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Parent and Friend Emotion Socialization as Correlates of Adolescent Eating  
Behavior

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A Thesis presented to the Graduate Faculty  
of The College of William & Mary in Candidacy for the Degree of  
Master of Arts

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Sciences

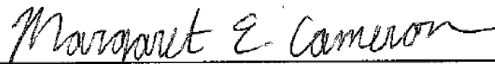
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This Thesis is submitted in partial fulfillment of  
the requirements for the degree of


Master of Arts

  
\_\_\_\_\_  
Margaret Eileen Cameron

Approved by the Committee, May 2018

  
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## COMPLIANCE PAGE

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## ABSTRACT

Eating disorders and disordered eating affect about half a million teenagers in the United States. Restrained eating is a type of disordered eating behavior where individuals limit their food intake to avoid weight gain, maintain their current weight, or lose weight. Although researchers have examined numerous predictors of this eating style, there are gaps in the literature related to the role of emotion socialization on restrained eating. Parents and peers continually interact with adolescents; as such, both groups often witness adolescents' emotion expressivity behaviors. They can respond supportively or unsupportively and these responses contribute to adolescents' emotion regulation strategies. The current study examined parents' and friends' supportive and unsupportive emotion socialization behaviors as correlates of adolescents' restrained eating directly and indirectly through emotion regulation strategies (i.e., inhibition, dysregulation, regulation cope). Since gender differences are typical in how emotions are socialized and in restrained eating behaviors, the role of gender was examined. Data were collected from 91 youth ( $M_{age} = 16.50$  years; 56.0% female; 76.9% Caucasian) and their parents ( $M_{age} = 49.30$  years; 91.2% mothers). Youth responded to the You and Your Friends Questionnaire which assessed best friends' emotion socialization, the Children's Emotion Management Scales, which assessed adolescents' emotion regulation behaviors, and the Dutch Eating Behavior Questionnaire, which assessed adolescents' restrained eating. Parents completed the Emotions as a Child Questionnaire, which asked about parents' emotion socialization. Conditional process analyses and parallel mediations were conducted to examine the direct and indirect effects of emotion socialization on restrained eating through emotion regulation and as a function of gender. Results indicated that emotion inhibition mediated the effects of friend supportive and passive unsupportive responses on restrained eating. Additionally, friend passive unsupportive responses predicted higher levels of restrained eating in girls and lower levels of restrained eating in boys. Lastly, parent and friend active unsupportive responses predicted restrained eating in girls, but in different directions. Parents' active unsupportive responses predicted lower levels of restrained eating in girls, whereas friends' active unsupportive response predicted higher levels of restrained eating in girls. These findings demonstrate that during adolescence individuals, especially friends, influence adolescents' restrained eating behaviors. Further, girls may be at greater risk of restrained eating compared to adolescent boys.

## TABLE OF CONTENTS

Acknowledgements	ii
List of Tables	iii
List of Figures	iv
Chapter 1. Introduction	1
Chapter 2. Method	26
Chapter 3. Results	35
Chapter 4. Discussion	41
References	58
Tables	75
Figures	87
Appendix	96

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## LIST OF TABLES

1. Demographic and Outcome Variables	75
2. Means, Standard Deviations, and Correlations of EAC Variables	77
3. Means, Standard Deviations, and Correlations of YYF Variables	78
4. Correlations of YYF Unsupportive Variables	79
5. Means, Standard Deviations, and Correlations of CEMS Variables	80
6. Correlations between Study Variables	81
7. Gender Interaction of the Effect of Parent and Friend Emotion Socialization Responses on Restrained Eating Through Emotion Regulation	82
8. Interaction of the Effect of Parent and Friend Emotion Socialization Responses on Restrained Eating Through Emotion Regulation	84
9. Direct Effect of Parent and Friend Emotion Socialization Responses on Restrained Eating	86

## LIST OF FIGURES

1. Statistical Diagram of the Conditional Process Model Tested	87
2. Conceptual Diagram of the Conditional Process Model Tested	88
3. Statistical Diagram of the Parallel Mediation Model Tested	89
4. Conceptual Diagram of the Parallel Mediation Model Tested	90
5. Indirect Effect of Friend Supportive Emotion Socialization Responses on Restrained Eating through Emotion Inhibition, Emotion Dysregulation, and Coping Regulation	91
6. A Visual Representation of the Moderation of the Effect of Friend Passive Unsupportive Behaviors on Adolescent Restrained Eating by Adolescent Gender.	92
7. Indirect Effect of Friend Passive Unsupportive Emotion Socialization Responses on Restrained Eating through Emotion Inhibition, Emotion Dysregulation, and Coping Regulation	93
8. A Visual Representation of the Moderation of the Effect of Parent Active Unsupportive Behaviors on Adolescent Restrained Eating by Adolescent Gender.	94
9. A Visual Representation of the Moderation of the Effect of Friend Active Unsupportive Behaviors on Adolescent Restrained Eating by Adolescent Gender.	95

## Chapter 1

### Introduction

Currently, about half a million adolescents and teenagers struggle with either eating disorders or disordered eating (National Eating Disorder Association, 2017). The current study will focus on restrained eating—a type of disordered eating because individuals resist eating to achieve a specific goal like losing weight (Munsch et al., 2007). Restrained eating is associated with clinical eating disorders like Bulimia Nervosa and Binge Eating Disorder (American Psychiatric Association, 2013) and it also resembles aspects of restrictive eating, which is highly linked to Anorexia Nervosa and Avoidant/Restrictive Food Intake Disorder (Steinglass, Mayer, & Attia, 2016). Parent and peer behaviors not only contribute to restrained eating in adolescence (Francis & Birch, 2005; Gerner & Wilson, 2005), but their actions also influence youths' emotion regulation and understanding, which ultimately can contribute to one's eating behaviors (Hansson, Daukantaitė, & Johnsson, 2017). Parents and peers teach youth how to regulate their emotions based on their positive and negative responses, a process known as emotion socialization (Eisenberg, Cumberland, & Spinrad, 1998; Klimes-Dougan et al., 2014). This study aims to better understand how parent and friend emotion socialization behaviors (i.e., supportive, unsupportive responses) directly contribute to restrained eating, as well as their indirect effects on restrained eating through emotion regulation strategies.

The current literature review will discuss restrained eating first, followed by emotion socialization. This paper will examine parent and friend emotion

socialization as well as how emotion socialization relates to eating behaviors. Next, this paper will discuss emotion regulation in adolescence and the relation between emotion regulation and eating behaviors. This literature review will conclude with the study's current aims and hypotheses.

### **Restrained Eating**

According to Polivy and Herman's (1985) Restrained Theory, restrained eating is based on the notion that individuals restrict how much food they eat with the purpose to either lose weight or prevent further weight gain. Although individuals may feel a physiological need to eat, they do not act on this sensation and instead resist the consumption of food (Munsch et al., 2007). Unlike typical eaters who exhibit physiological normalcy (i.e., eating when experiencing physiological triggers of hunger), restrained eaters eat for different reasons and have distinctive rules regarding when they should start and stop eating as well as what they should eat (Polivy & Herman, 1987). Nevertheless, when restrained eaters do choose to eat, they may overeat or eat based on external, not internal, cues (Herman & Mack, 1975; Herman & Polivy, 2004; Polivy & Herman, 1985). These behaviors may counteract the individuals' intentions for restraining their eating.

Further, researchers have explored the links between restrained eaters and obesity (Kalaivani Ashok, & Karunanidhi, 2015; Polivy & Herman, 1985; Polivy, Herman, & Warsh, 1978). For example, in a study examining the hyper-emotionality (i.e., heightened emotional responses) of restrained eaters, the researchers noted that dieters resembled obese individuals (Pliner, Meyer, &

Blankenstein, 1974) in that they demonstrated more extreme emotional responses compared to non-dieters (Polivy et al., 1978). The researchers suggest that this similarity may be due to both dieters' and obese persons' likelihood to ignore their internal states and thus eat based on external cues. Restrained eaters may be more likely to overeat when their thoughts and judgment become inhibited, resulting in a loss of self-control and ultimate weight gain (Polivy & Herman, 1985). This relation between overeating (or even binge eating) and dieting is a core feature of Restraint Theory. Specifically, instead of believing that binge eating causes dieting, the reverse direction of effects has been found to be true (i.e., dieting causes binge eating).

In addition to the link between binge eating and restrained eating, Body Mass Index (BMI) also correlates with restrained eating (Snoek, Engels, van Strien, & Otten, 2013; Snoek, van Strien, Janssens, & Engels, 2009). In a study examining 328 families over five years, Snoek et al., (2013) examined individuals' current BMI and their estimated weight trajectory. There were five different weight trajectories (i.e., low, low-medium, medium, medium-high, high). Participants who demonstrated more restrained eating tended to follow higher weight trajectories. Further, adolescents in the low-BMI trajectory group differed significantly in restrained eating (i.e., they were less likely to engage in this behavior) from those in the medium-high group and adolescents in the low-medium trajectory differed from the medium-high and high groups. Fewer differences were found between the high-trajectory group and other groups (excluding the medium-low group) because few individuals were in this category.

It is important to note that even though BMI and restrained eating were positively related, especially at the initial interview ( $M_{\text{age}} = 13.3$  years), restrained eating did not predict BMI with increasing age.

In contrast, other research has found that BMI often predicts restrained eating (Forrester-Knauss, Perren, & Alsaker, 2012; Snoek, van Strien, Janssens, & Engels, 2008, 2009; Stice, Gau, Rohde, & Shaw, 2017). Researchers studied younger ( $M_{\text{age}} = 13.4$  years) and older ( $M_{\text{age}} = 15.2$  years) adolescents in 404 families over three years (Snoek et al., 2009). After examining the relations between restrained eating and BMI, Snoek et al. (2009) noted that the most consistent expectation was when BMI predicted restrained eating. For younger adolescents, their BMIs during both year 1 and year 2 of the study predicted restrained eating one year later. That is, youth with higher BMIs exhibited more restrained eating one year later. Results were similar for older adolescents during the first time point. Further, these findings resemble Forrester-Knauss and colleagues' (2012) findings, which examined the relation between BMIs of younger children (i.e., 5.2 - 6.7 years) and their restrained eating behaviors 12 years later during adolescence. Higher BMI during childhood was linked to higher patterns of restrained eating. Although a plethora of research notes the association between high BMI and restrained eating (e.g., Field et al., 2003; Kalaivani Ashok & Karunanidhi, 2015; Snoek et al., 2008), Stice et al. (2017) found that low BMI and dieting also correlated with restricted eating patterns. Specifically, adolescent girls who dieted and had low BMIs were more likely to exhibit the onset of subthreshold/threshold Anorexia Nervosa (AN) than girls with

average BMIs. These findings demonstrate that both low and high BMIs play a role on individuals' eating patterns along with their willingness and desire to restrain their eating.

Not only are there correlations between BMI and restrained eating, but gender is also associated with restrained eating. Specifically, girls tend to demonstrate restrained eating more often than boys (Farrow & Fox, 2011; Snoek et al., 2013; Snoek et al., 2008, 2009). This gender difference may be related to the role weight stigma plays on young girls' perceptions and attitudes toward body size (Jendrzyca & Warschburger, 2016), as well as the general fear of becoming overweight or the assumption that being overweight is an undesirable state (Shapiro, Newcomb, & Burns-Loeb, 1997). Weight stigma includes stereotypes and prejudice based on weight, and it also affects psychological, physiological, and behavioral attributes especially in obese individuals (Tomiyama, 2014; Vartanian & Porter, 2016; Vartanian & Smyth, 2013). Weight stigmatization begins at an early age and its consequences differ for girls and boys. For instance, Jendrzyca and Warschburger (2016) evaluated weight stigma and restrained eating in 1619 children between the ages of 6-11 years and found that girls who perceived that they were stigmatized based on their weight exhibited restrained eating one year later. However, no such relation was found for boys. This relation between gender and restrained eating often continues in adulthood (Dye, 2016).

Parent gender and eating behaviors also contribute to children's levels of restrained eating and can further extenuate gender differences in these

behaviors in adolescents. Previous studies have extensively examined the association between mothers' behaviors and daughters' restrained eating (e.g., Francis & Birch, 2005; Prichard, Hodder, Hutchinson, & Wilson, 2012; Ogden & Steward, 2000). Maternal restrained eating tends to predict children's restrained eating (Munsch et al., 2007). Less research has studied the links between a father's role in his daughters' restrained eating, however, increasing research has examined the associations between both mothers and fathers and their effects on their sons and daughters' eating patterns (Snoek et al., 2009). For example, in a study by Snoek and colleagues (2009), both mothers and fathers were interviewed as well as younger and older adolescents in the family (50.3% were boys). The results revealed that mothers tended to report more restrained eating than fathers and that mothers' restrained eating predicted adolescents' restrained eating. Fathers' restrained eating, however, did effect older adolescents' restrained eating one year later and younger adolescents' restrained eating two years later. Overall, parents' restrained eating had similar effects on sons' and daughters' restrained eating. Further research should examine the associations between fathers' and mothers' eating behaviors and how these patterns may predict adolescents' restrained eating.

In addition to parents, friends contribute to adolescents' eating behaviors. Adolescents tend to spend more time with their friends and are also more preoccupied with their peer relations (Anderson, 2013). In a study examining adolescent friendships and restrained eating, Gerner and Wilson (2005) studied 131 teenage girls ( $M_{age} = 15.3$  years). The results demonstrated that girls had a



preconceived idea about body size and friendship intimacy. In other words, girls who believed that being thin would help them make more friends and improve their current friendships were more likely to restrain their eating. Of these children, heavier girls believed that they would have better friendships if they restrained their eating and were thinner. However, when measuring self-reported peer acceptance, social support, and friendship intimacy, thinness had no effect on these variables. Although teens that reported lower levels of peer acceptance, social support, and friendship closeness were likely to report body image concerns, these variables were not predictors of restrained eating. Verbal, physical, and social bullying, as well as emotional symptoms and body dissatisfaction were correlates of restrained eating (Farrow & Fox, 2011). These findings suggest that during adolescence, youth may believe they should manipulate their eating behaviors to maintain friendships and, conversely, adolescents' friendships may result in specific eating habits.

Little research has examined the role parental and peer emotion socialization has on adolescents' eating behaviors. In order to understand how emotion socialization may influence restrained eating, it is first important to understand normative parent and peer emotion socialization processes, and how these differ by child gender.

### **Emotion Socialization**

**Parent emotion socialization.** Emotion socialization refers to “the socialization of children’s understanding, experience, expression, and regulation of emotion” (Eisenberg et al., 1998, p. 241). Parents are considered to be the

primary emotion socializers of their children early in life—from birth to school age—and continue to exert influence from middle childhood through adolescence (Eisenberg et al., 1998; Halberstadt, 1991). Three of the most frequently discussed modes of parental socialization are based on how parents respond to their child's emotion, discuss their child's emotion, and how the socializer (i.e., the parent) expresses their own emotion and creates a family emotional climate (Eisenberg et al., 1998). For example, parents can *respond* to their child in supportive or unsupportive ways. They may try to comfort their child and help their child better understand their emotion or they may ignore their child or get mad at him or her for experiencing and/or expressing anger.

Parental *discussion* of emotions with their children can be helpful or harmful to the child's development of emotional understanding (Eisenberg et al., 1998). Parents can encourage their children to talk about the emotional experience to understand the causes and consequences of the experience and expression of emotions. Parents' active engagement with their children about their feelings promotes emotional competencies (for a review see, Katz, Malikan, & Stettler, 2012). Parents may also disregard, minimize, or actively discourage their children's discussion of emotion, which limits the child's opportunities to learn about emotional states. Lastly, *parents' own expression* of emotion serves as a model for their children's emotional expressivity. This modeling helps children learn how, when, and where to express emotions and its acceptability. Parents' emotional expressiveness may also affect how children perceive, interpret, and understand others' emotional expressions. For instance, if a parent

does not express their sadness, children may not learn how to properly show their sadness or to acknowledge when someone else is sad or upset. Depending on parents' reactions, discussions, and expressions of emotions, children develop emotional competencies (e.g., emotion regulation, emotional awareness).

