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FEATURES OF PARENT-CHILD INTERACTION AS PREDICTORS OF  
EMOTIONAL, COGNITIVE, AND BEHAVIORAL MARKERS OF RESILIENCE IN  
CHILDREN OF ALCOHOLICS

by

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## ABSTRACT OF THE DISSERTATION

Features of Parent-Child Interaction as Predictors of Emotional, Cognitive, and  
Behavioral Markers of Resilience in Children of Alcoholics

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Research in child development suggests that parental communication is one of the primary influences on children's healthy adjustment and development of prosocial skills. Interactions between parents and children establish norms for how one is to manage emotion, develop a strong sense of self, and demonstrate social competence. In families of alcoholics, however, features of interaction between parents and children may have different outcomes. The communication environment in families of alcoholics can be characterized by conflict, neglect, and inconsistencies, which are often associated with emotional, cognitive, and behavioral challenges for children of alcoholics. Despite these challenging circumstances, some children of alcoholics manage to successfully adapt to the conditions in their family and become resilient in the face of adversity. This study considers how features of interpersonal communication in the family may act as a protective factor for children of alcoholics and facilitate resilience. The goals of this

study are three-fold. First, the study sets out to gain a better understanding of adolescent resilience by examining emotion regulation ability, expressive self-efficacy, and impulsivity as markers of emotional, cognitive, and behavioral well-being. Second, the research draws on Baumrind's (1991) parenting styles typology and Gottman's (2001) Emotion Regulation Theory to examine responsiveness, control, emotion coaching, and emotion dismissing as features of parents' communication behavior that predict adolescent resilience for children of alcoholics and children of non-alcoholic parents. Third, this study explores a variety of methods to assess resilience, extend existing communication constructs, and examine the extent to which features of parent-child communication and adolescent resilience differ between children of alcoholics and children of non-alcoholics. To address these goals, this study invited parent-adolescent dyads (30 from families with an alcoholic parent, 30 from families without an alcoholic parent) to participate in a study in which they completed self-report measures of the parent's communication behavior and the adolescent's resilience, adolescents' heart rate variability was measured to account for physiological changes in emotion regulation, and both parent-adolescent dyads participated in two video-taped interactions that were later coded for various features of parent-child communication and markers of resilience. The results highlight the importance of parental communication in promoting adolescent resilience and point to some notable differences in these associations between families with an alcoholic parent and families without an alcoholic parent. These findings are discussed in terms of their implications for advancing the literature on family communication, promoting adolescent resilience, and responding to the challenging communication climate in families of alcoholics.

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## DEDICATION

To Graham

WE did it! There are no words to describe how lucky I am to have you with me on this journey. Looking forward to the next adventure!

To Suki

You will always be my daemon.

To children of alcoholics

I hope that this research is the first of many to shed light on such an important topic and population

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## CHAPTER ONE

Family relationships are some of the most crucial bonds in people's lives and they play an important role in shaping individual identity and promoting personal well-being. In particular, the relationship between parents and children is integral to the socialization and development of children in the family. A child's first introduction to appropriate communication behaviors and emotional expression begin with the socialization he or she receives from their parents (Grolnick, Gurland, DeCoursey, & Jacob, 2002). Availability of the caregiver also has direct links to a child's positive perception of self (Bretherton, 1991). Lack of interaction and hostile communication between parent and child may result in underdeveloped social skills, such as difficulty regulating emotion and interacting with others (Calkins, 1994; Calkins & Dedmon, 2000; Keenan, 2000). In families of alcoholics, which are characterized by conflict, turmoil, and communicative inconsistencies, such an environment may produce complications for children's healthy development (Connors, Donovan, & DiClemente, 2001). There are approximately one in four children growing up in an alcoholic home (Grant, 2000), many of whom experience depression, anxiety, low self-esteem, and behavioral problems. Among these children, 70% are likely to become substance abusers themselves (The Priory Center, 2006). Thus, there seem to be communication dynamics in alcoholic families that may inhibit children's development and well-being.

Although the experience of growing up in an alcoholic home places children at risk for emotional, cognitive, and behavioral problems, there are some children who demonstrate an ability to successfully cope with their challenging family circumstances. Resilience refers to the development and achievement of positive outcomes and the

avoidance of negative outcomes amidst adversity (Wyman et al., 1999). Resilience is an important personal characteristic for all children and adolescents to develop because it arms them with coping mechanisms to respond to hardships both big and small (Fergus & Zimmerman, 2005). For children of alcoholics (CoA), in particular, the tendency to respond with resilience to their family circumstances is a key factor in their ability to lead successful and healthy lives in adulthood (Werner & Johnson, 2004). Among the factors that contribute to resilience, features of parent-child interaction are the most germane to this study (Winslow, Sandler, & Wolchik, 2005). What, then, are the features of parent-child communication that can promote or impede resilience for adolescents, especially those from families of alcoholics?

Although researchers have suggested communication is an important factor in healthy child development (Aron & Aron, 1996), few have looked at how communication impacts resilience. Research suggests that children growing up in an environment where parents emphasize more authority and control experience higher levels of depression (Koerner & Fitzpatrick, 1997) and lower self-esteem (Hamon & Schrod, 2012) than children from open communication households. An open communication environment allows children to talk through concerns or triumphs, which could potentially mitigate emotional or psychological issues stemming from their family situation (Pennebaker, 1985). Discussing the negative experiences affecting CoA, in particular, can be an important part of the coping process (Bareket-Bojmel & Shahar, 2011). Therefore, productive and open communication behaviors in families of alcoholics may contribute to adolescents' resilience.

### **Goals of this Dissertation**

This study aims to identify the relationship between family communication and adolescent resilience, especially in the context of families of alcoholics. Identifying specific types of communication that facilitate resilience in adolescents may prove useful for practitioners working with high-risk families, as well as the families themselves. This study has three main goals: (1) gain a clearer understanding of adolescent resilience by examining emotional, cognitive, and behavioral manifestations of resilience; (2) identify the family communication dynamics that bolster or hinder resilience; and (3) utilize a variety of methods to assess resilience and communication, extend existing communication constructs, and explore any differences in parent-child communication and adolescent resilience between families of alcoholics and families of non-alcoholic parents.

First, to better understand the features of resilience this study specifically examines the following concepts as markers of adolescent resilience: emotion regulation, self-efficacy, and impulsivity. *Emotion regulation* refers to one's ability to manage their emotions (Gross & John, 2003). Children begin to develop their regulatory skills in infancy through interactions with their caregivers. Children who learn to effectively regulate their emotions demonstrate increased interpersonal competency and stress management (Gottman, Katz, & Hooven, 1997). *Self-efficacy* describes one's belief in his or her ability to accomplish a task (Bandura, 1977). Individuals establish their self-efficacy through a process of assessing existing knowledge and appraisal of the context. Those with a higher overall self-efficacy demonstrate less anxiety and superior cognitive performance (Cervone, Jiwani & Wood, 1991; Cervone & Wood, 1995). *Impulsivity* is described as a type of externalizing behavior when individuals act without considering

the potential for negative consequences (DeYoung, 2011). Individuals who frequently demonstrate impulsivity also display more signs of aggression (Plutchik & Van Praag, 1989, 1995), report difficulty in relationships (Hinshaw & Melnick, 1995; Whalen, Henker & Granger, 1990), and poor academic competence (Hinshaw, 1992). Each of these variables represents an emotional, cognitive, or behavioral element of resilience, which allows for a relatively complete picture of adolescent resilience.

Second, this study explores the dynamics of parent-child communication that may differentiate resilient and non-resilient adolescents. Two theoretical perspectives inform my thinking with regard to identifying features of parent-child interaction that may promote or impede resilience. Baumrind's (1991) parenting styles typology highlights responsiveness and control as two dimensions of parental communication that promote different outcomes in children. In addition, Gottman's (2001) emotion regulation theory describes emotion coaching and emotion dismissing behavior as two features of parental communication that can influence emotional reactivity and expressiveness in children. This study will examine the degree of responsiveness and control in parent-child interaction, as well as the amount of emotion coaching and emotion dismissing behavior, to identify features of parent-child communication that are associated with children's emotion regulation ability, self-efficacy, and impulsivity as markers of resilience.

Third, by using multiple methods, communication frameworks, and comparing families of alcoholics with families of non-alcoholic parents, this dissertation aims to extend the literature on family communication. This research makes theoretical, methodological, and practical contributions to the literature on family communication. Theoretically, this study integrates two theoretical approaches on parent-child



communication that are new to the field of family communication. Although the field of family communication is growing, relatively few theories focus on the dynamics of interaction between specific family members. Family communication patterns theory (Koerner & Fitzpatrick, 2002), for example, focuses primarily on individuals' perceptions of their entire family's communication tendencies, rather than focusing on specific relationships within the family and specific behaviors within interaction. This dissertation introduces new theories of family communication to the field that respond to both of these shortcomings. Methodologically, this study uses a mixed-method approach to measure and observe aspects of children's resilience and parent-child communication. In terms of assessing features of the parent-child communication, I will use both observations of interactions and self-reports of the adolescents' perceptions of their parent's communication behavior. In addition, the markers of resilience in this study will be assessed using self-report, observational, and physiological measures. Specifically, this study will include the physiological measure of heart rate variability to assess biological expression of emotion regulation. Because emotion regulation is a complex variable to study, examining it from several angles increases the chances of drawing efficient conclusions. The process of measuring heart rate variability is noninvasive and will allow for observing emotional arousal and time to recovery in adolescents. Pragmatically, this study is significant because it extends the literature on family communication by examining the experiences of high risk and non-high risk families. By comparing and understanding the dynamics of family communication that lead to resilience, this study can be useful in terms of identifying communication patterns that

are likely to promote resilience in CoA compared to children of non-alcoholic parents, facilitating healthier adjustment, confidence, and overall well-being.

### **Preview of the Dissertation**

To execute each of these goals, this dissertation will examine communication in parent-adolescent dyads from both alcoholic and non-alcoholic families to see how individual characteristics and features of parent-child interaction promote adolescent resilience. The purpose of chapter two is to provide an overview of the characteristics of families of alcoholics and identify three specific characteristics of adolescent resilience. Chapter two begins by providing an overview of the disease of alcoholism and explains how an alcohol use disorder may impact the family system. Since this study is focused on adolescent outcomes of parent-child communication, I describe the various outcomes that have been documented in children of alcoholics and demonstrate how these experiences may differ for children of non-alcoholic parents. I then define adolescent resilience by centering on three main characteristics: emotion regulation, self-efficacy, and impulsivity. Each marker of resilience is explained, followed by a discussion of the operationalization of the marker, the impact of parent-child communication on the marker, and the potential for differences in the experiences of CoA and non-CoA.

Chapter three introduces two theoretical frameworks of parent-child communication that may promote or impede child resilience: Baumrind's (1991) dimensions of responsiveness and control and Gottman's (2001) emotion coaching and emotion dismissing parenting behaviors. After describing each parenting style and the outcomes associated with them, I highlight each dimension of parental communication as a predictor of emotion regulation, self-efficacy, and impulsivity as markers of resilience.

In addition, this chapter discusses the potential for different outcomes of parent-child communication for CoA versus non-CoA and advances several research questions to investigate those differences.

In chapter four, I then provide a detailed explanation of the methodology of the study. To properly assess each marker of resilience this study utilizes self-reports, observations, and biomarker feedback. Both parent and adolescent were asked to consider the adolescent's ability to regulate emotion, self-efficacy, and impulsivity. Parents and adolescents were then asked to participate in two 5-minute interactions involving a happy topic and an unhappy topic at the discretion of the adolescent. The adolescent's heart rate was measured during each interaction and the 5-minutes following each interaction using a plethysmograph (finger sensor), to identify any biological reactions during the conversation. Two groups of parent-child dyads were involved in this study, 30 dyads from families of alcoholics and 30 dyads from families of non-alcoholic parents.

In chapter five, I describe the analyses and results of the study. I begin by summarizing preliminary analyses that compare means and bivariate correlations on all variables for adolescents with an alcoholic parent and those without an alcoholic parent. Then, I report the results of hierarchical linear regressions that examine the effects of parental communication on each marker of adolescent resilience and the potential moderating effect of the family's status with or without an alcoholic parent.

A discussion of findings is presented in chapter six. In chapter six I review each hypothesis and research question, explain the outcome for each, and consider their implications in regards to families of alcoholics and families of non-alcoholic parents. I also discuss the theoretical contributions of this research for the field of family

communication. Then, I highlight the pragmatic implications of parental communication for improving adolescent resilience, especially for adolescents with an alcoholic parent. Finally, I summarize the strengths and limitations of this study and point to future directions for research on families of alcoholics and adolescent resilience.

## **CHAPTER TWO**

The following chapter sets out to explain the dynamics present in families of alcoholics and introduce important markers of adolescent resilience. To do this, I begin by discussing experiences in families of alcoholics and the possible outcomes for children of alcoholics. I then present the importance of resilience for children of alcoholics and adolescents more broadly. Finally, I introduce each marker of resilience that will be the focus of this study and discuss how they are measured, how they relate to parent-child communication, and how they may differ across adolescent groups.

### **Dynamics of Families of Alcoholics**

Alcoholism refers to an addictive and boundless consumption of alcoholic substances and approximately 15 million people in the United States have been diagnosed with the disease (NIAAA, 1995; SAMHSA, 2011). An alcohol use disorder (AUD) is the fourth-most disabling disease among middle to low income countries and third-most disabling in high income countries (WHO, 2008). Disease and injury conditions attributable to an alcohol use disorder include infectious diseases, cancer, diabetes, neuropsychiatric disease, cardiovascular disease, disease of the liver and pancreas, and both intentional and unintentional injury (Rehm et al., 2009). Help and support for individuals with an alcohol dependency is challenging due to the stigma often associated with the disease (Lönnroth, Jaramillo, Williams, Dye, & Raviglione, 2009). These features of alcoholism make it a prevalent and challenging illness.

Individuals affected by alcoholism often struggle to engage in regular activities or fulfill their parental roles. Reasons for drinking include escapism, stress reduction, reward, social lubricant, and to subside depressive symptoms (McMahon, Kouzekanai,

DeMarco, Kusel, & Davidson, 1992; Olenick & Chalmers, 1991; Ooteman, Koeter, Verheul, Schippers, & Van den Brink, 2006; Verheul, Van den Brink, & Geerlings, 1999). The use of alcohol as a coping mechanism often leads to antisocial behavior, narcissism, and denial (Britton, 2004; Cornwell, 1968; Jacob, Leonard, & Haber, 2001). Alcoholic parents are known to neglect their family and work obligations, have a low frustration tolerance, experience high levels of anxiety, and have low self-esteem (Schade, 2006; NIAAA, 2010). The severity of their drinking can lead to manipulation of family members (Lyon & Greenberg, 1991) and the affection they give is typically inconsistent, fluctuating between warmth and rejection (Woititz, 1985). There are predominantly more alcoholic fathers than mothers with almost three times more male alcoholics than female alcoholics (NIAAA, 1995). Alcoholic fathers are reportedly less sensitive and communicate very little with their children compared to non-alcoholic fathers (Eiden, Chavez, & Leonard, 1999).

Due to the often stressful family environment in families of alcoholics, dynamics may be different from other types of families. Although experiences may vary, alcoholic families often encounter high levels of conflict, stress, and disorder (Straussner & Fewell, 2011). Interparental conflict often spills over into interactions between parent and child (Bradford & Barber, 2005), which may have negative impacts on parental communication sensitivity and orientation. Characteristics of parenting practices in families of alcoholics include inconsistency, frustration, explosive and inflexible discipline, low supervision and involvement, minimal nurturance, and little concern for adolescent substance use (Lam et al., 2007; Stanger, Dumenci, Kamon, & Burstein, 2004). Members of families affected by alcoholism also report expressing fewer feelings and

less regard for other family members (Jones & Houts, 1992). Perhaps this is why CoA who are exposed to family turbulence and dysfunction often develop more emotional, cognitive, and behavioral problems than children of non-alcoholic parents (Liepman, Keller, Botelho, Monroe, & Sloane, 1998).

One way that alcoholism can influence the family environment is through the alcoholic's relationship with his or her spouse. Families of alcoholics experience higher levels of parental distress (Stout & Mintz, 1996). Conflict and miscommunication often arise in couples with an alcoholic partner (Fals-Stewart & Birchler, 1998; Kelly, Halford, & Young, 2002), as well as a higher chance for disinterest and decreased levels of intimacy than in couples without an alcoholic partner (Carroll, Robinson, & Flowers, 2002). The higher levels of conflict found in alcoholic partnerships increases the potential for verbal and physical abuse (Straus & Sweet, 1992; Testa, Quigley, & Leonard, 2003; Wekerle & Wall, 2002). When the alcoholic parent is unable to fulfill their work obligations due to intoxication, the non-alcoholic parent may call in sick for the alcoholic, thereby enabling them, perpetuating the disease, and exposing the family to further abuse (Zelvin, 2004). In addition, partners of an alcoholic spouse are at an increased risk for mental health issues that may be detrimental to their long-term well-being (Le Poiré, 2006). Therefore, alcoholic partnerships have the potential to involve hardships at the personal and relational level.

An unhealthy and potentially turbulent relationship between parents can have negative consequences for the children in a family. As family systems theory suggests, each family member has an important function in the operation of the system as a whole and family members mutually influence one another through their interactions (Bowen,

1978; Broderick, 1993). Marital strife may result in child neglect and demonstrate a poor model for healthy relationships, making it difficult for children to process emotion and gain prosocial skills (Frosch & Mangelsdorf, 2001; Davies & Cummings, 1994).

*Prosocial skills* refer to one's efficacy in matching the expectations of social interactions, assimilating to societal norms, and solving problems (Hines & Saudino, 2002). The unpredictable behaviors of the alcoholic can reduce the adaptability and emotional expressivity of family members (Mylant, Ide, Cuevas, & Meehan, 2002; Barnow, Schuckit, Lucht, John, & Freyberger, 2002). A child's physical health may also be affected by parental conflict. Children exposed to high levels of conflict may experience impediments to their sympathetic nervous system, which allows them to regulate stress response, potentially putting them at physical risk (El-Sheikh et al., 2009). In families that experience multiple stressors such as alcoholism, children are at an especially high risk for developing adjustment problems (Jouriles et al., 1991). Thus, interactions among parents can have long-term effects on the well-being of their offspring.

Beyond the impact of a tumultuous spousal relationship, alcoholic parents can also have a more direct impact on their children's development and well-being. Alcoholic parents are known to withdraw from family relationships and responsibilities rendering them unavailable (Schade, 2006). Non-alcoholic parents are often occupied with the alcoholic, taking on additional responsibilities and covering up their drinking (Vernig, 2011). Thus, the neglect present in an alcoholic home may result in children's insecure attachment style (Erdman, 1998). One study found that mothers with an alcoholic partner demonstrated less warmth and sensitivity when interacting with their child, which eventually led to outcomes of poor social competence by grade school (Eiden, Colder,



Edwards, & Leonard, 2009). ACoA who reported having a distressed relationship with their parent also reported feeling isolated, an inability to communicate effectively, difficulty trusting others, more emotional longing, negative feelings towards the parent, and an increase in depressive symptoms (Kelley et al., 2011). Alcoholic parents often subscribe to a high conformity orientation and low conversation orientation (Rangarajan & Kelly, 2006). Research shows that in families of alcoholics, communication patterns moderate family stressors and attachment styles (Rangarajan, 2008). Furthermore, parents who demonstrate consistent warmth, discipline, and monitoring have been found to greatly reduce the potential for negative outcomes in CoA (Molina, Donovan, & Belendiuk, 2010). These findings paint a very different picture of the parent-child dynamic in an alcoholic home as compared to non-alcoholic families.

Adolescents are even more susceptible to issues stemming from their parent's drinking than younger children due to the longevity of exposure to the disease and negative outcomes from it (Peleg-Oren & Teichman, 2006). Also, during adolescence the brain is not fully developed, which can make it difficult to manage emotions (Cozzolino, 2006; Straussner & Fewell, 2011). At the same time, hormonal changes are also rapidly taking place impacting the amygdala, or area of emotion control, which can intensify emotional experiences. Thus, adolescents often appear to make rash decisions, seem narcissistic, be overly dramatic, and make poor judgments (Cozzolino, 2006). The stressful experiences of being an adolescent also add to the difficulty in coping with stressors at home. Developmental issues that emerge in childhood are often exacerbated during adolescence and into adulthood. In many cases, these problems lead to addiction, with more than half of the adolescents exposed to substance abuse developing an

addictive disorder (Saraceno, Munaf, Heron, Craddock, van den Bree, 2009; Biederman, Faraone, Monuteaux, & Feighner, 2000; Rothman, Edwards, Heeren, & Hingson, 2008).

As with most CoA, feelings of guilt and shame related to a parent's drinking are also present and may be associated with fear of disclosure regarding their parent's disease and related outcomes to family and/or health care professionals (Straussner & Fewell, 2011).

Despite the hardships that may arise for CoA, the family environment can also be an important factor in coping with an alcoholic parent. Family rituals have the potential to buffer the effects of an alcoholic parent (Wolin, Bennett & Jacobs, 1988; Hawkins, 1997). Rituals such as family dinner provide consistency in an otherwise inconsistent environment, thereby exposing CoA to some form of discipline and regulation. Open communication from the non-alcoholic parent has also shown to moderate the effects of having an alcoholic parent (Miller-Day & Marks, 2006; King & Chassin, 2004). By explaining and discussing the alcoholism, non-alcoholic parents may reduce child uncertainty and confusion. Taken together, these findings suggest that in families where at least one parent provides protective buffering, the effects of growing up in a dysfunctional environment are minimized (Bijttebier & Goethals, 2006). Therefore, it is possible that the communicative environment in the family may protect children from adopting maladaptive behaviors and promote resilience.

### **Outcomes for Children of Alcoholics**

Children who grow up in alcoholic families have been known to demonstrate a variety of dysfunctional emotions, cognitions, and behaviors. Conversely, some CoA respond to their family environment by showing increased maturity, responsibility, and resilience (Burnett et al., 2006; Walker & Lee, 1998). In this section, I discuss the

emotional, cognitive, and behavioral outcomes for CoA and I explore the potential for resilience in the face of troubling family circumstances.

Children who grow up with an alcoholic parent may develop a variety of negative emotional outcomes. Prohibiting discussion about the disease is a common pattern in families of alcoholics as a way to maintain the function of the family system (Gravitz, 1985). An inability to disclose experiences and receive support potentially increases stress and emotional reactivity (Bolger & Amarel, 2007; Terry, Rawle, & Callan, 1995). Many individuals who grew up with an alcoholic parent select future relationship partners who are also alcoholics (Schuckitt, Tipp, & Kelner, 1994). In those relationships, ACoA struggle to express emotion and often report less marital satisfaction (Barnow et al., 2002; El-Guebaly, West, Maticka-Tyndale, & Pool, 1993; Kearns-Bodkin & Leonard, 2008). Thus, the experiences from growing up in an alcoholic home have both short and long-term implications for emotional well-being.

There are also a variety of challenging cognitive outcomes reported by CoA. Researchers have found a significant relationship between quality of care at home and a child's cognitive progress (Arranz, 2005). For many CoA, growing up in an alcoholic home results in negative psychosocial outcomes that affect their health and well-being (Sher, 1991). CoA report lower levels of self-esteem and self-efficacy, resulting in an inability to effectively cope with their environment (Hussong & Chassin, 1997; Rangarajan & Kelly, 2006). In turn, many CoA are diagnosed with psychological disorders such as anxiety and depression (Chassin, Pitts, & Prost, 2002; Sher, 1991; Roosa, Dumka, & Tein, 1996). Thus, experiences in families of alcoholics may contribute to negative cognitive outcomes for CoA.

Behavioral problems can also develop as a result of growing up in an alcoholic home. CoA often demonstrate poor internalizing and externalizing behaviors (Hill et al., 2008; Schuckit, Smith, Pierson, Trim, & Danko, 2007). *Internalizing behaviors* refer to actions and behaviors that direct problematic energy inward toward the self, which often manifests in self-harm, depression, and anxiety (Dornbusch, Mont-Reynaud, Ritter, Chen, & Steinberg, 1991; Leadbeater, Blatt, & Quinlan, 1995). Girls are more likely to experience internalizing behaviors such as withdrawal, low self-esteem, and loneliness (Moylan et al., 2010). *Externalizing behaviors* refer to maladaptive responses to one's environment in which individuals direct their negative energy outward by lashing out at others (Jackson & Warren, 2000). Negative behavioral reactions include behaviors like attention deficit, hyperactivity, misconduct, poor interaction skills, and academic problems (Straussner & Fewell, 2011). Signs of internalizing and externalizing behavior vary depending on age, with older children demonstrating more internalizing behavior than younger children (Puttler, Zucker, Fitzgerald, & Bingham, 1998). Some evidence suggests that the mental health of one's primary caregiver may influence the degree to which a child experiences behavioral problems. Depressed mothers, common in families of substance abuse, demonstrate less responsiveness and engagement when interacting with their child, which may contribute to behavioral issues (Miller, 1993; Radke-Yarrow, 1998). Research suggests that the antisocial nature of a family may also be predictive of the behavioral outcomes for CoA (Puttler et al., 1998).

Despite evidence that CoA struggle with emotional, cognitive, and behavioral reactivity to their family circumstances, there are some situations in which children succeed in spite of their family environment. Children's ability to successfully adapt to an

adverse environment reflects their resilience. There are multiple factors that contribute to resilience, one of which is parental communication (Hines & Saudino, 2002). Parents that communicate consistent warmth and discipline aid in the development of emotional expression and reduce the likelihood of CoA developing negative outcomes (Trainor, Austin, & Desjardins, 2000; Molina, Donovan, & Belendiuk, 2010). Availability of support systems are also a strong predictor of the resilience that children may develop amidst a high-risk environment (Gruber & Taylor, 2006; Lam, Fals-Stewart, & Kelley, 2008). Thus, the availability of protective factors, such as healthy parent-child communication, may minimize the negative effects of growing up in an alcoholic home and instead promote children's resilience. To better understand the importance of resilience in children of alcoholics and adolescence more broadly, the following section provides an overview of resilience and introduces three important features of resilience: emotion regulation, self-efficacy, and impulsivity.

### **Characteristics of Resilience in Adolescents**

A high-risk setting or a prolonged traumatic experience can expose children to a stressful environment (Masten, 2001). Both genetic and environmental factors can influence one's vulnerability to negative experiences (Deater-Deckard, Ivy, & Smith, 2005). Although *all* children are exposed to some level of adversity, those that experience chronic stressors are the most prone to deleterious outcomes. Various protective factors act as coping mechanisms, allowing children to overcome their difficult circumstances. Children who are better at navigating an unfavorable situation are more likely to avoid negative outcomes (Lansford et al., 2006). *Resilience* refers to a successful adaptation in an adverse environment (Luthar, Cicchetti, & Becker, 2000). There are both positive and

negative outcomes that stem from resilience. On one hand, to successfully adapt to stressful situations individuals must master certain developmental skills, including self-monitoring and a healthy level of confidence, both of which can have long-term benefits (Hall & Webster, 2007). On the other hand, learning to adapt to adverse circumstances may put children in a position to take on responsibilities that require accelerated maturation, preventing them from experiencing the joys of youth. Emotion regulation, self-efficacy, and impulsivity are three distinct markers of resilience. Each marker was chosen to represent the emotional, cognitive, and behavioral facets of resilience. They are interrelated through the construct of self-regulation. Self-regulation refers to individuals sense-making process in regards to the actions they take and how they react to external stimuli (Carver & Scheier, 2011). Thus, each of these measures offers a valuable assessment of individuals' general ability to persevere amidst adversity (Vohs & Baumeister, 2011). The following sections describe the relationship between resilience and each of these markers, as well as how they operate in families of alcoholics.

