

## An Experimental Study on the Impact of a Food Addiction Explanatory Model of Eating Behaviors on Stigma Related To Weight

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### Abstract

Food addiction is increasingly recognized as a significant contributor to unhealthy eating behaviors, weight gain, and obesity. However, societal stigma related to weight often exacerbates the psychological and social burdens faced by individuals with food addiction. This study aims to explore how an explanatory model based on food addiction influences perceptions of weight stigma. Using an experimental approach, the research assesses the impact of providing participants with an education on food addiction as an underlying cause of unhealthy eating behaviors. The study reveals how a reframed understanding of eating behaviors through the lens of food addiction can reduce weight-related stigma and improve empathy. The findings have important implications for public health interventions aimed at addressing weight stigma and improving treatment outcomes for individuals struggling with food addiction.

**Keywords:** Food addiction; Eating behaviors; Weight stigma; Explanatory model

### Introduction

Food addiction has gained recognition as a psychological and physiological condition that contributes to overeating and poor dietary habits. Similar to substance addiction, food addiction is characterized by compulsive eating behaviors, loss of control, and an inability to cease harmful eating patterns despite negative consequences [1]. While food addiction is increasingly understood as a factor in the development of obesity and other eating disorders, societal attitudes and stigma related to weight remain significant obstacles in addressing the condition. Weight stigma, or the negative societal attitudes toward individuals based on their body weight, is pervasive and can lead to psychological distress, social exclusion, and avoidance of necessary medical care. Furthermore, individuals who experience weight stigma often internalize these negative stereotypes, which can worsen mental health issues and eating behaviors. One promising approach to reducing weight-related stigma is providing education on food addiction, framing overeating not as a failure of willpower, but as a health condition requiring intervention and understanding. This study seeks to understand the impact of providing an explanatory model of food addiction on participants' perceptions of weight stigma. Specifically, the research explores whether education on food addiction leads to a reduction in stigmatizing attitudes toward individuals with higher body weights. The concept of food addiction is increasingly being validated by research linking compulsive eating behaviors to neurobiological mechanisms, similar to those seen in substance use disorders. Studies have identified the role of dopamine and other neurotransmitters in reward pathways that influence eating behavior. These pathways may contribute to overeating and food cravings, especially in response to high-fat, high-sugar foods, which are known to activate pleasure centers in the brain [2-5].

Individuals with food addiction often report a loss of control over their eating habits, even when they recognize the harmful effects on their health. This loss of control can lead to feelings of guilt and shame, which further perpetuate unhealthy eating patterns. Addressing food addiction requires a holistic approach that recognizes the psychological and physiological components of the disorder. Weight stigma refers to the prejudice, discrimination, and negative stereotypes those individuals with higher body weights face. This stigma is pervasive

in various social contexts, including healthcare settings, educational institutions, and the workplace. People who experience weight stigma are often subjected to social exclusion, verbal abuse, and biased judgments based on their appearance [6].

Research has shown that weight stigma can lead to significant psychological distress, including depression, anxiety, and low self-esteem. Furthermore, weight-stigmatized individuals may avoid seeking medical care or engaging in healthy behaviors due to fear of judgment. This avoidance can exacerbate the very health issues that contribute to obesity and other eating disorders [7].

Explanatory models are cognitive frameworks that help individuals understand the causes of a particular behavior or condition. When individuals are educated about the underlying causes of eating behaviors, particularly in the context of food addiction, they may be more likely to view these behaviors through a compassionate and non-judgmental lens. Several studies have explored the effectiveness of explanatory models in reducing stigma in other contexts, such as mental health and substance use disorders, suggesting that providing education on the psychological and biological factors at play can reduce prejudice and foster empathy.

### Methodology

#### Participants

The study recruited 200 participants from a local university, with an equal distribution of gender and age range (18-40 years). Participants were selected to ensure a diverse sample in terms of body weight, with

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50% of participants identifying as having a body mass index (BMI) categorized as overweight or obese [8].

## Design

The study used a randomized controlled trial (RCT) design. Participants were randomly assigned to one of two groups:

1. **Intervention group:** Participants in this group were provided with educational materials that explained food addiction as a condition similar to substance addiction. The materials included information on the neurobiological mechanisms of food addiction, its psychological components, and treatment options.

2. **Control group:** Participants in the control group received general information about healthy eating and the importance of physical activity, without any reference to food addiction or its explanatory model.

Both groups were then asked to complete a series of surveys assessing their attitudes toward weight stigma, empathy, and support for individuals with obesity.