As noted, parents can react to their children's expressions of negative emotions in supportive or unsupportive ways (Eisenberg et al., 1998; O'Neal & Magai, 2005) and can do so using a variety of responses. Parents may *reward* their children's emotion expression by asking their children to explain more about their emotions or by comforting them. Parents may *magnify* the emotion by demonstrating or amplifying the felt emotion (e.g., getting angry too). Another response is *override*, in which parents joke with their children about the emotion or tell them to cheer up. They may also try and distract their children from a negative emotion by buying them something to take their mind off their negative feelings. Although rewarding, magnifying, and overriding emotions may all be viewed as supportive, there is some disagreement on whether the latter two are actually supportive socialization techniques (Garside & Klimes-Dougan, 2002; O'Neal & Magai, 2005). Magnifying and overriding children's emotions may result in youth growing more upset at themselves, their parents, or the situation, and may lead to children not learning how to experience and cope with the emotional arousal. Regarding validated unsupportive responses (O'Neal & Magai, 2005), parents may react in passive or active ways. For instance, parents exhibit passive behaviors by *neglecting* their child for his or her emotion expressions

and thus may ignore or not notice their child's emotions. Parents may also actively *punish* their child for certain emotion expressions and thus they may belittle or tease their child for experiencing a certain emotion.

The role of the child's and the parent's gender is important to consider in parental socialization of emotion as research demonstrates that parents socialize certain emotions in their children depending on their child's gender (Kennedy, 2006; Zeman, Cassano, Perry-Parrish, & Stegall, 2006 for a review). From an early age, girls may be taught to show empathy and guilt as well as more positive affect, compared to boys who may learn more about expressing anger that ultimately supports behaviors like autonomy and dominance (Zahn-Waxler, 2010). Parents may encourage more emotion expression in their daughters compared to their sons and also may inhibit their own emotion expression more with their sons compared to their daughters (Brody, 1993, 2000). When studying specific types of emotions, researchers have noted that parents have greater tendencies for promoting the expression of sadness in their daughters and, in contrast, encouraging their sons to control these expressions (Eisenberg et al., 1999). Further, parents appear to accept sons' expressions of anger, but discourage daughters from expressing this emotion (for a review see, Zahn-Waxler, 2000). However, in a study by Klimes-Dougan and colleagues (2007) that examined 220 families with youth between 11 and 16 years ( $M_{age} = 13.62$  years; 49.5% girls), the researchers noted few gender differences in how sadness, anger, and fear were socialized. Although parents socialized their sons

and daughters' emotions in similar ways, parents did tend to punish their sons' expressions of anger more than their daughters' expressions of anger.

The literature has conflicting findings about how parents continue to socialize their children's emotions as youth grow up (Stettler & Katz, 2014; Klimes-Dougan et al., 2007). In a longitudinal study examining boys and girls who were 5, 9, and 11 years old and their parents (51.3% mothers), Stettler and Katz (2014) found that parents demonstrated more emotion coaching for their children's negative emotions as the children got older. However, Klimes-Dougan and colleagues' (2007) studied adolescents ( $M_{age} = 13.6$  years) and found that parents of older children tended to be less supportive and more punitive toward their children's emotional displays. Therefore, coaching and supportive behaviors could decline as children enter late adolescence. These socialization changes in adolescence may also be related to changing parental perceptions of the acceptability of youth emotional expressivity as well as youth spending more time outside the home and less time with their parents than when they were younger (Klimes-Dougan & Zeman, 2007).

**Friend emotion socialization.** Although there is substantial research on parental emotion socialization, less is known about friend emotion socialization. Adolescence is a stage characterized by the development of autonomy and independence (Erikson, 1959), with simultaneous goals of forging an identity and gaining a sense of belonging. Thus, youth are trying to establish themselves apart from their parents while also seeking to belong in a peer group. Further, the nature of the peer relationship is generally egalitarian, resulting in less social

hierarchy and more similar levels of social power compared to parent-child relationships (Miller-Slough & Dunsmore, 2016; von Salisch, 2001). Due to this increased emphasis on peer relations during adolescence, it is necessary to examine how peers respond to each other when experiencing specific emotions (Klimes-Dougan & Zeman, 2007). Adolescence is a defining time in one's life and, therefore, the transition from parents as the main emotion-socializing agent to peers needs to be further examined to better understand adolescents' psychological and social outcomes as well as their overall health.

Much like parent emotion socialization, peer emotion socialization includes shaping emotional expressivity through supportive and unsupportive responses (Klimes-Dougan et al., 2014). For instance, adolescents who are supportive of their friend's emotions can *reward* their friends' emotion (i.e., encourage and empathize with their friend), *override* their friend's emotion (i.e., distract their friend from his/her emotion), or *magnify* their friend's emotion (i.e., exaggerate their friend's current emotional state by also experiencing the said emotion). Previous studies have questioned the adaptability of both override and magnify strategies within peer relationships (Garside & Klimes-Dougan, 2002; Moed et al., 2015; O'Neal & Magai, 2005). Although overriding one's negative emotions may not appear to be supportive during childhood, this behavior may actually be adaptive during adolescence (Garside & Klimes-Dougan, 2002). No research has examined if friends' overriding responses are helpful (Miller-Slough & Dunsmore, 2016), but Garside and Klimes-Dougan (2002) note that parental encouragement and overriding of adolescents' emotional expressivity may have a positive effect

on psychological adjustment. This finding suggests that the override response, like encouragement, may be a supportive response. However, parental or peer magnification of an adolescent's emotions may extend and/or intensify the adolescent's negative emotion (Moed et al., 2015; O'Neal & Magai, 2005). Even though the intentions for using overriding and magnifying strategies may be supportive, it is important to study the effect these strategies actually have on adolescents.

Adolescents can also respond unsupportively, in passive or active ways, to their friend's emotions. An example of a passive unsupportive response includes *neglecting* or ignoring their friend's emotion. Active unsupportive responses include *overtly victimizing* their friend (i.e., insulting and/or physically threatening or harming their friend because of their emotional expression), or *relationally victimizing* their friend (i.e., gossiping or spreading rumors to punish their friend for their emotional expression). Klimes-Dougan and colleagues (2014) acknowledge that rewarding, overriding, magnifying, and neglecting responses are similar to parents' supportive and unsupportive responses. However, since peers may punish each other in ways that differ from a typical parent-child relationship, overt and relational victimization are also considered unsupportive responses.

Peers' responses to negative emotion tend to have an effect on adolescents' social functioning. Legerski, Biggs, Greenhoot, and Sampilo (2015) studied 58 friend dyads ( $M_{age} = 13.1$  years; 59.6% girls) using an emotion discussion task. The conversation tasks included a general conversation,

planning a party, talking about a problem, and planning a special activity. The researchers noted that in early adolescence, youth who responded to their friends' negative emotions supportively were more likely to discuss their own emotions later on. This exchange amongst peers shows that youth are more likely to rely on and continue to discuss their negative emotions with the peers they feel supported by, and less so with those who are unsupportive of them.

Not only do friends' supportive responses influence how adolescents engage with each other, but friend emotion socialization has also been linked to somatic complaints in adolescents (Parr, Zeman, Braunstein, & Price, 2016). Adolescents (i.e., 132 youth;  $M_{age} = 12.6$  years; 61.6% girls) who received more positive, problem-focused and emotion-focused responses from their best friend had fewer somatic complaints. In contrast, those who received more punitive responses from their peers had more somatic complaints. Supportive peer responses to negative emotions appear to have positive effects on how youth respond to one another and on their overall health. Unsupportive peer responses may lead to more negative psychological and physical health outcomes.

Previous findings have noted that boys and girls express their emotions differently (Zahn-Waxler, 1993) and girls tend to express their emotions more than boys (Buckner & Fivush, 1998; Polce-Lynch, Myers, Kliewer, & Kilmartin, 2001). This emotive display may contribute to how adolescents respond to each other's emotions and their overall peer acceptance. In a study by Klimes-Dougan and colleagues (2014), the researchers found that when experiencing a negative event, girls reported that their friends used more reward, override, and



magnifying strategies compared to boys. On the other hand, boys reported that their friends used more neglect, overt victimization, and relational victimization strategies. These findings suggest that girls may be more accepting of negative emotions and also encourage their friends to discuss these events. Boys, in contrast, may be more likely to ignore, diminish, tease, or bully their peers when experiencing a negative emotion. Perry-Parrish and Zeman (2011) found that boys who showed their sadness were likely to experience less peer acceptance than the boys who did not display sadness. There were no apparent social consequences for girls' expression of sadness. Since boys tend to experience more negative repercussions for the display of their emotions, especially those that are not typically conveyed by boys (e.g., sadness), studying peer relations for both the boys that do and do not express their emotions is necessary. Examining this relation for girls also needs to be further studied since expressing certain negative emotions (e.g., sadness) may be more socially acceptable (Zeman & Garber, 1996; Zeman & Shipman 1997).

**Emotion socialization and eating behaviors.** Studying the relation between emotion socialization and restrained eating is important to better understand the processes in which youth learn appropriate ways to express their emotions and how these conditioned behaviors contribute to adolescent eating behaviors. More specifically, youths' eating behaviors may be triggered in different ways depending on the socializing agent (i.e., parent or friend). One study examined the links of parental emotion socialization and eating disordered behavior in adult children. Kaufman (2017) studied 170 adult participants who

were categorized into a clinical or non-clinical eating disorder group. Not only were participants' eating behaviors examined, but the researcher also asked participants to retrospectively rate their caregiver's parenting style and emotion socialization strategies when they were youth. Adults who had parents who were perceived as being more supportive (i.e., rewarding) of their emotions demonstrated lower levels of eating disorder symptomology. Further, parents who were remembered as punishing, neglecting, or magnifying their children's emotions had adult children who demonstrated greater levels of eating disorder symptomology. Lastly, the clinical group reported greater parental punishment and neglect of emotions compared to the non-clinical group. These findings suggest that the type of parental emotion socialization (i.e., supportive, unsupportive) was related to adults' eating disorder symptomology. Examining the role of parent emotion socialization on eating behaviors in youth is necessary to understand if these socialization responses exert influences earlier in development with longer-term effects into adulthood.

Peers, like parents, have a role on adolescents' eating behaviors. Although adolescents may choose friends who are like them, Badaly (2013) noted that the similarities amongst peers, especially considering weight-related behaviors, are also likely due to peer influences. Thus, friends play a role in each other's decisions and behaviors, specifically related to body size, food intake, physical activity, body dissatisfaction, and weight-controlling behaviors. The effect peers play on adolescents' unhealthy eating behaviors also appears to increase as youth age (i.e., approach older adolescence; Gaspar de Matos,

Palmeira, Gaspar, De Wit, & Luszczynska, 2016). Since adolescence is a time where youth are hoping to fit in with their peers while also becoming their own person (e.g., no longer tied solely to their parents), peer positive influences are vital in protecting against the development or furthering of eating-related problems. Friends' social influences are linked to one's eating awareness (Gaspar, Gaspar de Matos, Luszczynska, & De Wit, 2016), furthering the argument that positive eating habits and food-related views need to be instilled in adolescents since individuals in this age-group are likely to influence each other.

Due to the role parents and friends have on adolescents' behaviors, the current study will examine if parents' and friends' emotion socializing behaviors influence adolescents' restrained eating. Less is known about the specific relation between the socialization of youths' emotions on individual eating behaviors like restrained eating. However, studying this relation is necessary. By the time individuals reach adolescence, parents have socialized their children's emotions for years. Additionally, youth have observed their parents' eating behaviors and witnessed how parents may use food, specifically restraining food, as a coping mechanism for emotion experiences. Much like adolescents' experiences with their parents' emotion socializing and restrained eating behaviors, they also learn about these behaviors from their peers. Teenagers spend an increased amount of time with their peers and thus share more emotion experiences as well as more meals than previously. Greater emphasis is placed on overall appearance, ranging from behaviors (e.g., emotion expression) to

physical appearance (e.g., body size), which may contribute to greater control of both emotion expression as well as body size.

In sum, studying parent and friend emotion socialization as correlates to adolescent's restrained eating behavior will contribute to studies that have examined these variables separately and help better understand the role parents and friends play during adolescence. It may also be possible that the relation between emotion socialization and eating behaviors is mediated by a third variable. For example, it may be that emotion socialization is important in children's development of emotion regulation skills which then impact their eating behaviors.

### **Emotion Regulation**

Emotion regulation has been defined as "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goal" (Thompson, 1994, pp. 27-28). Thompson (1994) discusses four components of emotion regulation, which include (a) controlling emotional arousal via maintaining, heightening, inhibiting or reducing the emotion, (b) managing the emotion in the given social context, (c) acknowledging the effects of the emotions' intensity and duration, and (d) regulating the emotion to serve the individual's purpose or goal. Emotion regulation is a broad term that includes both conscious and unconscious processes and involves biological, social, and behavioral aspects (Garnefski, Kraaij, & Spinhoven, 2001; Thompson & Calkins, 1996). Learning appropriate ways to regulate emotions is a crucial

developmental task and requires continued responsiveness and adaptation based on changing social contextual demands (Cicchetti, Ganiban, & Barrett, 1991; Dodge, 1989; Kopp, 1989). Inappropriate forms of emotion regulation and emotion dysregulation have been linked to negative psychological outcomes, including depression (Paulus, Vanwoerden, Norton, & Sharp, 2016), anxiety (Trompeter, Bussey, & Fitzpatrick, 2017), aggression (Sullivan, Garthe, Goncy, Carlson, & Behrhorst, 2017), and somatic complaints (Zeman, Shipman, & Penza-Clyve, 1997). Understanding the behavioral motives and outcomes for youths' emotion regulation is necessary. This research will focus on adolescents' emotion regulation in regards to behavior within social relationships.

As individuals enter adolescence, their emotion regulation abilities continue to improve and their reasons for managing their emotions are better understood than in earlier developmental periods (Zeman et al., 2006). Further, the type of emotion experienced, social contextual factors, and their motivation to manage their emotions continue to influence adolescents' decisions to regulate their emotions. For instance, if an adolescent receives a bad grade on an important exam, he or she may feel sad. Depending on their social situation, the adolescent may not want to show their sadness for fear of rejection or ridicule by peers. In order to reach this emotion regulation decision, the adolescent needs to be able to evaluate and modify their expression, contingent on who is around them and on their end goal (e.g., fitting in, appearing unfazed). Modification and evaluation can involve checking the intensity of one's emotions (e.g., facial and vocal expressions, or lack thereof) and the duration of these emotions (i.e., how

long emotional arousal continues). By having more knowledge of the external repercussions of expressing particular emotions and the timing of these expressions, adolescents can understand if their emotional expressivity will assist or hinder them in achieving their goals (e.g., maintaining friendships). Thus, regulating emotions is a complex endeavor that requires multifaceted skills that must be altered in response to the subtleties of the social situation and the individual's social context goals.

There are numerous ways in which individuals manage emotion expressivity. Some typical behaviors involved in the regulation of emotions include the inhibition of emotions, the dysregulation of emotion expression, and overall regulation coping (Zeman, Shipman, & Penza-Clyve, 2001). *Emotional inhibition* refers to the over-control or suppression of expressing a certain emotion. For example, youth may hide their emotions or keep their emotions to themselves because they fear others' disapproval as well as their own discomfort in emotion expression (Zeman & Shipman, 1996, 1997). *Dysregulated-Expression* refers to the under-control or overt, exaggerated expression of a certain emotion. Adolescents may prolong or exaggerate their emotion expressions for various reasons, including the need for attention or the inability to manage the given emotion. *Regulation coping* refers to a repertoire of skills to respond effectively when experiencing emotions. For instance, youth may stay calm or distract themselves when they are feeling a specific emotion. Adolescents' abilities to respond to their emotions in a productive manner demonstrate the effectiveness of their emotion regulation strategies. Inhibition,

dysregulation, and regulation coping encompass primarily behavioral rather than cognitive facets of emotion regulation because these categories evaluate how adolescents respond behaviorally to their own negative emotion experiences (Garnefski et al., 2001).

**Emotion regulation and eating behaviors.** In relation to eating behaviors, emotion regulation appears to be one of the most frequently studied aspects of general regulatory behaviors (e.g., Ferrer, Green, Oh, Hennessy, & Dwyer, 2017; Hansson et al., 2017). Adolescents who have difficulties regulating their emotions (i.e., exhibit emotion dysregulation) are more likely to have disordered eating behaviors (Hansson et al., 2017). Moreover, Stapleton and Whitehead (2014) studied eating behaviors in men and women. The researchers noted a significant difference between restrained eaters and non-restrained eaters, such that restrained eaters had more difficulty regulating emotions than non-restrained eaters. Additionally, individuals who reported greater issues with emotion regulation, lower impulsivity, and lower sensitivity to reward exhibited higher levels of restrained eating.

