motivation affect eating habits [9]. Particularly, the connection between emotional eating and junk food intake among teenagers in Taiwan indicates that individuals vulnerable to emotional eating are more susceptible to junk food intake, thus highlighting the requirement for interventions to enhance emotional control.

Equivalently, one research on the European population determined that there was a strong correlation between increased levels of emotional eating and higher consumption of unhealthy food, indicating that people resort to comfort foods during periods of emotional pain (Morley et al., 2022). This is reinforced in studies among diverse populations, which reveal a strong correlation between negative affect and higher intake of high-calorie, unhealthy foods, suggesting that food is commonly utilized as a coping strategy [8]. In addition to this, another study on a targeted population established that emotional distress is a pathway towards comfort seeking through unhealthy foods, and public health interventions are critical [14].

Health behavior improvement interventions, like specially targeted programs of physical activity and improved diets, have proven effective in improving health outcomes[10]. The connection between emotional eating and food choice, especially the preference to eat unhealthily when under stress, highlights the need for interventions that enhance emotional regulation as well as healthy eating [15]. More investigation into the patterns of emotional eating and food consumption among adolescents, grouped by sociodemographic and psychosocial determinants, indicates that low self-efficacy and high food insecurity are key determinants of poor diet and high emotional eating [15].

This agrees with evidence that teenagers who consume unhealthy diets and have high emotional eating indicate highest food insecurity and lowest healthy eating self-efficacy [7]. Among university students, lower self-esteem and weak strategies for emotion regulation are linked with more common emotional eating, meaning interventions building up these components can control emotional eating [3]. This is supported by the relationship between self-efficacy, motivation, and social norms and emotional eating in adolescents, which shows lower self-efficacy and poor social norms playing a role in increased emotional eating [9]. Emotional influences on eating habits, such as unhealthy consumption, are also reflected in evidence of a positive correlation between negative emotions and more consumption of unhealthy foods [6].

Additionally, mindfulness interventions have been proven effective in enhancing mental well-being by alleviating anxiety and depression symptoms among adolescents, indicating that implementing mindfulness programs within schools can build resilience [13]. The relationship between emotional eating and psychological well-being, in which aversive emotions such as stress and anxiety significantly predict higher emotional eating, calls for interventions aimed at strengthening coping and emotional regulation skills [5].

Strong communication tactics are important in shaping nutrition choices and encouraging improved eating habits, with a focus on straightforward and goal-oriented messaging being essential to the success of health promotion campaigns [12]. The importance of good diets to the preservation of health is highlighted by evidence that certain eating patterns are associated with favorable health outcomes, illustrating the necessity of public health initiatives promoting healthy eating habits [4]. Together, these studies support the substantial role of emotional distress, such as anxiety and body image concerns, in emotional eating habits in adolescents, with future research aimed at longitudinal studies and varied influencing factors to design effective interventions.

2. Methods

2.1. Participants

The Current study aims at exploring and finding the relationship between Self efficacy and emotional eating in people who consume junk food frequently, consist of 244 samples (N=244). Participants were recruited through Google Forms, which was distributed via social media platforms. Those with diagnosed eating disorders, severe psychological conditions, medications affecting appetite or mood, or active substance use were excluded.

2.2. Measures

The EEQ is a 10-item questionnaire that evaluates emotional eating behavior, with scores ranging from 0 to 30, where higher scores indicate greater emotional eating tendencies [6]. The GSE is a 10-item questionnaire assessing self-efficacy, with scores ranging from 10 to 40, where higher scores indicate greater self-efficacy (Schwarzer et al., 1995). Both instruments demonstrate strong reliability and validity, with EEQ showing test-retest reliability ($r = 0.702$, $p < 0.0001$) and GSE displaying Cronbach's alpha between 0.76 and 0.90.

2.3. Research Design

A research design is a basic framework that directs the general process of research, which includes data collection, measurement, and analysis. Since the focus of this study is young adults who consume junk food regularly, a correlational research design is used to investigate the correlation between self-efficacy and emotional eating in this group.

