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Maternal intuitive eating as a moderator of the association between concern about child weight and restrictive child feeding

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ABSTRACT

Mothers who are concerned about their young child's weight are more likely to use restrictive feeding, which has been associated with increased food seeking behaviors, emotional eating, and overeating in young children across multiple prospective and experimental studies. In the present study, we examined whether mothers' intuitive eating behaviors would moderate the association between their concern about their child's weight and their use of restrictive feeding. In a sample of 180 mothers of young children, two maternal intuitive eating behaviors (i.e., eating for physical reasons, trust in hunger and satiety cues) moderated this association after controlling for maternal age, body mass index, years of education, race/ethnicity, awareness of hunger and satiety cues and perceptions of child weight. More specifically, concern about child weight was unrelated to restrictive feeding for mothers with higher levels of eating for physical reasons and trust in hunger and satiety cues. However, concern about child weight was positively related to restrictive feeding among mothers with lower or average levels of eating for physical reasons and trust in hunger and satiety cues. These findings indicate that it may be important address maternal intuitive eating within interventions designed to improve self-regulated eating in children, as mothers who attend these interventions tend to be highly concerned about their child's weight and, if also low in intuitive eating, may be at risk for using restrictive feeding behaviors that interfere with children's self-regulated eating.

1. Introduction

Many efforts have been directed towards increasing public awareness of the prevalence and health correlates of child overweight and obesity. The manner in which child weight-related issues are framed and communicated to the public, however, can be detrimental (Barry, Jarlenski, Grob, Schlesinger, & Gollust, 2011). Saguy and Almeling (2008) conducted a content analysis of scientific articles on weight and health, and corresponding press releases and news reports, to determine how news media filter and translate scientific information to the public. They found that news media frequently (a) dramatize and exaggerate weight-related health risks, (b) blame parents for their child's weight, and (c) emphasize individual behavior change as the solution. Given that the majority of adults obtain health information via the news media (Kaiser Family Foundation, 2001; Pew Research Center, 2014), many parents may be exposed to these alarmist media messages and express concern about their child being or becoming overweight (Barry et al., 2011; Saguy & Almeling, 2008).

Indeed, data show that parents perceive health risks associated with childhood overweight and obesity, are concerned about their child being or becoming overweight, see themselves as responsible for their child's weight, and are motivated to alter their feeding practices to prevent or alleviate their child's weight gain (Etelson, Brand, Patrick, & Shirali, 2003). Because mothers are often expected to assume feeding responsibilities within the family, they especially may be held accountable (and hold themselves

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accountable) for their child's weight (Saguy & Almeling, 2008). When concerned about their child being overweight, then, some mothers may use restrictive feeding, or limiting a child's intake of sweets, high fat foods, and favorite foods, and using these foods as rewards for good behavior (Birch et al., 2001). This process may be understood through the lens of an affect regulation framework (Webb, Butler-Ajibade, & Robinson, 2014). Specifically, being concerned about their child's weight could constitute negative affect for mothers (e.g., worry, anxiety, shame, guilt), and mothers can obtain relief from this negative affect by engaging in "proactive" efforts to lower their child's weight (or slow weight gain) by restricting their child's food intake (Webb et al., 2014). In support, many researchers have reported an association between mothers' concern about their child's weight and their restrictive feeding practices—a correlation which is significant, positive in direction, and typically moderate in strength (e.g., Birch, Fisher, & Davison, 2003; Birch et al., 2001; Francis, Hofer, & Birch, 2001; May et al., 2007; Tylka, Eneli, Kroon Van Diest, & Lumeng, 2013; Webber, Hill, Cooke, Carnell, & Wardle, 2010).

While restricting children's access to palatable foods may appeal to mothers as a straightforward means of controlling weight (Fisher & Birch, 1999), several longitudinal and experimental studies have found restrictive feeding to be largely counterproductive. Mothers' restrictive feeding predicted their young (age 2 years) child's increased likelihood of overeating and emotional eating a year later (Rodgers et al., 2013). Parents' reports of restrictive feeding when their child was age 5 predicted their child's increased eating in the absence of hunger at ages 7 and 9, with this link being stronger for overweight children (Birch et al., 2003; Fisher & Birch, 2002). When parents restricted their child's access to palatable foods in experimental tasks, the child responded with focused attention on the restricted food and displayed an increased desire to obtain and consume those foods (Fisher & Birch, 1999; Ogden, Cordey, Cutler, & Thomas, 2013; Rollins, Loken, Savage, & Birch, 2014). Rollins et al. further found that the association of restrictive feeding with increased child food intake was stronger among children with lower self-regulation and higher appetitive drive. Conversely, when preschool children were taught to identify and eat in response to their internal hunger and satiety cues, they improved their ability to self-regulate their energy intake (Birch, McPhee, Shoba, Steinberg, & Krehbiel, 1987; Johnson, 2000). Although restrictive feeding has not been linked to future child weight gain or overeating in all studies (see Campbell et al., 2010), the collective body of research raises significant concerns about using restrictive feeding to control child weight.