As noted, restrained eating is not solely linked to restricting one's eating, but this behavior is also associated with binge eating or Loss of Control (LOC) eating (Polivy & Herman, 1985). Findings have noted that the initial links between emotion regulation and eating behaviors can further evolve into binge eating and LOC eating (Balantekin, Birch, & Savage, 2017; Goldschmidt, Lavender, Hipwell, Stepp, & Keenan, 2017). Prospectively, poor emotional awareness is linked with LOC eating one year later (Goldschmidt et al., 2017), suggesting that

adolescents who are unaware of their emotions and their emotional state are more likely to rely on food to manage their emotions. LOC eating is also linked with overall higher levels of emotion dysregulation (Kelly et al., 2016) and lower levels of certain emotion regulation strategies (Goossens, Van Malderen, Van Durme, & Braet, 2016). For example, Goossens et al. (2016) found that girls, but not boys, who reported more LOC eating demonstrated lower levels of problem-oriented action, distraction, humor enhancement, acceptance, and cognitive problem solving than girls who did not exhibit LOC eating. These girls high on LOC eating did not differ from others on neglect or revaluation strategies.

In sum, the ability to regulate one's emotions successfully is vital in the development of eating regulation. Specifically, emotion regulation may serve as a protective factor in the development of eating behaviors including, but not limited to, restrained eating, binge eating, and LOC eating. Even though there are established links between emotion regulation and eating behaviors, it is necessary to examine the mechanism (i.e., parent emotion socialization) in which youth learn appropriate ways to regulate their emotions (Cassano, Perry-Parrish, & Zeman, 2007; Sanders, Zeman, Poon, & Miller, 2015; Zeman, Cassano, & Adrian, 2013). Emotion regulation may serve as a protective factor in the development of eating behaviors including restrained eating.

### **Present Study**

The current study examines both parent and friend emotion socialization responses as correlates of adolescents' restrained eating behaviors. Specifically, this study investigates parent's and same-sex close friend's supportive and



unsupportive responses to negative emotions and how these reactions contribute to adolescents' restrained eating. Since individuals learn how to regulate their emotions in part from others' responses to their emotional expressivity, adolescents' emotion regulation was examined as a potential mediator of the relation between emotion socialization methods and restrained eating. Lastly, gender differences were studied because parents and friends socialize emotions differently for boys and girls. Therefore, it is necessary to examine whether supportive or unsupportive emotion socialization responses influence restrained eating in similar or different ways by gender.

We chose to study these relations in adolescence because this is a stage of life when friends exert new influences on each other, yet parents continue to impact their children's thoughts and decisions (Zeman et al., 2013). Further, the changing social landscape of adolescence requires new emotion skills.

Adolescents are likely eating more with their friends and may feel greater pressure to have or maintain a certain body shape. Examining the role of both parents' and friends' emotion socialization responses, and how these behaviors influence adolescents' emotion regulation and eating behaviors is necessary to understand how supportive or unsupportive behaviors may contribute to eating problems, particularly restrained eating, during adolescence.

The following hypotheses were derived from theory and the limited literature examining emotion socialization and eating patterns.

**Hypothesis set 1: Parent and friend supportive responses.** Regarding the relation between parent's and friend's supportive emotion socialization and

restrained eating, we hypothesize that both parent and friend supportive methods of emotion socialization will be significantly and negatively associated with restrained eating. Thus, we expect that the more supportive parents and friends are of the adolescent's negative emotional expressivity, the less restrained eating he or she will report. Further, we hypothesize that emotion regulation—specifically emotion inhibition, and regulation coping—will mediate the relation between supportive emotion socialization and restrained eating. We hypothesize that parent and friend supportive emotion socialization will predict less emotion inhibition, and more regulation coping, which will predict less restrained eating. We do not anticipate mediation through emotion dysregulation because the dysregulation behaviors are not consistent with restrictive or controlled types of behaviors as evident in restrained eating. Gender is hypothesized to moderate these direct and indirect effects. We anticipate that the effects will emerge for girls but not boys because girls report a greater emphasis on thinness and appearance during adolescence.

**Hypothesis set 2: Parent and friend passive unsupportive responses.**

Additionally, we hypothesize that both parent's and friend's passive unsupportive responses (i.e., neglecting, ignoring) behaviors will be significantly and positively associated with restrained eating. We expect that the more parents and friends ignore their child's/friend's emotions, the more restrained eating the individual will exhibit. Further, we hypothesize that emotion regulation—specifically emotion inhibition, and regulation coping—will mediate the relation between neglect and restrained eating. Another hypothesis is that parent and friend neglect responses

will predict more emotion inhibition, and less regulation coping, which will predict more restrained eating. We do not expect dysregulation to mediate this link because the dysregulation behaviors assessed in the current study do not align with restrained eating behaviors. Since adolescent girls tend to report more focus on thinness and their overall appearance than adolescent boys, we expect gender to moderate these direct and indirect effects.

**Hypothesis set 3: Parent and friend active unsupportive responses.**

Lastly, we hypothesize that both parent's and friend's active unsupportive behaviors (i.e., punishment and victimization, respectively) will be significantly and positively associated with restrained eating. We expect that more unsupportive parental and friend responses will be related to more restrained eating. Additionally, emotion regulation behaviors like emotion inhibition and regulation coping are anticipated to mediate the effect of active unsupportive behaviors on restrained eating. We expect that parent and friend unsupportive behaviors will predict more emotion inhibition and less regulation coping and thus lead to more restrained eating. We do not predict that emotion dysregulation will mediate this link. Due to girls' reports of increased relational victimization during adolescence as well as their focus on thinness, we hypothesize that these relations will be more pronounced in girls compared to boys.

## Chapter 2

### Method

#### Participants

Participants were 91 adolescents (56% girls;  $M_{age} = 16.5$  years,  $SD = 1.0$  years;  $Range = 14.0 - 18.67$  years) and one of their parents. Adolescents were 76.9% White, 14.3% Black, 7.7% other, and 1.1% Hispanic. There were 91 participating parents (90.1% mothers, 8.8% fathers, 1.1% step-mothers;  $M_{age} = 49.3$  years,  $SD = 5.9$  years;  $Range = 35.3 - 67.0$  years). Families were of middle to upper socioeconomic status (SES, Hollingshead, 1975;  $M = 54.11$ ,  $SD = 8.65$ ) families in the southeast United States. See Table 1 for demographic characteristics of the sample.

#### Measures

**Adolescent eating behaviors.** Adolescents completed the Dutch Eating Behavior Questionnaire (DEBQ; van Strien, Frijters, Bergers, & Defares, 1986), which assesses individuals' eating behaviors. Participants respond to 33 items that are answered using a 5-point Likert scale (1 = *Never* to 5 = *Very often*). Although the questionnaire contains three subscales, for the purposes of the current study, only the Restrained Eating measure was used. The subscale includes 10 items (see Appendix A) and measures how often a person tries not to eat (e.g., "Do you try to eat less at mealtimes than you would like to eat?"). Scores were averaged within the subscale. Higher scores indicated more restrained eating. The DEBQ scales have high internal consistencies ( $\alpha = .80$  to  $.95$ ; van Strien et al., 1986) as well as high convergent and discriminative validity

(Snoek, et al., 2008, 2009; van Strien, 2002; van Strien, Konttinen, Homberg, Engels, & Winkens, 2016). Additionally, this measure has been used successfully in both adolescent and adult samples (Snoek et al., 2007). In the current study, the internal consistency for restrained eating was strong ( $\alpha = .91$ ).

**Body Mass Index (BMI).** Adolescents reported their body weight and height. These measurements, as well as youth's birth date, interview date, and gender, were used to calculate the BMI-for-age percentile. The BMI-for-age-percentile takes into account the child's age and gender compared to other children of the same age and gender. Percentiles were separated into four categories based on the Center for Disease Control BMI-for-age growth chart (Center for Disease Control and Prevention, 2015). Children who were less than the 5<sup>th</sup> percentile for their age and gender were categorized as underweight. Those between the 5<sup>th</sup> and 85<sup>th</sup> percentile for their age and gender were considered to be at a healthy weight. Individuals between the 85<sup>th</sup> and less than the 95<sup>th</sup> percentile were categorized as overweight and those children equal to or greater than the 95<sup>th</sup> percentile for their age and gender were considered to be obese. In this sample, the average BMI for boys and girls was 21.79 ( $SD = 3.78$ ) with 77% of the sample in the healthy weight category. There was not a significant difference in BMI between girls ( $M = 21.55$ ,  $SD = 2.73$ ) and boys ( $M = 22.10$ ,  $SD = 4.82$ );  $t(89) = -0.69$ ,  $p = .49$ .

**Parent emotion socialization.** The Emotions as a Child Questionnaire (EAC; Magai, 1996) assesses parents' self-report of how they respond to their child when their child is sad, angry, and worried. There are 15 items for each of

the three emotion types (see Appendix B, C, D). Parents are prompted to think about a recent time when their child was sad, angry, or worried and asked how often he or she responds to their child in specific ways. The questionnaire is comprised of five subscales that evaluate different parental responses. The Reward subscale evaluates when a parent helps his or her child overcome a problem that is making him or her experience a given emotion (e.g., “I helped my child deal with an issue”). The Override subscale measures the parent’s attempts to distract his or her child from experiencing the emotion (e.g., “I gave him/her something he/she liked”). The Magnify subscale assesses if the parent amplifies the child’s emotion by displaying the same emotion (e.g., “I got very sad”). The Neglect subscale examines if the parent ignores his or her child’s emotion (e.g., “I did not pay attention to his/her worry”), whereas the Punish subscale assesses how likely the parent gets upset with his or her child for expressing the emotion (e.g., “I told him/her that I did not approve of his/her anger.” Parents respond to each item using a 5-point scale (1 = *Never* to 5 = *Very often*). Two questions from the Neglect subscale were reverse-scored. Scores for each subscale were averaged and higher scores indicated more reward, override, magnification, neglect, or punishment.

To examine the broad categories of supportive and unsupportive parental responses, the subscales were collapsed across emotion because they were significantly correlated with each other (see Table 2). Since overriding and magnifying emotions can be viewed as both positive and negative socialization responses (Garside & Klimes-Dougan, 2002), only the reward subscale was

used for the supportive response variable. The subscales reflected overall supportive, overall passive unsupportive (through neglect), and overall active unsupportive (through punishing) responses. Past research has demonstrated high internal consistency for the scales ( $\alpha = .80$  to  $.88$ ; Kehoe et al., 2014) and test-retest reliability for this measure (Garside & Klimes-Dougan, 2002; Klimes-Dougan et al., 2007). For the current sample, internal consistencies were strong for the supportive scale ( $\alpha = .88$ ), the passive unsupportive scale ( $\alpha = .84$ ), and the active unsupportive scale ( $\alpha = .79$ ).

**Friend emotion socialization.** To measure friend emotion socialization, youth completed the You and Your Friends Questionnaire (YYF; Klimes-Dougan et al., 2014). This scale is comprised of 54 items. Each emotion (i.e., sadness, worry, anger) is assessed with 18 questions (see Appendix E, F, G). Adolescents were asked to imagine a time when they were feeling particularly [sad/worried/angry]. Youth answered questions on how they thought their best friend who was identified earlier in the interview, would respond to them if their friend knew they were feeling really [sad/worried/angry].

For each emotion, there are six subscales with three items each. The Reward subscale assesses how often a friend encourages expression and/or discussion of the given emotion (e.g., “Help you to deal with what’s made you feel sad”). The Override subscale evaluates if a friend tries to distract the adolescent from experiencing a given emotion (e.g., “Try to get you to do something else to take your mind of feeling worried”). The Magnify subscale includes behaviors that might heighten the experience and expression of the

given emotion (e.g., “Get angry too”). The Neglect subscale assesses how often a friend ignores the adolescent when he or she is experiencing an emotion (e.g., “Not say or do anything about it”). The likelihood that the friend will physically hurt the individual is evaluated by the Overt Victimization subscale (e.g., “Push you away or hit you”). Lastly, the Relational Victimization subscale examines how often the friend excludes or tries to hinder the adolescent’s social relationships (e.g., “Tell other people secrets or mean things about you”). Adolescents responded to questions on a 5-point scale (1 = *definitely WOULD NOT do this* to 5 = *definitely WOULD do this*). Scores within each subscale were averaged such that higher scores indicated more reward, override, magnification, neglect, overt victimization, and relational victimization.

To address the study’s goals, the subscales were collapsed across emotions in order to reflect overall supportive, overall passive unsupportive (through neglect), and overall active unsupportive (through overt and relational victimization) responses (see Table 3). Since override and magnify strategies have potentially both positive and negative outcomes (Garside & Klimes-Dougan, 2002; Hughes-Scalise & Connell, 2014; Moed et al., 2015; O’Neal & Magai, 2005), only the reward subscale was included for the supportive category. Neglect was used to assess passive unsupportive emotion socialization behaviors. Overt victimization and relational victimization were highly correlated and thus summed to create the overall active unsupportive composite score (see Table 4). Previous findings have noted high internal consistencies for the subscales ( $\alpha = .77$  to  $.91$ ; Klimes-Dougan et al., 2014). In the current sample,



internal consistencies were strong for the supportive variable ( $\alpha = .86$ ), the passive unsupportive scale ( $\alpha = .90$ ), and the active unsupportive scale (.88).

**Adolescent emotion regulation.** The Children's Emotion Management Scales (CEMS; Zeman, Cassano, Suveg, & Shipman, 2010; Zeman, Shipman, & Penza-Clyve, 2001) examines youth's self-report of their sadness, anger, and worry regulation (see Appendix H, I, J). For each scale, adolescents respond to items on a 3-point Likert scale (1 = *hardly ever* to 3 = *often*). The Children's Sadness Management Scale contains 12 items (e.g., "I cry and get upset when I'm sad"). The Children's Anger Management Scale contains 11 items (e.g., "When I am feeling mad, I control my temper"). The Children's Worry Management Scale comprises 10 items (e.g., "I hold my worried feelings in"). All measures include three subscales: Inhibition (e.g., over-control or suppression of emotions), Dysregulation (e.g., exaggeration or uncontrolled display of emotions), and Regulation Coping (e.g., adaptive methods of responding to emotions). Items were summed and then averaged. Higher scores indicated more inhibition, dysregulation, and greater regulation coping. Prior research has found acceptable construct validities for the subscales on the sadness and anger measures ( $\alpha = .60$  to  $.77$ ; Zeman et al., 2001) and on the worry measure ( $\alpha = .69$  to  $.74$ ; Zeman et al., 2010). The three emotion scales were collapsed across emotion given their significant correlations (see Table 5). In the current study, the internal consistency coefficients were strong for the 12-item inhibition subscale ( $\alpha = .87$ ) and were acceptable for the 12-item regulation coping subscale ( $\alpha = .72$ ). The 9-item dysregulation subscale was unacceptable ( $\alpha = .59$ ), but improved with

the deletion of item nine from the Children's Anger Management Scale ("I say mean things to others when I am mad;"  $\alpha = .62$ ).

### **Procedure**

Interviews were conducted in the participants' homes ( $N = 43$ ), in the university's research lab ( $N = 23$ ), in another preferred location (e.g., library;  $N = 11$ ), or over the phone, when families had moved out of the geographic area ( $N = 12$ ) or were unable to conduct an interview in person ( $N = 2$ ). Parents provided informed consent and adolescents gave verbal assent. Research assistants read each question from the questionnaires aloud to the adolescents. Youth responded to each question verbally, by saying the number on the scale that was associated with their answer. There were three orders of questionnaires that were counterbalanced across participants. Interviews lasted for one hour.

After providing consent, parents completed a questionnaire packet. All measures were read, and completed by the parent alone with a research assistant available to answer questions. Youth received \$15 and parents received \$10 as appreciation for their participation.

### **Analytic Plan**

Data analyses were conducted in two phases. All analyses covaried BMI within the restrained eating behavior variables since previous research has noted strong relations between BMI and restrained eating (Snoek et al., 2013). We conducted six moderated mediation analyses with three parallel mediators to examine whether: (a) parent and friend emotion socialization behaviors were directly related to restrained eating, (b) these socializing behaviors were

indirectly linked to restrained eating via emotion regulation (i.e., emotion inhibition, emotion dysregulation, regulation coping), and (c) these direct and indirect relations were conditional on adolescent gender. See Figure 1 for a statistical model and Figure 2 for a conceptual model.