### **Emotion Regulation as a Marker of Resilience**

One indicator of children's resilience is reflected in their ability to manage their emotions. *Emotion regulation* describes one's ability to control their emotional arousal (Ochsner & Gross, 2005). Emotional responses are stimulated by cognitive appraisal and affect behavioral outcomes (Smith & Lazarus, 1990). Individuals who learn to successfully manage their emotions demonstrate prosocial skills and stress management (Gottman, Katz, & Hooven, 1997). Since resilience reflects successful adaptation to adversity, adolescents with the ability to regulate emotion may exhibit the skills

necessary to effectively cope, this is particularly important for CoA who may experience a stressful family environment.

The experience and expression of emotion is a complex process. The study of emotion regulation began in the early 1900's and has grown in both popularity and operation (Gross & Thompson, 2006). One of the biggest challenges for emotion regulation scholars is how to define and differentiate emotion and emotion regulation. For the purpose of this study, emotions are the response system that allows individuals to construct meaning across experiences (Cole, Martin, & Dennis, 2004). To break emotions down even further it is important to understand that they involve goals, are multi-faceted, and affect multiple systems (Gross & Thompson, 2006). Goals refer to the conscious and subconscious ideals we have for a given situation that elicits some type of emotion, whether it be positive or negative. Emotions are multi-faceted in that they incorporate subjective experience, behavior, and physiology (Mauss, McCarter, Levenson, Wilhelm, & Gross, 2005). Emotions are personal because they involve feelings and, in turn, action. As feelings and action occur, a physiological process takes place in our nervous system, gauging the way to respond based on that emotional experience. As a system, emotions can interrupt our awareness and affect the way we behave in our social interactions (Gross & Thompson, 2006). Emotions influence the decisions we make and the reactions we have to various stimuli (Keltner & Kring, 1998; Tooby & Cosmides, 1990b). Thus, the way we manage our emotions affects how we perceive experiences and behave in social interactions.

The process of experiencing emotion often requires an attempt at control (Zaki & Williams, 2013). The control feature is commonly referred to as emotion regulation,

which describes the way we navigate through positive and negative affect (Ochsner & Gross, 2005). Affect refers to individual appraisals of a given state (Scherer, 1984a). States include stressful responses, emotions, moods, and motivational stimuli such as eating. States have the potential to elicit either a positive or negative response (Lazarus, 1993). To manage our states we attempt to control or regulate our arousal (Gross, 1998). Regulation strategies include reassessing a situation, distracting one's self from the situation, suppressing emotion, and distancing from the situation (Ayduk & Kross, 2010; Gross, 1998; McRae et al., 2010; Ochsner, Silvers, & Buhle, 2012). Based on the way we decide to regulate our emotion, a physiological arousal adjustment occurs, moment to moment, and varies in latency, rise time, magnitude, and duration (Gross, 1998; Thompson, 1990). Therefore, we regulate our emotional responses psychologically and biologically.

As children develop there are several factors that may influence their ability to regulate emotion including temperament, age, family dynamic, and peers. Literature on emotion regulation is primarily focused on children and adolescents (Thompson, 1990; 1994). This is a period when temperament, brain development, abstract thinking, and social networks are developing, thereby laying the groundwork for unique differences in emotion regulation that continue into adulthood (Calkins & Hill, 2007; Rothbart & Sheese, 2007; Thompson & Meyer, 2006). One's temperament is a strong factor that may affect how individuals perceive and express emotion. Temperament can be influenced by genetics as well as experience and consists of two domains: reactivity and self-regulation (Rothbart & Bates, 2006). *Reactivity* refers to the response to change in one's environment, both internal and external. *Self-regulation* describes an individual's ability



to control and orient one's self in a way that effectively manages reactivity (Rothbart & Bates, 2006). Individuals begin to develop their self-regulation from infancy through interactions with their parents and temperamental disposition (Eisenberg, Spinrad, & Eggum, 2010; Gottman, Katz, & Hooven, 1997). By age five, most children are capable of managing attention and behavior (Carlson, 2005; Li-Grining, 2007). Self-regulation in childhood can also involve impulsivity and modulation of negative emotion (De Pauw & Mervielde, 2011), which later reflects an individual's ability to manage aggression and behavioral problems (Caspi, 1998; Eisenberg et al., 2010). Moreover, proper self-regulation facilitates academic drive and compliance with social norms (Eisenberg, Duckworth, Spinrad, & Valiente, 2014). During adolescence a substantial amount of self-regulation growth occurs (Albert & Steinberg, 2011) and continues throughout the lifespan (Lengua, 2006).

Poor self-regulation may affect the way children respond to risky situations in adolescence. For example, risk-taking tendencies are common among adolescents (Romer, Duckworth, Sznitman, & Park, 2010). During adolescence, the body increases the release of dopamine to the subcortical reward centers, which encourages attraction to novel and exciting experiences (Chambers, Taylor, & Potenza, 2003; Spear, 2000). One's ability to delay gratification, or administer self-control, can potentially mitigate risk-taking predispositions (Romer, Duckworth, Sznitman, & Park, 2010). Thus, the successful development of self-regulation skills in childhood may prevent risk-taking behaviors in adolescence.

**Operationalizing emotion regulation.** Contemporary research emphasizes the need to measure emotion regulation in three ways: through self-report, observation, and

physiology (Cole, Martin, & Dennis, 2004). Self-report is utilized to gain the participant's perspective on the situational context and their perceived ability to respond in emotionally appropriate ways. Observation affords researchers the ability to see the expression of emotion in response to environmental stimuli. To further monitor the occurrence of emotion regulation researchers study the down-regulation of negative emotions through biological markers. Emotions affect and are influenced by various biological functions such as the cardiovascular and neuroendocrine systems (Porges, Doussard-Roosevelt, & Maiti, 1994; Stansbury & Gunnar, 1994). Because emotions are so complex and the regulation of them must be situationally grounded, using multiple cues to observe a change in regulatory behavior aids in making effective inferences (Cole, Martin, & Dennis, 2004). From a physiological standpoint, emotion regulation specifically describes the process of regulating emotions to maintain homeostasis, or physiological stability (Gottman, Katz, & Hooven, 1997).

Previous research on emotion regulation focused primarily on measuring a child's vagal tone (Gottman, Katz, & Hooven, 1997). Vagal tone refers to the regulation of the vagus nerve, which is located in the brainstem, specifically the medulla oblongata (Porges, Doussard-Roosevelt, & Maiti, 1994). The vagus nerve works as part of the parasympathetic branch of the autonomic nervous system in regulating homeostasis for many of the body's internal organs. The autonomic nervous system describes the subconscious operations of the body such as breathing, digesting, and sweating. One of the ways to measure vagal tone is monitoring one's heart rate variability (HRV). When a stimulus is presented to an individual that surprises or scares them, their heart rate typically increases and is no longer in homeostasis. To adjust, the nucleus ambiguus,

which is one of several centers in the brainstem, increases output from the parasympathetic nervous system (PNS) to the vagus nerve. When the vagus nerve receives the increase in output from the PNS the vagus nerve slows down the sinoatrial node in the heart thereby decreasing or regulating heart rate and returning to homeostasis. The better a child is at suppressing vagal tone, regulation of the sinoatrial node, the better they are at emotion regulation (Gottman, Katz, & Hooven, 1997). Children with high baseline vagal tone, or a heightened reactivity, have been found to recover faster in stressful situations, and children who are able to suppress vagal tone calm themselves down faster, quickly returning to homeostasis. Thus, emotion regulation is filtered through the child's physiological make-up and their ability to manage positive and negative affect (Gottman, Katz, & Hooven, 1997). Resilience, then, may be marked by the emotion regulation ability of a child. Therefore, this study will include a measure of HRV to identify the emotion regulation ability of adolescents.

Witnessing the changes in activated emotion is also important for confirming that regulation took place; thus, self-report and observational methods are also key to understanding the development of this process. Self-report measures allow individuals to describe the strategies they use in order to regulate emotion. In this study, adolescents will be asked to provide their experiences of reappraisal and expression of emotion. Parents are also asked about their demonstrations of emotion as well as their views on the adolescent's ability to regulate emotion. Taken together, these perspectives provide more detail regarding the adolescents' cognitive process when stimulated by emotion and the parent's potential role in the development of the adolescent's regulation ability. Observation of the interactions between parents and adolescents allows for visible

demonstrations of the emotion regulation process. Early observation methods for studying emotion regulation included the still-face paradigm, which examined change in children's emotion as a result of parental shift in affection (Tronick, Als, Adamson, Wise, & Brazelton, 1978). More recent research measured face-to-face interactions between mothers and infants by focusing on the duration of emotional expression and the sequence of behavioral shifts (Field, 1994). In this study, observations will focus on the positive and negative expressions of emotion as demonstrated by adolescents and the initial stimuli that activate the resulting emotional outcome. A similar observation method was conducted with toddlers who were confronted with a stressful situation (Grolnick, Bridges, & Connell, 1996). By engaging more with the environment toddlers effectively self-regulated their emotion and in turn, demonstrated less negative affect. On the other hand, the children who dwelled on the person or object causing the distress demonstrated more negative emotion. Taken together, each method produces a piece of a much larger construct, affording more inferences and offering a clearer understanding of the emotion regulation process.

**Communication patterns that promote emotion regulation.** A child's ability to regulate emotion may be largely based on the family communication climate. Research on emotion regulation found two parental communication styles that were predictive of a child's emotion regulation abilities: emotion coaching and emotion dismissing parenting (Gottman, Katz, & Hooven, 1997). *Emotion coaching* is considered a positive communication style where parents aid in the children's ability to recognize, manage, and express emotion. *Emotion dismissing* communication is less supportive, critical, and belittling of children's feelings. Children who grow up in an emotion coaching family

appear to regulate their emotions better and demonstrate positive developmental outcomes, such as interpersonal competency and stress management. Because children in an emotion dismissing family are exposed to frustration and mockery when they express feelings, their ability to regulate emotion suffers. Expression of negative emotions may frequently be dismissed and the inability to manage those emotions may result in outbursts of verbal and physical aggression (Cupach & Olson, 2006). Children in emotion dismissing families also appear less healthy, receive lower academic scores, and demonstrate more behavioral problems than children in emotion coaching families (Gottman, Katz, & Hooven, 1997). Thus, the family environment may be a strong predictor of a child's emotion regulation abilities and long-term well-being.

The emotional and communicative interaction style between parents and their children develops the foundation for how the child will interact with the world around them. At birth, child and primary caregiver experience a dyadic regulation where in most cases a parent's reaction to a child's response mirrors how the child should be feeling and how to address those feelings (Fonagy & Target, 1997; Beebe, Lachmann, & Jaffe, 1997). The reaction of the parent demonstrates to the child how they should manage and internalize emotion (Straussner & Fewell, 2011). A supportive and sympathetic response from parents during a child's expression of emotion allows the child to successfully identify and address their emotion during a social episode (Gross & Thompson, 2006). In doing so, children learn how to effectively regulate themselves in future interactions. Parents who respond to their child's emotion in a derogatory way often stimulates a child's negative adaptation and poor regulatory behavior (Denham, 1998; Eisenberg, Cumberland, & Spinrad, 1998). As children are exposed to the positive or negative

regulating process of emotions, the experiences lend a hand in shaping how they view themselves and their environment (Peterson & Park, 2006).

Although parent-child interactions set the groundwork for how to regulate emotion, peer interactions outside of the family offer children another channel to negotiate conflict, manage aggression, learn to cooperate, and form friendships (Gottman, Katz, & Hoover, 1997). Regulating negative affect, the inclination to experience negative emotion, can impact the way peer interactions function (Gottman, Katz, & Hoover, 1997; Watson & Clark, 1984). In families that neglect to teach their children proper ways to handle emotion, regulation of negative affect may be difficult. Moreover, when a child expresses more negative affect they are often viewed as a less desirable interaction partner, making it difficult for interpersonal relationships to form. Poor social interaction skills have been linked to other developmental outcomes including aggression, poor attention span, low academic achievement scores, depression, and deviant behavior (Patterson & Stoolmiller, 1991). Thus, the inability to regulate emotion may lead to a variety of other developmental problems.

**Emotion regulation among children of alcoholics.** Based on the environment of alcoholic homes, CoA may experience difficulty in regulating emotion. A responsive parent that teaches a child how to engage in perspective taking is associated with effective emotion regulation skills (Baumrind, 1971). In families where emotional distress is experienced, such as families of alcoholics, parents' demonstration of how to manage emotion may be incapacitated. In addition, frequent conflict is a common characteristic of alcoholic families (Connors, Donovan, & DiClemente, 2001). A child's reaction to conflict is often emotional distress due to the uncertainty about the parent

relationship (Cummings, 1987). Inability to appraise the situation may reduce their feelings of emotional security, thereby inhibiting their emotion regulation function (Davies & Cummings, 1994). Another common trait in families of alcoholics is manipulated or inconsistent communication, making it difficult for the child to interpret how to appropriately perceive communication and respond (Fonagy, Gergely, Jurist, & Target, 2002; Fonagy & Target, 1997). A parent's reaction to a child's emotional expression may demonstrate frustration and insecurity, potentially leading a child to expect these same characteristics of themselves. Similarly, the misunderstanding and poor management of emotion can have long term consequences for a child's future relationships (Fonagy et al., 2002). Thus, exposure to a distressed family environment during the early stages of development can have lasting effects on emotion regulation and individual well-being.

### **Self-Efficacy as a Marker of Resilience**

Self-efficacy is a cognitive variable that is reflective of resilience. *Self-efficacy* describes one's perception of their ability to accomplish a given task (Bandura, 1997). One's perception of self-efficacy can influence what goals are set, level of commitment to those goals, and the realization of accomplishments (Bandura, 2006). Individuals who believe they are capable of overcoming an adverse situation would also be said to have high self-efficacy in that context. The cognitive functions of self-efficacy impact the way individuals develop, adapt, and change (Boyer et al., 2000; Holden, 1991; Holden, Moncher, Schinke, & Barker, 1990; Moritz, Feltz, Fahrback, & Mack, 2000). Thus, self-efficacy is a relevant factor when considering resilience because it reflects how

individuals cognitively motivate themselves to do something regardless of environmental conditions.

Self-efficacy is one of many features in the cognitive system. According to the knowledge and appraisal personality architecture model (KAPA), self-efficacy entails both knowledge and appraisal (Cervone, 2004; Lazarus, 1991). *Knowledge* refers to the cognitive network of experiences people store as future references for how they view others, the environment, and themselves (Delia, 1977; Lazarus, 1991). *Appraisal* describes the way individuals evaluate their experiences with assistance from their existing knowledge. Perceived self-efficacy is situationally grounded, in that individuals may feel capable in one context and quite incapable in the next (Cervone, Mor, Orom, Shadel, & Scott, 2011). It is also important to note that self-efficacy is unique from other constructs such as self-esteem. A self-efficacy appraisal, or the perceived capabilities to perform, is different than considering one's overall self-worth (Cervone et al., 2011). Thus, self-efficacy appraisal involves reflection and decision making as part of the self-regulation process.

The knowledge and appraisal processes occur on both a cognitive and behavioral level. There are four ways that an individual gains psychosocial knowledge for future application: (1) mastery experience, or firsthand knowledge, is the primary influence on appraisals; (2) observation of other's experiences; (3) evaluation of emotional and psychological states; and (4) persuasive attempts from others that bolster or hinder one's self-appraisals (Bandura, 1977). There are also four ways that self-efficacy affects behavior (Bandura, 1997). First, self-efficacy influences the decision to participate or avoid certain events (e.g. Hackett & Betz, 1995). Second, appraisals impact the amount



of effort applied to the task (e.g. Cervone & Peake, 1986). Third, the level of confidence in completing the task influences one's level of anxiety (e.g. Bandura, Cioffi, Taylor, & Brouillard, 1988). Fourth, belief in one's ability affects performance (e.g. Cervone, Jiwani, & Wood, 1991). These factors suggest that higher self-efficacy appraisals encourage better self-regulation and overall success.

There are several positive and negative outcomes that result from self-efficacy. When individuals have low self-efficacy regarding a particular task and choose not to pursue it, they may be limiting themselves in terms of knowledge and skill (Betz, 2001; Betz & Hackett, 1981). Individuals who have high self-efficacy for an activity report less anxiety in completing the task (Bandura, Cioffi, Taylor, & Brouillard, 1988; Bandura, Taylor, Williams, Mefford, & Barchas, 1985). In contrast, those who frequently experience low self-efficacy are susceptible to depressive symptoms (Bandura, Pastorelli, Barbaranelli, & Caprara, 1999; Cutrona & Troutman, 1986). Self-efficacy also has a large influence on cognitive competence. Those who have higher self-efficacy demonstrate better performance on complex tasks (Cervone, Jiwani, & Wood, 1991; Cervone & Wood, 1995), problem-solving tasks (Artistico, Cervone, & Pezzuti, 2003), and tests of memory (Berry, West, & Dennehey, 1989). Conversely, those with low self-efficacy towards similar tasks may obsess over the challenge of the task and doubt their skill in accomplishing the task, thereby affecting their ability to perform (Elliott & Dweck, 1988). Taken together, high self-efficacy generates better self-regulation and accomplishment than low self-efficacy (Cervone et al., 2011). Thus, individuals who believe they are capable of accomplishing the task set before them may also demonstrate an increased ability to cope amidst hardship.

**Operationalizing self-efficacy.** Self-efficacy focuses on identifying particular goals and one's perceived ability to manage that behavior (Bandura, 1997, 2006). In other words, self-efficacy refers to the confidence individuals have in their ability to perform the behaviors that will help them to accomplish their goals. Because self-efficacy is a cognitive variable about beliefs, no real observational method can verify self-efficacy in interaction. Thus, the primary way to measure self-efficacy is through self-report. Self-report measures typically target a specific goal or behavior that the person feels efficacy to accomplish. In this particular study, adolescents will be asked to reflect on their ability to talk to their parent about their feelings and how capable they believe themselves to be in expressing their emotions. Parents will also be asked to provide their perspectives on the cognitive function of the adolescent as demonstrated by prosocial skill and self-regulation. The assessment of self-efficacy from two different viewpoints allows for greater understanding of an adolescent's confidence in their ability to communicate with their parent and express emotion.

**Communication patterns that promote self-efficacy.** A child's first experiences and perceptions of self-efficacy occur within the family. Parents provide the initial feedback that confirms children's academic ability, progress, and efforts (Epstein, 1990). Positive interactions with parents facilitate healthy levels of self-efficacy in children (Bandura, 1997; Meece, 1997). Family environments that engage children's curiosity and encourage skill development provide opportunities for children to gain knowledge and mastery experience (Meece, 1997). Families that provide few opportunities for parent-child interaction may result in lower levels of self-efficacy in children (Bandura, 1997).

Thus, families that have limited interaction or negative interaction may inhibit the successful development of adolescents' self-efficacy.

Relationships outside the home also influence self-efficacy. Observation of peers often motivates children to attempt an activity and aim for success (Schunk, 1987). Modeling others is a popular way for children to identify their level of self-efficacy in a variety of contexts, particularly among children who have an underdeveloped sense of self-efficacy (Bandura, 1986). Research on self-efficacy among school-aged children found that as a child progresses through school self-efficacy has the potential to decrease (Pintrich & Schunk, 1996) because the competition and comparison to others can cause added stress and affect one's perception of their academic abilities.

**Self-efficacy among children of alcoholics.** Self-efficacy may develop differently in CoA due largely to the communication issues that arise in alcoholic families. The variety of communication outcomes that a child is exposed to as a result of growing up in an alcoholic home could have direct impacts on their self-efficacy. Alcoholic parents are often inconsistent in their communication (Reed, 2006). Exposure to inconsistency in communication may create relational uncertainty between the alcoholic parent and child (Knobloch & Solomon, 2005). Uncertainty or inconsistencies in interactions with a parent may make it difficult for a child to establish whether they are capable, thereby damaging their perceptions of self-efficacy. The inconsistencies and uncertainty that result from interacting with the alcoholic parent may also lead to hypervigilance, a common characteristic among CoA that describes their heightened level of anxiety (Johnson & Stone, 2009; Sher, 1997). In addition, the appraisals of inadequacy towards interacting may render CoA unable to communicate effectively with others (cf.

Gudykunst & Nishida, 2001). Thus, the communication dynamics in an alcoholic home may result in low self-efficacy in children.

Non-alcoholic parents may have a very different influence on the development of child self-efficacy. Interactions with the alcoholic parent are likely to be unpredictable and a source of major anxiety for children who are trying to establish inferences on how to interact with others (Rangarajan & Kelly, 2006; Reed, 2006). Amidst the uncertainty, non-alcoholic parents may be able to provide predictable patterns of social interaction. Consistent and positive interactions with the non-alcoholic parent may make it possible for CoA to develop their social perspective-taking skills and in turn communicate effectively (cf. Berger, 1997). Consistent communication from the non-alcoholic parent could potentially provide the proper relational inferences necessary for the CoA to develop a healthy level of self-efficacy.

### **Impulsivity as a Marker of Resilience**

There is research to suggest that one's underdeveloped ability to self-regulate is evident in behavior; thus, I look to impulsive behaviors as another indicator of resilience. *Impulsivity* refers to a lack of inhibition regardless of the consequences (DeYoung, 2011). Recent research subscribes to the idea of impulsivity as a trait that appears to be related to the entire spectrum of externalizing behaviors (DeYoung, 2011; Kreuger et al., 2002). *Externalizing behaviors* describe the overarching umbrella for all outwardly motivated behavioral issues, including aggression, delinquency, and inattention (Achenbach, 1991; Bezdjian, Baker, Lozano, & Raine, 2009; Sher, 1991). Children who struggle with impulse control are often demonstrating other behavioral problems such as attention and aggression disorders (August, Realmuto, MacDonald, Nugent, & Crosby, 1996; Plutchik

& Van Praag, 1995), interpersonal problems (Hinshaw & Melnick, 1995), and learning deficiencies (Hinshaw, 1992). Individuals who are capable of controlling their behavior are viewed as positively adjusting to their environment, demonstrating flexibility and resourceful adaptation (Block & Kremen, 1996; Diener & Kim, 2004; Eisenberg & Spinrad, 2004). Research also suggests that youth participating in risk-taking at an early age, such as substance use and aggression, are found to demonstrate more impulsive behavior in the first years of life (Caspi & Silva, 1995). Taken together, adolescents who demonstrate more control and less impulsive behavior may also express higher levels of resilience.

Impulsivity is a complex concept that has left researchers debating the extent of cognitive, biological, and environmental influences. To understand how impulsivity serves to illustrate resilience, it is important to first address the cognitive features of impulsivity. To begin, one's personality involves higher-level and lower-level traits (DeYoung, 2011). An example of a higher-level trait is introversion. The lower-level traits for introversion may include communication apprehension, shyness, and being anti-social. Research on the hierarchy of traits led to the development of the Big Five, or the most relevant features of personality that includes: Extraversion, Neuroticism, Agreeableness, Conscientiousness, and Openness/Intellect (John, Naumann, & Soto, 2008). Impulsivity has been considered a facet, or lower-level trait, of each dimension, which reflects its complexity (Costa & McCrae, 1992; Eysenck & Eysenck, 1977; Goldberg & Rosolack, 1994; Hofstee, de Raad, & Goldberg, 1992; Markon, Krueger, & Watson, 2005; Zuckerman, 2005).

One of the most substantive assessments of impulsivity in relation to the Big Five structure considers four different types of impulsivity: urgency, lack of premeditation, lack of perseverance, and sensation seeking (Whiteside & Lynam, 2001). *Urgency* refers to the negative reactions individuals may have in response to a face-threatening encounter. Individuals who demonstrate urgency are likely to participate in impulsive behaviors in an effort to deal with a negative emotion regardless of the consequences (Whiteside & Lynam, 2001). *Lack of premeditation* describes the absence of forethought prior to an action or behavior. Researchers have long agreed that lack of premeditation is an important representation of impulsivity, adding that the action may occur without concern for potential consequences (Eysenck & Eysenck, 1977; Whiteside & Lynam, 2001). *Lack of perseverance* refers to one's inability to see a goal through to the end. This type of impulsivity suggests poor self-discipline, particularly towards tasks that are difficult or unexciting. *Sensation seeking* describes the appeal of thrill-seeking and risk-taking behavior and is one of the most prominent references to impulsive behavior. This facet of impulsivity encompasses two functions: (1) the enjoyment of exciting activities and (2) the willingness to try new experiences regardless of the risk. Each type of impulsivity may be linked with a particular psychopathology and manifest itself in a variety of behaviors. For instance lack of perseverance may be affiliated with attention deficit/hyperactivity disorder as demonstrated by the difficulty to stay on task and ease of distraction. Similarly, sensation seeking may manifest itself in a substance use disorder. Thus, the four facets of impulsivity stem from overarching personality dimensions that play a unique role in the development of various psychopathological disorders made visible in a variety of behaviors.

The features of one's environment also influence impulsive tendencies. Behavior regulation begins at infancy as children adopt and adapt to family norms of interaction (Kopp & Neufeld, 2003). Parent demonstrations of appropriate behavior, as well as feedback regarding the child's behavior all influence the development of behavior regulation (Calkins, 1994). Early exposure to severe stressors such as parental neglect and substance abuse are associated with adverse behavioral outcomes (Anda et al., 2006; Middlebrooks & Audage, 2008; Shonkoff, Boyce, & McEwen, 2009). Epigenetic research found that individuals who experienced maltreatment in childhood showed a decrease in their stress response gene as evidenced by changes to their hippocampus (biological influence), a crucial component of the brain's limbic system that regulates memory and spatial function (McGowan et al., 2009; Romer et al., 2010). As a result, these individuals demonstrated externalizing problems when later confronted with stressful stimuli. These findings suggest that experiences may have long-term implications on biological and cognitive functioning that in turn affect proper behavior regulation. Taken together, environmental experiences may impact the development of proper behavior regulation thereby affecting self-control and promoting externalizing behaviors.

**Operationalizing impulsivity.** Self-report and observational methods help to measure the practice of impulsive behavior since it is both cognitive and behavioral in nature. Parents will be asked to reflect on children's impulsive behavior and interpersonal interactions. Children will complete the same set of questions about their own behavioral experiences. Self-report from parents will also be collected following the interaction to assess impulsive behavior in conversation. Third party observations of the interaction will

examine the appropriateness of behavior and the attentiveness of the child. The combination of both perspectives and observations of behavior allow for making inferences about the existence of impulsivity and the extent of impulsive behaviors.