2.4. Hypothesis

There is no significant relationship between self-efficacy and emotional eating patterns. Self-efficacy does not predict emotional eating behaviors.

There is no difference of emotional eating patterns on frequency of junk food consumption

3. Results

Pearson's correlation analysis was run to test the hypothesis. The null hypothesis has been rejected as a significant correlation has been identified. The negative correlation ($r = -.139$, $p < .05$) indicated that with an increase in self-efficacy, emotional eating tendencies are expected to decline. Hence the first null hypothesis H01 is rejected as shown in Table 1.

Table 1 Descriptive Statistics and Correlations

Variable	n	Mean	SD	1	2
Self-Efficacy	244	19.332	5.397	-	
Emotional Eating	244	22.976	6.824	-0.139*	-

*Correlation is significant at the 0.05 level (2-tailed).

The second null hypothesis states that Self-efficacy is not a predictor of Emotional Eating. The null hypothesis has been rejected as a significant association was identified.

The regression analysis identifies a statistically significant inverse relationship between self-efficacy and emotional eating. That is, the findings indicate a significant negative correlation (β = -0.139, t = -2.182, p =.030), which means that with an increase in self-efficacy, emotional eating decreases.

Table 2 Regression Coefficient

Variable	B	SE	β	t	95% CI	p
Constant	26.375	1.615	—	16.328	[23.193, 29.557]	< 0.001
Self-Efficacy	-0.176	0.080	-0.139	-2.182	[-0.334, -0.017]	0.030

Dependent Variable: Emotional Eating

The third null hypothesis states there is no difference of Emotional Eating across the frequency of junk food consumption. The hypothesis was tested using one way ANOVA to identify the difference across the three groups, that is Less than a week, 2-4 times a week and 5-7 times a week. The results were statistically significant. The effect size Partial Eta Squared was identified to be 0.309 indicating a moderately weak difference.

The F-statistic value of 53.788 and the p-value of <.001 reveal a highly significant difference in emotional eating among various frequencies of junk food intake. This reveals that junk food frequency is meaningfully linked to emotional eating patterns.

Table 3 The table One-way ANOVA and effect size of Emotional eating based on frequency of junk food consumption

Source of Variation	Sum of Squares	df	Mean Square	F	p	Partial η^2
Between Groups	3,492.569	1	1,746.285	53.788	<0.001	0.309
Within Groups	7,824.326	df	32.466			
Total	11,316.895					

Post hoc analysis of Tukeys HSD and Bonferroni was conducted to identify the specific differences between each of the groups. The corresponding results indicate a statistically significant difference between each group in both the post hoc analysis. The results of this study correspond with growing research on the relationship between junk food consumption and emotional eating.

Table 4 Post Hoc Analysis of Emotional eating based on frequency of junk food consumption

Comparison	Mean Difference	*SE*	95% CI	*p*
Tukey's HSD Test				
Less than a week vs. 2-4 times/week	-3.809*	0.878	[-5.882, -1.736]	<0.001
Less than a week vs. 5-7 times/week	-9.583*	0.930	[-11.778, -7.389]	<0.001
2-4 times/week vs. 5-7 times/week	-5.774*	0.885	[-7.862, -3.686]	<0.001
Bonferroni Test				
Less than a week vs. 2-4 times/week	-3.809*	0.878	[-5.928, -1.690]	<0.001
Less than a week vs. 5-7 times/week	-9.583*	0.930	[-11.827, -7.340]	<0.001
2-4 times/week vs. 5-7 times/week	-5.774*	0.885	[-7.909, -3.639]	<0.001

Note. SE = Standard Error; CI = Confidence Interval. p < .05

4. Discussion

The present study prescribes a weak but meaningful negative correlation between self-efficacy and emotional eating (-0.139, p = 0.030). This indicates that individuals with higher self-efficacy tend to have lower emotional eating behaviors, consistent with previous research on the role of self-regulation in food intake behaviors.