Because little research has examined the role of emotion socialization on restrained eating and fewer studies have investigated whether this relation is conditional on gender, we adopted Hayes's (2013) approach to determine whether an expected moderation exists. If our results indicated that gender did not moderate these relations, we reexamined the model without gender as a moderator. We did not want to leave an interaction in the model that could influence the estimate of the indirect effect since we do not have evidence that this link is actually moderated by gender. Therefore, it is plausible to constrain the model to be unconditional rather than conditional on gender. Based on this approach, we conducted an additional six parallel mediation models examining the direct effect of emotion socialization on restrained eating and the indirect effect of emotion regulation. See Figure 3 for a statistical model and Figure 4 for a conceptual model.

We conducted our analyses using the PROCESS macro for SPSS (Hayes, 2013). Within this macro, direct and indirect effects as well as the role moderators have on these effects can be examined. Bias-corrected bootstrap procedures were implemented because this procedure does not assume the sampling distribution of the indirect effects to be normal. This procedure is also beneficial for smaller sample sizes. As recommended by Hayes (2013), we used

10,000 bootstrap samples to determine the lower and upper limits of the 95% bootstrap confidence interval for the conditional and unconditional indirect effects. All unstandardized estimates are reported.

## Chapter 3

### Results

Means, standard deviations, and correlations of predictor and mediator variables are presented in Tables 2, 3, and 5. Correlations among all study variables are presented in Table 6. Age was not correlated with any of the variables and was therefore not used as a covariate. Adolescents' average BMI was 21.79 ( $SD = 3.78$ ), and BMI for girls ( $M = 21.55$ ,  $SD = 2.73$ ) and boys ( $M = 22.10$ ,  $SD = 4.82$ ) did not significantly differ,  $F(1, 89) = 0.47$ ,  $p = .49$ . Additionally, youths' average restrained eating was 1.98 ( $SD = 0.72$ ). Restrained eating did not differ for girls ( $M = 2.09$ ,  $SD = 0.74$ ) or boys ( $M = 1.85$ ,  $SD = 0.70$ ),  $F(1, 89) = 2.39$ ,  $p = .13$ .

#### Parent and Friend Supportive Responses

It was hypothesized that parent and friend supportive responses to negative emotions would predict less restrained eating through emotion regulation. We hypothesized that parent and friend behavior would have similar roles in predicting restrained eating. Further, we hypothesized that these relations would differ by child gender.

**Parent.** The formal index of moderated mediation demonstrated that the relation between parent supportive socialization responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping did not significantly differ between girls and boys (see Table 7). The interaction of parent supportive emotion socialization responses and gender on restrained eating was not significant ( $b = 0.01$ ,  $SE = 0.27$ ,  $t = 0.02$ ,  $p = .98$ ).

The mediation analysis examining the relation between parent supportive socialization responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping was not significant (see Table 8). The direct effect of parent supportive emotion socialization responses on restrained eating (“path c”) was not significant (see Table 9).

**Friend.** The formal index of moderated mediation demonstrated that the relation between friend supportive socialization responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping did not significantly differ between girls and boys (see Table 7). The interaction of friend supportive emotion socialization responses and gender on restrained eating was not significant ( $b = 0.42$ ,  $SE = 0.26$ ,  $t = 1.59$ ,  $p = .12$ ).

The mediation analysis examining the relation between friend supportive socialization responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping was examined. Emotion inhibition served as a significant mediator between friend supportive emotion socialization responses and restrained eating (see Table 8). Higher reports of friend supportive emotion socialization responses predicted less emotion inhibition (“path  $a_1$ ”;  $b = -0.17$ ,  $SE = 0.07$ ,  $t = -2.56$ ,  $p = .01$ ), which predicted lower levels of restrained eating (“path  $b_1$ ”;  $b = 0.42$ ,  $SE = 0.19$ ,  $t = 2.23$ ,  $p = .03$ ). The direct effect of friend supportive emotion socialization responses on restrained eating (“path c”) was not significant (see Table 9). See Figure 5 for coefficients and standard errors for the overall model.

### **Parent and Friend Passive Unsupportive Responses**

It was hypothesized that parent and friend passive unsupportive responses through ignoring or neglecting the negative emotional expressivity would predict more restrained eating through emotion regulation. We hypothesized that parent and friend behavior would have similar roles in predicting restrained eating. Further, we hypothesized that these relations would differ by child gender.

**Parent.** The formal index of moderated mediation demonstrated that the relation between parent neglect responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping did not significantly differ between girls and boys (see Table 7). The interaction of parent neglect responses and gender on restrained eating was not significant ( $b = -0.12$ ,  $SE = 0.31$ ,  $t = -0.38$ ,  $p = .71$ ).

The mediation analysis examining the relation between parent neglect responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping was not significant (see Table 8). The direct effect of parent supportive emotion socialization responses on restrained eating (“path c”) was not significant (see Table 9).

**Friend.** The formal index of moderated mediation demonstrated that the relation between friend neglect responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping did not significantly differ between girls and boys (see Table 7). The interaction of friend neglect responses and gender on restrained eating was significant ( $b = -0.95$ ,  $SE = 0.27$ ,  $t = -3.61$ ,  $p < .001$ ). Simple slope analyses of the conditional direct effects were examined

(see Figure 6). The conditional direct effect for girls ( $b = 0.62$ ,  $SE = 0.20$ ,  $t = 3.09$ ,  $p = .003$ ) was significant, such that higher levels of friend neglect predicted more restrained eating in girls. The conditional direct effect for boys ( $b = -0.33$ ,  $SE = 0.18$ ,  $t = -1.89$ ,  $p = .06$ ) was marginally significant, such that higher levels of friend neglect predicted less restrained eating in boys.

The mediation analysis examining the relation between friend neglect responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping was examined. Emotion inhibition served as a significant mediator between friend neglect responses and restrained eating (see Table 8). Higher reports of friend neglect responses predicted more emotion inhibition (“path  $a_1$ ”;  $b = 0.19$ ,  $SE = 0.08$ ,  $t = 2.45$ ,  $p = .02$ ), which ultimately predicted marginally more restrained eating (“path  $b_1$ ”;  $b = 0.35$ ,  $SE = 0.19$ ,  $t = 1.81$ ,  $p = .07$ ). The direct effect of friend neglect responses on restrained eating (“path  $c$ ”) was not significant (see Table 9). See Figure 7 for coefficients and standard errors for the overall model.

### **Parent and Friend Active Unsupportive Responses**

It was hypothesized that parent and friend actively unsupportive responses through punishing and victimizing responses to negative emotions would predict more restrained eating through emotion regulation. We hypothesized that parent and friend behavior would have similar roles in predicting restrained eating. Further, we hypothesized that these relations would differ by child gender.



**Parent.** The formal index of moderated mediation demonstrated that the relation between parent punish responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping did not significantly differ between girls and boys (see Table 7). The interaction of parent punishing responses and gender on restrained eating was significant ( $b = 0.77$ ,  $SE = 0.30$ ,  $t = 2.54$ ,  $p = .01$ ). Simple slope analyses of the conditional direct effects were examined (see Figure 8). The conditional direct effect for girls ( $b = -0.43$ ,  $SE = 0.20$ ,  $t = -2.14$ ,  $p = .04$ ) was significant, such that higher levels of parent punishing responses predicted less restrained eating in girls. The conditional direct effect for boys ( $b = 0.34$ ,  $SE = 0.22$ ,  $t = 1.56$ ,  $p = .12$ ) was not significant.

The mediation analysis examining the relation between parent punishing responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping was not significant (see Table 8). The direct effect of parent supportive emotion socialization responses on restrained eating (“path c”) was not significant (see Table 9).

**Friend.** The formal index of moderated mediation demonstrated that the relation between friend victimization responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping did not significantly differ between girls and boys (see Table 7). The interaction of friend victimization responses and gender on restrained eating was significant ( $b = -1.03$ ,  $SE = 0.48$ ,  $t = -2.16$ ,  $p = .04$ ). Simple slope analyses of the conditional direct effects were examined (see Figure 9). The conditional direct effect for girls ( $b = 0.77$ ,  $SE = 0.37$ ,  $t = 2.09$ ,  $p = .04$ ) was significant, such that higher levels of

friend victimization predicted more restrained eating in girls. The conditional direct effect for boys ( $b = -0.26$ ,  $SE = 0.30$ ,  $t = -0.85$ ,  $p = .40$ ) was not significant.

The mediation analysis examining the relation between friend victimization responses and restrained eating through emotion inhibition, emotion dysregulation, and regulation coping was not significant (see Table 8). The direct effect of parent supportive emotion socialization responses on restrained eating (“path c”) was not significant (see Table 9).

## Chapter 4

### Discussion

The prevalence of eating disorders and disordered eating in adolescents and teenagers is strikingly high (National Eating Disorder Association, 2017). Due to its associations with clinical eating disorders like Bulimia Nervosa, Binge Eating Disorder, Anorexia Nervosa, and Avoidant/Restrictive Food Intake Disorder, understanding what may lead to restrained eating in adolescence is necessary. Also during this stage of life, youth spend increased time with their peers (Steinberg & Morris, 2001), while also still engaging with their parents. Examining the similarities and differences between how parents and friends relate to adolescents' behaviors, specifically negative emotions, is important. Few studies have examined the role emotion socializing behaviors have on restrained eating and the possible mediators of this relation.

Thus, the goal of the current study was to study the association between emotion socialization behaviors and restrained eating in adolescents. We examined parent and friend emotion socialization behaviors, which included supportive, passive unsupportive (i.e., neglect), and active unsupportive (i.e., punishment, victimization) responses. In addition to examining this direct link between emotion socializing behaviors and restrained eating, we studied the indirect effect of three facets of emotion regulation. Specifically, we examined how emotion inhibition, emotion dysregulation, and regulation coping mediated this relation. Since previous findings have noted gender differences between how

parents and peers socialize adolescents' behaviors (Eisenberg et al., 1999; Kilmes-Dougan et al., 2014), we also examined the function of gender.

Overall, the results indicated that friends' supportive behaviors were associated with positive outcomes (i.e., less restrained eating), whereas their unsupportive behaviors were directly linked to negative outcomes. Interestingly, parents' emotion socializing supportive behaviors did not tend to predict adolescents' restrained eating, but their active unsupportive behaviors did contribute to this eating style. Regarding facets of emotion regulation, only emotion inhibition served as a significant mediator. Additionally girls' restrained eating, but not boys' restrained eating, was directly significantly associated with parent and friend emotion socializing behaviors.

### **Hypothesis Set 1: Parent and Friend Supportive Responses**

Our first hypothesis, examining if parent and friend supportive emotion socialization responses predicted restrained eating, directly and indirectly through emotion regulation strategies was partially supported. Although we predicted that gender would moderate these direct and indirect effects, no relation was found. Specifically, emotion inhibition but not dysregulation or regulation coping mediated the relation between friend supportive emotion socialization behaviors and adolescent restrained eating. The more supportive friends were of adolescents' negative emotions, the less adolescents inhibited their emotions, and the less they restrained their eating

A better understanding of the role of emotion inhibition in comparison to other emotion regulation strategies on restrained eating is necessary. The

literature acknowledges the link between eating-disordered behaviors, affect regulation, and emotion inhibition (Bekker & Spoor, 2008; Hawkins & Clement, 1984; McCarthy, 1990), such that individuals' eating behaviors may actually serve as a coping mechanism to respond to negative emotions. For example, decreased appetite and less food consumption occur as responses to negative emotional states (for a review see, Bekker & Spoor, 2008). These findings support our findings that the more support adolescents perceive they receive when experiencing a negative emotional state, the less inclined they are to restrain their eating because this support presumably helps lower their distress. Further, if restraining one's eating is a way of coping with emotional distress, it is plausible that regulation coping may not mediate the relation between emotion socialization and restrained eating since the coping mechanism in use is restrained eating. A better understanding of the effects of supportive emotion socialization and regulation on restrained eating in adolescence provides insight regarding ways to reduce potentially maladaptive coping behaviors and potential eating concerns.

The association between parents' supportive emotion socialization behaviors and restrained eating was not significant, nor was it mediated by emotion regulation strategies. It is interesting that this finding emerged for supportive responses from friends but not from parents. It may be that support from parents is anticipated and in some ways is a "given" since these adolescents have received a certain style of emotional support from parents for

at least 15 years. Thus, the salience of friend responses to emotion may be more powerful to elicit a response than that of parents.

Perhaps of greater surprise in the current study was the lack of gender moderation in the link between friend emotion socialization and restrained eating, directly or indirectly through emotion regulation. Since closer, more supportive friendships tend to be established during adolescence (Steinberg & Morris, 2001), and previous findings have noted that girls are more likely to use supportive emotion socialization behaviors compared to boys (Klimes-Dougan et al., 2014), it was expected that gender would moderate these links. As expected, girls reported receiving more supportive emotion socializing behaviors from their friends compared to boys, but boys also reported moderate levels of peer supportive emotion socialization behaviors. Nevertheless, boys and girls reported similar levels of restrained eating, which may have influenced the moderation effect. Regardless, it is important to note that a null hypothesis cannot be proven true (Hayes, 2013) and these null findings, in regards to gender, might be due to the sample size that could have reduced the power to find differences. Additionally, the null relations between parents' socialization of supportive emotions and adolescents' restrained eating may be related to few differences in age. Previous findings have noted that age may interact with gender to influence how parents socialize their sons' and daughters' emotions (Klimes-Dougan et al., 2007). Unlike other studies examining parent emotion socialization in younger and older adolescents (i.e., Stettler & Katz, 2014), the current study only examined older adolescents. This study's findings align with prior research

examining only older adolescents and who did not find gender differences between how parents socialize their sons' and daughters' emotions (Klimes-Dougan et al., 2007).

### **Hypothesis Set 2: Parent and Friend Passive Unsupportive Responses**

This study's second hypothesis questioned if parent and friend passive unsupportive responses (i.e., neglecting behaviors) predicted restrained eating directly and indirectly through emotion regulation strategies. It also tested whether gender moderated these relations. This hypothesis was partially supported. Emotion inhibition mediated the relation between friends' passive unsupportive responses adolescents' restrained eating. Although gender did not significantly moderate the indirect effects, gender did moderate the direct effect of friend neglecting behaviors to restrained eating for boys and girls. No gender differences were found for parents' neglecting behaviors and restrained eating, directly or indirectly through emotion regulation.

Interestingly, emotion inhibition, but not emotion dysregulation or regulation coping, mediated the association between friend neglecting behaviors and restrained eating. Therefore, the more friends neglected their friend's emotions, the more the adolescents inhibited their emotions, and restrained their eating. As noted, inhibition of emotion can have negative health effects (Bekker & Spoor, 2008). Consistent with previous findings, restrained eating in the current study is a negative health outcome that was associated with higher levels of emotion inhibition. In another study, researchers found that the inhibition of one's behavior was strongly associated with higher levels of restrained eating (Smolak

& Munstertieger, 2002). It is apparent that emotion inhibition has ties with restrained eating suggesting the adoption of a controlled, inhibited approach or style.

Similar to our findings regarding supportive emotion socialization, parents' passive unsupportive emotion socializing behaviors were not significantly associated with restrained eating. As mentioned, adolescents may be more comfortable and accustomed to their parents' emotion socializing behaviors and therefore be less affected by their lack of response. Since adolescence is a time when individuals are spending increased amount of time with their friends (Steinberg & Morris, 2001), youth, especially girls, may be more upset when their friends ignore their behaviors compared to when their parents do not respond to their negative emotions.

However, when examining gender as a moderator, this study found that gender qualified the direct relation between friend passive unsupportive responses and adolescents' restrained eating. The more friends ignored girls' emotions, the more girls restrained their eating. In contrast, the more friends neglected boys' emotions, the less likely boys restrained their eating. As evidenced, by prior research, restrained eating tends to be more prevalent in girls than boys (Farrow & Fox, 2011; Snoek et al., 2013; Snoek et al., 2008, 2009). Although there were no significant mean differences between girls' and boys' restrained eating, there appear to be gender differences in what may contribute to girls' and boys' restrained eating. Friends' passive unsupportiveness may affect girls more negatively than boys, which results in more restrained eating for



girls. Klimes-Dougan and colleagues (2014) found that boys experienced more neglect than girls when they expressed their negative emotions. Boys may be more used to their friends' neglecting behaviors and therefore may be less preoccupied with or even aware of this behavior. Additionally, girls tend to self-disclose more and spend greater amounts of time in social conversations with their girl friends than boys (Ladd, 1983; Moller, Hymel, & Rubin, 1992; Rose, & Rudolph, 2006). If girls feel neglected or ignored by their friends, this may cause them more distress and they may use restrained eating as a coping strategy to deal with their perceived lack of support and connection. Boys, on the other hand, may not view a lack of response from their male friends as a problem and have no need to use restrained eating as a coping mechanism or if they are upset by the lack of response, they may resort to other coping behaviors not related to eating.