**Communication patterns that regulate impulsivity.** Interactions between parent and child may be an important predictor of behavioral development. A lack of parental responsiveness may negatively impact early childhood behaviors and play an important role in the development of externalizing problems as children search for ways to gain their parent's attention and affection (Loukas, Fitzgerald, Zucker, & von Eye, 2001). Early research on parent child interactions found a strong link between maternal stress and lack of child nurturance, which may negatively impact brain development and functioning (Meany, 2001; Olds et al., 1997). On the other hand, children who received skill based training that emphasized reward of good behavior in an effort to minimize impulse disorders such as attention deficit hyperactivity disorder (ADHD), reduced impulsive tendencies and improved executive functioning (Barry & Welsh, 2007; Petras et al., 2008).

Children growing up in families experiencing heightened levels of conflict have also been known to engage in externalizing behaviors (Patterson & Capaldi, 1991). Frequent exposure to conflict may teach children that aggressive behaviors and lashing out are appropriate ways to express their displeasure. Children who demonstrate externalizing behavior also tend to have negative emotions and poor regulation (Eisenberg, Fabes, & Murphy, 1996). Children learn how to self-regulate by modeling the behavior in their environment and their awareness of contextual demands (Posner & Rothbart, 2000). Children who demonstrate effective self-regulation are more likely to



have positive interactions with family and peers (Eiden, Edwards, & Leonard, 2007). Conversely, children who demonstrate externalizing problems are more likely to struggle with peer interactions (Calkins, 1994; Campbell, 1994; Spira & Fischel, 2005). Thus, interactions within the family may establish a norm for behavior that encourages impulsivity.

**Impulsivity among children of alcoholics.** Behavioral problems are a common outcome as a result of growing up in an alcoholic home. A common characteristic among alcoholics is an increase in depressive symptoms (Regier et al., 1990). In families with depressed parents, children are more likely to develop externalizing problems due to less positive family interactions and more familial conflict (Campbell, March, Pierce, Ewing, & Szumowski, 1991; Chassin, Rogosch, & Barrera, 1991; Billings & Moos, 1983; Johnson & Jacob, 1995). Furthermore, the distress commonly experienced in families of alcoholics may affect interactions between parent and child, such that they are less involved and fail to enact discipline, thereby perpetuating the likelihood for negative behavioral outcomes (Patterson, 1982; Patterson & Capaldi, 1991). Children of substance abusing parents also commonly display underdeveloped emotional and attentional regulatory abilities resulting in an increase in impulsivity (Cole, Michel, & Teti, 1994; Fitzgerald et al., 1993; Tarter & Vanyukov, 1994). Thus, the conditions in families of alcoholics have the potential to influence the adaptive or maladaptive impulses of CoA.

### **Conclusion**

In this chapter, I reviewed the characteristics of families of alcoholics and discussed general outcomes of children of alcoholics. I then introduced the concept of resilience and described how emotion regulation, self-efficacy, and impulsivity are

markers of resilience. I also explained how each variable may operate in families more generally and in families of alcoholics specifically, potentially resulting in both positive and negative outcomes. Thus, the information provided begs the question, what makes CoA resilient and how is it different compared to children of non-alcoholic parents? Chapter three aims to answer that question by focusing on the features of parent-child communication dynamics that may foster or inhibit resilience.

### **CHAPTER THREE**

Families are essential to the growth and development of well-adjusted children (Bowlby, 1988). In particular, communication between parents and children is instrumental in children's socialization and adjustment. There are a variety of theoretical perspectives that help to characterize the role of family dynamics in shaping outcomes for children. Two communication frameworks are especially salient for characterizing the communication dynamics that predict adolescent resilience: Baumrind's dimensions of parental communication (1991) and Gottman's (2001) emotion regulation theory. Collectively, this chapter aims to identify how parents' communication behavior influences emotional, cognitive, and behavioral outcomes for children in families of alcoholics compared to families of non-alcoholic parents.

#### **Baumrind's Dimensions of Parental Communication**

Baumrind (1991) identified two dimensions for describing parental communication behaviors towards children: responsiveness and control. *Parental responsiveness* refers to verbal and nonverbal communication that is attentive to a child's needs and supportive of a child's individuality (Peterson & Hann, 1999). *Parental control* describes communication behaviors that firmly regulate children's behavior and emotions. The following paragraphs review the specific verbal and nonverbal behavior associated with each dimension, the typology developed to assess parenting styles, and how each dimension may influence adolescent resilience as demonstrated by their emotional, cognitive, and behavioral outcomes.

To understand how each dimension may function in families it is important to highlight their specific communication features beginning with responsiveness. Generally,

responsiveness refers to communication that provides warmth and support from parent to child (Peterson & Hann, 1999). Vocal tone, or fluctuations in pitch and rate of speech, is a way for parents to demonstrate responsiveness when interacting with their child. These alterations in language enable parents to gain child attention and participation in language practices (Segrin & Flora, 2011; Van Egeren & Barratt, 2004). Gaze is another form of nonverbal communication that reflects responsive communication. Eye contact or gaze, illustrates focus and care between parent and child. This type of responsiveness is associated with more positive vocalizations and an increase in language acquirement of children in their first years of life (Keller, Schoelmerich, & Eibl-Eibesfeldt, 1988; Deak, Flom, & Pick, 2000). Parental touch also signifies responsive communication. Touch may include handholding or a simple embrace and has a strong influence on the emotional outcomes of children (Hertenstein, 2002). Verbal behaviors also demonstrate responsiveness. Parents who are consistent, direct, and sincere in their communication with children minimize the anxieties that may occur throughout child development and into adulthood (Segrin & Flora, 2011). Thus, responsive communication has the potential to facilitate healthy development and long-term well-being.

The control dimension offers a separate set of distinct verbal and nonverbal communication behaviors. Research on parent-child interaction indicates that there are two types of controlling communication, psychological and behavioral. *Psychological control* describes the parents' control over emotions in an effort to change child behavior (Aunola & Nurmi, 2005; Barber, 1996). There are three forms of psychological control that include: love withdrawal, disappointment, and intrusiveness. *Love withdrawal* describes parental threats of reducing love and affection in an effort to punish the child

(Hoffman, 1980). Parents may do so by threatening neglect or abandonment.

*Disappointment* is an effective form of control with children who seek parent approval (Segrin & Flora, 2011). *Parental intrusiveness* refers to the over-involvement of parents, which enables them to manipulate emotions and reduce child independence (Barber & Harmon, 2002; Peterson & Hann, 1999). *Behavioral control* is communicated through physical and/or explicit demands (Barber, 1996; Galambos, Barker, & Almeida, 2003). This type of control emphasizes the parents' power over the children instead of using reason to seek compliance (Baumrind, 1995). Verbal examples of behavioral control may include "go to bed" or "because I said so." Hitting, grabbing, or spanking are examples of nonverbal behavioral control. Children exposed to psychological and behavioral control are more likely to develop low self-esteem, demonstrate less obedience, and in some extreme cases become substance abusers (Garbarino & Gilliam, 1980; Grolnick et al., 2002). Thus, behavioral control may have more adverse implications for child development and well-being.

A combination of these dimensions led to the development of a parenting style typology consisting of four parenting styles: authoritative, permissive, authoritarian, and neglecting (Baumrind, 1991; Macobby & Martin, 1983). *Authoritative parents* are high in responsiveness and control, demonstrating a balance of both nurturance and discipline (Baumrind, 1995). Parents high in responsiveness and low in control are considered *permissive parents*, where nurturance is emphasized and few limits are placed on child behavior. *Authoritarian parents* are high in control and low in responsiveness. These parents enforce structure and demonstrate lower levels of empathy (Baumrind, 1971). Lastly, *neglecting* parents are low in responsiveness and control, demonstrating an almost

indifference towards the needs of their children and are often emotionally unavailable (Feldman, 2009). Baumrind's typology provides a good framework for viewing individual parenting styles rather than communication patterns of the entire family system.

Research on families of alcoholics suggests that there may be substantial differences in the ways that alcoholic and non-alcoholic parents communicate with their children. In one study researchers found that each parent demonstrated a different communication orientation (Rangarajan & Kelly, 2006). Alcoholic parents demonstrated authoritative parenting and expected children to conform to their communication behavior and beliefs. The non-alcoholic parent however, embraced a conversation orientation where children participated in decision-making and their individuality was supported. Another study established similar findings, in which paternal communication orientations were positively associated with child eating disorders, whereas maternal communication had no adverse effect (Miller-Day & Marks, 2006). Along these same lines, alcoholic and non-alcoholic parents may demonstrate different parenting styles of responsiveness and control, thereby influencing the resilience outcomes of children. To examine how responsiveness and control may operate in families of alcoholics compared to families of non-alcoholic parents and the implications of these parenting styles on adolescent outcomes, the following sections introduce responsiveness and control as predictors of emotional, cognitive, and behavioral markers of resilience.

### **Parental Responsiveness and Control as Predictors of Adolescents' Emotional Resilience**

Exposure to responsive parental communication may be constructive in promoting children's resilience through emotion regulation. Parents who demonstrate responsive communication patterns encourage children to self-regulate and develop independence (Baumrind, 1991). One way parents demonstrate this is through their vocal tone. As parents alter their communication style to elicit engagement with their child, the vocal alterations illustrate expression of emotion (Trainor, Austin, & Desjardins, 2000). In addition, demonstrations of affection through gaze and touch promote expression of feelings and encourage supportive interactions (Hertenstein, 2002; Keller, Schoelmerich, & Eibl-Eibesfeldt, 1988). Children of responsive parents often exhibit healthy emotion regulation by demonstrating effective support-seeking strategies and positive emotions. Demonstrations of sympathy and problem-solving attempts from parents were positively associated with lower levels of anxiety and distress in children (Eisenberg, Fabes, Schaller, Carlo, & Miller, 1991). Parents who suggest different ways of managing a situation facilitate better coping skills in children (Kliewer, Fernow, & Miller, 1996). Taken together, this evidence suggests that responsive parental communication may help adolescents develop better emotion regulation ability and more resilience. Thus, I propose the following hypothesis:

*H1:* Parental responsiveness is positively associated with adolescents' emotion regulation ability.

On the other hand, parents who assert more control in their communication may inhibit a child's ability to regulate emotion and behavior (Houck & Lecuyer-Maus, 2004). Children exposed to an authoritarian parenting style and extreme control have the potential to develop over-arousal or poor regulation abilities (Calkins, 1994). Negative

behavior from a parent such as psychological or behavioral control, has been associated with a slower recovery of vagal tone following stressful situations (Calkins, Smith, Gill, & Johnson, 1998). In families of alcoholics, expression of feelings and affection for other family members is often suppressed (Jones & Houts, 1992). As a result, families of alcoholics encounter high levels of conflict and difficulty expressing positive emotion (Johnson, 2001). These studies indicate that family environments characterized by high levels of parental control may discourage healthy emotion regulation for adolescents. Based on these assumptions the following hypothesis is presented:

*H2:* Parental control is negatively associated with adolescents' emotion regulation ability.

There is evidence to suggest that families of alcoholics demonstrate less responsive communication and more control than families of non-alcoholic parents. Characteristics of families of alcoholics include explosive and inflexible discipline, along with low supervision and involvement (Lam et al., 2007; Stanger et al., 2004). The lack of involvement and rigidity present in families of alcoholics may make it difficult for CoA to express emotions and receive support, which may lead to higher levels of stress and emotional reactivity (Bolger & Amarel, 2007; Terry, Rawle, & Callan, 1995). Therefore, the predicted associations may differ for adolescents with an alcoholic parent versus those without an alcoholic parent. Thus, I propose the following research questions:

*R1:* Does a family's alcohol status moderate associations between emotion regulation and parents' responsiveness and control?



## **Parental Responsiveness and Control as Predictors of Adolescents' Cognitive Resilience**

Parent communication style plays a large role in children's cognitive development. For example responsive parenting promotes positive self-esteem in children (Noller, 1995). When children express concern or unease, a responsive parent counters with assurances that can bolster self-confidence (Segrin & Flora, 2011). The encouragement and praise that children receive for their accomplishments contribute to the belief that they can accomplish their goals. Thus, these types of positive interactions between parent and child promote healthy levels of self-efficacy in children (Bandura, 1997; Meece, 1997). Furthermore, when families encourage independence and skill-building children are exposed to a variety of experiences that add to their body of knowledge, thereby increasing self-efficacy (Meece, 1997). Parent-child interactions that lack this type of engagement may have the opposite effect resulting in lower levels of child self-efficacy (Bandura, 1997). Taken together, the following hypothesis is presented:

*H3:* Parental responsiveness is positively associated with adolescents' self-efficacy.

A controlling communication environment may have a very different influence on child outcomes. Children who experience love withdrawal from their parents often report feeling guilty, have low self-esteem, and struggle to trust others (Grolnick et al., 2002; Maccoby & Martin, 1983). Over-involvement from parents may affect how children view their own abilities, potentially resulting in feelings of incompetence (Grolnick et al., 2002). Moreover, high levels of control in parenting produce depressive symptoms in children (Baumrind, 1971; Feldman, 2009). Children who have depressive symptoms are

unlikely to have confidence in their ability to achieve their goals and will have low self-efficacy. To explore this further, the following hypothesis is presented:

*H4:* Parental control is negatively associated with adolescents' self-efficacy.

The often volatile environment experienced in families of alcoholics may impede parents' ability to demonstrate responsive communication and instead require that they rely on strict discipline and rule enforcement to maintain family function (Lam et al., 2007; Stanger et al., 2004). Given that the environment may be more hostile in families of alcoholics, it is possible that CoA experience self-efficacy differently than families of non-alcoholic parents. As a result of the dysfunction and poor parent-child interaction many CoA may struggle with poor self-esteem and low levels of depression (Hussong & Chassin, 1997; Rangarajan & Kelly, 2006), which may render CoA unable to recognize their full potential in accomplishing small tasks and larger goals. Thus, the following research question is proposed:

*R2:* Does a family's alcohol status moderate associations between self-efficacy and parents' responsiveness and control?

### **Parental Responsiveness and Control as Predictors of Adolescents' Behavioral Resilience**

Responsive communication from a parent plays a large role in shaping children's behavioral outcomes. Toddlers of parents who were responsive, discussed emotions openly, and provided support as well as independence, were more capable of self-control and attentiveness than toddlers exposed to an insensitive parenting style (Bernier, Carlson, & Whipple, 2010; Calkins & Johnson, 1998). Children with insensitive parents were more likely to exhibit distress during activities that asked the children to delay

gratification, such that they acted out more than children with responsive parents did. These same environments also have implications on brain development in children, hindering the biological circuitry necessary to exercise healthy self-control (Tarullo, Obradović, & Gunnar, 2009). Taken together, this research suggests that resilient behavioral outcomes are more common under conditions of responsive parental communication and that impulsive and externalizing behaviors are more likely with unresponsive parents. Therefore, I present the following hypothesis:

*H5:* Parental responsiveness is negatively associated with adolescents' impulsivity.

A healthy balance of both responsiveness and control has the potential to produce positive academic, behavioral, and self-confidence outcomes (Domitrovich & Bierman, 2001; Mize & Petit, 1997; Segrin & Flora, 2011). Conversely, parents who emphasize control generate negative outcomes for children, including dependency, passive aggressiveness, and increased levels of aggression (Baumrind, 1995; Miller-Day & Lee, 2001; Segrin & Flora, 2011; Wilson & Whipple, 2001). Withdraw behaviors are also common in children from families that utilize parental control (Baumrind, 1971; Feldman, 2009). Along these lines, children may show more impulsivity when they encounter controlling parental communication. Thus, the following hypothesis is proposed:

*H6:* Parental control is positively associated with adolescents' impulsivity.

Impulsivity may develop differently in children with an alcoholic parent compared to children with non-alcoholic parents due to the parent-child interactions. Parenting behaviors in families of alcoholics may be less responsive in nature based on CoA's reports of parental neglect (Schade, 2006). Neglectful environments may impede a

child's ability to develop self-control due to the lack of interaction and demonstration of appropriate behavior (Shackman, Wismer Fries, & Pollak, 2008). As a result, CoA may develop poor internalizing and externalizing behaviors (Hill et al., 2008; Shuckit et al., 2007). Based on this reasoning, the following research question is presented:

*R3:* Does a family's alcohol status moderate associations between impulsivity and parents' responsiveness and control

### **Gottman's Emotion Regulation Theory**

Another framework that is applied in this study is Emotion Regulation Theory (Gottman, 2001). From a meta-emotion perspective, this theory suggests that parents address children's emotional experiences in one of two ways during interaction: emotion coaching and emotion dismissing (Cupach & Olson, 2006; Gottman, Katz, & Hooven, 1996). *Emotion coaching* involves expressions of empathy and views children's communication of emotion as an opportunity for parents to teach their children about appropriate and inappropriate emotional reactions. *Emotion dismissing* encompasses criticizing or scolding children for their experience and expression of emotion.

The theory originates from a series of detailed interviews with parents about emotion. Analysis of the interviews found that parents exhibit emotion coaching communication in several ways: (1) parents would demonstrate awareness of their child's emotions, even subtle expressions of emotion; (2) expression of emotion was viewed as an opportunity to teach the child how to appropriately address the emotions being experienced; (3) parents assisted children in the vocabulary necessary to describe their emotions; (4) parents would attempt to empathize and demonstrate understanding of the child's emotions; and (5) parent and child would work together to address the emotion,

including goal setting and limiting inappropriate behavior (Cupach & Olson, 2006; Gottman, Katz, & Hooven, 1997). On the other hand, emotion dismissing communication was evident by: (1) parents' inability to describe emotions; (2) lack of awareness of subtle expressions of emotion; and (3) hostile reactions to negative emotions.

Each type of meta-emotion encompasses specific parenting behaviors. Emotion coaching parents often adopt scaffolding/praising behaviors (Gottman, Katz, & Hooven, 1997). *Scaffolding/praising* refers to an engaged and warm teaching style between parent and child that utilizes structure when offering support. A parent will introduce a child to a task with some guidance, encourage their independence in completing the task, and then praise the child for their successes. Emotion dismissing parents employ derogatory behaviors. *Derogatory* parenting does not look for teaching opportunities but instead embraces opportunities for criticism. In this form of parenting, parents may express frustration when working on a task with their child and complete the task for them. In some cases a child's mistake leads to ridicule and disparagement (Cupach & Olson, 2006).

There are a number of outcomes affiliated with an emotion coaching parenting style. Children growing up in an emotion coaching environment demonstrate prosocial skills, academic competence, attentiveness, and good health (Gottman, Katz, & Hooven, 1997). The reason for these outcomes is the facilitation of emotional intelligence by parents (Goleman, 1995; Salovey & Mayer, 1990). A high emotional intelligence demonstrates the ability to regulate emotion (Cupach & Olson, 2006). Thus, when presented with a stressful situation these children are much more capable of regulating themselves and appropriately managing their emotions and behaviors.

Emotion coaching communication also influences a child's regulatory make-up. Children with emotion coaching parents have a higher basal vagal tone, which correlates with an ability to be attentive and regulate emotion (Fox, 1989; Porges, 1973). A higher vagal tone makes it possible to respond faster to stimuli, as well as returning to a calming state, resulting in a faster recovery when confronted with stressful situations (Gottman & Katz, 2002). Emotion coaching children also appear more capable at suppressing vagal tone, or regulating their emotion, requiring less down regulation from parents when the child behaves inappropriately or becomes overly excited (Gottman & Katz, 2002; Gottman, Katz, & Hooven, 1997). As a result, children exposed to some form of emotion coaching are found to be better equipped to handle a stressful environment such as high levels of conflict (Gottman, Katz, & Hooven, 1997). Thus, this type of communication can produce a biological buffer to adverse situations, thereby facilitating resilience.

### **Emotion Coaching and Emotion Dismissing as Predictors of Adolescents' Emotional Resilience**

Children are better able to manage their emotions when exposed to emotion coaching parenting. Children with parents that express acceptance of emotions and take a teaching approach to managing emotion demonstrate successful regulation (Eisenberg, Spinrad, & Eggum, 2010; Gottman, Katz, & Hooven, 1997). Research on mothers who use assertive power strategies to address their child's emotions found a decrease in child patience for delay of gratification (Houck & Lecuyer-Maus, 2004), whereas parents who attempted to teach their child about emotions by using a balance of control and empathy techniques found an increase in child patience. Adolescents who have at least one parent that encourages open communication have been found to adjust more successfully when

exposed to adverse situations (Moe, Johnson, & Wade, 2007; Rangarajan & Kelly, 2006).

Taken together, these findings endorse the following hypothesis:

*H7: Parents' emotion coaching behavior is positively associated with adolescents' emotion regulation.*

The opposite result may occur in children growing up with a parent that demonstrates emotion dismissing behavior. Emotion dismissing communication entails avoidance of negative emotion, difficulty describing emotion, and lack of awareness for lower intensity emotions (Lukenheimer, Shields, & Cortina, 2007). Children exposed to this type of parental communication often demonstrate poorer emotion regulation (Gottman, Katz, & Hooven, 1996). Parents who avoid discussing negative emotions with their children may inhibit healthy emotional development making it difficult for children to regulate themselves. Thus, the following prediction is made:

*H8: Parents' emotion dismissing behavior is negatively associated with an adolescent's emotion regulation.*

There is evidence to suggest that alcoholic families may pay less attention to the emotional needs of children and, instead, demonstrate a more emotion dismissing communication behavior. In families of alcoholics, children are often exposed to neglect and a fluctuation between messages of warmth and rejection (Schade, 2006; Woititz, 1985). Previous studies document parenting practices in families of alcoholics as being low in supervision and involvement as well as offering minimal nurturance (Lam et al., 2007; Stanger et al., 2004). Members of the alcoholic family, including children, often report expressing fewer feelings and having less regard for other family members (Jones & Houts, 1992). This type of dysfunctional environment suggests that CoA are more

likely to experience an emotion dismissing parenting style and, in turn, a higher potential for negative emotional outcomes. With that in mind, I present the following research question:

*R4:* Does a family's alcohol status moderate associations between emotion regulation and parents' emotion coaching and emotion dismissing behavior?

### **Emotion Coaching and Emotion Dismissing as Predictors of Adolescents' Cognitive Resilience**

Supportive communication may also facilitate positive cognitive outcomes for adolescents. Emotion coaching parents promote expression of feelings and facilitate healthy ways of addressing both positive and negative emotions (Hertenstein, 2002). Children who learn to successfully regulate emotion are capable of remaining calm during stressful situations (Lukenheimer, Shields, & Cortina, 2007). As a result, these children develop prosocial skills and academic competence (Gottman, Katz, & Hooven, 1997). As children gain experience regulating their emotions in response to adverse circumstances, they are likely to build confidence in their ability to cope with a variety of negative experiences. Thus, emotion coaching parents are likely to promote self-efficacy to the extent that they position children to experience success in their emotional and behavioral regulation. Based on this assumption I propose the following hypothesis:

*H9:* Parents' emotion coaching behavior is positively associated with adolescents' self-efficacy.

Emotion dismissing communication has been linked to poor emotion regulation (Gottman, Katz, & Hooven, 1996). Children who struggle to regulate emotion often



resort to distraction or rumination (Gross & Thompson, 2006). Distraction describes the shift in attention to something other than the trigger of the emotional stimulation (Stifter & Moyer, 1991). Rumination is the intense focus on feelings that are elicited by the stimulation (Wegner & Bargh, 1998). Depressive symptoms are more severe and last longer when individuals ruminate on sad experiences (Just & Alloy, 1997; Nolen-Hoeksema, 2000). Similarly, depressive symptoms reduce perceptions of one's self-efficacy (Muris, 2002). Thus, the cognitive and emotional outcomes that correlate with emotion dismissing behavior are likely to diminish adolescents' confidence in their ability to communicate effectively. Accordingly, the following hypothesis is proposed:

*H10:* Parents' emotion dismissing behavior is negatively associated with adolescents' self-efficacy.

Families of alcoholics often experience high levels of conflict and stress (Straussner & Fewell, 2011). As a result, parents often neglect the needs of their children and communicate with less sensitivity (Das Eiden, Chavez, & Leonard, 1999; Schade, 2006). CoA growing up in this environment are at an increased risk for developing depressive symptoms, high levels of anxiety, low self-esteem, and poor social competence (Eiden et al., 2009; Rangarajan & Kelly, 2006). These conditions may make it difficult for CoA to develop efficacy in the face of difficult circumstances, as compared to children without an alcoholic parent. Thus, I propose the following research question:

*RQ5:* Does a family's alcohol status moderate associations between self-efficacy and parents' emotion coaching and emotion dismissing behavior?

### **Emotion Coaching and Emotion Dismissing as Predictors of Adolescents'**

#### **Behavioral Resilience**

The management of emotions as demonstrated by the parent can also have implications for the behavior demonstrated by adolescents. Emotion coaching communication promotes positive attachment bonds between parent and child (Waters et al., 2010) and secure attachment between parent and child has been found to promote effective self-regulation (Gilliom, Shaw, Beck, Schonberg, & Lukon, 2002). Children with emotion coaching parents demonstrate less aggression and fewer behavioral problems, even when exposed to high levels of conflict (Gottman, Katz, & Hooven, 1996; Gottman & Katz, 1995; Katz & Gottman, 1997). Children often model the behavior of their parents (Denham, 1998; Eisenberg, Cumberland, & Spinrad, 1998); therefore, exposure to positive interactions may reduce the likelihood for children to develop externalizing problems such as impulsivity. Along this line of reasoning, the following hypothesis is proposed:

*H11:* Parents' emotion coaching behavior is negatively associated with adolescents' impulsivity.

Conversely, exposure to emotion dismissing communication may increase the likelihood for externalizing problems. Emotion dismissing parents may exhibit frustration or avoidance when a child expresses negative emotions (Cupach & Olson, 2006). When parents display more anger in their interactions, children tend to exhibit more problems associated with externalizing behaviors as they attempt to model their parents' behaviors (Denham et al., 2000). Similarly, adolescents demonstrate an increase in negative behaviors when parents avoid or fail to acknowledge children's expression of negative emotion (Eisenberg, Fabes, & Murphy, 1996). Given that children tend to act out when their parents attempt to suppress emotional expression, I expect that emotion dismissing

behavior is associated with increased impulsivity. Therefore, I present the following hypothesis:

*H12:* Parents' emotion dismissing behavior is positively associated with adolescents' impulsivity.

Given that the features of an alcoholic home often demonstrate emotion dismissing parenting behaviors, CoA may be more prone to impulsive behavior than children growing up in families without an alcohol use disorder. The impulsive and aggressive behaviors commonly found among CoA may be the result of insensitive parenting (Cole, Michel, & Teti, 1994; Fitzgerald et al., 1993; Hussong & Chassin, 1997; Tarter & Vanyukov, 1994). A lack of instruction in terms of how to properly manage emotions and behave in an appropriate manner may result in CoA acting out more than children of non-alcoholic parents. Based on this reasoning, the following research question is presented:

*RQ6:* Does a family's alcohol status moderate associations between impulsivity and parents' emotion coaching and emotion dismissing behavior?