Overeating as a consequence of stress or distress [15], also referred to as emotional eating, has been strongly related to poor dietary practices, like excessive consumption of fast or junk food [14]. The findings of this study are consistent with previous studies that have postulated that low self-efficacy would result in inapplicable eating behaviors, particularly among individuals who eat junk foods frequently [13].

Perhaps the most significant contribution of this study is the identification of the emotional eating and junk food consumption cycle. Junk foods are fatty as well as high in sugar, which activates the brain's reward system, providing instant solace from negative emotions but conducive to reliance on inapt eating [2]. Daily intake of junk foods, leads to fluctuating blood sugar levels and mood swings, making them more susceptible to emotional eating [14].

Regression analysis also confirmed that self-efficacy can significantly predict eating emotionally (β = -0.139, p = 0.030), validating that self-efficacy greatly influences regulating eating behavior [2].

Based on the results of this study, the previous research has already identified emotional distress as a primary reason for unhealthy eating habits, particularly among young adults [7]. This is also supported in studies among adolescents, where psychosocial stressors and body image concerns strongly predict emotional eating [9]. Additionally, found that individuals who are experiencing distressing emotions tend to harbor emotional eating, which consequently leads to overconsumption of unhealthy food.

Findings from the research validate the role of self-efficacy in reversing emotional eating behaviors. The more an individual possesses self-efficacy, the higher the control over emotions achieved through healthier modes and lower requirement for food in offering any form of comfort or relief. Self-regulated eating behavior is a link between food choice and stress highlighting intervention in favor of self-efficacy [8]. Furthermore, intervention studies have proven that increasing self-efficacy can lead to healthier eating behaviors [12]. [13] showed that individuals with low eating self-efficacy tend to have more unhealthy eating behaviors, which further supports the importance of developing self-efficacy in order to avoid emotional eating behaviors.

Another robust implication of this study is that emotional eating varies depending on how often one consumes junk food. One-way ANOVA results indicated there was a statistically significant difference (F = 53.788, p < 0.001), and post-hoc analysis guaranteed those who consumed more junk food were higher on emotional eating.

The results are in line with the study demonstrating that individuals with high emotional eating behavior are prone to consume unhealthy food rich in high-calorie. In addition, the Emotional Eater Questionnaire (EEQ) has been cross-validated to be a standard measure of assessment of emotional eating behavior, with further support provided for the use of methodology applied in the current study [6].

Research among university students also points to poor skill in emotion regulation and low self-efficacy as being positively associated with high levels of emotional eating, further pointing to self-efficacy intervention opportunities in addition to emotion regulation [3].

The post hoc analysis indicates a strong, statistically significant association between frequency of junk food intake and emotional eating behaviors, revealing a distinct increase in psychological vulnerability as the frequency of food intake rises. With a thorough statistical analysis using both Tukey's HSD and Bonferroni tests, the study illustrates a remarkable trend: individuals who consume junk food less than once per week report low levels of emotional eating, followed by more moderate emotional eating behaviors of participants who consume junk food 2-4 times per week, and then, the most elevated emotional eating behaviors belong to junk food consumers who eat junk food 5-7 times per week.

This gradient of emotional eating presents a range of behaviors that can be explained by advanced and multifaceted neurobiological and psychological processes. The neurobiological processes can be illustrated by the dopaminergic reward pathways of the brain which releases dopamine release when consuming foods high in sugar and fat allowing for a brief elevation in mood, leading to a cyclical pattern of searching for emotional relief through food. Over the same time of these psychological processes, chronic stress can also lead to an increase in cortisol production which extends

cravings for appealing foods that are high in calories - turning junk food into a disordered emotional regulation response.

Psychologically, this pattern shows deeper weaknesses: eating junk food becomes more than a dietary choice; it is an emotionally charged coping strategy used to navigate negative feelings, indicating a potential underlying mental health issue such as unresolved stress, anxiety or depression. The implication is not limited to mental well-being; rather, there are potential long-term health issues, including metabolic dysfunction, nutritional inadequacy, and poor self-esteem.