## Measures

The following measures were used to assess the study's outcomes:

- **Weight Stigma Attitudes Scale (WSAS):** A validated tool to measure negative attitudes and discrimination toward individuals with higher body weights.
- **Empathy Scale:** A measure of participants' ability to understand and share the feelings of others.
- **Attitudes Toward Treatment:** A scale assessing participants' willingness to support treatment for individuals with food addiction or obesity [9].

## Results

The results of the study indicated a significant reduction in weight stigma among participants in the intervention group, compared to the control group. Specifically, those who received education on food addiction demonstrated greater empathy toward individuals with obesity and were more likely to support treatment options for food addiction and weight management.

In contrast, participants in the control group, who received only general information on healthy eating, showed no significant changes in their attitudes toward weight stigma. These results suggest that providing an explanatory model of food addiction can be an effective strategy for reducing stigma related to weight.

## Discussion

This study provides evidence that educating individuals about food addiction can reduce weight-related stigma and increase empathy toward those struggling with eating behaviors. The findings align with previous research suggesting that understanding the psychological and biological underpinnings of a condition can foster a more compassionate perspective.

By framing food addiction as a health condition rather than a moral failing, interventions can challenge societal stereotypes and promote more supportive attitudes. These findings have important implications for public health programs and interventions aimed at reducing weight stigma and supporting individuals with food addiction. Weight stigma has been a pervasive issue in society, often reinforcing harmful

stereotypes about individuals who are overweight or obese. The stigma surrounding food addiction and obesity is rooted in beliefs that individuals with higher body weights lack self-control, are lazy, or have personal deficiencies. These stereotypes not only negatively affect the mental and emotional well-being of those affected but also create barriers to effective healthcare. The findings from this study show that an explanatory model of food addiction can help shift these negative perceptions.

When participants in the intervention group were educated about the biological, psychological, and neurochemical underpinnings of food addiction, they demonstrated significantly lower levels of weight stigma. This suggests that providing information about food addiction as a medical condition, akin to substance use disorder, can break down prejudices and foster a more compassionate attitude toward those with obesity. Importantly, the educational model helped reframe food addiction from a moral failing to a condition that requires medical attention, thus reducing the emotional and social toll of weight-related stigma. The study also highlighted the importance of empathy in mitigating weight stigma. After learning about food addiction, participants in the intervention group exhibited a noticeable increase in empathy toward individuals with obesity. This empathy was not only directed toward individuals struggling with obesity but also towards those dealing with food addiction as a health condition.

Empathy plays a crucial role in how individuals perceive others and is integral to breaking down stereotypes. When individuals can understand the challenges faced by those with food addiction—such as loss of control over eating, biological triggers, and psychological factors—their attitudes become more supportive. The results from this study suggest that fostering empathy through education can be a powerful tool in addressing prejudice, which could, in turn, lead to increased acceptance of people with food addiction and obesity in society. Weight stigma has significant consequences for healthcare outcomes. Individuals who experience weight-related prejudice often delay seeking medical care due to fear of judgment or discrimination. As a result, they may not receive the necessary support for treating obesity, food addiction, or associated health conditions, such as diabetes or hypertension.

This study's findings suggest that reducing stigma through education can lead to improved healthcare access and outcomes. As participants in the intervention group showed greater support for treatment options for food addiction and obesity, it is reasonable to conclude that knowledge about food addiction's medical basis encourages individuals to be more open to seeking help. Moreover, when individuals view food addiction as a medical condition, they may feel more empowered to engage with healthcare providers and follow treatment regimens without the fear of being judged.

Given the success of the educational intervention in improving attitudes toward food addiction, the healthcare system could benefit from integrating education about food addiction into the clinical environment. Healthcare providers could educate patients about the nature of food addiction as part of routine discussions around obesity treatment, helping patients feel more supported and understood. The results of this study also carry significant implications for public health campaigns. Most public health messaging related to obesity tends to focus on the behavioral aspects of eating, often framing obesity as a result of poor lifestyle choices or lack of self-discipline. Such messaging, while well-intentioned, can contribute to the stigmatization of individuals with obesity.

In contrast, by integrating an explanatory model of food addiction into public health education, it is possible to reduce stigma and promote a more supportive narrative surrounding obesity and eating behaviors. This approach would encourage a shift away from blaming individuals for their condition and toward understanding the complexities of food addiction, including its neurobiological and psychological roots [10-18].

## Conclusion

Food addiction is a complex and often misunderstood condition that contributes to unhealthy eating behaviors and obesity. Weight stigma, which often accompanies food addiction, can exacerbate the challenges faced by individuals struggling with these issues. This study highlights the importance of reframing food addiction through an explanatory model, which can reduce stigma and promote empathy. Further research is needed to explore the long-term effects of such educational interventions and to assess the potential benefits of integrating this approach into public health campaigns, healthcare settings, and community outreach programs.

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## Conflict of Interest

None

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