### **Conclusion**

In this chapter, I presented two theoretical frameworks to guide this research: Baumrind's dimensions of parental communication and Gottman's emotion regulation theory. I then reviewed how the communication features of each construct have the potential to facilitate or hinder resilience in terms of emotion, cognition, and behavior. In doing so, I proposed several hypotheses that explore the relationship between specific types of communication and the emotional, cognitive, and behavioral markers of resilience in this study. I also posed several research questions that query the extent to

which the predicted associations may differ for children of alcoholics versus children of nonalcoholic parents. The next chapter describes the methods and procedures of a study that was designed to investigate these hypotheses and research questions.

## **CHAPTER FOUR**

In an effort to examine how parent-child communication predicts resilience among children of alcoholic parents and children of non-alcoholic parents, the proposed study utilized a combination of methods, including self-report, observational, and physiological measures. A total of 60 parent-adolescent dyads, 30 from families of non-alcoholic parents and 30 from families with alcoholic parents, participated in the study. Dyads from non-alcoholic families were recruited by posting announcements about the study in various social media platforms, posting informative flyers (see Appendix A) about the study in local businesses, and relying on snowball sampling by having participants tell other families about the study. I recruited parent-adolescent dyads from alcoholic families through a variety of organizations and agencies in New Jersey, Texas, and California that are geared towards high-risk families (Integrity House, Al-Anon World Services, New Hope Outpatient Center, PRAB Family Success Center, National Council on Family Relations, and the Middlesex County Coalition for Healthy Communities).

Eligibility for the non-alcoholic parent-adolescent dyad required that (a) the adolescent child be between the ages of 12 and 19; (b) parents were either married and both live in the same home with the child, or unmarried but share custody of the child and visitation with the non-residential parent occurred at least once a month; (c) both the parent and the adolescent speak, read, and write in English; and (d) the adolescent was not taking medication for any emotional or psychological disorders. The alcoholic parent-adolescent dyads eligibility required that (a) the adolescent child be between the ages of 12 and 19; (b) at least one of the adolescent's parents identified as an alcoholic by either

themselves or the other parent; (c) parents were either married and both live in the same home with the child, or parents were unmarried but share custody of the child and visitation with the non-residential parent occurred at least once a month; (d) both the parent and the adolescent speak, read, and write in English; and (e) the adolescent was not taking medication for any emotional or psychological disorders. For families with an alcoholic parent, the parent who participated could be either the alcoholic parent or the nonalcoholic parent. Both the parent and the adolescent completed pre-interaction self-report measures, two video-taped interactions, and post-interaction self-report measures. In addition, the adolescents wore a heart rate monitor for certain portions of the study to measure variation in vagal tone.

### **Sample**

The sample consisted of 60 parent-adolescent dyads, 30 from families with at least one alcoholic parent and 30 from families with no alcoholic parent (see Table 1). Among the adolescents who participated, there were 24 males (40%) and 35 females (58.3%) with one adolescent declining to report. The mean age of adolescent participants was 14.8 years ( $SD = 1.93$ ), with a range of 12 to 19 years. The majority of adolescents were Caucasian (70%), followed by African American (10%), Hispanic/Latino (6.7%), Asian (1.7%), Native American (1.7%), and Other (6.7%). Two adolescents' declined to report (3.3%).

Of the parents who participated, there were 14 males (23.3%) and 45 females (75%) with one parent who declined to report. The mean age of parent participants was 46.62 years ( $SD = 7.76$ ), with a range of 27 to 63 years. The majority of parents were Caucasian (80%), followed by African American (10%), Hispanic/Latino (8.3%), and

Indian (1.7%). In terms of parent education, 11.7% completed high school, 8.3% had some college, 13.3% had a 2-year college degree, 25% had a 4-year college degree, 26.7% had a master's degree, 3.3% had an advanced degree in their field (e.g., Ph.D., M.D., etc.), and 10% reported other. One parent declined to report their highest level of education. For current household income, 8.3% reported less than \$25,000, 10% reported \$26,000 to \$50,000, 18.3% reported \$51,000 to \$75,000, 10% reported \$76,000 to \$100,000, 6.7% reported \$101,000 to \$125,000, and the majority of families had a household income of more than \$126,000 (43.3%), with two families declining to report. When asked about the relationship status of parents, the majority reported being involved in a committed relationship with the child's other parent (85%). Among parents who were romantically involved with the child's other parent, 3.3% claimed to be dating but not married, 80% claimed to be married, 3.3% claimed to be in a common law marriage, and 13.3% declined to report. For the 15% of participants not involved with their child's other parent 37.5% reported being separated, 37.5% reported divorce, 12.5% reported being widowed, and 12.5% reported never having a committed relationship.

In the dyads from families with an alcoholic parent, the participating parent identified as an alcoholic in 6 dyads and the non-participating parent was identified as the alcoholic in 13 dyads. In 11 dyads, both parents had an alcohol use disorder. The alcoholic parent(s) consumed an average of 23.5 alcoholic beverages in a typical week. Of the parents who participated in both groups, the majority reported never being in recovery for a substance abuse problem (81.6%). Of the parents who reported being in recovery or that their child's other parent was in recovery (15%), the mean length of recovery was 6 to 10 years.

## **Procedures**

Dyads who were eligible participated at the interaction laboratory in the School of Communication and Information at Rutgers University, or at a public location made by arrangement and with IRB approval. Prior to participating in the study, parent and adolescent dyads were screened for medication that may affect regulatory behaviors and asked to refrain from caffeine, exercise, and smoking at least 2 hours prior to the interaction, and instructed to eat something at least two hours prior to the interaction (Udo et al., 2009). Upon arrival to the laboratory, the parent and adolescent provided informed consent to participate in the study (see Appendix B & C), then the parent and the adolescent independently completed questionnaires about perceptions of the family and communication behaviors within the family. Adolescents were asked additional questions about their resilience, ability to regulate emotion and behavior, and their feelings toward each parent. The parent was also asked to report on their own and the other parent's health behaviors regarding alcohol, perceptions of their child's resilience, and perceptions of their communication with the child. The parent and adolescent completed the online questionnaires on computers in separate rooms, on iPads in separate rooms, or filled out a hardcopy version of the questionnaire if that was their preference. The researcher was available to assist participants with any questions they had during the survey. Prior to the start of the study, two adolescents aged 12 and 13 were each paid \$20 to complete the surveys and provide feedback to ensure that the survey items were appropriate for the age group of our sample and easy to understand.

After completing the surveys, the parent and the adolescent were asked to participate in an interaction task where they discussed a happy experience and an



unhappy experience (Afifi, Granger, Denes, Joseph, & Aldeis, 2011; Fivush, 1994). Prior to the interaction, adolescents were asked to think of three happy experiences and three unhappy experiences that had happened to them within the past two weeks and write these experiences down on separate note cards as possible discussion topics (McLaren & Pederson, 2014). If the adolescent could not think of anything occurring in the past two weeks, they were instructed to write down an experience from any point in time. They were then asked to pick one experience from each topic, happy and unhappy, to discuss with their parent. The order of the happy and unhappy topic conversations were alternated at random to avoid ordering effects. A timer was set for the interaction allowing for 5 minutes of discussion on each topic.

Prior to the start of the interaction, adolescents were asked to wear a small sensor (or plethysmograph) on their pointer finger or ear lobe to measure heart beat pulses during the interactions. Adolescents were asked to minimize movement upon application of the sensor. Following completion of the pre-interaction survey, a baseline measure of heart rate was collected to familiarize participants with the heart rate measuring process prior to the interaction. Following each interaction, the adolescent was asked to sit quietly for 5 minutes wearing the heart rate sensor to obtain a measure of heart rate variability. Interactions were video-taped to later be coded for the dimensions of responsiveness, control, emotion coaching, and emotion dismissing behavior on the part of the parent and positive/negative emotional expression and inappropriate/appropriate behavior on the part of the adolescent.

Following each interaction, the parent and the adolescent completed a brief survey about their perceptions of the interaction, in terms of whether or not the interaction was

realistic to how they typically communicate, as well as their feelings during the conversation. After all study elements were completed, the dyad was debriefed and compensated for their time. The parent and adolescent each received a \$50 VISA gift card for their participation.<sup>1</sup>

### **Measures**

This study employed a range of self-report, observational, and physiological measures to assess hypotheses. The pre-interaction and post-interaction surveys included a variety of closed-ended scales to assess the variables of interest. Following data collection, confirmatory factor analyses were conducted for all scales (Hunter & Gerbing, 1982). The criteria for a good fitting structure were set at  $\chi^2/df < 3.0$ , confirmatory fit index (CFI)  $> .90$ , and root mean squared error of approximation (RMSEA)  $< .10$  (Kline, 1998). After confirming unidimensionality, composite variables were created for each scale for subsequent analyses (Carle & Chassin, 2004). Based on a sample size of 60 dyads and significance tests set at  $\alpha = .05$  for two-tailed tests, power to detect small effects ( $r = .10$ ) was .12, power to detect medium effects ( $r = .30$ ) was .67, and power to detect large effects ( $r = .50$ ) exceeded .99 (Cohen, Cohen, West, & Aiken, 2003). In addition to self-report measures, I employed a physiological measure of heart rate variability as an indicator of emotion regulation. The interactions were coded by a team of trained research assistants to evaluate the features of conversation that are of interest in this study. Lists of the individual items for each scale and instructions for coders for each feature of conversation are presented in the Appendices.

#### **Pre-interaction Measures for Parent**

Parents were asked to complete surveys consisting of demographic information and descriptive information about the family, followed by scales designed to measure the degree of their own and their partner's substance abuse, parental communication behavior, and perceptions of their child's emotional, cognitive, and behavioral coping (see Appendix D).

**Perceptions of child's emotion regulation.** The parent's assessment of the adolescent's emotion regulation was measured using the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997). The 24-item measure was intended for use by parents and teachers to evaluate a child's ability to regulate emotion. The 5-point scale (1 = rarely/never like this child, 5 = almost always like this child) asks parents to respond to statements regarding their child's general expression of emotion (e.g., "Is a cheerful child," "Is empathetic towards others; shows concern when others are upset or distressed"). In previous studies, this measure has demonstrated high reliability on both the positive emotion regulation and negative emotion regulation subscales. In a study of emotional competence and classroom adjustment among low-income preschoolers, the scale showed reliability scores of  $\alpha = .83$  for positive emotion regulation and  $\alpha = .92$  for negative dysregulation (Miller et al., 2006). Another study that assessed emotion regulation in family interaction tasks found similar reliability results with positive emotion regulation  $\alpha = .83$  and emotional negativity  $\alpha = .96$  (Lunkenheimer, Shields, & Cortina, 2007). Given the length of the survey in this study, I used a subset of 16 items from this scale focused on general emotion regulation to prevent cognitive exhaustion. I also employed a 5-point scale instead of a 4-point scale to be consistent with other scales

in the survey. Scores closer to 5 indicate poor emotion regulation ( $M = 1.84$ ,  $SD = .52$ ,  $\alpha = .77$ ,  $\chi^2/df = 1.16$ , CFI = .96, RMSEA = .05).

**Parent's perceptions of child's cognitive competence.** To evaluate cognitive processes of the adolescent, parents were asked to complete the Social Competence Scale (Conduct Problems Prevention Research Group, 2002). The 10-item assessment inquires about the adolescent's prosocial skills and emotion regulation, with a total competence score resulting from combining the two subscales. The assessment asks parents about how their child responds to a situation using a 5-point scale (1 = *not at all*, 5 = *very well*; e.g., "My child copes well with failure," "My child can accept things not going his/her way"). This scale has typically been measured among elementary school students but demonstrated temporal stability across ages over time. At the preschool level among both normative and high risk samples, the emotion regulation subscale demonstrated a reliability of  $\alpha = .84$  and prosocial skills subscale with a reliability of  $\alpha = .89$  (Gouley, Brotman, & Huang, 2008). Another study examining social-emotional and literacy interventions for school-based programs found a combined reliability score of  $\alpha = .97$  across four waves of participants (Jones, Brown, & Aber, 2011). In this study, results indicated a combined reliability that was acceptable across the 10-item scale ( $M = 4.14$ ,  $SD = .61$ ,  $\alpha = .80$ ,  $\chi^2/df = 1.46$ , CFI = .96, RMSEA = .08).

**Parent's perceptions of child's behavior.** Parents were also asked to evaluate child behavior using the Impulsivity Scale for Children (ISC; Tsukayama, Duckworth, & Kim, 2011). The 8-item measure assesses schoolwork impulsivity and interpersonal impulsivity as well as an overall measure of impulsivity from both parent and adolescent perspectives. The assessment operates on a 5-point scale (1 = *almost never*, 5 = *at least*

*once a day*) asking how often the adolescent did the following during the past year (e.g., “My child interrupted other people while they were talking,” “My child lost his/her temper”). Parents who rate their child higher on the scale present a child with higher impulsivity. In testing this scale, previous studies found internal reliability ranging from  $\alpha = .78$  to  $\alpha = .94$  (Duckworth, Kim, & Tsukayama, 2012). In another test of the scale’s reliability, the self-report measure was assessed from individual, parent, and teacher perspectives. Results indicated acceptable reliability at  $\alpha = .78$  for children,  $\alpha = .85$  for parents, and  $\alpha = .93$  for teachers (Duckworth, Quinn, & Tsukayama, 2012). The reliability of the scale in this study was slightly lower than what has been achieved in previous studies, but still in the acceptable range ( $M = 2.40$ ,  $SD = .77$ ,  $\alpha = .77$ ,  $\chi^2/df = .51$ , CFI = 1.00, RMSEA = .00).

**Parent perceptions of responsiveness and control.** Aunola and Nurmi’s (2005) Parenting Style Questionnaire (PSQ) and Robinson, Mandleco, Olsen, and Hart’s (2001) Parenting Style and Dimension Questionnaire (PSDQ) were combined to create a measure of parental perceptions of responsiveness and control. On a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) parents were asked to rate their level of agreement with 10-items for responsiveness (e.g., “I talk it over and reason with my child when he/she misbehaves,” “I encourage my child to talk about trouble he/she experiences”) and 8-items for control (e.g., “My child must learn that there are rules in our family,” “When my child is crying, it is best if I don’t rush to comfort him/her”). The PSQ assesses parental affection and behavioral and psychological control by pulling items from earlier scales on parenting practices (see Barber, 1996; Baumrind, 1991; Maccoby & Martin, 1983; Roberts, Block, & Block, 1984; Schaefer, 1965). Tests of the PSQ found

acceptable levels of reliability for all three dimensions across both mothers and fathers, for affection  $\alpha = .88$  and  $\alpha = .86$ , for behavioral control  $\alpha = .72$  and  $\alpha = .72$ , and for psychological control  $\alpha = .79$  and  $\alpha = .80$  (Aunola & Nurmi, 2005). A study attempting to target parenting practices to increase efficacy in interventions found the 32-item scale reliable for all three dimensions of the scale, authoritative  $\alpha = .82$ , authoritarian  $\alpha = .78$ , and permissive  $\alpha = .76$  (Hubbs-Tait, Kennedy, Page, Topham, & Harrist, 2008). The original PSDQ measure consisted of 62-items and has been scaled down in various studies to a 32-item measure. Since it was combined with the PSQ scale for this study only 8-items from the 32-item scale were incorporated. These items were selected based on the statements reference to parental control (*Responsiveness*:  $M = 2.34$ ,  $SD = .70$ ,  $\alpha = .69$ ,  $\chi^2/df = 1.11$ , CFI = .99, RMSEA = .04; *Control*:  $M = 4.84$ ,  $SD = .99$ ,  $\alpha = .71$ ,  $\chi^2/df = 1.11$ , CFI = .99, RMSEA = .04).

**Parent perceptions of emotion coaching and emotion dismissing.** An assessment of parents' emotional communication was measured using the Maternal Emotional Style Questionnaire (MESQ; Lagacé-Séguin & Coplan, 2005). The questionnaire has 7-items that address emotion coaching parenting styles and 7-items that address emotion dismissing parenting styles, for a total of 14-items. Items are assessed on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) asking mother's to indicate their level of agreement with each statement (emotion coaching e.g., "When my child is sad, it's time to problem-solve," "Anger is an emotion worth exploring"; emotion dismissing e.g., "I try to change my child's angry moods into cheerful ones," "I prefer a happy child to a child who is overly emotional"). For the purposes of this study, the measure was adapted to ask both mothers and fathers about their emotional

communication style. In an earlier study, the scale was found to have an acceptable reliability on both emotion coaching  $\alpha = .69$  and emotion dismissing  $\alpha = .74$  parenting styles (Lagacé-Séguin & d'Entremont, 2006). Another study examining both parenting styles at two different time points also demonstrated acceptable reliability with  $\alpha = .83$  for emotion dismissing and  $\alpha = .77$  for emotion coaching at time one and  $\alpha = .87$  for emotion dismissing and  $\alpha = .82$  for emotion coaching at time two (Havighurst, Wilson, Harley, & Prior, 2009). Results of psychometric tests for this study revealed a good fitting measurement model and acceptable reliability (*Emotion coaching*:  $M = 3.52$ ,  $SD = .56$ ,  $\alpha = .71$ ,  $\chi^2/df = .85$ , CFI = 1.00, RMSEA = .00; *Emotion dismissing*:  $M = 3.11$ ,  $SD = .81$ ,  $\alpha = .78$ ,  $\chi^2/df = .96$ , CFI = 1.00, RMSEA = .00).

### **Pre-Interaction Measures for Adolescent**

Adolescents completed surveys about their emotion regulation through reappraisal and expressive suppression, the amount of confidence they have in accomplishing different activities, the extent of their impulsive behavior, and their current state of psychological well-being (see Appendix E).

**Emotion regulation.** Gross and John (2003) developed a 10-item self-report measure of emotion regulation that focuses on two regulation strategies, cognitive reappraisal and expressive suppression. In line with the Emotion Regulation Theory, the 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*) reports how an individual is able to regulate their emotions based on emotional experience and emotional expression (e.g., “I control my emotions by changing the way I think about the situation I’m in,” “When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm”). Higher scores on each scale indicate increased ability to

engage in emotion regulation. A study on emotion suppression and reappraisal among college students found the scale to be reliable,  $\alpha = .81$  (Ehring, Tuschen-Caffier, Schnülle, Fischer, & Gross, 2010). In a study about stigmatized groups similar results were found with a reliability of  $\alpha = .83$  (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). In this study, the scale was converted to a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) to be consistent with other scales in the survey ( $M = 3.40$ ,  $SD = .88$ ,  $\alpha = .76$ ,  $\chi^2/df = .18$ , CFI = 1.00, RMSEA = .00).

**Self-efficacy.** A modified version of the Resilience of Self-Efficacy Scale was used to assess child self-efficacy (Bandura, 2001). This questionnaire is designed to better understand self-efficacy as it relates to resilience. Children were asked to rate how certain they are that they can do each of the 12 items described by selecting a number between 1 and 5 (1 = *cannot do it at all*, 5 = *highly certain can do it*; e.g., “Bounce back after you tried your best and failed,” “Realize when I make someone else upset”). Prior studies that have used the measure have not clearly reported the psychometric properties of the scale, but reliability analysis in the current study revealed that the scale had acceptable reliability ( $M = 3.92$ ,  $SD = .85$ ,  $\alpha = .83$ ,  $\chi^2/df = 1.42$ , CFI = .98, RMSEA = .08).

**Impulsivity.** The Impulsivity Scale for Children (ISC; Tsukayama et al., 2011) was included as a self-report measure of behavior from the parent and adolescent perspective. The 8-item measure assesses schoolwork impulsivity and interpersonal impulsivity, as well as an overall measure of impulsivity (e.g., “I stopped listening because my mind was wandering,” “I talked back when I was upset”). The assessment operates on a 5-point scale (1 = *almost never*, 5 = *at least once a day*) asking how often



the adolescent did the following during the past month. The ISC was found to be reliable in previous studies, as noted in the parent measure, and had acceptable reliability in the adolescent sample for this study ( $M = 2.84$ ,  $SD = .77$ ,  $\alpha = .75$ ,  $\chi^2/df = 1.34$ , CFI = .96, RMSEA = .07).

### **Interaction Measures**

**Physiological marker.** To assess an individual's ability to regulate emotion effectively, a triangulation of measures is recommended that includes self-report, observation, and physiological markers (Cole, Martin, & Dennis, 2004). Self-report was assessed prior to the interaction and after the interaction using existing measures of emotion, cognition, and behavior. Observations were coded for communication patterns reflecting emotion regulation and impulsivity. A physiological measure of heart rate variability (HRV) was used to assess emotion regulation. Heart rate frequencies modulate between 0 and 0.5 Hz (Berntson et al., 1997). Baseline, interaction, and recovery HRV measures were collected from adolescents using the HeartMath EMWAVE® PRO biofeedback instrument. The HRV measure uses a plethysmograph sensor clipped to the participant's ear lobe or finger and connects to the computer for data collection.

Following each session the heart rate data collected was transferred to the software program, Kubios, for reporting purposes. Kubios takes the RR, time between successive beats or peaks in the heart wave, and develops an output using several algorithms. There are two types of output terms that are commonly used in reporting heart rate variability, time domain and frequency domain (Task Force, 1996). *Time domain* is focused on measuring the beat-to-beat intervals and includes the measures: SDNN, RMSSD, and pNN50. SDNN, refers to the standard deviation of all normal RR

intervals, where the SDNN index is the mean of all 5-minute standard deviations of NN or normal RR. RMSSD describes the root mean square successive difference, which calculates the square root of the mean of the squared differences between successive NN intervals as they occur over time. pNN50 is a percentage of the differences between successive NN intervals over time or pNN50/total NN's and helps to explain any parasympathetic responses. *Frequency domain* is focused on the variability present in the heart rate and utilizes the following frequency measures: VLF, LF, and HF. To calculate, bands of frequency are assigned and the number of NN intervals that match that band are added together. VLF is very low frequency and establishes responses from the sympathetic nervous system. LF stands for low frequency and signifies the parasympathetic nervous system. HF represents high frequency and reactions of the vagus nerve. A low value of an HRV measure reflects low HRV. Low HRV is undesirable, suggesting that the adolescent's heart rate shows less variability, less flexibility, and less of an ability to regulate their emotions. A high HRV value suggests that there is a healthy level of emotion regulation; thus, a better ability to regulate emotions and the potential to be more resilient. Results for each domain were compiled for each participating adolescent. Then, it was necessary to clean the HRV data and identify any existing outliers. To clean artifacts, or noise, present in the data, adjustments were made using the Kubios software levels according to the presence of artifacts. Outliers were assessed using the Mahalanobis distance test  $p < .001$  (de Maesschalck, Jouan-Rimbaud, & Massart, 2000). No outliers were identified in the data. The clean data set from Kubios was then compiled and added to SPSS for further analysis. The mean for SDNN ranged from 87.77 to 97.36 across the five assessments, RMSSD ranged from

81.47 to 97.32 across the five assessments, pNN50 ranged from 42.41 to 48.89 across the five assessments, VLF ranged from 1950.39 to 4235.87 across the five assessments, LF ranged from 2288.65 to 4292.44 across the five assessments, and HF ranged from 2417.28 to 3506.23 across the five assessments.

**Coding for parent features of conversation.** All videotaped interactions were coded for parent emotion coaching style, parent emotion dismissing style, parent responsiveness, and parent control. To code the interactions, four coders were given the following instructions, “For each 30-second interval of the conversation, please rate the interaction on a five-point scale with regard to...”. Each set of instructions was customized based on the features of conversation under consideration. The five-point scale varied depending on the message feature. Reliability of the coders was determined using Cronbach’s Alpha.

Observed interactions of responsiveness and control were coded according to Baumrind’s (1991) classifications (see Appendix F). A group of four trained coders were given directions for how to code the recordings based on a 5-point Likert-scale (1 = *not at all responsive/controlling*, 5 = *completely responsive/controlling*). For the responsiveness dimension, coders looked at how responsive or how unresponsive the parent communicated during each interaction. Responsiveness signs include encouragement, support, praise, acknowledgement of feelings, and verbal and nonverbal expressions of care. Frustration, impatience, avoidance, discomfort, and lack of eye contact demonstrate an unresponsive communication style. The control dimension was assessed based on how controlling the communication was from parent to child during each interaction. A controlling parent may make demands, nag the child, stress rules, and demonstrate

aggression. A parent that is not demonstrating control would not blame the child, changes their own behavior, and appears passive during the interaction tasks (Estlein, 2013).

Coders were reliable across both dimensions: parental responsiveness ( $\alpha = .87$ ,  $M = 3.66$ ,  $SD = .48$ ) and parental control ( $\alpha = .85$ ,  $M = 2.55$ ,  $SD = .59$ ).

Observations were also coded with the Family Emotional Communication Scoring System used for assessing emotion coaching and emotion dismissing communication from an observed interaction (see Appendix G; Shields, Lunkenheimer, & Reed-Twiss, 2002). Emotion coaching communication refers to statements or questions that validate, describe, and/or aim to solve the adolescent's emotions. Examples of emotion coaching statements are "*Can you think of anything that would have made you feel better?*" and "*I could tell you were mad because you walked away.*" A dismissing parenting style may demonstrate both verbal and nonverbal communication that invalidated, criticized, and/or disregarded the adolescent's emotions. Emotion dismissing statements might include "*It wasn't anything to get upset over*" or "*Are you proud of yourself?*" A group of trained coders were directed to code the recordings based on a 5-point Likert-scale (1 = *not at all emotion coaching/dismissing*, 5 = *completely emotion coaching/dismissing*) at 30-second intervals. A follow up study examined family interaction tasks, emotion regulation, and behavioral problems among children in middle childhood and found high inter-rater reliability for emotion coaching  $\alpha = .96$  and emotion dismissing  $\alpha = .89$  (Lunkenheimer, Shields, & Cortina, 2007). A study used the same construct to assess emotion socialization style of parents with children who have emotional functioning deficits (Pasalich, Waschbusch, Dadds, & Hawes, 2013). Results demonstrated high reliability for the measure in mothers and fathers for both emotion

coaching ( $\alpha = .95$ ,  $\alpha = .98$ ) and emotion dismissing ( $\alpha = .96$ ,  $\alpha = .78$ ). For this study, coders achieved the following reliabilities: emotion coaching ( $\alpha = .71$ ,  $M = 3.61$ ,  $SD = .49$ ) and emotion dismissing ( $\alpha = .78$ ,  $M = 2.37$ ,  $SD = .58$ ).

**Coding for adolescent features of conversation.** Videotaped interactions were also coded for adolescent emotion regulation and adolescent impulsivity. To code the interactions coders were given the same instructions, “For each 30-second interval of the conversation, please rate the interaction on a five-point scale with regard to...”. Instructions, as well as the five-point scale, were customized based on the features of conversation under consideration.

