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# The Mediating Effects of Eating Disorder, Food Addiction, and Insomnia in the Association between Psychological Distress and Being Overweight among Iranian Adolescents

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**Abstract:** With obesity and excess weight remaining a serious concern worldwide, investigating the mechanisms underlying this is of great importance. Psychological distress is a possible trigger contributing to excess weight for adolescents. Moreover, the association between psychological distress and excess weight may be mediated by eating disorder, food addiction, and insomnia. The present study utilized parallel mediation analysis to assess the aforementioned associations and possible mediation effects among Iranian adolescents. Through stratified and clustered sampling, adolescents ( $N = 861$ ; mean  $\pm$  SD age =  $15.9 \pm 3.2$ ; 372 males) participated and were followed for a one-year period. Excess weight (standardized body mass index, z-BMI); psychological distress (Depression, Anxiety, and Stress Scale-21); eating disorder attitudes (Eating Attitude Test-26); food addiction (Yale Food Addiction Scale for Children); and insomnia (Insomnia Severity Index) were assessed. Eating disorder attitudes, food addiction, and insomnia were significant mediators in the association of psychological distress and z-BMI. Additionally, psychological distress had direct effects on z-BMI. Given that eating disorder attitudes, food addiction, and insomnia showed mediated effects in the temporal association of psychological distress and excess weight, healthcare providers are encouraged to design programs on improving these three mediators to help adolescents overcome excess weight problems.

**Keywords:** eating disorder; food addiction; insomnia; psychological distress; excess weight gain

## 1. Introduction

The issue of childhood obesity and excessive weight gain is of great concern worldwide although plateaued prevalence of childhood overweight has been reported in some countries, especially in the developed countries [1,2]. More specifically, the prevalence of childhood overweight is still high although not necessarily increasing. Recent statistics from the Centers for Disease Control and Prevention (CDC) in the U.S. reported that 13.9% of 2- to 5-year-olds; 18.4% of 6- to 11-year-olds; and 20.6% of 12- to 19-year-olds