### **Hypothesis Set 3: Parent and Friend Active Unsupportive Responses**

Regarding the third hypothesis, this study predicted that parent and friend active unsupportive responses (i.e., punishing and victimizing behaviors) would directly, and indirectly through emotion regulation, be associated with restrained eating in adolescents. Gender was also tested as a moderator of these relations. This hypothesis was partially supported. Emotion inhibition, emotion dysregulation, and regulation coping did not mediate this relation. However, parents' punishing and friends' victimizing behaviors directly predicted restrained eating in girls, but not for boys. The more parents punished their daughters for their negative emotions, the less likely girls restrained their eating, and the more

friends victimized their female friends for their negative emotions, the more likely girls reported restraining their eating.

Importantly, no emotion regulation strategy mediated the relation between active unsupportive emotion socializing behaviors and restrained eating. Emotion inhibition served as a mediator for both supportive and passive unsupportive emotion socialization behaviors and has previously been linked to restrained eating (for a review see, Bekker & Spoor, 2008). Nevertheless, there was not an indirect effect of emotion inhibition on parents' punishing or friends' victimizing behaviors on restrained eating. Since punishing and victimizing are active negative behaviors, youth may not use inhibition, which tends to be more internalized and passive, as a coping mechanism. It may also be that a lack of effective emotion regulation strategies results in a direct link between unsupportive emotion socialization behaviors and negative eating behaviors. It is interesting, however, that emotion dysregulation was not directly related to unsupportive emotion socialization behaviors or mediated the relation between socialization and restrained eating. However, the internal consistency of the dysregulation variable was weak and this may have contributed to the lack of significant effects. Clearly, future research needs to investigate more thoroughly the relation between active unsupportive responses and eating behaviors.

Unlike the previous findings with supportive responses and passive unsupportive responses, parents' and female friends' active unsupportive responses both have roles on girls' restrained eating. Thus, examining the specific roles of punishing and victimizing behaviors is necessary. Compared to

boys, girls may be less used to this type of unsupportive behavior from their girlfriends (Klimes-Dougan et al., 2014) and therefore, may use restrained eating as a coping mechanism to help control their negative emotions. Interestingly and unexpectedly, parents' active unsupportive emotion socialization behaviors had the opposite effect on girls' restrained eating than did friends' active unsupportive emotion socialization. Girls whose parents punished them more for their negative emotions reported lower levels of restrained eating. Parents tend to use more supportive emotion socialization behaviors with their daughters compared to their sons (Brody, 1993, 2000) and therefore, daughters may be less accustomed to receiving punishing responses from their parents. As such, girls may not know how to manage their feelings constructively when their parents punish them for experiencing negative emotions. This uncertainty may result in adolescents' use of food as a coping mechanism. Although, this study expected adolescents to cope by restraining their eating, adolescent girls may do the opposite (e.g., overeat) when experiencing parental punishment. Due to its link with Binge Eating Disorder, restrained eating may also contribute to increased food consumption, especially when experiencing a negative event (Buckholdt et al., 2010). This is an interesting future area for study given that restrained eating does not necessarily indicate restriction, but instead may be linked to overeating as a response to negative circumstances.

### **Limitations and Future Directions**

This study is the first to investigate how parent and friend emotion socialization behaviors are directly related to adolescents' eating behaviors as

well as the indirectly related through adolescent emotion regulation. The findings, however, must be considered in light of the study's limitations. First, the sample size was modest, comprised of 91 parent-child dyads. Several findings were marginally significant and perhaps reflect issues related to being underpowered. The direct effect of friend passive unsupportive responses on boys' restrained eating was marginally significant, thus interpretations are made with caution. Related to the small sample size, the range of restrained eating behavior was limited. Most adolescents reported low levels of restrained eating, which limits the generalizability of these findings to samples in which higher levels of restrained eating are reported. It would be interesting to investigate whether the pattern of findings in the current study would be replicated in a clinical sample of youth with Binge Eating Disorder who have extreme levels of restrained eating behaviors. Future studies could also examine this topic in a clinical setting to better understand if supportive emotion socialization behaviors help serve as a buffer for restrained eating compared to unsupportive emotion socialization responses that may promote restrained eating. Additionally, studying peoples' motives for restraining their eating is necessary to ensure that this eating style is in fact an unhealthy behavior because some individuals may need to restrain their eating for health reasons. Although BMI was positively correlated to restrained eating in our study, which indicates this behavior is likely negative, future studies should use additional measures that include more specific negative aspects of restrained eating like the internalization of the thin ideal and muscular norms.

Third, the sample was not recruited from a diverse demographic region resulting in restrictions on the generalizability of the findings. Most of this study's participants were Caucasian, were recruited from a small region of the southeast United States, and were from middle- to upper-SES homes. Previous research notes important cultural differences regarding emotional displays and expression (Matsumoto, Kasri, Kookan, 1999; Matsumoto et al., 2008; Morelen, Jacob, Suveg, Jones, & Thomassin, 2013). Specifically, there are differences between Eastern and Western cultures, such that Western cultures tend to express their emotions more openly than Eastern cultures. In addition to these cross-cultural differences, there are also cultural differences between perceptions of satisfactory and acceptable body sizes (Kronenfeld, Reba-Harrelson, Von Holle, Reyes, & Bulik, 2010). Researchers have found that African-American women report preferring larger body sizes compared to Caucasian and Asian women. This difference may contribute to higher levels of restrained eating in Caucasian and Asian women compared to African American women. Therefore, future studies should examine individuals across cultures as well as people of different races to better understand the role emotion socialization has on restrained eating.

Fourth, although a strength of the study is its inclusion of parent and adolescent reports, the two reports assessed somewhat different socialization constructs (for a review see, Zeman, Klimes-Dougan, Cassano, & Adrian, 2007) and thus, cannot be compared directly. Parents completed questionnaires assessing their opinions about how they respond to their child's emotions.

Adolescents completed a questionnaire about how they thought their close friend would likely respond to their emotions. It would be interesting to have adolescents' perceptions of their parent's responses to them when they were feeling sad, worried, or angry. Additionally, the friends did not report how they would react to the participating adolescent when he or she experienced a negative emotion. Because this study asks parents their perceptions of their own socializing behaviors, and adolescents their opinion of their friend's socializing behaviors, the two cannot be directly compared when assessing adolescents' eating behaviors. Future studies should obtain all four reports so that the different reports can be directly compared. This would allow for the assessment of adolescents' opinions of their parent and friend emotion socialization behaviors as well as comparisons of adolescents' thoughts about their parent and friend in conjunction with their parent and their friend's own thoughts. By examining these four perceptions, future studies would gain a better understanding of the role parents and friends have on adolescents' eating behaviors.

Fifth, adolescents' and parents' reports of socialization and eating behaviors may be biased. Even though self-report has been documented as the most common and likely best way to assess internal states such as emotions (e.g., Larsen & Prizmic-Larsen, 2006; Robinson & Clore, 2002; Walcott & Scherer, 1989), individuals may respond to questions in socially desirable ways. For instance, Cassano, Zeman, and Sanders (2014) found that spouses were actually the most accurate reporter of the other spouse's emotion socialization behaviors as compared to self-report. Asking the other spouse about their

husband's or wife's behaviors would be beneficial to better characterize socializing behaviors.

Boys and girls, who tend to express emotions differently from each other (Buckner & Fivush, 1998; Zahn-Waxler, 1993; Polce-Lynch et al., 2001), may answer questions consistent with gender expression norms. For example, boys may report more inhibition and less expression of sadness than girls because this emotion is typically associated with girls compared to boys (Polce-Lynch, Myers, Kilmartin, Forssmann-Falk, & Kliewer, 1998). Likewise, girls may report less expression of anger than what may actually occur. These biases may also be inherent in reports of eating behaviors. Research examining restrained eating in adult women has compared self-report measures with direct interview measures (Black & Wilson, 1996; Fairburn & Beglin, 1994; Wolk, Loeb, & Walsh, 2005) and found that self-report measures, instead of interviews, tend to measure eating behaviors more accurately. In the current study, adolescents reported on their eating behaviors via interviews. Future research should continue to assess parents and youth via self-report measures, but should also include written eating behavior questionnaires for participants. Additionally, observations of parent and friend dynamics, emotion behaviors, and eating behaviors (e.g., food diary) would be beneficial.

Sixth, although the current study examined three types of emotion socialization behaviors and three types of emotion regulation strategies, individual emotions were not examined. The study averaged the socialization and regulation variables across emotion due to the high inter-correlations among the

emotions and therefore did not evaluate sadness, worry, and anger independently. Previous research has noted that specific emotions, especially sadness, appear to play a role in adolescents' disordered eating behaviors (Buckholdt, Parra, & Jobe-Shields, 2010; Hughes-Scalise & Connell, 2014). For example, parental magnification of sadness (i.e., getting sad too), but not anger, was related to disordered eating behaviors such as binge eating and Lack of Control (LOC) eating (Buckholdt et al., 2010). Emotion dysregulation was a partial mediator of this relation. Specifically, parental magnification of sadness not only was directly associated with more disordered eating behaviors, but was also related to more emotion dysregulation in college students, which contributed to more disordered eating behaviors. In the future, studies should examine how parents and friends respond to adolescents' sadness, anger, and worry, along with how adolescents' regulate their own sadness, anger, and worry to better understand how these specific emotions relate to restrained eating. Studying the role that positive emotions like happiness and joy play on restrained eating is also important to determine how these emotions may influence restrained eating in positive or negative ways.

Seventh, this study would benefit from a longitudinal design to examine whether the relations among socializing behaviors, regulation strategies, and restrained eating remain the same or change over time. Implementing a longitudinal design would allow the interpretation of causality. Researchers could use a cross lagged design to assess inhibition, dysregulation, and regulation coping as longitudinal mediators while also studying the bidirectional relations



between emotion socialization and restrained eating. Overall, this design would provide a better conceptualization of how emotion socialization, emotion regulation, and restrained eating relate to and contribute to the other as youth age.

Lastly, the current study examined same-sex best friendships but it is not clear whether these friendships were reciprocated. Further, future research should expand investigation of best friendship to include cross-sex and romantic relationships. Not only do adolescents' social circles continue to develop as they establish more supportive and close-knit friendships (Steinberg & Morris, 2001), but there is also an increase in cross-sex (Kuttler, La Greca, & Prinstein, 1999) and romantic relationships (Carver, Joyner, & Udry, 2003) in older adolescents. By studying cross-sex friendships and romantic partners, future research could better understand the similarities and differences these two groups may have on adolescents' emotion regulation and eating behaviors.

### **Clinical Implications and Conclusion**

Despite these limitations, this study provides some potentially useful insights that may inform preventive interventions. The findings indicate that girls are more likely to engage in restrained eating behaviors than boys when their parents and friends respond to them in negative ways. Previous literature notes that girls report experiencing more supportive emotion socialization strategies from their friends (Klimes-Dougan et al., 2014) and they often report higher levels of restrained eating and eating disorders than boys (Farrow & Fox, 2011; Snoek et al., 2013; Snoek et al., 2008, 2009). Although boys may experience more

negative emotion socializing responses from their friends, these actions do not appear to increase their levels of restrained eating. Fostering and promoting supportive peer relations is necessary for boys and girls, but may be particularly useful in preventing restrained eating in girls. Additionally, it would be helpful to teach girls positive emotion coping mechanisms that do not include inhibiting their emotions or restraining their eating when their parents and friends respond to their negative emotions in an unsupportive manner.

It may also be helpful to teach adolescents ways that they can provide support to each other, particularly within female friend groups. That is, girls could be taught how to acknowledge the negative emotions of others without becoming entangled in these negative emotions—a social process known as co-rumination (Rose, Carlson, & Waller, 2007). Given that ignoring negative emotions was associated with poorer emotion regulation and increased restrained eating, it would be helpful to provide friends with some strategies (e.g., nodding sympathetically), which indicate that they “hear” their friend so that their friend feels validated for their negative emotions. The friendship patterns of boys do not seem to require as much validation or acknowledgement as girls’ friendships (Rose & Rudolph, 2006), thus a different set of friendship skills might be necessary for boys than girls.

In sum, this study contributes to the literature by providing greater insight into the socialization of adolescents’ negative emotions as well as how parents’ and friends’ responses relate to restrained eating. This was the first study to examine both parents’ and friends’ emotion socializing behaviors and their

contributions to restrained eating, directly and indirectly through emotion regulation strategies. Further, the function of gender on these direct and indirect relations was tested. Close friends' emotion socializing behaviors and adolescents' emotion inhibition appear to have the greatest effect on adolescents' restrained eating. Additionally, when gender differences were noted, girls' restrained eating appeared to be more affected by friends' and parents' unsupportive socializing behaviors. By comprehending these associations, we can better understand adolescents' overall socio-emotional processes as well as their eating behaviors. This knowledge contributes to future research examining restrained eating, along with the clinical eating disorders associated with this eating style, and how adolescents' parents, friends, and overall emotions may prevent or promote adolescents' restrained eating.

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Table 1  
*Demographic and Outcome Variables (n = 91)*

Variable	Parent	Adolescent
Mean Age (in years)	49.3 ( <i>SD</i> = 5.9)	16.5 ( <i>SD</i> = 1.0)
Percent female	83 (91.2%)	51 (56.0%)
Race/Ethnicity	—	—
White		70 (76.9%)
Black		13 (14.3%)
Hispanic/Latino(a)		1 (1.1%)
Other		7 (7.7%)
Education	—	—
High school	5 (5.5%)	
Some education after high school	13 (14.3%)	
Bachelor's degree	23 (25.3%)	
Some education after Bachelor's degree	6 (6.6%)	
Master's degree	27 (29.7%)	
Some education after Master's degree	6 (6.6%)	
Doctoral Degree	11 (12.1%)	
8 <sup>th</sup> grade		1 (1.1%)
9 <sup>th</sup> grade		7 (7.7%)
10 <sup>th</sup> grade		34 (37.4%)
11 <sup>th</sup> grade		25 (27.5%)
12 <sup>th</sup> grade		21 (23.1%)
Freshman in college		3 (3.3%)
Marital status	—	—
Married	79 (86.8%)	
Divorced	6 (6.6%)	

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Marital status cont.	—	—
Widowed	2 (2.2%)	
Single	4 (4.4%)	
Employment status	—	—
Full time	55 (60.4%)	
Part time	31 (34.1%)	
Other (homemaker)	5 (5.5%)	

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Table 2  
*Means, Standard Deviations, and Correlations of EAC Variables (n = 91)*

EAC Subscales	<i>M</i>	<i>SD</i>	Correlations	
			<i>Sadness</i>	<i>Worry</i>
Reward				
1. Sadness	4.36	0.60	-	
2. Worry	4.50	0.57	.73**	-
3. Anger	4.28	0.66	.67**	.73**
4. Overall	4.38	0.54		
Neglect				
1. Sadness	1.46	0.49	-	
2. Worry	1.46	0.54	.70**	-
3. Anger	1.75	0.61	.61**	.65**
4. Overall	1.56	0.48		
Punish				
1. Sadness	1.40	0.53	-	
2. Worry	1.52	0.50	.58**	-
3. Anger	1.86	0.75	.51**	.51**
4. Overall	1.59	0.49		

*Note.* EAC = Emotions as a Child Questionnaire. Average scores on a 5-point scale ranging from 1 (*never*) to 5 (*very often*).