A positive and negative affect behavior scale was developed to measure observations of adolescent emotion regulation (see Appendix H). The measure assesses the degree of control a person has over their emotional expressions. Coders were instructed to assess emotion regulation behavior based on a 5-point scale (1 = *poor emotion regulation*, 5 = *excellent emotion regulation*) for 30-second intervals of interaction. When coding for poor emotion regulation, coders were asked to look for adolescents’ demonstrations of explosive behavior, withdrawing from the conversation, lack of eye contact or eye rolling, and criticizing of the parent. For excellent emotion regulation, coders were asked to observe signs that the adolescents’ were comfortable, engaged in the conversation, demonstrating emotions appropriate to the conversation, relaxed posture, eye contact, and leaning towards the parent. Coders were reliable in assessing adolescent emotional expression ( $\alpha = .75$ ,  $M = 3.71$ ,  $SD = .65$ ).

Adolescent appropriate and inappropriate behavior was observed using an adaptation of the Revised Edition of the School Observation Coding System (see

Appendix I; REDSOCS; Jacobs et al., 2000). The revised version was intended for observing classroom behaviors among pre-school and elementary school children by measuring the number of 10-second intervals that the child misbehaved divided by the total number of intervals. Of the original eight assessment categories, one was modified and adopted for the purposes of measuring adolescent behavior in interaction. The coding scheme was also adjusted to match similar observation assessments. The revised category includes inappropriate/appropriate behavior. Using a 5-point scale, coders were asked to measure inappropriate/appropriate behavior (1 = *appropriate behavior*, 5 = *inappropriate behavior*) for each 30-second interval of interaction. When coding appropriate behavior of the adolescent, coders were asked to look for effective turn-taking during the interaction, active listening, no forceful gestures, and appropriate volume of speech. Observers of adolescents' inappropriate behavior were asked to look for signs of aggression such as speaking over the parent or yelling, being easily distracted or visibly annoyed, fidgeting, and limited eye contact. In a study regarding Head Start programs and classroom-based incentives the measure was assessed using 10-second intervals with high reliability averaging to  $\alpha = .91$  (Reitman, Murphy, Hupp, & O'Callaghan, 2004). Another study training teachers in behavior management found high inter-observer reliability for appropriate behavior  $\alpha = .85$  and inappropriate behavior  $\alpha = .83$  (Tiano & McNeil, 2006). For this study, coders demonstrated high reliability of adolescent impulsivity ( $\alpha = .83$ ,  $M = 2.14$ ,  $SD = .74$ ).<sup>2</sup>

## **CHAPTER FIVE**

In this chapter, I present the findings of both preliminary and substantive analyses designed to investigate my hypotheses and research questions. Initial *t*-tests demonstrated some differences across groups. Bivariate correlations were then conducted to assess pre-interaction responses of both parents and adolescents followed by a second assessment of both conversation types (happy and unhappy) among each family type (alcoholic and non-alcoholic) accounting for coded interactions and heart rate measures. I then ran hierarchical linear regression and moderation analyses for each hypothesis and confirmed whether hypotheses and research questions were supported.

### **Preliminary Statistical Analyses**

#### **Independent Samples *t*-tests**

As a first step, I conducted independent samples *t*-tests to compare means on all of the variables for children of alcoholics versus children of non-alcoholics (see Table 2). For the self-report variables, results of the independent samples *t*-tests indicated that there were significant differences between alcoholic and non-alcoholic families on some of the variables. Children of alcoholics reported a higher mean for impulsivity ( $M = 3.03$ ,  $SD = .80$ ) than did children of non-alcoholic parents ( $M = 2.64$ ,  $SD = .71$ ). Parents' perceptions of adolescents' self-efficacy was higher for children of non-alcoholic parents ( $M = 4.32$ ,  $SD = .46$ ) than children of alcoholics ( $M = 3.97$ ,  $SD = .70$ ). Parents' perceptions of adolescents' impulsivity was higher for children of alcoholics ( $M = 2.63$ ,  $SD = .69$ ) than for children of non-alcoholics ( $M = 2.17$ ,  $SD = .78$ ). Finally, parents of children from families of alcoholics reported more responsiveness in their parental communication ( $M = 2.54$ ,  $SD = .65$ ) than did parents of children from non-alcoholic

families ( $M = 2.15$ ,  $SD = .70$ ). For the observed features of interaction, parents from non-alcoholic families demonstrated increased emotion coaching behavior during the unhappy interaction ( $M = 3.79$ ,  $SD = .31$ ) as compared to parents from families of alcoholics ( $M = 3.52$ ,  $SD = .62$ ). In addition, adolescents from non-alcoholic families demonstrated more emotion regulation during the happy interaction ( $M = 3.91$ ,  $SD = .38$ ) than did their peers from families of alcoholics ( $M = 3.54$ ,  $SD = .84$ ).

Next, I conducted independent samples  $t$ -tests comparing means of all variables for male and female adolescents (see Table 3). For the self-report variables, results of the independent samples  $t$ -tests indicated that there were significant differences between male and female adolescent participants for adolescents' self-reported impulsivity and parents' self-reported emotion coaching behavior. Female adolescents ( $M = 2.99$ ,  $SD = .82$ ) had a higher mean for impulsivity than male adolescents ( $M = 2.59$ ,  $SD = .65$ ). Parents' perceptions of their emotion coaching behavior were also higher when they had daughters ( $M = 3.66$ ,  $SD = .60$ ) as compared to sons ( $M = 3.33$ ,  $SD = .44$ ). For the observed features of the interaction, parents' responsiveness during the happy interaction was higher in conversations with daughters ( $M = 3.15$ ,  $SD = .98$ ) as compared to sons ( $M = 2.59$ ,  $SD = 1.00$ ).

A final set of independent samples  $t$ -tests was conducted to compare means of the self-reported and observed parenting behaviors for mothers versus fathers (see Table 4). For the self-report variables, differences between fathers and mothers emerged for perceptions of adolescent emotion regulation and self-efficacy, as well as for parents' perceptions of their own emotion coaching behavior. Fathers reported a higher mean in perceptions of adolescent emotion regulation ( $M = 2.16$ ,  $SD = .63$ ) than did mothers ( $M =$



1.75,  $SD = .46$ ), whereas mothers ( $M = 4.22$ ,  $SD = .61$ ) reported more adolescent self-efficacy than did fathers ( $M = 3.85$ ,  $SD = .54$ ). In addition, fathers ( $M = 3.78$ ,  $SD = .60$ ) reported more emotion coaching behavior than did mothers ( $M = 3.45$ ,  $SD = .53$ ). For the observed features of the interaction, fathers demonstrated more control during the sad interaction ( $M = 2.95$ ,  $SD = 1.00$ ) as compared to mothers ( $M = 2.53$ ,  $SD = .55$ ). In addition, adolescents showed more impulsivity during the unhappy conversation in interactions with fathers ( $M = 2.60$ ,  $SD = .81$ ) than mothers ( $M = 1.93$ ,  $SD = .65$ ), and they showed more emotion regulation in both conversations with mothers (happy  $M = 3.86$ ,  $SD = .56$ ; unhappy  $M = 3.87$ ,  $SD = .57$ ) than with fathers (happy  $M = 3.32$ ,  $SD = .85$ ; unhappy  $M = 3.21$ ,  $SD = .91$ ).<sup>3</sup>

### **Bivariate Correlations**

As a next step, I assessed the bivariate correlations among the variables in this study. Bivariate correlations were calculated separately for families of alcoholics versus families of non-alcoholics. First, I assessed correlations among the self-report variables as measured in the pre-interaction survey (see Table 5). There were several correlations that were significant across both groups, adolescents' perceptions of emotion regulation was positively associated with adolescents' perceptions of self-efficacy for both groups. Parents' perceptions of adolescent self-efficacy were negatively associated with parents' perceptions of adolescents' emotion regulation. Parents' perceptions of adolescents' behavior was positively associated with both adolescents' perception of behavior and parents' perception of emotion regulation. Parents' perceptions of responsiveness was positively associated with parents' perceptions of adolescents' emotion regulation and behavior, and negatively associated with parents' perceptions of adolescents' self-

efficacy. Parents' perceptions of emotion dismissing behavior was positively associated with parents' perceptions of control and emotion coaching behavior. There were also correlations significant only for families of alcoholics. Adolescents' perceptions of impulsivity was positively associated with parents' perceptions of adolescent emotion regulation and responsiveness. Correlations that were significant only for families of non-alcoholics were also present in the findings. Parents' perceptions of adolescents' emotion regulation was positively associated with parents' perceptions of control, emotion coaching, and emotion dismissing behavior. Parents' perceptions of adolescents' self-efficacy was negatively associated with parents' perceptions of control. Parents' perceptions of adolescent impulsivity and parents' perceptions of responsiveness were each positively associated with parents' perceptions of emotion dismissing behavior. Finally, parents' perceptions of control was positively associated with parents' perceptions of emotion coaching behavior.

The second set of bivariate correlations examined the associations between the observed communication features of the interactions and the measures of heart rate variability as a marker of emotion regulation. Not surprisingly, the majority of HRV measures were positively interrelated. Beyond these expected intercorrelations, I also examined associations between the HRV measures and observed variables for both unhappy and happy interactions (see Table 6 for unhappy interactions and Table 7 for happy interactions). The vast majority of associations with HRV were nonsignificant, with the exception of several negative correlations in the sample of non-alcoholic families between adolescents' emotion regulation during the happy interaction, impulsivity during the unhappy interaction, and a positive correlation with

responsiveness during the unhappy interaction. Associations between HRV variables and coded observations were also largely nonsignificant for families of alcoholics with the exception of several negative correlations including emotion coaching during the happy interaction, emotion dismissing during the unhappy interaction, emotion regulation during the happy interaction, and responsiveness during the happy interaction. A positive correlation was found for impulsivity during the happy interaction.

A third bivariate correlation analysis was conducted to assess the correlations among the observed variables for both parents and adolescents (see Table 8). There were significant correlations for both families of alcoholics and non-alcoholic families in terms of predictors and outcomes for happy and unhappy interactions. For both alcoholic and non-alcoholic families, observed parent responsiveness was positively associated with observed adolescent emotion regulation in the unhappy interaction and negatively associated with observed adolescent impulsivity in both the happy and unhappy interactions. Observation of parental control was negatively associated with observed adolescent emotion regulation and positively associated with observed adolescent impulsivity during the unhappy interactions. Observed emotion coaching was positively associated with observed adolescent emotion regulation during the unhappy interaction and negatively associated with observed adolescent impulsivity in both the happy and unhappy interactions. For alcoholic families only, observed control was negatively associated with observed adolescent emotion regulation during the unhappy interaction. There were no significant correlations between predictors and outcomes for observed emotion dismissing behavior.<sup>4</sup>

### **Test of Hypotheses**

The hypotheses and research questions in this study were evaluated using hierarchical linear regression. The dependent variable in each analysis was one of the emotional, cognitive, or behavioral markers of adolescent resilience (e.g. emotion regulation, self-efficacy, impulsivity). Separate analyses were conducted for the different operationalizations of each variable. For example, emotion regulation was operationalized as a self-report variable, an observed variable, and a physiological variable; thus, I conducted separate regressions for each outcome variable. Similarly, behavioral impulsivity was measured as a self-report variable and an observed variable, so separate analyses were conducted for each outcome. The first step of each regression included adolescents' age and gender, parents' relationship status, and number of children in the family as control variables. The second step of each model included the self-reported and/or observed parental communication variables (e.g., responsiveness, control, emotion coaching, emotion dismissing), depending on whether the outcome variable was self-reported or observed, and a dummy coded variable identifying the family as alcoholic or non-alcoholic. Then, to address the research questions in this study and assess the potential moderating effect of a parent's alcoholism, the third step of each model included the interaction term between the substantive predictor(s) in the model and the alcoholism identifying variable. In the sections that follow, I summarize the results for adolescents' emotion regulation, self-efficacy, and behavioral impulsivity as predicted by parents' communication behavior.

### **Associations between Emotion Regulation and Parental Communication**

Recall that my first set of hypotheses suggested that emotion regulation is positively associated with parental responsiveness (*H1*) and negatively associated with

parental control (*H2*). In addition, I also hypothesized that emotion regulation is positively associated with parents' emotion coaching behavior (*H7*) and negatively associated with parents' emotion dismissing behavior (*H8*). Research questions queried whether these associations differ for adolescents with an alcoholic parent versus those without an alcoholic parent (*RQ1 & RQ4*). In this section, I summarize the results of regression analyses that examined the effect of each of these four parental communication patterns on self-reported, observed, and physiological markers of emotion regulation.

**Self-reported emotion regulation.** To begin, I constructed models in which the adolescents' self-reported emotion regulation and the parents' self-reported perceptions of the adolescents' emotion regulation were outcome variables predicted by the parents' self-reported responsiveness, control, emotion coaching, and emotion dismissing in separate models (see Table 9). In the models predicting adolescents' self-reported emotion regulation, the control variables accounted for 17% of the variance in the dependent variable and revealed a negative association between number of children and adolescents' self-reported emotion regulation. The second step of predictors included the family status variable and the parents' self-reported communication behaviors, which accounted for 9% to 10% of the variance in the outcome variable. Results for the second step revealed that family status was positively associated with adolescents' self-reported emotion regulation. In addition, parents' self-reported responsiveness was non-significantly associated with adolescents' self-reported emotion regulation; thus, *H1* was not supported in this model. Parents' self-reported control was negatively associated with adolescents' self-reported emotion regulation, as predicted in *H2*. Contrary to predictions

(*H7*), parents' self-reported emotion coaching behavior was not significantly associated with adolescents' self-reported emotion regulation in this model. Finally, parents' self-reported emotion dismissing behavior was not significantly associated with adolescents' self-reported emotion regulation in this model (*H8*). The interaction terms between family status and each substantive variable were entered as predictors in separate models on step three and accounted for 0% to 4% of variance in the dependent variable. None of the interactions were significant predictors of adolescents' self-reported emotion regulation.

In the models predicting parents' perceptions of adolescent emotion regulation, the control variables accounted for 1% of the variance and none of the associations were significant. Results for the second step revealed that the substantive variables accounted for 3% to 60% of the variance in the outcome. Parents' self-reported responsiveness was positively associated with parents' perceptions of adolescent emotion regulation; thus, *H1* was supported in this model. Contrary to predictions (*H2*), parents' self-reported control was positively associated with parents' perceptions of adolescent emotion regulation, not negatively associated as was predicted. Parents' self-reported emotion coaching behavior was not significantly associated with parents' perceptions of adolescent emotion regulation, demonstrating no support for *H7*. Finally, parents' self-reported emotion dismissing behavior was not significantly associated with parents' perception of adolescent emotion regulation (*H8*). Results for step three of the models indicated that the interaction term accounted for 0% to 6% of variance in the outcome and also revealed that the family's alcoholism status moderated the effects for responsiveness. To evaluate the moderation, I ran the regression model separately for alcoholic families and

nonalcoholic families to isolate the slopes for each group. As shown in Figure 1, the association between parents' self-reported responsiveness and parents' perception of adolescent emotion regulation was stronger for alcoholic families (alcoholic  $\beta = .90$ ,  $p < .00$ ) than those from non-alcoholic families ( $\beta = .77$ ,  $p < .00$ ).

**Observed emotion regulation.** The model for observed emotion regulation was designed the same way as the model for self-reported emotion regulation, with the dependent variable being observed adolescent emotion regulation in either the happy or unhappy interaction and predictor variables including observed responsiveness, control, emotion coaching, and emotion dismissing for the corresponding happy or unhappy interactions (see Table 10). The control variables for the happy interaction accounted for 4% of the variance, but none of the effects were significant. The substantive predictors on step two accounted for 7% to 17% of the variance in adolescents' emotion regulation during the happy interaction. Observations of parent responsiveness during the happy conversation were not significantly associated with observed adolescent emotion regulation, showing no support for *H1* in this model. Consistent with *H2*, observed parental control was negatively associated with observed adolescent emotion regulation. Observation of emotion coaching during the happy conversation was not significantly associated with observed adolescent emotion regulation, showing no support for *H7*. For observed emotion dismissing behavior, there was no significant association with observed adolescent emotion regulation (*H8*). Results also revealed that the family's alcoholism status moderated the effect of control during the happy interaction. To evaluate the moderation, I ran the regression model separately for alcoholic families and nonalcoholic families to isolate the slopes for each group. As shown in Figure 2, the

association between observed parental control and observed adolescent emotion regulation during the happy interaction was stronger for alcoholic families ( $\beta = -.67$ ,  $p < .01$ ) than for non-alcoholic families ( $\beta = .08$ ,  $p < .70$ ).

Similar models were constructed to evaluate the associations in the unhappy conversations. The control variables for the unhappy interaction accounted for 5% of the variance, but none of the associations were significant. On step two, the substantive variables accounted for 4% to 32% of the variance in observed adolescent emotion regulation. Observed parent responsiveness during the unhappy interaction was positively associated with observed adolescent emotion regulation in support of *H1*. Consistent with *H2*, observed parent control was negatively associated with observed adolescent emotion regulation. Observed emotion coaching was positively associated with observed adolescent emotion regulation, supporting predictions for *H7*. Observed emotion dismissing was not significantly associated with observed adolescent emotion regulation, showing no support for *H8* in this model. The interaction terms entered on step three of the model were non-significant.

**Physiological markers of emotion regulation.** HRV was also assessed and for the majority of the measures, no significant associations were found with any of the predictor variables. Results revealed significant associations between three of the HRV measures and parents' observed communication behavior that will be discussed in more detail, the remaining analyses have been excluded from this section for the sake of parsimony. First, SDNN during the recovery period of the happy interaction was set as the outcome variable predicted by responsiveness, control, emotion coaching, and emotion dismissing during the happy interaction (see Table 11). The control variables



accounted for 6% of the variance. The substantive predictors on step two accounted for 3% to 12% of the variance in adolescents' observed emotion regulation. SDNN was positively associated with observed responsiveness during the happy interaction, showing support for *H1*. SDNN was not significantly associated with observed control (*H2*), observed emotion coaching (*H7*), or observed emotion dismissing (*H8*). Moreover, the interaction terms were also non-significant.

Next, VLF during the recovery period of the happy interaction was assessed (see Table 12). The control variables accounted for 7% of the variance in the dependent variable, but none of the effects were significant. The substantive predictors entered on step two accounted for 0% to 9% of the variance in the outcome variable across models. In support of *H1*, observed parental responsiveness was positively associated with VLF; however, observed control (*H2*), observed emotion coaching (*H7*), and observed emotion dismissing (*H8*) were not significantly associated with VLF. In addition, none of the interaction terms were significant.

The third HRV measure to be examined was pNN50 measured during the stimuli session of the unhappy interaction (see Table 13). The control step accounted for 5% of the variance of the dependent variable, but none of the individual predictors produced significant associations. The predictors entered in step two accounted for 13% to 21% of the variance in the outcome variable across models. Family alcohol status was positively associated with pNN50 across models. Observed parental responsiveness during the unhappy interaction was positively associated with pNN50 as a marker of emotion regulation, showing support for *H1*. The remaining parental communication variables were non-significant predictors of pNN50 and none of the interactions were significant.

### **Associations between Self-Efficacy and Parental Communication**

Adolescent self-efficacy was the next marker of resilience to be assessed. Since self-efficacy is a cognitive measure of adolescent resilience it was only measured through self-report measures of the adolescent and the parent. To review, *H3* predicted that parent responsiveness would be positively associated with adolescent self-efficacy and *H4* predicted that parental control would be negatively associated with adolescent self-efficacy. In addition, *H9* predicted that parents' emotion coaching behavior would be positively associated with adolescent self-efficacy and *H10* predicted that parents' emotion dismissing behavior would be negatively associated with adolescent self-efficacy. Two research questions were also presented to explore whether these associations differ for adolescents with an alcoholic parent versus those without an alcoholic parent (*RQ2* & *RQ5*). The following sections summarize the results of regression analyses, which examined each of the four parental communication variables as predictors of adolescent self-efficacy.

**Self-reported self-efficacy.** For this model, adolescents' perceptions of self-efficacy and parents' perceptions of self-efficacy were the outcome variables, the same control variables that were included in the previous models were included for step one, the same four predictor variables were included in separate models for step two, and the corresponding interaction variables were placed in step three (see Table 14). The following paragraphs report the findings for each of the hypotheses and provide an answer to each research question.

In the models predicting adolescents' self-reported self-efficacy, the control variables accounted for 22% of the variance in the dependent variable. Results revealed a

positive association between adolescents' self-reported self-efficacy and parents' relationship status, such that adolescents whose parents were married reported more self-efficacy than those whose parents were never married or divorced. Adolescent age and number of children in the family were also negatively associated with self-efficacy, such that older individuals and individuals with more siblings reported lower self-efficacy. The second step contained the substantive variables for the model and accounted for 7% to 9% of the variance in the outcome variable. Results for the second step revealed that family status was positively associated with adolescents' self-reported self-efficacy in the model for responsiveness, but adolescents' self-reported self-efficacy was not significantly associated with parents' self-reported responsiveness (*H3*), control (*H4*), emotion coaching (*H9*), or emotion dismissing (*H10*). In addition, there were no significant interactions on step three of the model.

Parents' perception of adolescent self-efficacy was the dependent variable in the next model to assess adolescent self-efficacy. The control variables accounted for 5% of the variance in the dependent variable, but none of the associations were significant. The substantive predictors in the model accounted for 4% to 25% of variance in the outcome variable. Contrary to *H3*, parents' self-reported responsiveness was negatively, not positively, associated with their perceptions of adolescent self-efficacy. Consistent with *H4*, parents' self-reported control was negatively associated with parents' perceptions of adolescent self-efficacy. Parents' self-reported emotion coaching behavior was not significantly associated with parents' perceptions of adolescent self-efficacy, showing no support for *H9*. Parents' self-reported emotion dismissing behavior was not significant with parents' perceptions of self-reported self-efficacy (*H10*). Results also revealed that

the family's alcoholism status moderated the effects for responsiveness and emotion coaching behavior, accounting for 2% and 12% of the variance in each model respectively. To evaluate the moderations, I ran the regression model separately for alcoholic families and nonalcoholic families to isolate the slopes for each group. As shown in Figure 3, the association between parents' self-reported responsiveness and parents' perception of adolescent self-efficacy was stronger for alcoholic families ( $\beta = -.64$   $p < .01$ ) than those from non-alcoholic families ( $\beta = -.31$ ,  $p < .11$ ). As shown in Figure 4, the association between parents' self-reported emotion coaching and parents' perception of adolescent self-efficacy was positive for families of alcoholics ( $\beta = .48$   $p < .05$ ) and negative in non-alcoholic families ( $\beta = -.38$ ,  $p < .04$ ).

### **Associations between Behavioral Impulsivity and Parental Communication**

The final marker of resilience was behavioral impulsivity. Impulsivity was measured by both self-report and observational measures. Recall that *H5* predicted that parent responsiveness would be negatively associated with adolescent impulsivity. *H6* predicted that parental control would be positively associated with adolescent impulsivity. For the other parenting styles, *H11* predicted that parents' emotion coaching behavior would be negatively associated with adolescent impulsivity and *H12* predicted that parents' emotion dismissing behavior would be positively associated with adolescent impulsivity. Research questions inquired as to whether these associations differ for adolescents with an alcoholic parent versus those without an alcoholic parent (*RQ3* & *RQ6*). The following sections summarize the results of regression analyses, examining each of the four parental communication variables as predictors of self-reported and observed outcomes of adolescent impulsivity.

**Self-reported behavioral impulsivity.** I constructed models in which the adolescents' self-reported impulsivity and the parents' perceptions of the adolescents' impulsivity were outcome variables predicted by the parents' self-reported responsiveness, control, emotion coaching, and emotion dismissing in separate models (see Table 15). In the models predicting adolescents' self-reported impulsivity, the control variables accounted for 9% of the variance in the dependent variable, but none of the effects were significant. The variables in step two accounted for 9% to 26% of the variance in the outcome variable. Family status was positively associated with adolescents' self-reported impulsivity in the models for parental control, emotion coaching, and emotion dismissing. Contrary to *H5*, parents' self-reported responsiveness was positively associated with adolescents' self-reported impulsivity, not negatively associated as predicted. Parents' self-reported control was not significantly associated with adolescents' self-reported impulsivity (*H6*). Similarly, parents' self-reported emotion coaching behavior (*H11*) and emotion dismissing behavior (*H12*) were not significantly associated with adolescents' self-reported impulsivity. In addition, none of the interactions were significant.

Next, I examined parents' perceptions of adolescent impulsivity as the dependent variable with parents' self-reported responsiveness, control, emotion coaching, and emotion dismissing as predictor variables. The control variables accounted for 6% of the variance of the dependent variable. Results revealed a negative association between parents' perceptions of adolescent impulsivity and adolescent gender, such that parents' perceived that females were more impulsive than males. The variables on step two accounted for 5% to 31% of the variance in the outcome variable. Contrary to predictions

(*H5*), parents' self-reported responsiveness was positively, not negatively, associated with parents' perceptions of adolescent impulsivity. Consistent with *H6*, parents' self-reported control was positively associated with parents' perceptions of adolescent impulsivity. Parents' perceptions of adolescent impulsivity were not significantly associated with parents' self-reported emotion coaching (*H11*) or emotion dismissing (*H12*). The interaction terms between family status and each substantive variable were entered as predictors in separate models on step three and accounted for 0% to 8% of the variance in the dependent variable. Results revealed that the family's alcoholism status moderated the effects for emotion dismissing behavior. To evaluate the moderation, I ran the regression model separately for alcoholic families and nonalcoholic families to isolate the slopes for each group. As shown in Figure 5, the association between parents' perceptions of emotion dismissing behavior and parents' perceptions of adolescent impulsivity was positive for non-alcoholic families ( $\beta = .36, p < .08$ ) and negative for alcoholic families ( $\beta = -.29, p < .24$ ), although neither of the slopes reached significance.

**Observed behavioral impulsivity.** In the models for observed impulsivity, observed adolescent impulsivity in the happy and unhappy conversation was selected as the dependent variable in separate models (see Table 16). In step one, the same control variables were selected. In step two, family status and each of the observed predictor variables were entered for both happy and unhappy interactions in separate analyses. In step three, the corresponding interaction terms were entered. For the happy interaction, the control variables accounted for 10% of the variance, but none of the variables were significant predictors. The variables entered on step two accounted for 2% to 57% of the variance in the outcome variable. Consistent with *H5*, observed parent responsiveness

was negatively associated with observed adolescent impulsivity. Observation of parent control was not significantly associated with observed adolescent impulsivity (*H6*). Consistent with predictions (*H11*), observed emotion coaching was negatively associated with observed adolescent impulsivity. Finally, observation of emotion dismissing behavior was not significant with observed adolescent impulsivity, showing no support for *H12*. None of the interactions were significant.

For the unhappy interaction, the control variables accounted for 5% of the variance but were not significantly associated with the outcome. The variables on step two accounted for 1% to 28% of the variance in adolescents' observed impulsivity. Observation of parent responsiveness during the unhappy interaction was negatively associated with observed adolescent impulsivity, consistent with *H5*. In line with *H6*, observation of parent control was positively associated with observed adolescent impulsivity. Predictions for *H11* are supported with observed emotion coaching being negatively associated with observed adolescent impulsivity. Observed emotion dismissing behavior was not significantly associated with observed adolescent impulsivity, showing no support for *H12*. The interactions entered on step three were not significant in any of the models.