Many mothers who are concerned about their child's weight may not choose to use restrictive feeding to prevent or alleviate weight gain in their child. The correlation between maternal concern about child weight and restrictive feeding, while significant, is not extremely strong (see Birch et al., 2001, 2003; Francis et al., 2001; May et al., 2007; Tylka et al., 2013; Webber et al., 2010), suggesting that third variables may influence the strength of this relationship. Indeed, an affect regulation framework proposes that moderators, which represent individual variability, help determine the strength between situation-specific negative affect and coping strategies (Webb et al., 2014).

Perhaps mothers' own eating behaviors moderate the association between their concern about their child's weight and their restrictive feeding. In fact, mothers' own eating behaviors have been found to be associated with how they feed their children. In a longitudinal study, Francis and Birch (2005) found that mothers who were preoccupied with their own weight and food intake reported increased levels of restricting their daughters' food intake. Similarly, mothers who restricted their own food intake and ate in the absence of hunger were more likely to restrict their young child's food intake (Birch & Fisher, 2000; Brown & Lee, 2011). However, to our knowledge, no study has examined whether mothers' eating behaviors moderate the association between concern about child weight and restrictive feeding.

In the present study, we examined whether mothers' intuitive eating behaviors moderate the association between their concern about their child's weight and their use of restrictive feeding with their child. Intuitive eating is a flexible eating style characterized by trusting in and mainly following physiological hunger and satiety cues to determine when, what, and how much to eat (Tribole & Resch, 2012; Tylka, 2006). Intuitive eating, as described by Tylka (2006) is characterized by (a) eating for physical rather than emotional reasons, (b) unconditional permission to eat, and (c) reliance on internal hunger and satiety cues. Eating for physical rather than emotional reasons represents a pattern of eating when physically hungry rather than to cope with emotional distress, such as loneliness, anxiety, and boredom. Unconditional permission to eat reflects a willingness to eat when hungry rather than trying to stave off hunger and being inclusive with food choice (i.e., refusing to label certain foods as forbidden); unconditional permission to eat is *not* the same as disinhibited eating, which entails overeating in response to external cues such as daily circumstances, stress, or social settings (Stunkard & Messick, 1985). Reliance on internal hunger and satiety cues encompasses a general *awareness* of hunger and satiety cues and *trust* in these internal cues to direct when, what, and how much to eat, with subsequent research supporting a clear distinction between awareness and trust in internal cues among early adolescents (Dockendorff, Petrie, Greenleaf, & Martin, 2012). Among women, intuitive eating has been found to be associated adaptively with physical health (e.g., lower triglyceride levels, higher high density lipoprotein cholesterol), and psychological well-being (e.g., lower disordered and disinhibited eating as well as higher life satisfaction, body appreciation, and interoceptive sensitivity; Augustus-Horvath & Tylka, 2011; Denny, Loth, Eisenberg, & Neumark-Sztainer, 2013; Hawks, Madanat, Hawks, & Harris, 2005; Herbert, Blechert, Hautzinger, Matthias, & Herbert, 2013; Madden, Leong, Gray, & Horwath, 2012; Smith & Hawks, 2006; Tylka & Wilcox, 2006; Van Dyke & Drinkwater, 2013).

It is plausible that maternal intuitive eating could buffer the association between mothers' concern about their child's weight and their use of restrictive feeding. Mothers who trust their own internal hunger and satiety cues may be likely to trust their child's ability follow his or her internal cues. When concerned about their child's weight, restrictive feeding may feel disingenuous for mothers high in intuitive eating, given that restrictive feeding practices are antithetical to trusting a child's internal cues to determine what, when, and how much to eat. Thus, mothers high in intuitive eating may refrain from using restrictive feeding. Conversely, by definition, mothers low in intuitive eating mistrust their internal hunger and satiety cues to regulate their eating and weight. When mothers low in intuitive eating are unconcerned about their child's weight, they may feel that there is no need to restrict their child's intake of high fat, high sugar, and favorite foods. Yet, when mothers low in intuitive eating are concerned about their child's weight, they may assume that their child's internal cues also cannot be trusted and feel it necessary to restrict their child's food intake.

Therefore, we hypothesized that intuitive eating would weaken the relationship between mothers' concern about their child's weight and restrictive feeding. That is, for mothers low in intuitive eating, concern about child weight would be strongly related to restrictive feeding; however, for mothers high in intuitive eating, concern about child weight would be unrelated to restrictive feeding. We examined three components of intuitive eating separately (i.e., eating for physical rather than emotional reasons,