Family Processes, Eating Breakfast, and Academic Motivation in Early Adolescence: A Diary Study

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Abstract

Obesity is an increasing area of concern for children navigating the transition to puberty as 34.2% of 6- to 11-year-olds are overweight in the US (Ogden et al., 2014). A second issue of concern during this developmental period is academic motivation as approximately 50% of high school dropouts give their primary reason for dropping out as boredom or disconnection from school (Bridgeland et al., 2006). Because skipping breakfast has been linked to higher obesity risk (Coppinger et al., 2012) and eating breakfast has been linked to positive academic outcomes (Mizuno et al., 2013), the current study examined the frequency of adolescent breakfast consumption as a potential mediator of the relationship between family factors and academic motivation. Overall, current findings enhance our understanding of predictors of both eating breakfast and academic motivation, and have important implications for understanding and reducing obesity risk and increasing academic engagement in adolescents.

Introduction

Obesity rates have more than doubled in children and tripled in adolescents since the 1980s, and currently more than one-third of children and adolescents are overweight or obese (Ogden et al., 2012). Obese children and adolescents are more likely to become obese adults and consequently develop serious physical and mental health problems (Sendula et al., 1993). Skipping breakfast has been linked to weight gain and obesity (Dubois et al., 2009), while eating breakfast regularly has been identified as a preventive measure against obesity (Huang et al., 2010). Additionally, regular breakfast consumption has been linked to salutary outcomes for children and adolescents in school (Boschholz et al., 2012).

The transition from middle childhood to adolescence is an important time to address the unique and additive roles of family context factors that are linked to both obesity and academic motivation (Forrest et al., 2013). Thus, the current study examined the role of family routines, parent-child communication, parental acceptance, and coparenting in predicting frequency of breakfast consumption and academic motivation in a sample of early adolescents. To obtain a dynamic measure of breakfast consumption frequency, we gathered a five-day eating diary.

The goals of the study were the following:

1. To assess the relationship between regular breakfast consumption and academic motivation.
2. To explore associations between family context factors and both eating breakfast and academic motivation.
3. To examine the degree to which eating breakfast explains the link between family context factors and academic motivation.

Method

Participants

Data were from 40 families recruited from the San Francisco area, each with at least one child between the ages of 8 and 12 (Mage = 10.16, SD = 1.34).

Procedure

Adolescents and parents participated in separate interviews during which we assessed family routines, parent-child communication, parental acceptance, coparenting, and academic motivation. To assess breakfast consumption, adolescents and parents completed a five-day eating diary.

Measures

Academic Motivation. Adolescents completed the Motivational Strategies for Learning Questionnaire (MSLQ; Pintrich & DeGroot, 1990), which asks participants to rate statements on a 7-point scale ranging from 1 (not at all true of me) to 7 (very true of me; e.g., “I prefer class work that is challenging so I can learn new things.”) Reliability for the MSLQ was α = .868.

Frequency of Family Routines. Parents completed the Family Routines Inventory (FRI; Jensen et al., 1983), which asks participants if certain activities happened in their family never, sometimes or a lot (e.g., “The children in your family took part in regular activities after school.”) Reliability for the FRI was α = .743.

Parent-Child Communication. Parents completed the Parent-Adolescent Communication Scale (PACS; Barnes & Olson, 1982), which asks participants to rate statements on a 5-point scale ranging from 1 (Dissagree a lot) to 5 (Agree a lot; e.g., “When your child asked questions, he/she got honest answers from you.”) Reliability for this scale was α = .708.

Parental Acceptance. Parents completed the acceptance subscale of the Children’s Report of Parent Behavior Inventory (CRPBI; Schaefer, 1965), which asks parents if certain behaviors are like you, somewhat like you, or not like you (e.g., “You saw your child’s good points more than his/her faults.”) Reliability for this subscale was α = .782.

Coparenting. Parents completed 13 items adopted from Dunnik, Prost, and Barrera (2002; e.g., “My child’s other parent and I agree on how to raise the child.”) Reliability for this scale was α = .969.

Breakfast Consumption. Participants were asked on each of the five days of data collection, “Did you eat breakfast today?” Response options were 0 (No) or 1 (Yes). Frequency of breakfast consumption was averaged over the five days of data collection such that scores ranged from 0 (No breakfast consumed) to 1 (Breakfast consumed on all five days).

Results

To determine predictors of academic motivation and breakfast consumption, we looked at bivariate correlations among independently related variables (Table 1). The constructs that correlated at the bivariate level (i.e., coparenting, parental acceptance) were considered for subsequent analysis.

We performed hierarchical regression to predict academic motivation. On the first step, we included the independent variable (coparenting or parental acceptance) and on the second step we added the mediator of frequency of breakfast consumption (Figures 1 & 2).

Results of the regression analyses provided partial confirmation of our hypotheses with evidence supporting that eating breakfast partially mediated the links between each independent variable and academic motivation.

Table 1 – Correlation Matrix

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<td>2. Eating Breakfast</td>
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<td>3. Coparenting</td>
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<td>4. Parental Acceptance</td>
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<td>5. Family Routines</td>
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<td>6. Parent-Adolescent Communication</td>
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*p < .10, **p < .05, ***p < .001, ***p < .0001

Discussion

We found both partial mediation and additive effects of eating breakfast and family context factors.

It is possible that individual differences in the adolescent may be more important than external and family factors when predicting breakfast consumption patterns and academic motivation.

Findings from this study increase our understanding of the unique contributions of family context factors and individual differences in the explanation of eating behavior and academic motivation in adolescents. Future research in this area may potentially lead to the formation of preventative interventions that could reverse the increasing rate of adolescent obesity and improve adolescents' academic performance and engagement.

Acknowledgement

We greatly appreciate the time the families devoted for this study. We are also thankful for the members of the Family Interaction Research Lab for assisting with the recruitment and analyses of these data which made this work possible.

To learn more about our lab or to download this poster with references please visit: http://www.sfsu.edu/deptpsych/ or contact susan.mauskopf@gmail.com