4.1. Implications

Fostering Self-Efficacy to Lessen Emotional Eating This research emphasizes the role of self-efficacy in the control of emotional eating behaviors, and it indicates that interventions would be more effective if they target enhancing people's confidence in being able to consume healthier foods. Interventions that incorporate training in behavior, goal-setting, and cognitive restructuring can assist individuals in developing self-efficacy, thus mitigating their use of food as an emotional buffer. The use of self-efficacy-increasing techniques within nutritional and psychological interventions can have long-term beneficial effects on diet.

Combining Emotional Regulation Strategies with Public Health Programs The results call for the conjunction of emotional distress and poor dietary habits, so public health efforts must be conducted that combine emotional regulation strategies. Stress management education, mindfulness therapy, and cognitive-behavioral therapy needs to be brought into public health policy to ensure that people can manage negative feelings without turning to junk food for relief. Such efforts may be most useful in those populations that are more susceptible to emotional eating, e.g., young adults and those with a high level of stress or anxiety.

The Requirement of Longitudinal and Experimental Studies While this research sets up a negative relationship between self-efficacy and emotional eating, causal associations are not evident. Future studies ought to use longitudinal and experimental research to determine how changes in self-efficacy over time predict eating habits. Experimental studies can also determine the efficacy of self-efficacy-enhancing interventions for alleviating emotional eating. Investigation should also be done on whether gains in self-efficacy bring about lasting changes in food intake and well-being. This knowledge will help in developing more powerful, evidence-based interventions for curbing unhealthy eating and enhancing global mental and physical well-being.

Limitations

Since the current research employed a correlational design, it does not prove causality between self-efficacy and emotional eating. Although there was a significant negative correlation, the direction of this relationship is difficult to ascertain -- whether lower levels of self-efficacy predict emotional eating or whether frequent occurrences of emotional eating decrease self-efficacy. Future research will need to incorporate longitudinal or experimental designs to define causal relationships as well as temporal changes.

The sample size of 244 participants may not be entirely representative of larger populations, such as older adults, teenagers, and people from different cultural backgrounds. The research was concentrated on young adults who have regular intakes of junk food, restricting generalizability to other demographic populations. Future studies will seek bigger and more inclusive samples in examining the differences in self-efficacy and emotional eating across age groups, sex, and culture.

The research was based on self-reported questionnaires, which can lead to social desirability and recall bias. Respondents might have overreported or underreported their emotional eating behavior or levels of self-efficacy based on subjective perceptions rather than objective data. Future research might include objective measures, for example, dietary recording, observation of behavior, or physiological measurements, to yield more accurate and valid data.

The present study did not control for other possible influences on emotional eating, including stress levels, socioeconomic status, or mental health status. These variables may interact with self-efficacy and emotional eating to affect the findings. Future research will need to include more comprehensive measures of these variables to give a more inclusive view of what is fueling emotional eating behavior.

5. Conclusion

This research examined the connection between self-efficacy (an individual's perception that they can regulate their behaviors) and emotional eating (eating due to feelings and not hunger) in people who consume a lot of junk foods. The results indicated that self-efficacy was negatively correlated with emotional eating, so individuals with higher self-efficacy were less prone to emotional eating, and individuals with lower self-efficacy were more inclined to use food to manage emotions.

These findings underscore the value of developing self-efficacy in facilitating healthier eating and minimizing emotional eating. Strengthening self-control, stress management, and mindful eating interventions may assist individuals in making improved food choices and preventing the use of junk food as a means of coping with negative emotions.

While this research is useful, it has limitations such as the use of self-reported data and its inability to provide a direct cause-and-effect link. Longitudinal or experimental designs would be used in future research to more fully understand how self-efficacy affects emotional eating in the long term. Overall, enhancing self-efficacy may be an important method of curbing emotional eating and encouraging healthier eating patterns, ultimately contributing to greater overall well-being

Compliance with ethical standards

Disclosure of conflict of interest

No disclosure of conflict of interest.

Statement of informed consent

Statement of informed consent was obtained from all individual participants included in the study.

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