†*p* < .10; \**p* < .05; \*\**p* < .01

Table 3  
*Means, Standard Deviations, and Correlations of YYF Variables (n = 91)*

YYF subscales	<i>M</i>	<i>SD</i>	Correlations	
			<i>Sadness</i>	<i>Worry</i>
Reward				
1. Sadness	4.02	0.66	-	
2. Worry	3.89	0.64	.76**	-
3. Anger	3.88	0.66	.83**	.78**
4. Overall	3.93	0.60		
Neglect				
1. Sadness	1.61	0.61	-	
2. Worry	1.60	0.55	.75**	-
3. Anger	1.66	0.60	.73**	.63**
4. Overall	1.62	0.53		
Overall Victimization				
1. Sadness	1.20	0.28	-	
2. Worry	1.28	0.36	.83**	-
3. Anger	1.32	0.38	.79**	.82**
4. Overall	1.27	0.32		

*Note.* YYF = You and Your Friends Questionnaire. Average scores on a 5-point scale ranging from 1 (*Definitely WOULD NOT do this*) to 5 (*Definitely WOULD do this*).

†*p* < .10; \**p* < .05; \*\**p* < .01



Table 4  
*Correlations of YF Unsupportive Variables (n = 91)*

YF Subscales	1	2	3	4	5
1. Sad Overt Victimization	-				
2. Worry Overt Victimization	.77**	-			
3. Anger Overt Victimization	.71**	.74**	-		
4. Sad Relational Victimization	.46**	.39**	.43**	-	
5. Worry Relational Victimization	.43**	.39**	.47**	.79**	-
6. Anger Relational Victimization	.44**	.34**	.47**	.74**	.85**

*Note.* YF = You and Your Friends Questionnaire

† $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$

Table 5  
*Means, Standard Deviations, and Correlations of CEMS Variables (n = 91)*

CEMS subscales	<i>M</i>	<i>SD</i>	Correlations	
			1	2
Inhibition				
1. Sadness	2.08	0.47	-	
2. Worry	2.07	0.49	.56**	-
3. Anger	2.02	0.47	.64**	.52**
4. Overall	2.06	0.40		
Dysregulation				
1. Sadness	1.67	0.41	-	
2. Worry	1.49	0.40	.53**	-
3. Anger	1.40	0.49	.26*	.20 <sup>†</sup>
4. Overall	1.52	0.32		
Regulation Coping				
1. Sadness	2.39	0.35	-	
2. Worry	2.37	0.41	.41**	-
3. Anger	2.54	0.43	.46**	.37**
4. Overall	2.43	0.31		

*Note.* CEMS = Child Emotion Management Scales. Average scores on a 3-point scale ranging from 1 (*hardly ever*) to 3 (*often*).

<sup>†</sup>*p* < .10; \**p* < .05; \*\**p* < .01

Table 6  
*Correlations between study variables (n = 91)*

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Child Gender	-										
2. Child BMI	.07	-									
3. Parent S. Resp.	.05	.05	-								
4. Parent P.U. Resp.	-.12	.08	-.81**	-							
5. Parent A.U. Resp.	-.03	.22*	.03	.08	-						
6. Friend S. Resp.	-.32	-.04	.13	-.07	-.04	-					
7. Friend P.U. Resp.	.10	-.02	-.11	.10	-.02	-.50**	-				
8. Friend A.U. Resp.	.19 <sup>†</sup>	.15	-.17	.10	.16	-.40**	.60**	-			
9. Inhib.	.11	.09	-.17	.03	-.01	-.26*	.25*	.15	-		
10. Dysreg.	-.47**	-.02	.05	-.03	.04	.17	.06	.09	-.21*	-	
11. Coping	.29**	.22*	-.01	.05	-.03	.01	-.03	-.01	.11	-.53**	-
12. Restr. Eating	-.16	.31**	.00	-.03	.03	.07	.08	.10	.21 <sup>†</sup>	.07	-.01

*Note.* BMI = Body Mass Index, S. = Supportive, Resp. = Responses, P.U. = Passive

Unsupportive, A.U. = Active Unsupportive, Inhib.= Inhibition, Dysreg. = Dysregulation, Restr. = Restrained

Gender was coded as Girl = 0, Boy = 1

<sup>†</sup> $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$

Table 7

*Gender Interaction of the Effect of Parent and Friend Emotion Socialization Responses on Restrained Eating Through Emotion Regulation*

	Indirect Effect (ab)	Bootstrapped SE	Bootstrapped 95% CI
<i>Predictor: Parent Supportive Resp.</i>			
Emotion Inhibition	0.02	0.06	-0.09, 0.16
Emotion Dysregulation	0.001	0.05	-0.10, 0.12
Regulation Coping	0.004	0.04	-0.05, 0.11
<i>Predictor: Friend Supportive Resp.</i>			
Emotion Inhibition	0.05	0.07	-0.04, 0.25
Emotion Dysregulation	-0.01	0.05	-0.15, 0.06
Regulation Coping	0.01	0.04	-0.04, 0.12
<i>Predictor: Parent Passive Unsupportive Resp.</i>			
Emotion Inhibition	0.05	0.08	-0.07, 0.28
Emotion Dysregulation	0.001	0.05	-0.10, 0.12
Regulation Coping	-0.02	0.07	-0.21, 0.08
<i>Predictor: Friend Passive Unsupportive Resp.</i>			
Emotion Inhibition	-0.02	0.05	-0.20, 0.05
Emotion Dysregulation	0.03	0.06	-0.05, 0.20
Regulation Coping	-0.01	0.05	-0.18, 0.06
<i>Predictor: Parent Active Unsupportive Resp.</i>			
Emotion Inhibition	0.03	0.08	-0.09, 0.22
Emotion Dysregulation	-0.0003	0.04	-0.08, 0.08
Regulation Coping	0.002	0.04	-0.07, 0.13
<i>Predictor: Friend Active Unsupportive Resp.</i>			
Emotion Inhibition	0.08	0.11	-0.09, 0.35

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Emotion Dysregulation	0.06	0.13	-0.12, 0.44
Regulation Coping	-0.02	0.08	-0.31, 0.07

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*Note.* This is a test of equality of the conditional indirect effect between girls and boys (formal test of moderated mediation). Resp. = Responses. ab = point estimate of indirect effect. SE = standard error. CI = confidence interval. For the CI, it is considered significant if the interval does not include zero and such rows are in bold.

Table 8

*Interaction of the Effect of Parent and Friend Emotion Socialization Responses on Restrained Eating Through Emotion Regulation*

	Indirect Effect (ab)	Bootstrapped SE	Bootstrapped 95% CI
<i>Predictor: Parent Supportive Resp.</i>			
Emotion Inhibition	-0.05	0.04	-0.16, 0.002
Emotion Dysregulation	0.01	0.02	-0.02, 0.09
Regulation Coping	0.0004	0.02	-0.04, 0.05
<i>Predictor: Friend Supportive Resp.</i>			
Emotion Inhibition	<b>-0.07</b>	<b>0.05</b>	<b>-0.21, -0.01</b>
Emotion Dysregulation	0.01	0.03	-0.03, 0.09
Regulation Coping	-0.001	0.02	-0.05, 0.03
<i>Predictor: Parent Passive Unsupportive Resp.</i>			
Emotion Inhibition	0.01	0.04	-0.06, 0.10
Emotion Dysregulation	-0.004	0.02	-0.08, 0.03
Regulation Coping	-0.004	0.02	-0.08, 0.02
<i>Predictor: Friend Passive Unsupportive Resp.</i>			
Emotion Inhibition	<b>0.06</b>	<b>0.05</b>	<b>0.004, 0.20</b>
Emotion Dysregulation	0.01	0.02	-0.02, 0.08
Regulation Coping	0.002	0.02	-0.03, 0.06
<i>Predictor: Parent Active Unsupportive Resp.</i>			
Emotion Inhibition	-0.002	0.04	-0.09, 0.07
Emotion Dysregulation	0.01	0.02	-0.02, 0.08
Regulation Coping	0.003	0.02	-0.03, 0.08
<i>Predictor: Friend Active Unsupportive Resp.</i>			
Emotion Inhibition	0.07	0.06	-0.02, 0.24

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Emotion Dysregulation	0.02	0.04	-0.03, 0.19
Regulation Coping	0.001	0.03	-0.05, 0.08

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*Note.* This is a test of the indirect effect (formal test of mediation). Resp. = Responses. ab = point estimate of indirect effect. SE = standard error. CI = confidence interval. For the CI, it is considered significant if the interval does not include zero and such rows are in bold.

Table 9

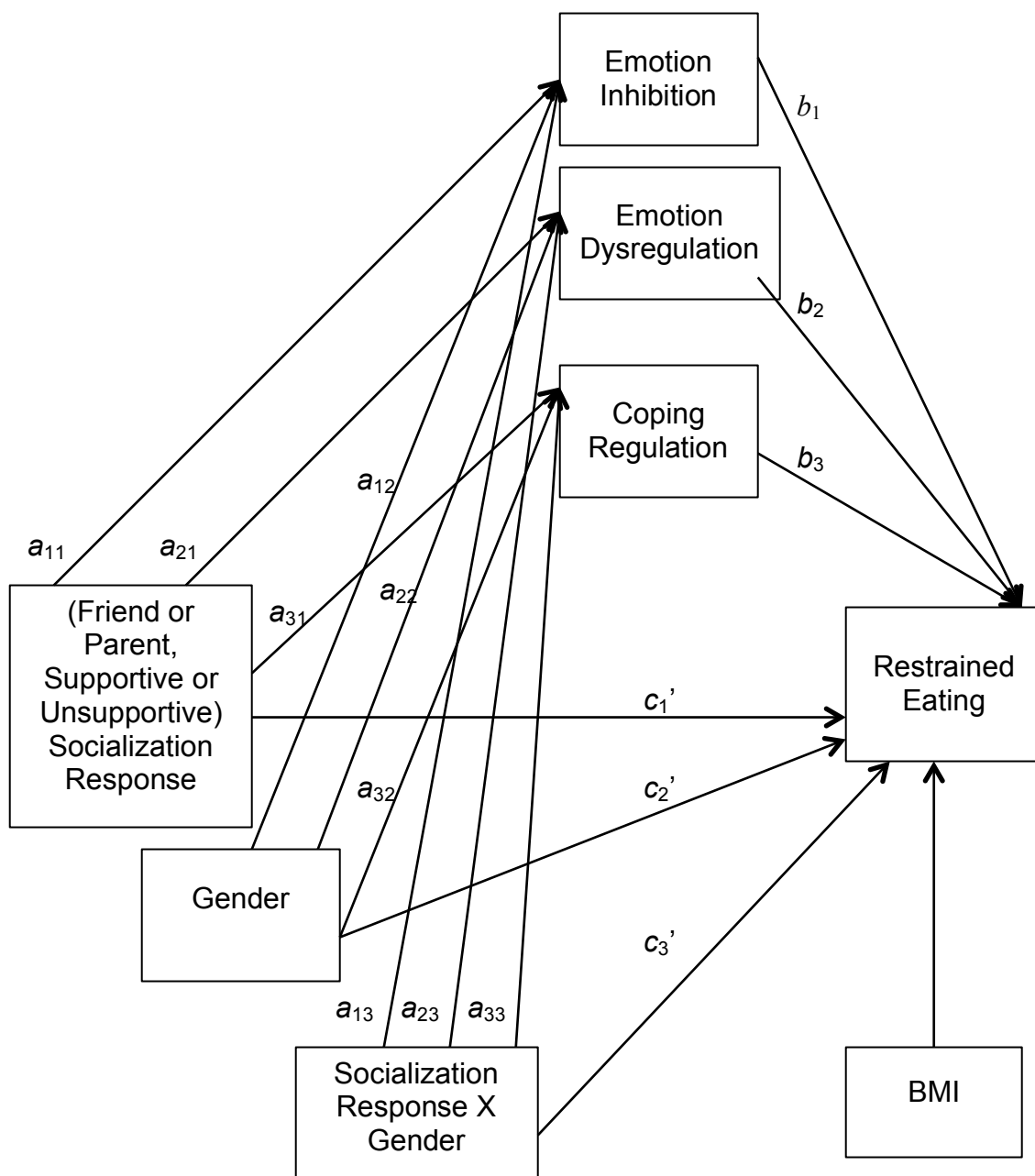
*Direct Effect of Parent and Friend Emotion Socialization Responses on Restrained Eating*

	Direct Effect (SE)	t-value	p-value	95% CI
<i>Predictor: Parent Supportive Resp.</i>	0.02 (0.14)	0.15	0.88	-0.25, 0.29
<i>Predictor: Friend Supportive Resp.</i>	0.16 (0.13)	1.29	0.20	-0.09, 0.41
<i>Predictor: Parent Passive Unsupportive Resp.</i>	-0.08 (0.15)	-0.52	0.60	-0.38, 0.22
<i>Predictor: Friend Passive Unsupportive Resp.</i>	0.04 (0.14)	0.30	0.76	-0.24, 0.33
<i>Predictor: Parent Active Unsupportive Resp.</i>	-0.07 (0.15)	-0.47	0.64	-0.37, 0.23
<i>Predictor: Friend Active Unsupportive Resp.</i>	0.04 (0.24)	0.18	0.95	-0.42, 0.51

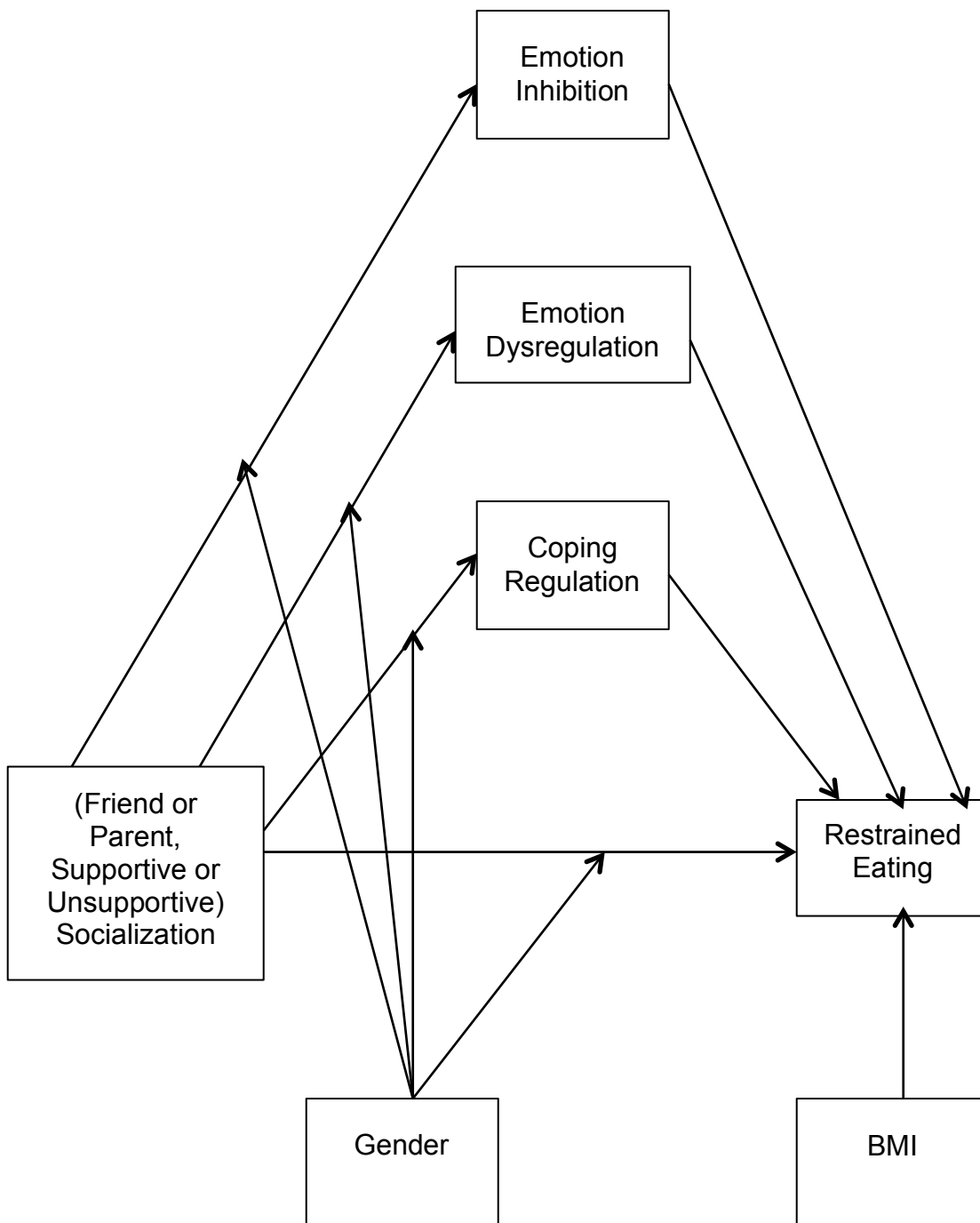
*Note.* This is a test of the direct effect. Direct effect is “path c” from Figure X. Resp. = Responses.

