

Research report

## Dietary correlates of emotional eating in adolescence

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Received 24 May 2006; received in revised form 6 January 2007; accepted 13 March 2007

### Abstract

To better understand the relation between emotional eating and dietary choices, dietary correlates of emotional eating were investigated in an adolescent sample. Participants were 617 predominantly Latino middle school students from seven schools in Los Angeles County. Analyses of cross-sectional data revealed that emotional eating was associated with increased frequency of intake of sweet high energy-dense foods, such as cake and ice cream, salty high energy-dense foods like chips, and soda. Gender stratified analyses revealed an association between emotional eating and more frequent fruit and vegetable intake in boys only, and a positive association between emotional eating and salty high energy-dense intake in both boys and girls. These data support previous literature that reports a preference for high energy-dense food in emotional eating, and shows that this association may be generalizable to Latino youth. Considering that emotional eating may lead to overeating because it often takes place in the absence of hunger, it may be appropriate to develop interventions to teach youth healthier substitutions and regulate mood by means other than eating in order to reduce risk for obesity, especially in high risk populations, such as Latinos.

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*Keywords:* Emotional eating; Adolescence; Dietary choices; High-energy dense; Latino

### Introduction

Despite a longstanding recognition of the occurrence of emotional eating (including stress-induced eating), many questions remain regarding its associated precursors and outcomes. Review papers have pointed to the need for additional research to identify specific dietary choices in emotional eating (especially considering its assumed association with obesity) as well as studies of males and youth populations (Faith, Allison, & Geliebter, 1997; Ganley, 1989; Greeno & Wing, 1994). As evidenced in these reviews, emotional eating has predominantly been studied in Caucasian adults, usually females, often in the lab, and little is known about specific food preferences. Findings from review papers on adults and the few studies in youth reporting on dietary outcomes are below.

In Ganley's (1989) review of emotional eating and obesity, it was made apparent that individual food choice

is an important factor in this relationship, and that consumption often involved "high-calorie or high-carbohydrate food" (p. 354). Another review of the same topic addressed the issue of "carbohydrate cravers" (Faith et al., 1997). The mechanism thought to be at work here is based on animal studies, where increase in carbohydrates led to increase of serotonin levels in rats. This would support a preference for emotional eaters to ingest carbohydrates to improve mood.

A 2004 study of eating patterns of adolescents and adults found that (1) in adults emotional eating was associated with higher intake of oleaginous fruits (e.g., peanuts) and cakes/pastries/biscuits, and (2) in adolescents and young adults (mean age 17 years old), there was a negative relationship with fruits and vegetables and a positive association with yogurt in males (de Lauzon et al., 2004). In Braet and van Strien's (1997) study of eating styles in children, relationships were found between emotional eating and all measures of food intake, indicating overall increased consumption. Wardle et al. (1992) found that those scoring high on emotional eating gave high ratings of

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liking fattening food as well as them being “good for you.” In contrast to the abovementioned studies, baseline findings from the Stanislas Study found no associations between emotional eating and dietary intake (Lluch, Herbeth, Mejean, & Siest, 2000).

Greeno and Wing’s (1994) review of stress-induced eating found studies that supported a preference for high energy-dense foods in response to stress, specifically women preferred sweets (Grunberg & Straub, 1992). An adolescent study of stress and dietary practices revealed that higher stress increased the chances of unhealthy dietary practices, such as increased consumption of fatty foods and decreased consumption of fruits and vegetables (Cartwright et al., 2003). Michaud et al.’s (1990) study of high school students showed that a stressful life event (major exam) did in fact change eating behavior. A gender interaction showed that on the day of the exam, increased total energy intake was significant for girls, and there was an increase in percentage from fat in the diet of boys.

A close look at the studies on emotional eating in youth also reveals that the large majority of these studies have been conducted with European populations, with only a few in the United States. Hedley et al. (2004) reported national data that show that over 30% of children and adolescents are ‘at risk for overweight’ and ‘overweight.’ Further, Latino youth in the US have been shown to be at increased risk for obesity. Data from 1999 to 2002 show that nearly 40% of Mexican American children and adolescents were reported to be at least at risk for overweight and more than 20% were overweight; these numbers were similar for African Americans, 35.4% and 20.5%, respectively (Hedley et al., 2004). Considering these striking numbers, it seems that studies of emotional eating in American minority adolescents are warranted, as this may help us to better understand this increased risk.

The primary aim of this study was to identify dietary choices associated with emotional eating in a predominantly Latino adolescent population. Based on outcomes of the literature presented, the following hypotheses were tested. It was hypothesized that emotional eating would be associated with more frequent consumption of sweet and salty high energy-dense items and soda, and not with fruit and vegetable intake. Further, we expected that emotional eaters (vs. those not categorized as emotional eaters) would be more likely to more frequently consume the high energy-dense choices than fruits and vegetables. We also sought to explore gender differences in the associations between emotional eating and dietary choices.

## Methods

### *Sample*

Cross-sectional data from 617 middle school students in Los Angeles County, collected as part of a larger survey on physical activity and diet in Latino children, were

employed for the present study. Seventh and eighth grade students were from seven public and private middle schools. Participants completed a psychosocial questionnaire that assessed emotional eating and dietary choices, among other factors.

### *School selection*

Sampling methods aimed to obtain a sample of predominantly Latino adolescents. Data from the California Board of Education and the Roman Catholic Archdiocese were used to identify schools with high numbers of Latino students and a range of socioeconomic statuses (SES). The principal investigator approached nine schools fitting study selection criteria and eight agreed to participate. At the time of data collection, one school was no longer able to participate due to curriculum priorities of the district, therefore seven schools took part in the study.

### *Student recruitment*

The principal investigator contacted physical education teachers at each school to recruit individual classrooms for participation. Seventeen of the 18 teachers approached agreed to participate, and all students from each classroom were invited to complete the surveys. Recruitment and data collection took place across five days. The study was explained on the first day by the principal investigator, and parental consent forms were distributed. Separate parent refusal forms were given out on the third day of recruitment to those students who had not yet returned parental consent forms. All forms were collected through four days (students were asked to choose the appropriate language forms, English or Spanish, for their parents); on the fourth and fifth days, data collection took place. All students who gave active personal assent, and active parental consent or whose parents did not actively refuse participation completed surveys. Those students with implied consent (i.e., those who did not provide written parental consent or written parental refusal) filled out an abbreviated version of the survey. All study procedures were approved by the University Institutional Review Board and the appropriate boards of participating schools and school districts. Active or implied consent was provided by 85% of students.

### *Procedure*

Trained data collectors followed data collection manual procedures and scripts in distribution and collection of surveys. Paper-and-pencil surveys were completed across two class periods. Confidentiality was maintained by identifying surveys only by a unique identification number assigned to each student. The survey took approximately 45 min to complete.

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