### **Summary**

To review, the majority of hypotheses were supported or at least partially supported, with some receiving no support, and others being contradicted (see Table 17). The first set of hypotheses considered parent responsiveness and parent control as predictors of adolescent emotion regulation, self-efficacy, and impulsivity. Findings indicated that responsiveness was positively associated with adolescent emotion

regulation in all of the models except adolescent self-report and observed adolescent emotion regulation during the happy interaction, showing mostly support for *H1*. *H2* predicted a negative association between parental control and adolescent emotion regulation, which was partially supported with observation data, but self-report data revealed positive associations, contrary to predictions. *H3* was not supported, with parents' perceptions of adolescent self-efficacy being positively associated with parents' responsiveness, which was opposite of initial predictions. Support was found for *H4*, showing that parents' self-reported control was negatively associated with parents' perceptions of adolescent self-efficacy. *H5* received partial support, which predicted that parent responsiveness was negatively associated with adolescent impulsivity. Both adolescent and parent self-report results revealed a positive association between parents' responsiveness and adolescent impulsivity; however, both happy and unhappy observations were positively associated with observations of adolescent impulsivity. Finally, *H6* was supported indicating that parent control was positively associated with parents' perceptions of adolescent impulsivity and observations of adolescent impulsivity for the unhappy interaction.

The second set of analyses explored parent emotion coaching and emotion dismissing behavior as predictors of adolescent emotion regulation, self-efficacy, and impulsivity. *H7* was partially supported in that parent emotion coaching was positively associated with emotion regulation during the observations, but not for self-report data. There was no support in any of the models for *H8*, which predicted that parent emotion dismissing communication would be negatively associated with adolescent emotion regulation. *H9* and *H10*, were also not supported. Parent emotion coaching was not



positively associated with adolescent self-efficacy and parent emotion dismissing was not negatively associated with adolescent self-efficacy. Both *H11* and *H12* received partial support. Parent emotion coaching behavior was negatively associated with impulsivity for the observation data but not for self-report data, resulting in partial support for *H11*. For *H12* parent emotion dismissing was positively associated with impulsivity based on the observation data for the unhappy conversation only.

Six research questions also explored any differences between adolescent outcomes from families of alcoholics and families of non-alcoholics for each of the outcome variables assessed. Although several mean differences arose in the independent samples *t*-tests comparing children of alcoholics and children of non-alcoholics, results of the regression analyses only revealed five moderating effects. The first interaction effect was between alcoholic families and non-alcoholic families regarding adolescent emotion regulation (*RQ1*). The association between parents' self-reported responsiveness and their perceptions of adolescent emotion regulation was stronger for alcoholic families compared to non-alcoholic families. Observed parental control and observed adolescent emotion regulation during the happy interaction also demonstrated an interaction effect, with the effect being stronger for alcoholic families compared to non-alcoholic families. A difference between groups was also present in regards to parents' self-reported responsiveness and their perceptions of adolescent self-efficacy (*RQ2*), such that the effect was stronger for alcoholic families compared to non-alcoholic families. Associations were also different for adolescents in families of alcoholics and families of non-alcoholic parents when the predictor was emotion coaching (*RQ5*), such that the effect was positive for families of alcoholics and negative for families of non-alcoholics.

Finally, differences were found between parents' self-reported emotion dismissing behavior and parents' perceptions of adolescent impulsivity (*RQ6*), such that the effect was positive for non-alcoholic families and negative for alcoholic families.

## **CHAPTER SIX**

To review, the goals of this study were threefold. First, by conducting this study I hoped to better understand resilience among adolescents by examining emotion regulation, self-efficacy, and impulsivity as markers of resilience. Second, this study aimed to distinguish family communication styles and behavior that may bolster or hinder resilience in adolescents. Finally, I incorporated a variety of methods in the hopes of properly measuring each marker of resilience, expand on existing communication frameworks, and explore the extent to which features of parent-child communication and adolescent resilience differ between children of alcoholics and children of non-alcoholics. In this chapter, I will discuss the findings of the study, provide some explanation for the outcomes established, consider the implications of this research, identify strengths and limitations, and provide future directions.

### **Interpretation of Results**

Based on the analyses and assessment using multiple methods, 7 of the 12 hypotheses in this study received at least partial support. Given that I measured all of the variables in this study in multiple ways, ranging from self-report measures to observational and physiological measures, and including perceptions on the part of the adolescent as well as the parent, interpretation of the findings is not very straightforward. In some instances a hypothesis received support using one measure of resilience, but a different operationalization of the same variable yielded nonsignificant or even contradictory results. In this section, I will walk through each of the findings and provide an explanation of the results.

### **Findings for Emotion Regulation as a Marker of Resilience**

The first hypothesis, *H1*, predicted that parental responsiveness would be positively associated with adolescents' emotion regulation ability. *H2* predicted that parental control would be negatively associated with adolescents' emotion regulation. For *H7*, I predicted that parents' emotion coaching behavior would be positively associated with adolescents' emotion regulation. Alternatively, *H8* predicted that parents' emotion dismissing behavior would be negatively associated with adolescents' emotion regulation. Emotion regulation was measured through adolescent and parent self-reports, observation of interaction, and through vagal tone or heart rate variability. Although no significant findings emerged based on adolescents' self-reported emotion regulation, all of the remaining measures yield some significant results. Notably, parental responsiveness and control were far more reliable predictors of adolescent emotion regulation than were parental emotion coaching or emotion dismissing behavior.

Parents' self-reported responsiveness was positively associated with their perceptions of the adolescents' emotion regulation ability, as predicted in *H1*. This result makes sense when considering that one way children learn to regulate their emotions is through interactions with their parent (Eisenberg et al., 2010). Since responsiveness refers to a parent who is attentive to their child's needs (Peterson & Hann, 1999), parents who are responsive in nature are more likely to notice when their child is struggling to manage emotions and aid them in the regulation process (Baumrind, 1991). Contrary to expectations (*H2*), parents' self-reported control was also positively associated with the parents' perceptions of adolescents' emotion regulation. This result is perplexing, especially given that the association between parental control and adolescent emotion regulation was in the predicted negative direction for the observation variables. Why,

then, this anomaly for parents' self-reported control? On one hand, it does make sense that parental control may be positively associated with adolescents' emotion regulation. Parents who are more controlling of their children may interact in such a way that children are not responsible for regulating their own emotions (Peterson & Hann, 1999). Constantly being told what to do, how to act, and how to feel does not leave much room for children to regulate their emotions independently, they simply feel the way they are told to feel (Barber & Harmon, 2002). The initial prediction assumed that parents who are more controlling produce children who are less experienced in dealing with their own emotions effectively. Perhaps when parents are more controlling of how and when emotions are expressed children are conditioned to regulate emotions quickly in order to appease their parents' demands. On the other hand, this explanation fails to account for the fact that our predictions did bear out as expected in the observational data. This could suggest that parents are not particularly skilled at judging their own enactment of parental control or assessing their child's ability to regulate emotion. Alternatively, perhaps parents assume that when they tell their child to act or feel a particular way that a child's outward compliance is a true reflection of their internal experience, which may not be the case. Additional research is needed to see if this result replicates itself in future studies, or if it is unique to this particular context.

With regard to the observational measures, observed parental responsiveness was positively associated with adolescent emotion regulation in the unhappy conversation, but the association in the happy conversation was nonsignificant; thus, *H1* was partially supported by the observational data. Notably, although nonsignificant, the association between parental responsiveness and adolescent emotion regulation was also in the

opposite direction from what was predicted. Why would parental responsiveness perform as expected in the unhappy conversation, but not in the happy conversation? It is possible that responsive parenting in the context of an unhappy topic is likely to provide support and validation that may have a calming effect on the child and assist them in overcoming negative emotions (Segrin & Flora, 2011). In a happy conversation, responsiveness may simply validate the existing positive emotions, which may serve to amplify emotional expression rather than suppress it. In addition, positive expressions are more likely to be perceived as an already appropriate way to respond to the situation and unnecessary to regulate, whereas negative emotional expressions are likely to be perceived as more inappropriate and requiring some type of control (Aunola & Nurmi, 2005). Turning to observed parental control, the association with adolescent emotion regulation was negative in both the happy and the unhappy conversations, as expected (*H2*). Overt expressions of control observed during the interactions may suggest more extreme levels of parental control. Consistent with the prediction, children who are exposed to psychological or behavioral control are less likely to have healthy emotion regulation and more likely to experience anxiety and distress (Calkins, 1994; Houck & Lecuyer-Maus, 2004).

The physiological measures of emotion regulation were only significantly associated with observed parental responsiveness. It is possible that HRV is not the most reliable measure of emotion regulation in an interactive context such as this one. Perhaps emotions during the 5-minute controlled interaction are not extreme enough to produce much variability. In the future, studies using HRV may benefit by looking at the child's communication behavior as a more proximal predictor of heart rate. It may be that the

children's own communicative responses leads to an increase in heart rate rather than the parents' communication. If children are unable to express themselves or they become overly excited, their own behavior may be more likely to correlate with the heart rate outcome. One study using HRV examined how an image may elicit a particular type of physiological response in an individual suffering from an alcohol use disorder compared to someone without an alcohol use disorder (Eddie et al., 2013). Those with an alcohol use disorder reacted more to the stimuli than those without the alcohol use disorder, suggesting that it was the individuals' behavior and experience that ultimately altered heart rate. In addition, it is possible that the design of this study did not introduce stimuli stressful enough to produce dramatic changes in HRV. Regardless, parents' responsiveness did have a significant effect and should not be overlooked.

Surprisingly, only one significant association emerged when looking at emotion coaching and emotion dismissing behavior as predictors of emotion regulation. Parents' observed emotion coaching was positively associated with adolescents' emotion regulation in the unhappy interaction (*H7*). Parent emotion coaching behavior expresses empathy towards the child's emotions and aims to teach effective coping of both positive and negative emotions (Cupach & Olson, 2006). It makes sense, then, that observations of emotion coaching behavior during a conversation that is likely to produce negative emotions for adolescents would also demonstrate healthy emotion regulation abilities in adolescents. At a broader level, these results point to Baumrind's dimensions of parental responsiveness and control as more robust predictors of adolescent emotion regulation than Gottman's dimensions of emotion coaching and emotion dismissing behavior. This finding is surprising given that Gottman's typology was developed specifically to

examine parental behaviors that are predictive of children's emotion regulation. There are a couple of explanations for this finding. Baumrind's dimensions may be more universal because they are not limited to expression of emotion and are therefore more applicable to a variety of contexts. It may also be the case that the design of the study, controlled interactions for 5-minutes with adolescents selecting the topic, does not permit enough time to generate strong emotions, making it difficult to warrant and assess the presence of emotion coaching and emotion dismissing behavior. Longer interaction time or topics that are selected to generate extreme emotions may improve the chances of witnessing Gottman's dimensions of parental communication.

### **Findings for Self-Efficacy as a Marker of Resilience**

The next marker of resilience assessed was adolescent self-efficacy. Observation and physiological methods could not be used to assess self-efficacy since it is a cognitive measure of one's confidence that they can accomplish a task or goal, not their actual ability to do so. Thus, the findings for self-efficacy are entirely based on self-report of both adolescents' perceived self-efficacy and parents' perceptions of adolescent self-efficacy. Results indicated that none of the parental communication behaviors predicted adolescents' own self-reported self-efficacy. Turning to the parents' self-reported perceptions of adolescents' self-efficacy, parents' self-reported responsiveness and control were the only significant predictors.

Given that self-efficacy is a cognitive appraisal of one's own confidence in his or her ability to accomplish a desired goal, it is surprising that associations with parents' perceptions of the child's self-efficacy were significant, but the adolescents' own self-reported self-efficacy was not significantly associated with parents' self-reported



parenting behavior. Although surprising, this outcome is consistent with previous research where examinations of child and adolescent self-efficacy are typically measured through parent self-reports and considerations from third parties, such as a teacher (Conduct Problems Prevention Research Group, 2002). Other studies have also been known to examine the self-efficacy of the parent to assess offspring self-efficacy ability (Jones & Prinz, 2005). Perhaps adolescents are unable to articulate such a complex cognitive construct like self-efficacy, requiring them to consider their strengths and beliefs toward accomplishing a task or goal. It is also possible that the adapted scale used in this study was too challenging for this age group.

The results for self-efficacy revealed that, contrary to predictions (*H3*), parents' self-reported responsiveness was negatively associated with parents' perceptions of the adolescents' self-efficacy. In addition, parents' self-reported control was also negatively associated with parents' perceptions of adolescents' self-efficacy, as predicted (*H4*). These unexpectedly similar results may reflect differences in the direction of the effect. Whereas the negative effect for parental control may reflect the influence that parenting behavior has on adolescents' efficacy to perform tasks, the negative effect for parental responsiveness may reflect the type of parenting behavior that is required when children lack confidence. Perhaps increased parental control creates a context in which adolescents lack the confidence to complete tasks independent from a parent's influence (Barber & Harmon, 2002). In other words, adolescents may become decreasingly motivated or incapable of performing certain tasks if their parents are always stepping in to control their actions, which would diminish their confidence to do so in other situations. Responsive parenting behavior, on the other hand, might be increasingly

warranted when adolescents possess especially low self-efficacy to accomplish their goals. When adolescents are feeling particularly discouraged about their abilities, perhaps parents need to step in with more supportive, responsive, and encouraging communication to bolster their child's confidence (Baumrind, 1991). Although I had theorized that parental communication is predictive of adolescent self-efficacy, it seems that a more complex reciprocal relationship may be at play among these variables.

Results provided no support for parents' self-reported emotion coaching behavior (*H9*) or emotion dismissing behavior (*H10*) as predictors of adolescents' self-efficacy. On one hand, this outcome is surprising considering that emotion coaching and emotion dismissing behaviors could have a great impact on the way adolescents view their accomplishments and their ability to persevere (Gottman, Katz, & Hooven, 1997). On the other hand, given that Gottman's dimensions of parental communication focus predominantly on the ways that parents cultivate appropriate emotions and sensitivity in their children, they may not be as influential for predicting more cognitive or behavioral outcomes. Although Gottman's research has found that emotion coaching behaviors promote prosocial skills and reduce behavioral problems in children (Gottman, Katz, & Hooven, 1996, 1997), it is the ability to successfully regulate emotions that allows children to remain calm and cope with stressful situations (Lukenheimer et al., 2007).

### **Findings for Impulsivity as a Marker of Resilience**

The final marker of resilience examined was impulsivity. The analyses for adolescent impulsivity received the most support across different types of measurement, but with few exceptions the results were isolated to parental responsiveness and control, with relatively fewer significant results for emotion coaching and emotion dismissing

behavior. Although the results for responsiveness and control were widely significant, some of the associations with self-reported parental responsiveness contradicted my hypotheses.

Contrary to hypotheses (*H5*), results for the self-report measures revealed that parents' self-reported responsiveness was positively associated with both adolescents' own self-reported impulsivity and parents' self-reported perceptions of adolescents' impulsivity. Why might adolescents be more likely to enact inappropriate and impulsive behaviors when their parents are highly responsive? Perhaps a parent's responsiveness serves to reinforce undesirable behaviors for adolescents. If parents respond to their children's inappropriate actions with support and understanding, this may teach children that continued impulsivity will gain the parental attention that they desire (Cothran, Kulinna, & Garrahy, 2009; Aunola & Nurmi, 2005). To the extent that responsive parenting fails to correct inappropriate behaviors, adolescents may perceive responsiveness as permission to continue behaving badly. Results for parental control were in the predicted direction, such that parents' self-reported control was positively associated with their perceptions of adolescent impulsivity (*H6*). This finding may reflect a degree of reactance on the part of adolescents, such that the more parents attempt to control children's behavior, the more children act out to avoid conforming to parental expectations (Barber & Harmon, 2002; Baumrind, 1989).

Whereas self-reported responsiveness was positively associated with adolescent impulsivity, observed parental responsiveness was negatively associated with adolescents' inappropriate behavior in both the happy and the unhappy conversation, as expected (*H5*). These results support the idea that parents who are sensitive to the needs of their children,

encourage open discussion, and offer independence will produce children who practice similar behaviors such as being attentive to others and demonstrating self-control (Bernier et al., 2010; Calkins & Johnson, 1998). Although the observational results support this logic, it is unclear why the self-report results produced such divergent results for parental responsiveness. These results may suggest that parents have a biased view of their own parenting behavior, such that any form of attentiveness may be equated with responsiveness, whereas the outside observers were trained to look primarily for constructive and supportive communication as markers of responsiveness. The self-report measure of responsiveness may also reflect more of an ideology of parental communication that differs from the communication behaviors that parents actually enact during conversations with their children.

Parents' observed control was positively associated with adolescent impulsivity in the unhappy conversation, as predicted (*H6*), but not in the happy conversation. This result makes sense given the different content of these conversations. The content of the happy conversation focused on positive experiences and emotions, which are topics that are less likely to correspond with inappropriate behaviors or efforts to control a child's thoughts and actions. The unhappy conversation, on the other hand, focuses on negative or undesirable experiences, which provides more opportunities for children to act out and more opportunities for parents to enact control of their children's undesirable actions (Davies & Cummings, 1994; Peterson & Hann, 1999).

With regard to emotion coaching and emotion dismissing parenting behavior, results indicated that parents' emotion coaching behavior was negatively associated with adolescents' impulsivity in both the happy and unhappy conversation, as predicted (*H11*).

Previous research has found that adolescents misbehave in an effort to receive attention (Cothran et al., 2009). If a parent is providing empathy and coaching a child through an emotional experience the adolescent may feel that they are receiving the attention they need and are therefore less likely to act out. Consistent with this reasoning, children with emotion coaching parents have been found to exhibit less aggression and behavioral problems (Gottman & Katz, 1995). Emotion dismissing behavior was not significantly associated with adolescent impulsivity in any of the measures (*H12*). Adolescents' may not demonstrate impulsivity in the face of emotion dismissing behavior to avoid further ridicule or parental aggression. The age of the adolescent and what is considered appropriate and inappropriate behavior may influence these findings. For a 12-year-old participant, fidgeting in the seat during an interaction may be viewed as expected or more appropriate behavior compared to an 18 year old participant. Withdrawal is another component of impulsivity that is considered inappropriate in nature. One could argue though, that withdrawal may be an appropriate response to a parent's persistence in discussing an uncomfortable topic. Additional consideration of appropriate and inappropriate behavior is necessary when reviewing these findings.

### **Theoretical Implications for Family Communication**

Based on the study findings, Baumrind's dimensions of parental communication received far more support as predictors of resilience than did Gottman's dimensions. This is likely due to the fact that Baumrind's dimensions capture a broader range of parenting behaviors than do Gottman's. Baumrind's dimensions could be applied to a broader range of communication situations in parent-child interactions, whereas Gottman's focuses primarily on behaviors that encourage the appropriate experience and expression of

emotion. A different study design may demonstrate more applicability in using Gottman's parental communication dimensions.

It is also important to note that responsiveness often produced different results in the self-report as compared to the observed variables. Given the discrepancy in outcomes, it may be worthwhile to reconsider the measurement strategies that have been used to operationalize responsiveness. The observational method, for example, seemed to be a strong resource in assessing parental responsiveness. Observational methods may be less subject to self-report and social desirability biases making them more effective in measuring behavior, but more prone to other cultural expectations that the coders may subconsciously enact during the coding process.

Based on the utility of Baumrind's dimensions it is worth comparing this framework to other family communication theories and typologies that exist. The responsiveness and control dimensions seem to be quite useful for predicting outcomes in children that are a direct result of parenting behavior, whereas family communication patterns theory (Fitzpatrick & Ritchie, 1994) is more adept at characterizing family communication patterns within the whole family system and is less capable of isolating the interpersonal dynamics that are responsible for individual outcomes. The same could be said of family systems theory, which posits that the lives of family members are interdependent and tends to examine the norms and dynamics that evolve out of the entire family system as opposed to the individual relationships within it (Broderick 1993). Family systems theory provides a valuable perspective for family research that examines the family as a social unit; however, the nature of this study was interested in individual level outcomes and not characteristics of the whole family system. Another

developmental framework that illustrates the impact of parent-child interaction is attachment theory. The theory suggests that from infancy we have an innate drive to be in close proximity with our primary caregiver and that the caregivers' role is essential in developing children's internal representation of self (Bowlby, 1973, 1977; Straussner & Fewell, 2011). Although attachment styles are likely correlated with the markers of resilience that were examined in this study, it circumvents the focus on parental communication behavior as a predictor of resilience since the communication behaviors that produced the attachment would have happened during infancy.

### **Comparing Children of Alcoholics and Children of Non-Alcoholics**

A number of research questions were posed in this study to investigate potential differences in parental communication and adolescent resilience in families with an alcoholic parent versus those without an alcoholic parent. Results of the independent samples *t*-tests and the moderation analyses revealed some noteworthy differences between adolescents from alcoholic families and those from nonalcoholic families. Results of the *t*-tests indicated that children of alcoholics had higher self-reported impulsivity, lower self-reported self-efficacy, and lower observed emotion regulation than children of non-alcoholics. In addition, parents from alcoholic homes reported more responsiveness and enacted less emotion coaching behavior than parents from nonalcoholic homes. Moderation analyses revealed that a family's alcohol status moderated associations between parents' self-reported responsiveness and perceptions of adolescents' emotion regulation, parents' self-reported responsiveness and perceived adolescent self-efficacy, parents' self-reported emotion coaching and perceived

adolescent self-efficacy, observed parental control and adolescent emotion regulation, and parents' self-reported emotion dismissing and perceived adolescent impulsivity.

### **The Moderating Effect of Family Alcoholism**

The first significant moderation showed that the positive association between parents' self-reported responsiveness and their perceptions of adolescents' emotion regulation was stronger in families of alcoholics than in families of non-alcoholics. Although responsiveness has been found to be a beneficial way of communicating in families in general (Baumrind, 1991), it may be especially important in families of alcoholics given the broader range of adverse conditions that children of alcoholics need to navigate (Johnson, 2001; Jones & Houts, 1992). CoA may be exposed to more conflict, stress, and neglect compared to children of non-alcoholics (Lam et al., 2007; Stanger et al., 2004; Straussner & Fewell, 2011). These challenging experiences that some CoA navigate are likely to produce negative emotion. Having a responsive parent may be a crucial protective factor in bolstering resilience in CoA, by buffering the negative impacts of alcoholism (Hertenstein, 2002; Rangarajan & Kelly, 2006). For both CoA and children of non-alcoholic parents the effects were positive, where the presence of more parental responsiveness led to more adolescent emotion regulation. Although the effect was stronger for families of alcoholics, the role of parental responsiveness in adolescent emotion regulation is also important to consider for non-alcoholic family types.

The second moderation revealed that observed parental control in the happy interaction was negatively associated with adolescent emotion regulation in alcoholic families, but positively associated with adolescent emotion regulation in nonalcoholic families. It may be that there is a double standard experience for CoA when a parent



attempts to control their actions. Alcoholic parents often demonstrate antisocial behavior, low frustration tolerance, and high anxiety (Britton, 2004; NIAAA, 2010; Schade, 2006). If parents are modeling poor behavior in the home, children are likely to feel frustrated if they are held to a higher standard. A parent who typically behaves in inappropriate ways but expects their child to behave in more appropriate ways may incite a reactive response rather than compliance from the adolescent. The reverse was true for families of non-alcoholic parents, the more observed parental control the better the adolescent emotion regulation. In families of non-alcoholic parents there may be more consistency in terms of control such as limit setting and boundary expectations. Thus, children in families exposed to consistent regulatory behavior from their parents may be more aware of these enforcements and respond to them accordingly.

A third moderation showed that parents' self-reported responsiveness is negatively associated with perceptions of adolescent self-efficacy in families of alcoholics, whereas it was positively associated with adolescent self-efficacy in families of non-alcoholics. Due to their family circumstances, CoA may develop poor confidence and self-efficacy (Kelley et al., 2011). In addition, our results point to more parental responsiveness in alcoholic homes versus non-alcoholic homes. As previously argued, perhaps the negative association for families of alcoholics reflect the greater need that CoA have for responsive parenting given their tendency to have especially low self-confidence. Whereas responsiveness from parents in nonalcoholic families likely serves to reinforce their children's already high levels of confidence and perceived ability, responsiveness from parents in alcoholic families likely serves to address some deficit that exists in adolescents' self-efficacy.

Results for a fourth moderating effect indicated that parents' self-reported emotion coaching behavior was positively associated with perceived adolescent self-efficacy in alcoholic families, but negatively associated with adolescent self-efficacy in non-alcoholic families. This finding was particularly puzzling. Why would emotion coaching be such a detriment to self-efficacy for children of non-alcoholic parents and a benefit to self-efficacy for CoA? Based on the *t*-tests, alcoholic parents are doing less emotion coaching than non-alcoholic parents. Perhaps the emotion coaching in non-alcoholic families is perceived more as interference, thereby restricting children's ability to cope with circumstances on their own. Since emotion coaching is more limited in alcoholic families, and self-efficacy is lower in those families too, it is possible that when emotion coaching is enacted it has a more pronounced effect in terms of bolstering confidence. The neglect often experienced in families of alcoholics may help to explain this line of reasoning (Das Eiden, Chavez, & Leonard, 1999; Schade, 2006). Children who encounter emotion coaching behaviors infrequently may give more weight to those emotion coaching events when they do occur, resulting in inflated perceptions of self-efficacy.

The fifth and final moderation demonstrated that parents' self-reported emotion dismissing behavior and parents' perceptions of adolescent impulsivity was positive and stronger for non-alcoholic families and negative in alcoholic families. Notably, the main effects for each group were nonsignificant so the results should be interpreted with some caution, but if these results are significant in a larger sample, why is emotion dismissing behavior negatively associated with adolescent impulsivity for CoA, but positively associated with impulsivity for non-CoA? Perhaps this result also reflects a different

direction of the effect. Research has shown that CoA tend to demonstrate an array of behavioral issues, including withdrawal, hyperactivity, poor interaction skills, and misconduct (Moylan et al., 2010; Straussner & Fewell, 2011). Perhaps emotion dismissing behavior is perceived as less appropriate in this context since some of the behavioral issues displayed by CoA may be an expected or even understandable response to their family circumstances. The slope for families of alcoholics is near zero. Perhaps the presence of emotion dismissing communication and adolescent impulsivity is considered typical behavior and therefore does not register one way or the other. For families of non-alcoholic parents, emotion dismissing communication may be less frequent than in families of alcoholics (Schade, 2006; Woititz, 1985). When emotion dismissing communication is introduced in families of non-alcoholic parents it may incite more of a reaction from adolescents who are less familiar with this parental response.