SE = standard error of direct effect. Significant direct effects are bolded.

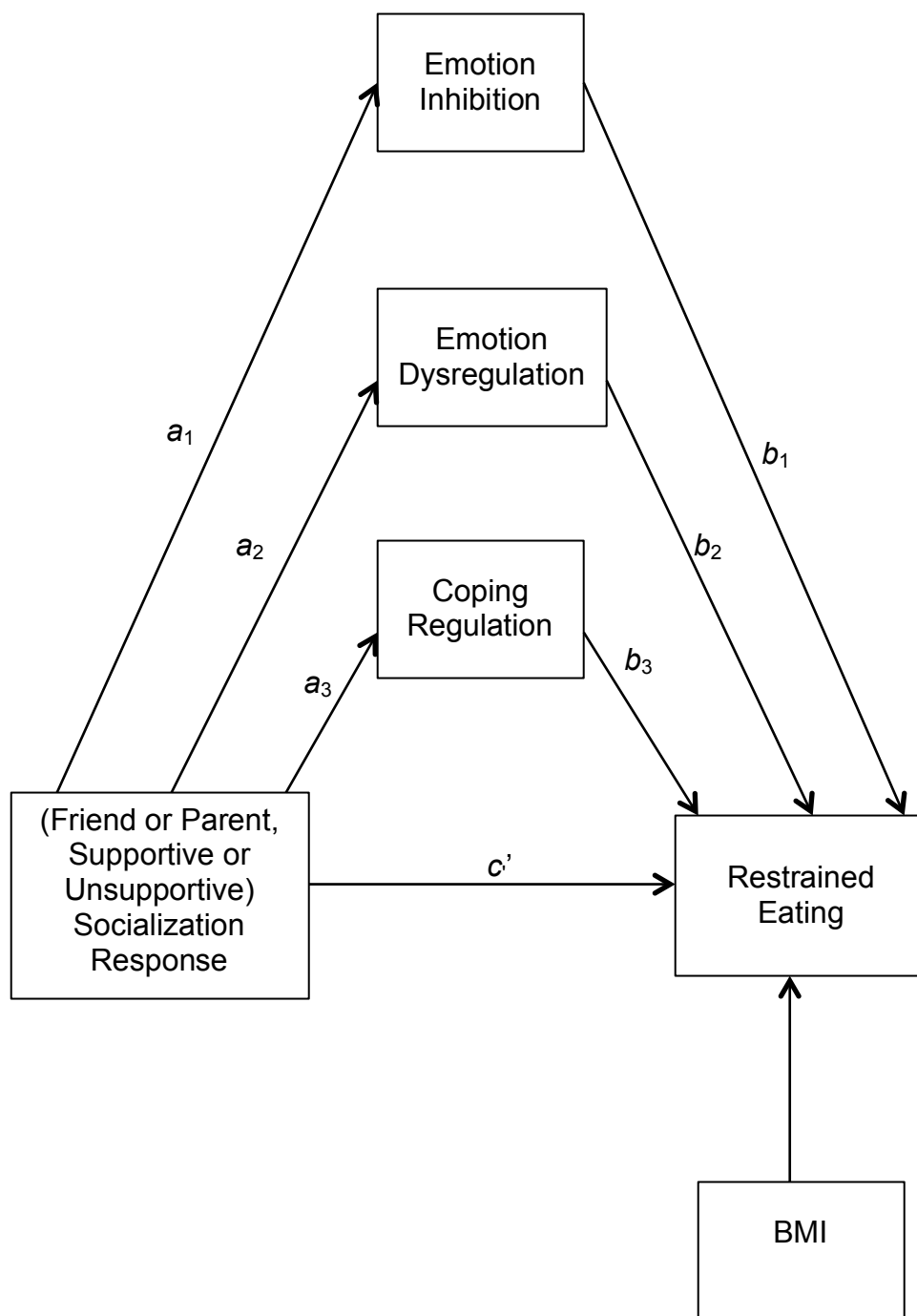




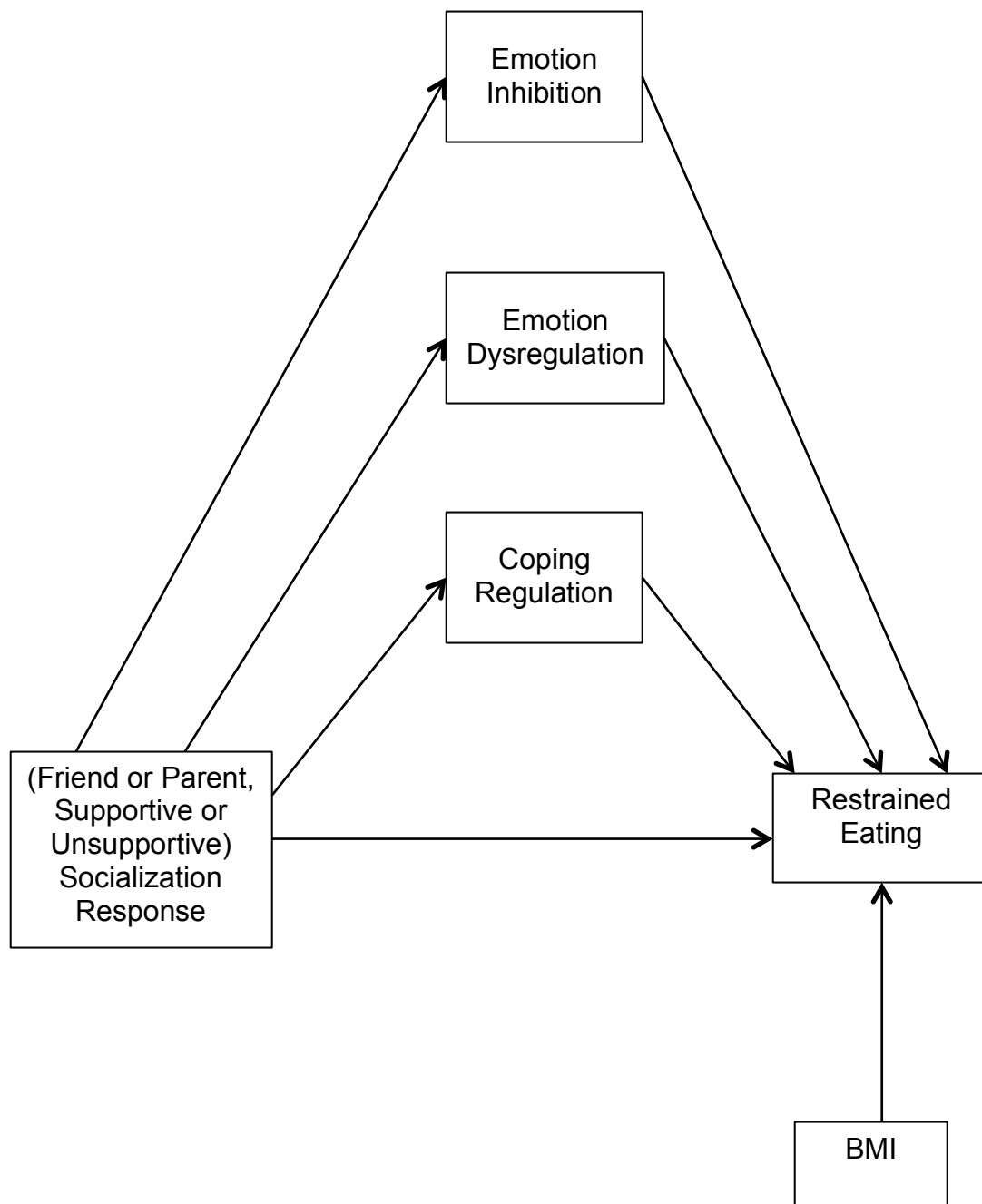
*Figure 1.* Statistical diagram of the conditional process model tested. Specifically, the indirect effect of socialization responses on restrained eating through emotion regulation strategies conditional on gender was tested. Body Mass Index was controlled for in eating behavior.



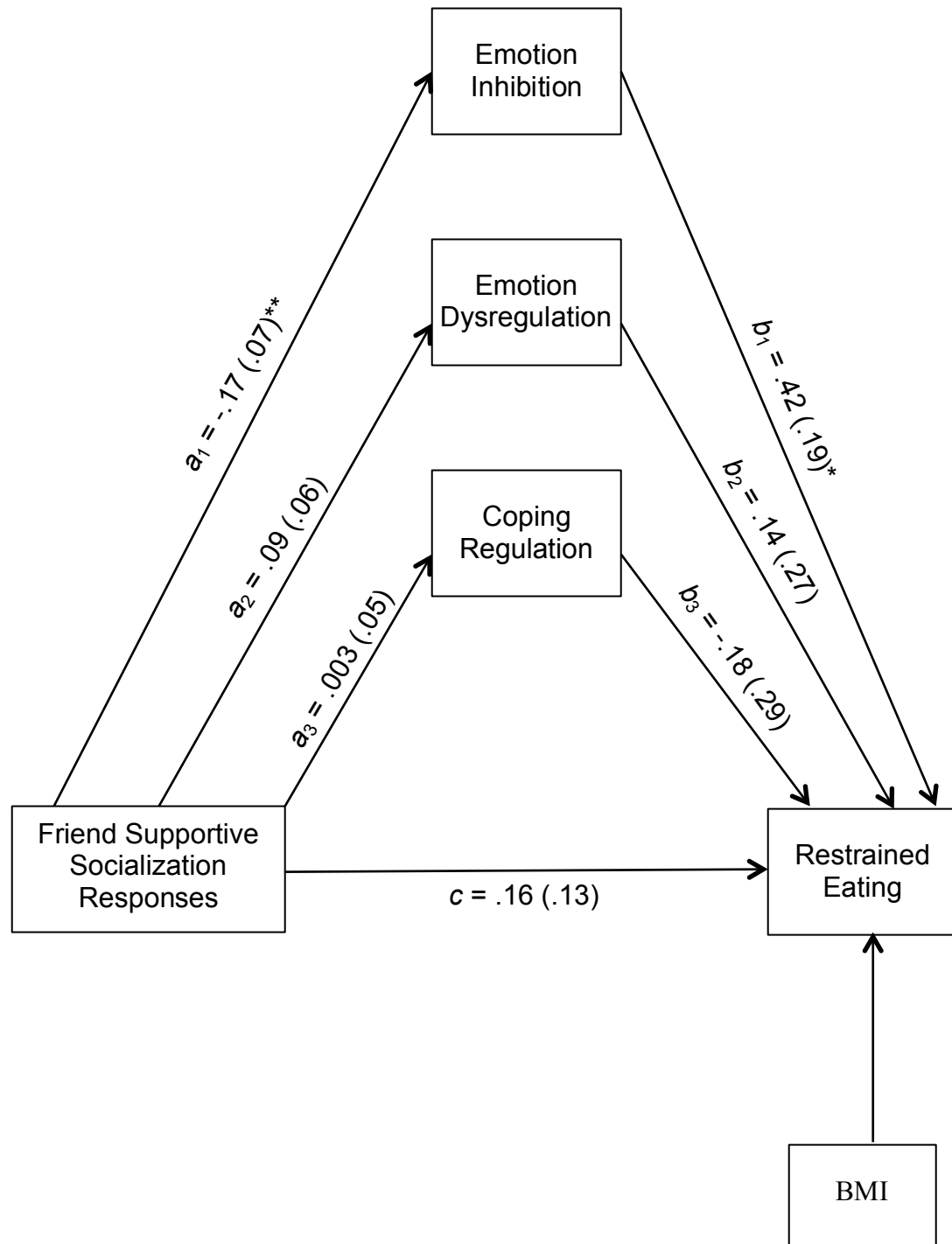
*Figure 2.* Conceptual diagram of the conditional process model tested. Specifically, the indirect effect of socialization responses on restrained eating through emotion regulation strategies conditional on gender was tested. Body Mass Index was controlled in eating behavior.



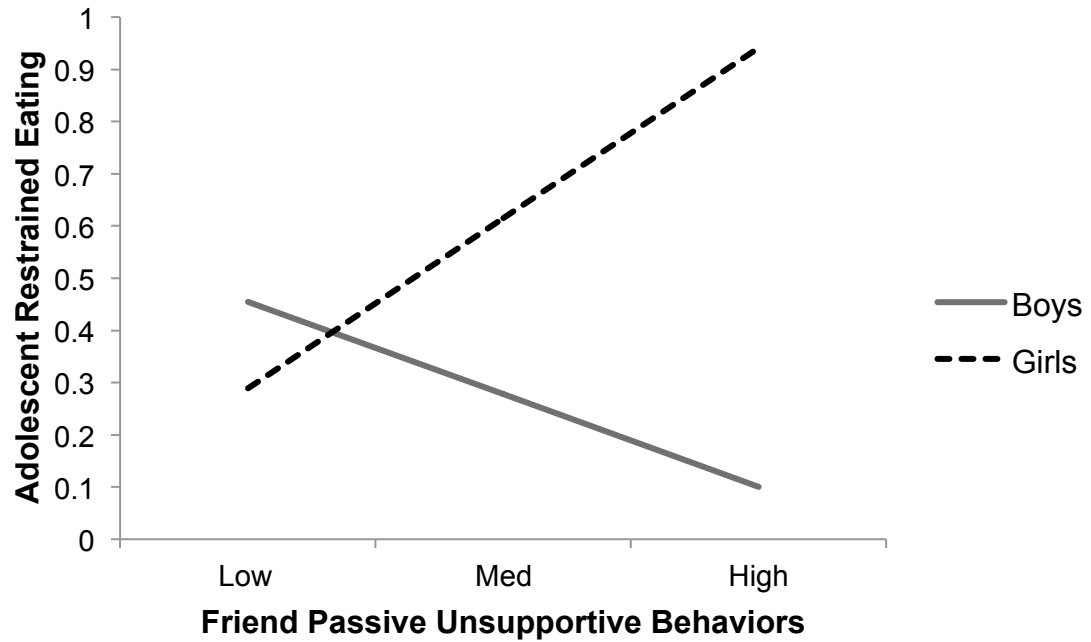
*Figure 3.* Statistical diagram of the parallel mediation model tested. Specifically, the indirect effect of socialization responses on restrained eating through emotion regulation strategies was tested. Body Mass Index was controlled for in eating behavior.



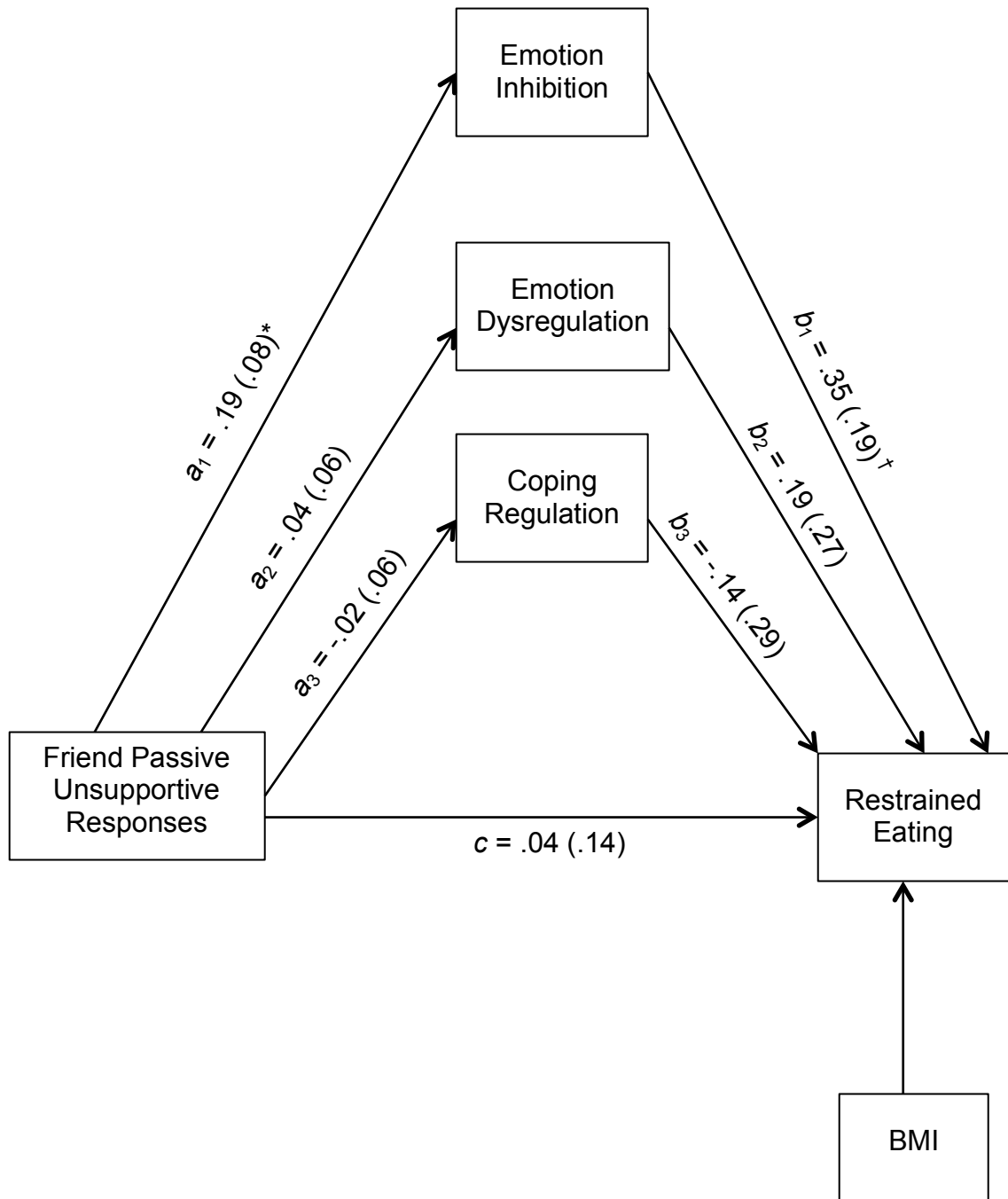
*Figure 4.* Conceptual diagram of the parallel mediation model tested. Specifically, the indirect effect of socialization responses on restrained eating through emotion regulation strategies was tested. Body Mass Index was controlled for in eating behavior.



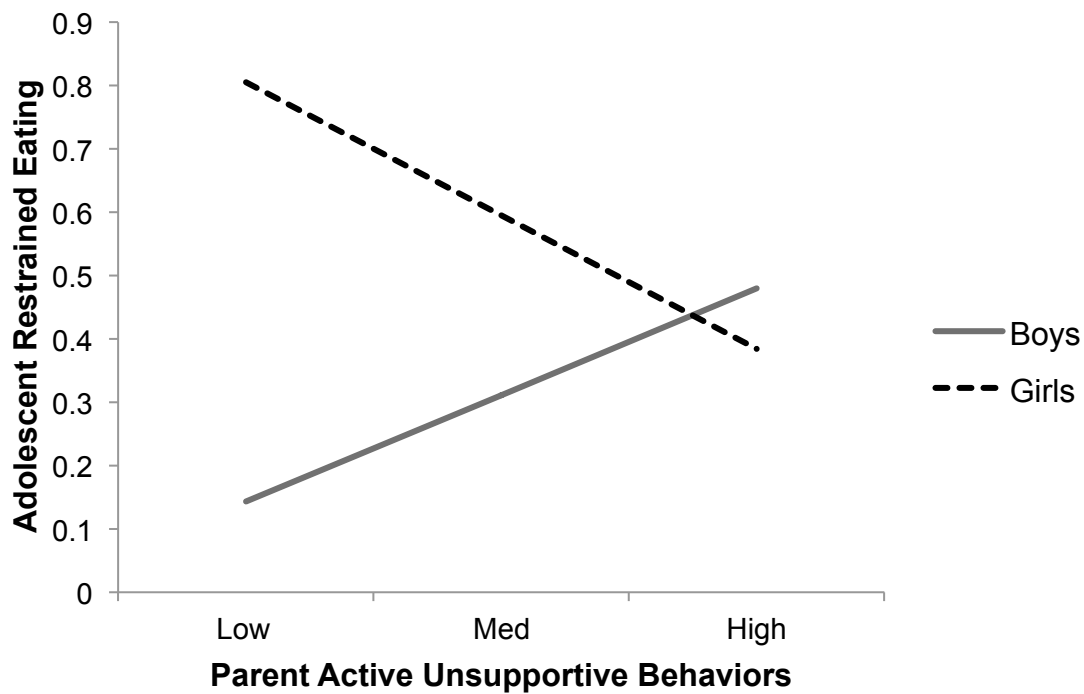
*Figure 5.* Indirect effect of friend supportive emotion socialization responses on restrained eating through emotion inhibition, emotion dysregulation, and coping regulation. Body Mass Index (BMI) was controlled for in restrained eating. Unstandardized beta and standard error values are reported here. Pathway labels are simplified for presentation purposes.  $^{\dagger}p < .10$ ;  $*p < .05$ ;  $**p < .01$



*Figure 6.* A visual representation of the moderation of the effect of friend passive unsupportive behaviors ( $X$ ) on adolescent restrained eating ( $Y$ ) by adolescent gender ( $M$ ).

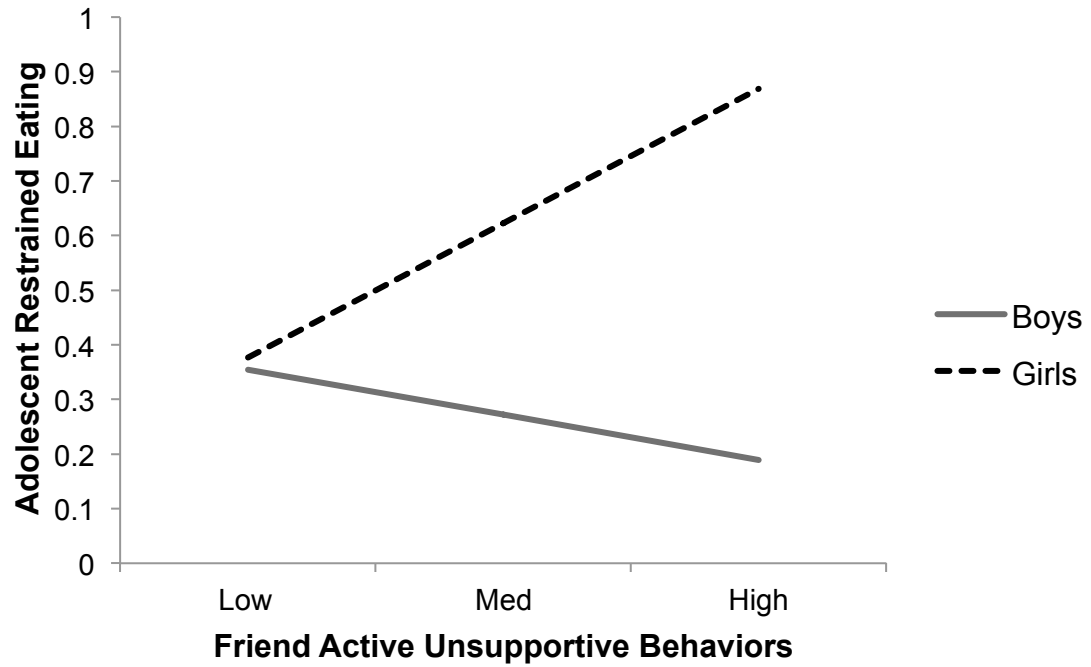


*Figure 7.* Indirect effect of friend passive unsupportive responses on restrained eating through emotion inhibition, emotion dysregulation, and coping regulation. Body Mass Index (BMI) was controlled for in restrained eating. Unstandardized beta and standard error values are reported here. Pathway labels are simplified for presentation purposes.  $^\dagger p < .10$ ;  $*p < .05$ ;  $**p < .01$



*Figure 8.* A visual representation of the moderation of the effect of parent active unsupportive behaviors ( $X$ ) on adolescent restrained eating ( $Y$ ) by adolescent gender ( $M$ ).





*Figure 9.* A visual representation of the moderation of the effect of friend active unsupportive behaviors ( $X$ ) on adolescent restrained eating ( $Y$ ) by adolescent gender ( $M$ ).

## Appendix A

## Dutch Eating Behavior Questionnaire—Restrained Eating

1. If you have put on weight, do you eat less than you usually do?
2. How often do you refuse food or drink offered because you are concerned about your weight?
3. Do you try to eat less at mealtimes than you would like to eat?
4. Do you watch exactly what you eat?
5. Do you deliberately eat foods that are slimming?
6. When you have eaten too much, do you eat less than usual the following days?
7. Do you deliberately eat less in order not to become heavier?
8. How often do you try not to eat between meals because you are watching your weight?
9. How often in the evening do you try not to eat because you are watching your weight?
10. Do you take into account your weight with what you eat?

## Appendix B

### Emotion as a Child Questionnaire: Sadness

Think of a time when your child felt **SAD** or **DOWN** in the past year. When your child was **SAD** or feeling **DOWN** in the past year, how often would you respond in these ways?

#### **Supportive:**

1. When my child was sad, I helped him/her deal with the issue that made him/her sad.
2. When my child was sad, I asked him/her what made him/her sad.
3. When my child was sad, I comforted him/her.

#### **Passive Unsupportive:**

1. When my child was sad, I responded to his/her sadness. (Reverse-scored)
2. When my child was sad, I took time to focus on him/her. (Reverse-scored)
3. When my child was sad, I did not pay attention to his/her sadness.

#### **Active Unsupportive:**

1. When my child was sad, I told him/her to stop being sad.
2. When my child was sad, I told him/her that he/she was acting younger than his/her age.
3. When my child was sad, I let him/her know I did not approve of his/her sadness.

## Appendix C

### Emotion as a Child Questionnaire: Worry

Think of a time when your child felt **WORRIED** or **AFRAID** in the past year.

When your child was **WORRIED** or feeling **AFRAID** in the past year, how often would you respond in these ways?

#### **Supportive:**

1. When my child was worried, I helped him/her deal with the issue that made him/her worried.
2. When my child was worried, I asked him/her what made him/her worried.
3. When my child was worried, I comforted him/her.

#### **Passive Unsupportive:**

1. When my child was worried, I responded to his/her worry. (Reverse-scored)
2. When my child was worried, I took time to focus on him/her. (Reverse-scored)
3. When my child was worried, I did not pay attention to his/her worry.

#### **Active Unsupportive:**

1. When my child was worried, I told him/her to stop being worried.
2. When my child was worried, I told him/her that he/she was acting younger than his/her age.
3. When my child was worried, I let him/her know I did not approve of his/her worry.

## Appendix D

## Emotion as a Child Questionnaire: Anger

Think of a time when your child felt **ANGRY** or **FRUSTRATED** in the past year.

When your child was **ANGRY** or feeling **FRUSTRATED** in the past year, how often would you respond in these ways?

**Supportive:**

1. When my child was angry, I helped him/her deal with the issue that made him/her angry.
2. When my child was angry, I asked him/her what made him/her angry.
3. When my child was angry, I comforted him/her.

**Passive Unsupportive:**

1. When my child was angry, I responded to his/her anger. (Reverse-scored)
2. When my child was angry, I took time to focus on him/her. (Reverse-scored)
3. When my child was angry, I did not pay attention to his/her anger.

**Active Unsupportive:**

1. When my child was angry, I told him/her to stop being angry.
2. When my child was angry, I told him/her that he/she was acting younger than his/her age.
3. When my child was angry, I let him/her know I did not approve of his/her anger.

## Appendix E

### You and Your Friends Questionnaire: Sadness

You got some very bad and upsetting news today that has made you sad. You are with your friend and you're thinking about this news, and you are feeling really, really sad. Think about what your friend would do in this situation if he/she KNEW that you really felt sad. Rate how likely he/she would be to do each of the things on the list. Do you think he/she would:

#### **Supportive:**

1. Help you to deal with what's made you feel sad.
2. Say something like "It's okay, we all feel sad sometimes."
3. Ask you about what has made you feel sad.

#### **Passive Unsupportive:**

1. Not say or do anything about it.
2. Act like he/she doesn't notice that you feel sad.
3. Ignore the fact that you feel sad.

#### **Active Unsupportive:**

1. Push you away or hit you.
2. Say that he/she will stop liking you if you don't change your attitude.
3. Say something like "You're being ridiculous," or "You're stupid."
4. Leave you out of the group or any activities for a while.
5. Say that he/she doesn't like it when you act this way.
6. Tell other people secrets or mean things about you.

## Appendix F

### You and Your Friends Questionnaire: Worry

You discover that something bad and harmful might be about to happen to you. This has really made you worried. You're with your friend and you are feeling really, really worried. Think about what your friend would do in this situation if he/she KNEW that you really felt worried. Rate how likely he/she would be to do each of the things on the list. Do you think he/she would:

#### **Supportive:**

1. Help you to deal with what's made you feel worried.
2. Say something like "It's okay, we all feel worried sometimes."
3. Ask you about what has made you feel worried.

#### **Passive Unsupportive:**

1. Not say or do anything about it.
2. Act like he/she doesn't notice that you feel worried.
3. Ignore the fact that you feel worried.

#### **Active Unsupportive:**

1. Push you away or hit you.
2. Say that he/she will stop liking you if you don't change your attitude.
3. Say something like "You're being ridiculous," or "You're stupid."
4. Leave you out of the group or any activities for a while.
5. Say that he/she doesn't like it when you act this way.
6. Tell other people secrets or mean things about you.

## Appendix G

### You and Your Friends Questionnaire: Anger

You just found out about something really unfair and annoying that was done to you, and that has made you angry. You are with your friend and you feel really, really angry. Think about what your friend would do in this situation if he/she KNEW that you really felt angry. Rate how likely he/she would be to do each of the things on the list. Do you think he/she would:

#### **Supportive:**

1. Help you to deal with what's made you feel angry.
2. Say something like "It's okay, we all feel angry sometimes."
3. Ask you about what has made you feel angry.

#### **Passive Unsupportive:**

1. Not say or do anything about it.
2. Act like he/she doesn't notice that you feel angry.
3. Ignore the fact that you feel angry.

#### **Active Unsupportive:**

1. Push you away or hit you.
2. Say that he/she will stop liking you if you don't change your attitude.
3. Say something like "You're being ridiculous," or "You're stupid."
4. Leave you out of the group or any activities for a while.
5. Say that he/she doesn't like it when you act this way.
6. Tell other people secrets or mean things about you.



## Appendix H

## Children's Emotion Management Scale: Sadness

Please circle the response that describes your behavior when you are feeling sad.

**Emotion Inhibition:**

1. I hold my sad feelings in.
2. I hide my sadness.
3. I get sad inside, but don't show it.
4. I'm afraid to show my sadness.

**Emotion Dysregulation:**

1. I whine/fuss about what's making me sad.
2. I cry and get upset when I'm sad.
3. I do things like mope around when I'm sad.

**Regulation Coping:**

1. When I'm feeling sad, I can control my crying and being upset.
2. I stay calm and don't let sad things get to me.
3. When I'm sad, I do something totally different until I calm down.
4. I can stop myself from losing control of my sad feelings.
5. I try to calmly deal with what is making me sad.

## Appendix I

## Children's Emotion Management Scale: Worry

Please circle the response that describes your behavior when you are feeling worried.

**Emotion Inhibition:**

1. I show my worried feelings. (Reverse-scored)
2. I hold my worried feelings in.
3. I hide my worried feelings.
4. I get worried inside but don't show it.

**Emotion Dysregulation:**

1. I do things like cry and get upset when I'm worried.
2. I keep whining about how worried I am.
3. I can't stop myself from acting really worried.

**Regulation Coping:**

1. I keep myself from losing control of my worried feelings.
2. I talk to someone until I feel better when I'm worried.
3. I try to calmly settle the problem when I feel worried.

## Appendix J

## Children's Emotion Management Scale: Anger

Please circle the response that describes your behavior when you are feeling mad.

**Emotion Inhibition:**

1. I hold my anger in.
2. I hide my anger.
3. I get mad inside, but don't show it.
4. I'm afraid to show my anger.

**Emotion Dysregulation:**

1. I do things like slam doors and stomp around when I am mad.
2. I attack or feel like attacking whatever it is that makes me mad.

**Regulation Coping:**

1. When I am feeling mad, I control my temper.
2. I stay calm and keep my cool when I am feeling mad.
3. I can stop myself from losing my temper.
4. I try to calmly deal with what is making me feel mad.