### **Practical Implications for Children of Alcoholics**

Results point to parental responsiveness as an important factor in promoting adolescent resilience and that practitioners and family counselors may want to work with parents to cultivate more responsive behaviors. This may be especially true in families of alcoholics, given that the effects of responsiveness are more pronounced in these families. In terms of emotion regulation, parental responsiveness seemed to facilitate better emotion regulation for children of alcoholics. This finding suggests the importance of parental responsiveness in families experiencing an alcohol use disorder. Parents in families of alcoholics may want to incorporate more responsive parenting in an effort to buffer the effects of risk factors that might prevent healthy emotion regulation and, in turn, resilience. Previous research on families of alcoholics supports this notion,

demonstrating the potential benefits of a communicative environment that provides children with acknowledgement and support (Hertenstein, 2002; Rangarajan & Kelly, 2006). In doing so, CoA may become more resilient to the adverse environment that many families of alcoholics experience (Rangarajan & Kelly, 2006). The larger sample of mothers involved in the study compared to fathers may also have something to do with the prevalence of responsiveness. Mothers are typically viewed as the caregiver of a family, often operating in the role of nurturer for other family members (Le Poire, 2006). This outcome may have been different if more fathers were present in the study, which presents an important consideration for future research.

Parental control may be another important behavior for families to consider in terms of promoting adolescent resilience. The relationship between observed parental control and observed adolescent emotion regulation was stronger for families of alcoholics. In a dysfunctional family environment, like that of families of alcoholics, control may be the only way to manage the chaos (Stanger et al., 2004). Therefore, parental control may be a very common communication practice in families of alcoholics. It may also be quite difficult for a parent to relinquish control under these circumstances. Parental control may also produce negative outcomes (Grolnick et al., 2002), requiring children to be resilient amidst their parents' communication and behavior, rather than as a result of it. Although this places a large burden on CoA, it may be better than the emotional hardship they might experience by attempting to deal with controlling parents. In addition, these findings suggest that reducing the amount of parental control may improve adolescent emotion regulation. Many CoA may take on responsibilities even when they are not told or expected to, simply to maintain family function (Burnett et al.,

2006). CoA may need to learn how to cope independent of parental influence and the study results suggest they are capable of doing this. A healthy balance of parental control and responsiveness may be very beneficial for CoA (Domitrovich & Bierman, 2001; Segrin & Flora, 2011), instilling boundaries and discipline while also being responsive to children's needs and requests for support. Practitioners working with families of alcoholics may want to explore the dimensions of responsiveness and control and work with families to reduce the extent of controlling communication among family members.

Emotion coaching and emotion dismissing are not parental behaviors that should be emphasized in family therapy given that they have limited influence on adolescent resilience. That said, parents' emotion coaching and parents' perception of adolescent self-efficacy was once again stronger for families of alcoholics. Parents' emotion coaching behaviors have been found to promote more positive outcomes among adolescents including better academic performance, interpersonal skills, and attentiveness (Gottman, Katz, & Hooven, 1997). The presence of emotion coaching suggests that adolescents are able to express their emotions, both positive and negative, to a parent knowing they will receive sympathy and guidance (Cupach & Olson, 2006). Regular exposure to this form of communication may improve adolescents' concept of self and facilitate the belief that they are capable of overcoming any obstacle set in front of them. This may be especially rewarding for adolescents growing up with an alcoholic parent, who may experience a variety negative emotions as they interact with family members in that environment (Eiden et al., 2009). Their ability to cope may strongly rely on having a parent they can talk to about their feelings (Bijttebier & Goethals, 2006). Growing up without emotion coaching parents may result in an inability to navigate emotions and

impede emotional development, which in turn may affect CoA's perception of self and their ability to accomplish goals.

There are a few additional factors to consider regarding the results of this study. This sample of participants is primarily Caucasian; however, the cultural background of families is an important feature to consider when making recommendations for acceptable communication behaviors. In some cultures, it is less acceptable for children to express themselves, thereby placing limits on their ability to disclose opinions and emotions (Shearman & Dumlao, 2008). There were also more alcoholic fathers represented in this study compared to alcoholic mothers. Although the distribution of maternal versus paternal alcoholism is consistent with previous findings (NIAAA, 1995), communication with an alcoholic mother versus an alcoholic father may have very different effects on adolescent outcomes. Mothers are often the primary caretakers in a family, so if they are the alcoholic parent, the consequences for CoA may be more problematic (Le Poire, 2006). The gender of the adolescent and gender of the alcoholic parent is also an important feature of the communication environment that should be considered (Coffelt et al., 2006). In some cases, the participating parent was the alcoholic and other times it was the non-alcoholic who participated. Again, the dynamics of communication with each parent may drastically differ. Finally, some of the alcoholic parents who participated in the study had entered or are currently in a program of recovery. Communication may operate differently in families that have not sought help compared to those who are open to receiving outside support. This study does not have enough data on families of alcoholics and families of non-alcoholic parents to identify

these major differences across groups; however, the hope is that these findings shed some light on communication behaviors that may enhance CoA resilience.

### **Strengths and Limitations**

There are several strengths to this research. First, this study provides a comparison between alcoholic and non-alcoholic families. Without such a comparison it may be difficult to identify and examine the similarities and differences across family types. Second, this study involved parent-adolescent dyads. The inclusion of both a parent and child family member allowed for multiple perspectives regarding the family communication dynamic and extent of adolescent resilience. Third, this study involved three different measures of adolescent resilience. The ability to examine such a complex construct like resilience through various methods allowed for a more well-rounded view of how communication impacts resilience and the extent to which adolescents demonstrate resilience. A fourth strength of this study is the variety of regions that contribute to the participant sample. Since the sample was not exclusively from one area, there is greater validity in the patterns that are present, suggesting that the communication behaviors and adolescent outcomes are universal in nature. The fifth strength of this study is how it contributes to theory in family communication. The research does this not only by examining a unique family context but also by assessing two important family typologies. Finally, the use of physiological data adds strength to this research. Although the significant results of the physiological data were minimal, the findings that were established confirmed other methods and demonstrated the presence of a biological response to communication.

This study is not without several limitations. First, the relatively small sample size of the study limits the ability to generalize findings and prevents further examination of different family characteristics that may have an impact on results. Findings may also be affected by type I error due to the number of tests that were conducted, such that hypotheses that were found to be supported should not actually be supported. The Bonferroni correction may aid in any multiple comparison issues; however, after some consideration, the correction was considered too conservative and therefore not used in these analyses.

Second, a few of the adolescent participants in this study were 18 to 19 years of age. Although these ages are considered part of the adolescent age group (Mackenzie, 2000), the experiences and communication behaviors of adolescents at this age may vary from those of younger adolescents. Impulsivity for example may manifest in different ways for a 12 year old compared to an 18 year old. Although coders attempted to account for these variations, a closer look at these differences may be warranted. In addition, the age of the parents participating in this study range from 27 to 63 years of age. The communication behaviors of a young parent with adolescents may differ from that of an older parent with adolescents.

A third limitation was that the eligibility criteria did not control for which parent, the alcoholic parent or the non-alcoholic parent, participated in the study. As mentioned earlier, it is possible that adolescents have very different interactions with the alcoholic parent compared to the non-alcoholic parent. Relatedly, a fourth limitation is the number of mothers who participated compared to fathers. Previous research identifies that the nature of communication with a mother can be quite different from that of



communication with a father (Winsler, Madigan, & Aquilino, 2005). Along these lines, another limitation was that the study did not incorporate enough of the family system to address co-parenting influences or the role of siblings in predicting adolescent resilience. Future research would benefit from incorporating both parents in the study, or at least trying to get a more even sample of mothers and fathers.

A final limitation is that this study excluded non-English speaking families. In doing so, this study neglects a large demographic of families who may also benefit from this research. Incorporating non-English speaking families into future research has the potential to extend theoretical frameworks as well as improve our understanding of parent-child communication and adolescent resilience.

### **Future Directions**

The results of this study present many opportunities for future directions. One avenue of future research is further exploration of HRV in relation to families of alcoholics and resilience. One practice of HRV is coherence, a breathing technique that facilitates relaxation and improves emotion regulation (McCraty & Tomasino, 2006). Teaching coherence techniques to CoA while measuring family communication and resilience may present even more usefulness of the HRV tool in learning about emotion regulation. Future research should also focus on working with larger samples of families of alcoholics and do more comparisons across families of alcoholics who have entered recovery versus those who have not. Another benefit to future research is incorporating both parents in the research. This would allow researchers to examine differences in communication across parent types as well as identify any co-parenting influences. Conducting longitudinal research with adolescents, such as a daily diary study, would be

another important direction for future research. The longitudinal data could express changes over time, facilitate healthy communication, provide an outlet for expression of emotions, and identify certain communication circumstances that are particularly harmful to adolescent resilience. Finally, future research that examines communication in families of alcoholics and the effects communication has on CoA resilience may provide useful information for developing evidence-based programming geared towards substance abuse prevention. Prevention programs geared towards CoA and other children from high-risk families may offer communication skills that they would otherwise not be exposed to, allowing them to cope and build resilience.

### **Conclusion**

The first goal of this study was to clarify the nature of adolescent resilience by focusing on emotional, cognitive, and behavioral markers of resilience. Emotion regulation, self-efficacy, and impulsivity were the markers used in this study to identify resilience. To measure markers of resilience I incorporated self-report, observational, and biomarker methods. Both self-report and observational methods proved most helpful in assessing outcomes of parent-child communication on markers of resilience. The second goal of this study was to identify features of parent-child communication that promote resilience among adolescents. I drew on Baumrind's parenting styles and Gottman's dimensions of parental communication as frameworks for this study. My results point to Baumrind's framework as the more reliable and robust model for predicting adolescent resilience. Finally, this study utilized a variety of methods, extended existing communication frameworks, and examined the potential differences in adolescent resilience between children of alcoholics and children of non-alcoholic parents. The

results point to a handful of ways that CoA and non-CoA experience resilience differently that are worthy of future investigation.

## Appendix A

## General Study Flyer

IRB Approval # 14-646Mc



Researchers at Rutgers University are looking for parents and adolescents to participate in a research study about how family communication affects children's resilience



Researchers from Rutgers University are looking for a parent and their adolescent child to spend one-hour completing two brief questionnaires and an interaction. The study hopes to inform researchers about features of parent-child communication that promote resiliency in children. To be eligible to participate:

- (a) the adolescent child should be between the ages of 12 and 19 years old;
- (b) the parents are either in a committed relationship and both live in the same home with the child, OR the parents are separated but each parent interacts with the child at least once per month;
- (c) both the parent and the adolescent can speak, read, and write in English;
- (d) the adolescent is not on medication to treat emotional or psychological disorders.

The study will take place at a research laboratory on the Rutgers University campus in New Brunswick, NJ, and can be scheduled on a day and time that is most convenient for you.

Parents and adolescents will EACH receive a  
**\$50 VISA gift card** for participating in the study

Refreshments will be provided and  
FREE babysitting for younger siblings will be available if needed.

**For more information, please contact:** Marie Haverfield at  
RUFamilyStudy@gmail.com or 408-375-6966.

## Alcohol Specific Flyer

IRB Approval # 14-646Mc



Researchers at Rutgers University are looking for parents and adolescents from families of alcoholics to participate in a research study about how family communication affects children's resilience



Researchers from Rutgers University are looking for a parent and their adolescent child from families with an alcoholic parent to spend one-hour completing two brief questionnaires and an interaction. The study hopes to inform researchers about features of parent-child communication that promote resiliency in children. To be eligible to participate:

- (a) the adolescent child should be between the ages of 12 and 19 years old;
- (b) at least one of the adolescent's parents is identified as an alcoholic;
- (c) the parents are either in a committed relationship and both live in the same home with the child, OR the parents are separated but each parent interacts with the child at least once per month;
- (d) both the parent and the adolescent can speak, read, and write in English;
- (e) the adolescent is not on medication to treat emotional or psychological disorders.

The study will take place at a research laboratory on the Rutgers University campus in New Brunswick, NJ, and can be scheduled on a day and time that is most convenient for you.

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## Appendix B

**PARENT CONSENT FORM TO PARTICIPATE IN RESEARCH**

**Project Title:** Features of Parent-Child Interaction as Predictors of Emotional, Cognitive, and Behavioral Markers of Resilience in Adolescents

**Principal Investigator:** Marie C. Haverfield  
 4 Huntington St., New Brunswick, NJ 08901  
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 Phone: 408-375-6966

**Faculty Advisor:** Jennifer A. Theiss, Ph.D.  
 4 Huntington St., New Brunswick, NJ 08901  
 Email: [jtheiss@rutgers.edu](mailto:jtheiss@rutgers.edu)  
 Phone: 848-932-8719

You are invited to participate in a research study that is being conducted by Marie Haverfield, who is a graduate student in the Department of Communication at Rutgers University. Before you agree to participate in this study, you should know enough about it to make an informed decision. If you have any questions, ask the investigator. You should be satisfied with the answers before you agree to be in the study.

The purpose of this research is to examine how parent-child communication affects resilience in adolescents. Approximately 100 parent-adolescent dyads (100 parents, 100 adolescents) will participate in the study. Your involvement in the study will last approximately 60 minutes. The study procedures involve reviewing and signing the consent form, after which an assent form will be given to your adolescent child to obtain his/her consent. If either you or your child refuse to participate in the study no further steps will be taken and you may leave the laboratory without compensation. If you and your child both consent to participate, the next phase of the study requires completing pre and post interaction questionnaires and participating in a video-taped interaction. You and your child will each complete an initial questionnaire. Your questionnaire will ask you to provide demographic information and report your perceptions of your family dynamics and your child's resiliency. Your child's questionnaire will ask him/her to report on his/her perceptions of the family and report on their own emotions, cognitions, and behaviors. Then, you will engage in a video-taped interaction with your child about two topics that your child will select, one topic will be an experience that made him/her feel happy or proud and the other topic will be an experience that made him/her feel angry or sad. In order to participate in this study, it is necessary that the interaction is videotaped. If you refuse to be videotaped you may end your participation in the study at this time and leave the laboratory without compensation. Finally, you and your child will be asked to complete two post-interaction questionnaires about your perceptions of the interaction on each topic. You and your child will each receive a \$50 VISA giftcard as compensation for your participation in this study.

Your participation in this study is voluntary. Although answering every question is preferable, you have the right to skip any questions that you do not want to answer. You also have the right to stop participating at any time prior to the completion of the study. If you withdraw from the study before data collection is completed your data will be removed from the data set and destroyed. If you withdraw from the study before data collection is completed, you will still receive compensation for your involvement in the study. The investigator also reserves the right

to terminate the participation of individuals in the study if it becomes apparent that they are overwhelmed or at risk.

This research is confidential. Confidential means that the research records will include some information about you/your child and this information will be stored in such a manner that some linkage between you/your child's identity and the response in the research exists. Some of the information collected about you/your child includes age, biological sex, family history of alcoholism, drinking behavior, and mental well-being. This information is kept confidential by limiting individual's access to the research data and keeping it in a secure location. If you agree to take part in the study, your name will only appear on this consent form, which will be stored separately from your questionnaires and other data. Questionnaires will be completed online or immediately converted to online by the investigator immediately following your session at which point the paper version of the survey will be shredded. The online questionnaires will contain no identifying information about you and will be stored on a secure website accessible only to the investigator and the faculty advisor. Your interactions will be videotaped and even though your name will not be included in any of the videos, it might be possible for someone to identify you from your video image. To prevent this breach of confidentiality from occurring, the videos will be stored on a secure website accessible only to members of the research team.

Thus, to the extent possible, your identity will be kept confidential. If imminent danger is disclosed, then it may be necessary for the investigator to break confidentiality. The investigator must notify the appropriate authorities if a participant is believed to be a threat to herself/himself or others. The research team and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. If a report of this study is published, or the results are presented at a professional conference, only group results will be stated. All study data will be kept for three years.

Risks associated with participation in this study are limited, but might include nervousness, embarrassment, or self-consciousness stemming from being videotaped, or potential emotional distress resulting from increased reflection on your family. There are some possible benefits as a result of your participation. You may benefit from the opportunity to reflect on your experiences and communicate with your child about events that you may not otherwise discuss. As a whole, this research will benefit society by identifying the features of parent-child communication that facilitate resilience in adolescents.

If you experience emotional distress or increased stress and anxiety about your family relationships following your participation in this study, you are encouraged to seek counseling services. You can find a certified counselor in your area by searching the counseling directory of the American Counseling Association at the following web address:

<http://www.counseling.org/Resources/CounselorDirectory/TP/Home/CT2.aspx>

Steps are in place to minimize stress and address distress should it occur. First, you are instructed at the beginning of the study that you are welcome to terminate your participation at any time and are able to skip questions that may make you uncomfortable. Second, during the interaction the researcher will monitor the exchange on a video monitor in a nearby room. Should distress become apparent, the researcher will stop the interaction and separate you and your child, if necessary. Then, a member of the study risk committee will immediately be contacted to establish the appropriate course of action. Third, a list of local resources will be made available to you and your child at the end of the study and you are encouraged to utilize the resources if any distress is experienced as a result of your participation in this study.

Subject Initials \_\_\_\_\_

If you have any questions about the study or study procedures, you may contact the investigator, Marie Haverfield, at [marie.haverfield@gmail.com](mailto:marie.haverfield@gmail.com) or 408-375-6966, 185 College Avenue, New Brunswick, NJ 08901 or you can contact the faculty advisor, Dr. Jennifer Theiss, at 4 Huntington Avenue, New Brunswick, NJ 08901, [jtheiss@rutgers.edu](mailto:jtheiss@rutgers.edu) or 848-932-8719.

If you have any questions about your rights as a research subject, you may contact the IRB Administrator at Rutgers University at:

Rutgers University, the State University of New Jersey  
Institutional Review Board for the Protection of Human Subjects  
Office of Research and Sponsored Programs  
3 Rutgers Plaza  
New Brunswick, NJ 08901-8559  
Tel: 848-932-0150  
Email: [humansubjects@orsp.rutgers.edu](mailto:humansubjects@orsp.rutgers.edu)

You will be given a copy of this consent form for your records.

Sign below if you agree to participate in this research study:

Subject's Name (Print): \_\_\_\_\_

Subject's Signature \_\_\_\_\_ Date \_\_\_\_\_

Principal Investigator Signature \_\_\_\_\_ Date \_\_\_\_\_

Sign below if you agree to have your child participate in this research study:

Child's Name (Print): \_\_\_\_\_

Parent Signature on behalf of the child: \_\_\_\_\_ Date \_\_\_\_\_

Principal Investigator Signature: \_\_\_\_\_ Date \_\_\_\_\_



**AUDIO/VIDEOTAPE ADDENDUM TO CONSENT FORM**

You have already agreed to participate in a research study entitled: **Features of Parent-Child Interaction as Predictors of Emotional, Cognitive, and Behavioral Markers of Resilience in Adolescents** conducted by **Marie Haverfield**. We are asking for your permission to allow us to **videotape** you as part of the research study. In order to participate in the study, it will be necessary for us to videotape the interaction between you and your child.

The recording will be used for later analysis to code the types of communication behavior displayed. The recording will only include your video image, it will not include any identifying information, such as your name.

The recording will be stored on a secure departmental server during data collection and transferred immediately to a secure, password protected website accessible only to the PI and the faculty advisor. Once the data has been coded, all video files will be permanently deleted. The data will be stored separate from the consent forms; thus, there will be no identifiable information to link you with your interaction.

Your signature on this form grants the investigator permission to record you as described above during your participation in the study. The investigator will not use the recording for any other reason than those stated in the consent form without your written permission.

Subject (Print): \_\_\_\_\_

Subject Signature: \_\_\_\_\_ Date \_\_\_\_\_

Principal Investigator Signature: \_\_\_\_\_ Date \_\_\_\_\_

## Appendix C

**ASSENT FORM TO PARTICIPATE IN RESEARCH**

**Project Title:** Features of Parent-Child Interaction as Predictors of Emotional, Cognitive, and Behavioral Markers of Resilience in Adolescents

**Principal Investigator:** Marie C. Haverfield  
4 Huntington St., New Brunswick, NJ 08901  
Email: [marie.haverfield@rutgers.edu](mailto:marie.haverfield@rutgers.edu)  
Phone: 408-375-6966

**Faculty Advisor:** Jennifer A. Theiss, Ph.D.  
4 Huntington St., New Brunswick, NJ 08901  
Email: [jtheiss@rutgers.edu](mailto:jtheiss@rutgers.edu)  
Phone: 848-932-8719

You are being asked to be in a research study about how teens like you communicate with their parents. There are a few things I want you to know before you agree to be in the study. Please read this form and the audio/videotape form on the last page and ask any questions you might have before agreeing to be in the study.

**Why are you being asked to be in this study?**

You are being asked to be in this study because we are interested in family communication and how that makes you feel about yourself. I also want to know how your parents talk to you about your feelings.

**What will happen during this study?**

First, you are being asked to read and sign this consent form and the audio/videotape consent form because your parent has already agreed to participate in the study. If you agree to participate too, you will fill out a survey about your family and your feelings about yourself. While you do this, I will connect a small device to your earlobe or finger to measure your heartbeat. Then, I will ask you to write down some events that happened recently that made you feel happy or proud and angry or sad. You will pick two of these events that you want to talk to your parent about. Next, you will have a conversation with your parent about this topic that I will video-tape so that I can look at your communication behaviors later. During this conversation, you will also wear the device that measures your heartbeat. After the conversation, you will fill out a short survey asking about how the conversation made you feel.

**Do I have to be in this study?**

Your parent needs to give permission for you to be in this study. You do not have to be in this study if you don't want to, even if your parent has already given permission. If you start, you can decide to stop being in the study at any time. If you decide to stop, no one will be angry or upset with you.

**Will I get anything for being in this study?**

You will receive a \$50 VISA giftcard for being in this study. Even if you decide to stop being in the study after you get started, you will still receive the giftcard.

**Subject Initials** \_\_\_\_\_

**Are there any risks of being in this study?**

The risks of being in this study are very minor. It is possible that you might feel a bit uncomfortable or embarrassed being video-taped for this study. It is also possible that some of the questions in the survey or the conversation with your parent might make you think more about your family, which could be stressful. If being in the study makes you feel upset or stressed, you can quit at any time.

**Who will see my activities in this study?**

The only people who will see the answers to your survey or your video-taped conversation are me and my advisor. Later, a small team of research assistants will also watch your video-tape to analyze your communication, but they will not be able to tell anyone who you are or what you did in this study. We will keep your information and your identity completely private. I will write articles that summarize the results of the study, but they will not include any information that can identify you.

**What questions do you have?**

You have the right to ask questions about this study and to have those questions answered by me before, during, or after the research. If you have any further questions about the study, at any time feel free to contact me, Marie Haverfield at [marie.haverfield@rutgers.edu](mailto:marie.haverfield@rutgers.edu) or by telephone at 408-375-6966.

**Do you want to be in this study?**

Signing here means that you have read this paper or had it read to you and that you are willing to be in this study. If you don't want to be in the study, don't sign.

**Name of Participant (print):** \_\_\_\_\_

**Signature of Participant:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Signature of Investigator(s):** \_\_\_\_\_ **Date:** \_\_\_\_\_

**AUDIO/VIDEOTAPE ADDENDUM TO CONSENT FORM**

You have agreed to participate in a research study entitled: **Features of Parent-Child Interaction as Predictors of Emotional, Cognitive, and Behavioral Markers of Resilience in Adolescents** conducted by **Marie Haverfield**. We are asking for your permission to allow us to **videotape** you as part of the research study. In order to participate in the study, it will be necessary for us to videotape the interaction between you and your parent.

The recording will be used to examine how you and your parent communicate. The recording will only include your video image, it will not include any identifying information, such as your name.

The recording will be kept on a safe university server during data collection and transferred immediately to a secure website that only the researcher and her advisor can access. Once the data has been examined, all video files will be permanently deleted. The data will be stored separate from the consent forms, so your name will not be linked to the videotaped interaction.

Your signature on this form gives the researcher permission to record you as described above during your participation in the study. The researcher will not use the recording for any other reason than those described in the consent form without your written permission.

Subject (Print): \_\_\_\_\_

Subject Signature: \_\_\_\_\_

Date \_\_\_\_\_

Principal Investigator Signature: \_\_\_\_\_

Date \_\_\_\_\_

## Appendix D

**Pre-Interaction Questionnaire for Parent****Emotion Regulation.**

*The following questions ask **about your child's emotional behavior**. Please circle the number that best indicates your agreement with each statement.*

- |  | 1                            | 2 | 3 | 4 | 5                             |
|--|------------------------------|---|---|---|-------------------------------|
|  | Rarely/Never like this child |   |   |   | Almost always like this child |
| 1. Is a cheerful child (R) .....   | 1                            | 2 | 3 | 4 | 5                             |
| 2. Transitions well from one activity to another; doesn't become angry, anxious, distressed or overly excited when moving from one activity to another (R) ..... | 1                            | 2 | 3 | 4 | 5                             |
| 3. Can recover quickly from upset or distress, doesn't pout or remain sullen, anxious or sad after emotionally distressing events (R).....                       | 1                            | 2 | 3 | 4 | 5                             |
| 4. Is easily frustrated .....  | 1                            | 2 | 3 | 4 | 5                             |
| 5. Is prone to angry outbursts/tantrums easily .....   | 1                            | 2 | 3 | 4 | 5                             |
| 6. Takes pleasure in the distress of others (laughs when another person gets hurt or punished; seems to enjoy teasing others).....                               | 1                            | 2 | 3 | 4 | 5                             |
| 7. Can modulate excitement (doesn't get "carried away" in high energy play or overly excited in inappropriate contexts (R).....                                  | 1                            | 2 | 3 | 4 | 5                             |
| 8. Is whiny or clingy with adults.....   | 1                            | 2 | 3 | 4 | 5                             |
| 9. Is prone to disruptive outbursts of energy and exuberance.....  | 1                            | 2 | 3 | 4 | 5                             |
| 10. Responds angrily to limit setting by adults.....   | 1                            | 2 | 3 | 4 | 5                             |
| 11. Can say when he/she is feeling sad, angry, or mad, fearful, or afraid (R).....   | 1                            | 2 | 3 | 4 | 5                             |
| 12. Seems sad or listless.....   | 1                            | 2 | 3 | 4 | 5                             |
| 13. Displays flat affect (expression is vacant or inexpressive; child seems emotionally absent).....   | 1                            | 2 | 3 | 4 | 5                             |
| 14. Is impulsive.....  | 1                            | 2 | 3 | 4 | 5                             |
| 15. Is empathetic towards others; shows concern when others are upset or distressed (R) .....  | 1                            | 2 | 3 | 4 | 5                             |
| 16. Displays exuberance that others find intrusive or disruptive.....  | 1                            | 2 | 3 | 4 | 5                             |

**Cognitive Scale.**

*The following questions ask **about your perceptions of how your child responds to a situation**. Please circle the number that best indicates your agreement with each statement.*

- | 1          | 2 | 3 | 4 | 5         |
|------------|---|---|---|-----------|
| Not at All |   |   |   | Very Well |

1. My child can accept things not going his/her way.....1 2 3 4 5
2. My child copes well with failure .....1 2 3 4 5
3. My child thinks before acting .....1 2 3 4 5
4. My child resolves problems with friends or brothers and sisters  
on his/her own.....1 2 3 4 5
5. My child can calm down when excited or all wound up .....1 2 3 4 5
6. My child is very good at understanding other people's feelings .....1 2 3 4 5
7. My child controls his/her temper when there is a disagreement.....1 2 3 4 5
8. My child shares things with others .....1 2 3 4 5
9. My child is helpful to others .....1 2 3 4 5
10. My child listens to others' points of view.....1 2 3 4 5

### **Behavior Scale.**

*Please circle the number that best indicates your agreement with each statement regarding your **child's behavior in the past year.***

1	2	3	4	5
Almost Never				At Least Once a Day

1. My child left something he/she needed for school at home .....1 2 3 4 5
2. My child interrupted other people while they were talking .....1 2 3 4 5
3. My child said something rude .....1 2 3 4 5
4. My child couldn't find something because his/her bedroom was messy ..1 2 3 4 5
5. My child lost his/her temper.....1 2 3 4 5
6. My child did not remember what someone told him/her to do .....1 2 3 4 5
7. My child stopped listening because his/her mind was wandering .....1 2 3 4 5
8. My child talked back when he/she was upset.....1 2 3 4 5

### **Responsiveness and Control.**

*The following questions ask **about your parenting beliefs.** Please select the number that best indicates your agreement with each statement.*

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

#### **Responsiveness**

1. I am easygoing and relaxed around my child.....1 2 3 4 5
2. I talk it over and reason with my child when he/she misbehaves .....1 2 3 4 5
3. I explain to my child why I act the way I do when he/she misbehaves ....1 2 3 4 5
4. I take my child's preferences into account when making plans  
for the family .....1 2 3 4 5

5. I encourage my child to talk about trouble he/she experiences.....1 2 3 4 5
6. I often encourage my child to talk about his/her troubles .....1 2 3 4 5
7. I tend to be responsive to my child's feelings or needs.....1 2 3 4 5
8. I have intimate times together with my child .....1 2 3 4 5
9. I believe that punishment is more effective than praise (R).....1 2 3 4 5
10. I express my affection by hugging and holding my child.....1 2 3 4 5

#### Control

1. It is important for me to show other people how well behaved  
my child is .....1 2 3 4 5
2. My child must learn that there are rules in our family .....1 2 3 4 5
3. When my child is crying, it is best if I don't rush to comfort him/her.....1 2 3 4 5
4. I have great expectations for my child .....1 2 3 4 5
5. My child should be aware of how much I sacrifice for him/her .....1 2 3 4 5
6. My child should be aware of how much I have done for him/her.....1 2 3 4 5
7. I let my child see how disappointed I am if he/she misbehaves.....1 2 3 4 5
8. I expect my child to be grateful and appreciate all the advantages  
he/she has .....1 2 3 4 5

#### Emotion coaching and emotion dismissing.

*Please select the number that best indicates your agreement with each statement.*

1	2	3	4	5
Strongly Disagree				Strongly Agree

#### Emotion Coaching

1. When my child is sad, it's time to problem-solve .....1 2 3 4 5
2. Anger is an emotion worth exploring .....1 2 3 4 5
3. When my child gets sad, it's time to get close.....1 2 3 4 5
4. When my child is angry, it's an opportunity for getting close.....1 2 3 4 5
5. When my child is angry, it's time to solve a problem .....1 2 3 4 5
6. When my child is angry, I take some time to try to experience this  
feeling with my child .....1 2 3 4 5
7. When my child is angry I want to know what he/she is thinking .....1 2 3 4 5

#### Emotion Dismissing

8. Sadness is something that one has to get over, to ride out,  
not to dwell on .....1 2 3 4 5
9. I try to change my child's angry moods into cheerful ones .....1 2 3 4 5
10. Childhood is a happy-go-lucky time, not a time for  
feeling sad or angry .....1 2 3 4 5

11. When my child gets angry my goal is to get him/her to stop .....1 2 3 4 5
12. I prefer a happy child to a child who is overly emotional .....1 2 3 4 5
13. When my child is sad, I am expected to fix the world and  
make it perfect.....1 2 3 4 5
14. I help my child get over sadness quickly so he/she can move  
on to other things .....1 2 3 4 5



## Appendix E

**Pre-Interaction Questionnaire for Adolescent****Emotion Regulation.**

*The following questions ask **about your feelings**. Please circle the number that best indicates your agreement with each statement.*

- |                   |   |   |   |                |
|-------------------|---|---|---|----------------|
| 1                 | 2 | 3 | 4 | 5              |
| Strongly Disagree |   |   |   | Strongly Agree |
- Emotional experience
1. When I want to feel more positive emotion  
(such as joy or amusement), I change what I'm thinking about .....1 2 3 4 5
  2. When I want to feel less negative emotion  
(such as sadness or anger), I change what I'm thinking about .....1 2 3 4 5
  3. When I'm faced with a stressful situation, I make myself think  
about it in a way that helps me stay calm .....1 2 3 4 5
  4. When I want to feel more positive emotion, I change the way  
I'm thinking about the situation .....1 2 3 4 5
  5. I control my emotions by changing the way I think about the  
situation I'm in .....1 2 3 4 5
  6. When I want to feel less negative emotion, I change the way I'm  
thinking about the situation .....1 2 3 4 5
  7. I keep my emotions to myself (R).....1 2 3 4 5
  8. When I am feeling positive emotions, I am careful not to  
express them (R) .....1 2 3 4 5
  9. I control my emotions by not expressing them (R).....1 2 3 4 5
  10. When I am feeling negative emotions, I make sure not to  
express them (R) .....1 2 3 4 5

**Self-Efficacy.**

*The following questions ask about **how you approach situations**. Please select the number that best indicates your confidence that you could do each of the following things:*

- |                        |   |                 |   |                      |
|------------------------|---|-----------------|---|----------------------|
| 1                      | 2 | 3               | 4 | 5                    |
| Definitely can't do it |   | Maybe can do it |   | Definitely can do it |
1. Keep tough problems from getting you down .....1 2 3 4 5
  2. Bounce back after you tried your best and failed .....1 2 3 4 5
  3. Get yourself to keep trying when things are going really badly .....1 2 3 4 5
  4. Keep up your spirits when you suffer hardships .....1 2 3 4 5
  5. Get rid of self-doubts after you have had tough setbacks .....1 2 3 4 5
  6. Keep from being easily rattled .....1 2 3 4 5

7. Overcome discouragement when nothing you try seems to work.....1 2 3 4 5
8. Ask for help.....1 2 3 4 5
9. Tell my parents when I am upset .....1 2 3 4 5
10. Express my emotions .....1 2 3 4 5
11. Tell others what I am thinking or feeling.....1 2 3 4 5
12. Know when to walk away from a conversation.....1 2 3 4 5
13. Realize when I make someone else upset .....1 2 3 4 5

### **Behavior.**

*The following questions ask about **your behavior in the past month**. Please circle the number that best indicates how often you did each of these things in the **past month**:*

- |              |   |   |   |                     |
|--------------|---|---|---|---------------------|
| 1            | 2 | 3 | 4 | 5                   |
| Almost Never |   |   |   | At Least Once A Day |
1. I left something I needed for school at home .....1 2 3 4 5
  2. I interrupted other people while they were talking.....1 2 3 4 5
  3. I said something rude .....1 2 3 4 5
  4. I couldn't find something because my bedroom was messy .....1 2 3 4 5
  5. I lost my temper.....1 2 3 4 5
  6. I did not remember what someone told me to do .....1 2 3 4 5
  7. I stopped listening because my mind was wandering .....1 2 3 4 5
  8. I talked back when I was upset.....1 2 3 4 5

### **Resilience.**

*The following questions ask about **how you view your interactions with others**. Please circle the number that best indicates your agreement with each statement.*

- |                   |   |   |   |                |
|-------------------|---|---|---|----------------|
| 1                 | 2 | 3 | 4 | 5              |
| Strongly Disagree |   |   |   | Strongly Agree |
1. I tend to be influenced by people with strong opinions (R).....1 2 3 4 5
  2. In general, I feel I am in charge of the situation in which I live .....1 2 3 4 5
  3. I think it is important to have new experiences that challenge how  
you think about yourself in the world .....1 2 3 4 5
  4. Maintaining close relationships has been difficult and  
frustrating for me (R).....1 2 3 4 5
  5. I have confidence in my opinions, even if they are different  
from the most popular ideas.....1 2 3 4 5
  6. I feel a lot of pressure to be responsible all the time, which  
I find stressful (R) .....1 2 3 4 5
  7. I believe life is a continuous process of learning,  
changing and growth .....1 2 3 4 5
  8. People would describe me as a giving person, willing to  
share my time with others .....1 2 3 4 5
  9. I judge myself by what I think is important, not by the values

- of what others think is important .....1 2 3 4 5
10. I am quite good at managing the many responsibilities  
of my daily life.....1 2 3 4 5
11. I don't like to make many changes in my life (R) .....1 2 3 4 5
12. I have not experienced many warm and trusting  
relationships with others (R).....1 2 3 4 5
13. I tend to bounce back quickly after hard times .....1 2 3 4 5
14. I have a hard time making it through stressful events .....1 2 3 4 5
15. It does not take me long to recover from a stressful event .....1 2 3 4 5
16. It is hard for me to snap back when something bad happens.....1 2 3 4 5
17. I usually come through difficult times with little trouble .....1 2 3 4 5
18. I tend to take a long time to get over set-backs in my life .....1 2 3 4 5

## Appendix F

**Observation Coding Scheme Parent Responsiveness**

The purpose of this coding scheme is to assess whether the parents in this study demonstrate warmth, support, affection and intimacy during the conversation. The parent-adolescent dyads in this study were instructed to have two 5-minute conversations about a happy topic and an unhappy topic. Your task is to assess the extent to which the parent demonstrates responsiveness when communicating with the adolescent.

For each 30-second interval of the conversation, please rate the interaction on a five-point scale with regard to the parent's responsiveness during the interaction. Please use the following scale when rating the interactions:

1	2	3	4	5
Not at all Responsive				Completely Responsive

Using this scale, you would give the parent the rating of "1" if they showed no signs of warmth or support toward the adolescent. Use the following guidelines to help you determine when it is appropriate to assign a code of 1:

- The parent is being critical of the adolescent, shows contempt, or demonstrates frustration or disgust.
- The parent appears to be uncomfortable in their interaction with the adolescent.
- The parent appears disinterested in the adolescent, not paying attention, not listening, or uninvolved in the conversation.
- Look for nonverbal cues that would indicate negative affect or disinterest, such as expressions of anger, contempt, or disgust; lack of eye contact; indirect body orientation; or a general lack of involvement in the conversation.

Using this scale, you would give the parent the rating of "5" if during that minute they were completely responsive to the adolescent. Use the following guidelines to help you determine when it is appropriate to assign a code of 5:

- The parent acknowledges what their adolescent is saying (e.g. "I hear you", "I understand where you're coming from")
- The parent uses verbal expressions of love and care for the adolescent, acknowledging the child's frustration and/or enthusiasm.
- The parent uses nonverbal expressions of love and care for the adolescent. In particular, look for nonverbal cues that would indicate positive affect, such as smiling, touching, leaning toward the adolescent, laughing, etc.
- The parent is being supportive of the adolescent (e.g. "I liked when you did this", "I value your opinion")

PARENT RESPONSIVENESS CODING SHEET **Dyad ID#**\_\_\_\_\_

Using the following scale, please rate each 30-second interval of the interaction with regard to the parent's responsiveness during the conversation. Please make your ratings in whole numbers only.

1                      2                      3                      4                      5  
 Not at all Responsive                      Completely Responsive

Seconds	Interaction A
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

Seconds	Interaction B
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

### Observation Coding Scheme Parent Control

The purpose of this coding scheme is to assess whether the parents in this study demonstrate control during the conversation. The parent-adolescent dyads in this study were instructed to have two 5-minute conversations about a happy topic and an unhappy topic. Your task is to assess the extent to which the parent demonstrates control when communicating with the adolescent.

For each 30-second interval of the conversation, please rate the interaction on a five-point scale with regard to the parent's controlling communication during the interaction. Please use the following scale when rating the interactions:

1	2	3	4	5
Not at all Controlling				Completely Controlling

Using this scale, you would give the parent the rating of "1" if they did not request anything of the adolescent, did not make demands, and did not ask them to do anything to resolve the conflict. Use the following guidelines to help you determine when it is appropriate to assign a code of 1:

- The parent does **not** place any blame on the adolescent and does not make any suggestions for ways the adolescent could change their behavior to solve a disagreement. The parent does not ask the adolescent to change behavior or attitude in any way.
- The parent agrees to change his or her own behavior instead of requesting a change from the adolescent. They make few suggestions for how to resolve the issues discussed.
- The parent's nonverbal behaviors may also denote a lack of control. They are **not** assertive, they are relatively passive, and they tend to let their adolescent guide the conversation.

You would give the parent the rating of "5" if they are nagging or make demands of the adolescent to change his/her behavior. Use the following guidelines to help you determine when it is appropriate to assign a code of 5:

- The parent uses a lot of "you" statements (e.g. "you need to do this" or "will you please stop doing that")
- The parent demands that his/her adolescent do something to solve the issue or change their behavior, feelings, or thoughts.
- The parent is nagging and suggests that his/her adolescent needs to change, but does not address changing their own behavior.
- The parent's nonverbal behaviors also denote control. They may take an aggressive posture, force the adolescent to make eye contact, gesture in a way that is directive and assertive, etc.



## Appendix G

**Observation Coding Scheme for Emotion Coaching Parenting Style**

The purpose of this coding scheme is to assess whether the parents in this study acknowledge the child's emotions and encourages proper management of those emotions during the conversation. The parent-adolescent dyads in this study were instructed to have two 5-minute conversations about a happy topic and an unhappy topic. Your task is to assess the extent to which the parent demonstrates emotion coaching communication with the adolescent.

For each 30-second interval of the conversation, please rate the interaction on a five-point scale with regard to the parent's emotion coaching communication during the interaction. Please use the following scale when rating the interactions:

1	2	3	4	5
Not at all				Completely
Emotion Coaching				Emotion Coaching

Using this scale, you would give the parent the rating of "1" if they showed no signs of warmth or support toward the adolescent's expression of emotion. Use the following guidelines to help you determine when it is appropriate to assign a code of 1:

- The parent appears to be unaware of the child's emotions or disregards their emotions (e.g. "stop your crying", "don't be upset").
- The parent criticizes or makes fun of the child for expressing their emotions.
- Look for nonverbal cues that would indicate negative affect or disinterest, such as expressions of anger, frustration, impatience; lack of eye contact; indirect body orientation; eye rolling; or a general lack of involvement in the conversation.

Using this scale, you would give the parent the rating of "5" if during that minute they were completely emotion coaching to the adolescent. Use the following guidelines to help you determine when it is appropriate to assign a code of 5:

- The parent acknowledges what their adolescent is experiencing and encourages them to talk about it (e.g. "I could tell that you were upset", "What would have made you feel better?")
- The parent attempts to embrace the child's emotion, both positive and negative (e.g. expressing their own feelings, relating to the child's feelings)
- The parent uses nonverbal expressions of warmth. In particular, look for nonverbal cues that would indicate positive affect, such as smiling, eye contact, touching, leaning toward the adolescent, laughing, etc.
- The parent is being supportive of the adolescent (e.g. demonstrating sympathy and/or empathy)



**EMOTION COACHING CODING SHEET Dyad ID#\_\_\_\_\_**

Using the following scale, please rate each 30-second interval of the interaction with regard to the parent's responsiveness during the conversation. Please make your ratings in whole numbers only.

1	2	3	4	5
Not at all				Completely
Emotion Coaching				Emotion Coaching

Seconds	Interaction A
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

Seconds	Interaction B
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

### Observation Coding Scheme Emotion Dismissing

The purpose of this coding scheme is to assess whether the parents in this study demonstrate emotion dismissing communication during the conversation. The parent-adolescent dyads in this study were instructed to have two 5-minute conversations about a happy topic and an unhappy topic. Your task is to assess the extent to which the parent demonstrates emotion dismissing communication when communicating with the adolescent.

For each 30-second interval of the conversation, please rate the interaction on a five-point scale with regard to the parent's emotion dismissing communication during the interaction. Please use the following scale when rating the interactions:

1	2	3	4	5
Not at all				Completely
Emotion Dismissing				Emotion Dismissing

Using this scale, you would give the parent the rating of "1" if they acknowledged the child's feelings, provided support, and guided the child in addressing those emotions. Use the following guidelines to help you determine when it is appropriate to assign a code of 1:

- The parent does **not** criticize the child or makes fun of the child for expressing emotions.
- The parent does **not** ignore the child when they express emotions, instead they encourage discussion about the emotion.
- The parent validates the child's emotions, attempts to relate to the child's emotions, and may verbally describe how the child is feeling.
- The parent's nonverbal behaviors demonstrate warmth and support. They make eye-contact; may lean towards the child, smile, laugh with the child.

You would give the parent the rating of "5" if they are teasing the child or making demands for the adolescent to change his/her behavior. Use the following guidelines to help you determine when it is appropriate to assign a code of 5:

- The parent may tell the child to stop feeling a certain way or that the feelings are unwarranted.
- The parent may tease the child about their feelings.
- The parent ignores a child's expression of emotion.
- The parent's nonverbal behaviors may take an aggressive posture; gesture in a way that is directive and assertive; laughing at child not with child; gesture in a way that brushes them off; rolling of eyes; etc.

**EMOTION DISMISSING CODING SHEET Dyad ID#\_\_\_\_\_**

Using the following scale, please rate each 30-second interval of the interaction with regard to the parent's emotion dismissing communication during the conversation. Please make your ratings in whole numbers only.

1	2	3	4	5
Not at all				Completely
Emotion Dismissing				Emotion Dismissing

Seconds	Interaction A
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

Seconds	Interaction B
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

## Appendix H

### Observation Coding Scheme for Adolescent Emotion Regulation

The purpose of this coding scheme is to assess adolescent emotion regulation behavior during the conversation. Emotion regulation refers to the degree of control a person has over their emotional expressions. The parent-adolescent dyads in this study were instructed to have two 5-minute conversations about a happy topic and an unhappy topic. Your task is to assess the extent to which the adolescent manages their emotions during the interaction.

For each 30-second interval of the conversation, please rate the interactions on a five-point scale with regard to the adolescent's emotion regulation behavior during the interaction. Please use the following scale when rating the interactions:

1	2	3	4	5
Poor Emotion Regulation				Excellent Emotion Regulation

Using this scale, you would give the adolescent the rating of “1” if they showed difficulty controlling their emotions, such that they displayed discomfort, explosiveness, frustration, inappropriate crying, or reluctance to communicate when expressing emotion. Use the following guidelines to help you determine when it is appropriate to assign a code of 1:

- The adolescent displays emotions that are highly intense or explosive, especially with regard to negative emotion.
- The adolescent responds to the parent's efforts to engage discussion about emotion by refusing to acknowledge what their parent is saying, ignoring the parent, withdrawing from the conversation, accusing the parent, changing the subject, or interrupting (e.g., “I don't want to talk about it”, “You never listen to me”).
- The adolescent expresses negative emotions by lashing out aggressively, criticizing the parent, or disobeying the parent. Adolescents also demonstrate difficulty empathizing.
- Look for nonverbal cues that would indicate difficulty managing emotions such as expressions of anger, frustration, impatience; signs of stress; lack of eye contact; indirect body orientation; eye rolling; restlessness; or withdrawal from the conversation.

Using this scale, you would give the adolescent the rating of “5” if during that 30-second interval they appeared comfortable, in control, and attentive during the interaction. Use the following guidelines to help you determine when it is appropriate to assign a code of 5:

- The adolescent appears to have control over their emotions. They appear comfortable talking about their feelings and are skilled at expressing their emotions.
- The adolescent is engaged in the conversation with their parent and freely contributes their opinions, describes their emotion, and demonstrates active listening.
- The adolescent expresses both positive and negative emotions with a degree of intensity that is suitable to the conversation.
- Look for nonverbal cues that would indicate controlled emotions such as relaxed posture, eye contact, leaning toward the parent, laughing, nodding and smiling, etc.

ADOLESCENT EMOTION REGULATION CODING SHEET **Dyad ID#**\_\_\_\_\_

Using the following scale, please rate each 30-second interval of the interaction with regard to the adolescent's emotion regulation during the conversation. Please make your ratings in whole numbers only.

1	2	3	4	5
Poor Regulation of Emotion				Excellent Regulation of Emotion

Seconds	Interaction A
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

Seconds	Interaction B
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

## Appendix I

### Observation Coding Scheme for Adolescent Inappropriate/Appropriate Behavior

The purpose of this coding scheme is to assess adolescent expression of behavioral impulsivity during the conversation, which is reflected in the extent to which children demonstrate behaviors that are appropriate or inappropriate to the conversation. The parent-adolescent dyads in this study were instructed to have two 5-minute conversations about a happy topic and an unhappy topic. Your objective is to assess the extent to which the adolescent demonstrates inappropriate/appropriate behavior with the parent.

For each 30-second interval of the conversation, please rate behavior on a five-point scale with regard to the adolescent's impulsivity during the interaction. Please use the following scale when rating the interactions:

1	2	3	4	5
Appropriate				Inappropriate
Behavior				Behavior

Using this scale, you would give the adolescent the rating of "1" for **Appropriate** behavior if during the 30-seconds they were calm, collected, attentive, and engaged. Use the following guideline to help you determine when it is appropriate to assign a code of 1:

- The adolescent effectively took turns in conversing with their parent, they did not speak out of turn, did not make any forceful gestures, and spoke at an appropriate volume.
- The adolescent was able to stay on topic, appeared to be actively listening to their parent, was responsive to questions asked, and showed respect.
- Look for nonverbal cues such as direct body orientation, posture that shows active engagement, consistent eye contact, no fidgeting, no unnecessary bodily movements, etc.

Using this scale, you would give the adolescent the rating of "5" on **Inappropriate** behavior if they showed signs of annoyance, inattention, or disruption during the interaction. Use the following guideline to help you determine when it is appropriate to assign an inappropriate/appropriate code of 5:

- The adolescent appears aggressive or destructive by doing things such as speaking with hostility, loud volume, or yelling. The adolescent may interrupt their parent, talk over them, or show disrespect.
- The adolescent is disengaged from the conversation, easily distracted, visibly annoyed with the parent, and eager to end the conversation.
- Look for nonverbal cues such as fidgeting, rolling their eyes, aggressive gestures, facial expressions of disgust or boredom, and limited eye contact.

**ADOLESCENT IMPULSIVITY CODING SHEET Dyad ID#\_\_\_\_\_**

Using the following scale, please rate each 30-second interval of the interaction with regard to the adolescent's inappropriate/appropriate behaviors during the conversation. Please make your ratings in whole numbers only.

1	2	3	4	5
Appropriate Behavior				Inappropriate Behavior

Seconds	Interaction A
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

Seconds	Interaction B
0:00 – 0:29	
0:30 – 0:59	
1:00 – 1:29	
1:30 – 1:59	
2:00 – 2:29	
2:30 – 2:59	
3:00 – 3:29	
3:30 – 3:59	
4:00 – 4:29	
4:30 – 4:59	

Table 1

*Descriptive Table*

<b>Demographic Information</b>	<b>Adolescents</b>	<b>Parents</b>
<b>No. of Male and Female Participants</b>	24 males, 35 females	14 males, 45 females, one declined to report
<b>Average Age of Participants</b>	$M = 14.8$ , 12 to 19 years	$M = 46.62$ , 27 to 63 years
<b>Ethnicity Breakdown</b>	Caucasian (70%), African American (10%), Hispanic/Latino (6.7%), Asian (1.7%), Other 6.7%), two declined to report	Caucasian (80%), African American (10%), Hispanic/Latino (8.3%), and Indian (1.7%)
<b>Parents' Education Level</b>	N/A	Completed high school (11.7%), had some college (8.3%), had a 2-year college degree (13.3%), had a 4-year college degree (25%), had a master's degree (26.7%), had an advanced degree in their field (e.g., Ph.D., M.D., etc.) (3.3%), and 10% reported other with one declining to report
<b>Average Household Income</b>	N/A	Less than \$25,000 (8.3%), \$26,000 to \$50,000 (10%), \$51,000 to \$75,000 (18.3%), \$76,000 to \$100,000 (10%), \$101,000 to \$125,000 (6.7%), \$126,000 and above (43.3%), with two families declining to report
<b>Parents' Relationship Status (Committed)</b>	N/A	Committed relationship with child's other parent (85%), dating but not married (3.3%), married (80%), common law marriage (3.3%), declined to report (13.3%)
<b>Parents' Relationship Status (Not Involved)</b>	N/A	Not involved with child's other parent (15%), separated (37.5%), divorce (37.5%), widowed (12.5%), never had a committed relationship (12.5%)



Table 2

*Independent Samples t-test (Alcoholic vs. Non-Alcoholic)*

	<i>t</i> -statistic	p-value of <i>t</i>	Alcoholic Mean	Alcoholic SD	Non Alcoholic Mean	Non Alcoholic SD
<u>Adolescent Pre-Interaction</u>						
Emotion Regulation	-1.96	.06	3.18	1.05	3.62	.59
Self-Efficacy	-1.60	.11	3.75	.94	4.09	.73
Impulsivity	2.02	.05*	3.03	.80	2.64	.71
<u>Parent Pre-Interaction</u>						
Emotion Regulation	1.68	.09	1.96	.61	1.73	.40
Self-Efficacy	-2.33	.02*	3.97	.70	4.32	.46
Impulsivity	2.41	.02*	2.63	.69	2.17	.78
Responsiveness	2.25	.03*	2.54	.65	2.15	.70
Control	-.84	.41	4.74	1.01	4.95	.97
Emotion Coaching	.23	.83	3.54	.56	3.51	.57
Emotion Dismissing	-1.40	.17	2.97	.87	3.26	.74
<u>Observed Variables</u>						
Resp. (Unhappy)	-.80	.43	3.55	.56	3.66	.55
Resp. (Happy)	.49	.63	2.99	1.07	2.86	.96
Control (Unhappy)	.16	.87	2.64	.78	2.55	.56

Control (Happy)	-.89	.37	2.41	.61	2.55	.56
Emo. Coaching (Unhappy)	-2.18	.03*	3.52	.62	3.79	.31
Emo. Coaching (Happy)	-.12	.90	2.77	.91	2.80	.89
Emo. Dismissing (Unhappy)	.27	.79	3.04	.80	2.97	.97
Emo. Dismissing (Happy)	-.99	.33	2.43	.68	2.61	.71
Emo. Regulation (Unhappy)	-1.82	.07	3.53	.85	3.86	.53
Emo. Regulation (Happy)	-2.23	.03*	3.54	.84	3.91	.38
Impulsivity (Unhappy)	1.26	.21	2.23	.87	1.99	.58
Impulsivity (Happy)	.79	.43	3.08	1.00	2.87	1.06

---

*Note.* Families of Alcoholics ( $N = 30$ ), Families of Non-Alcoholics ( $N = 30$ ).

\*  $p < .05$ .

Table 3

*Independent Samples t-test (Male vs. Female Adolescents)*

	<i>t</i> -statistic	p-value of <i>t</i>	Male Mean	Male SD	Female Mean	Female SD
<u>Adolescent Pre-Interaction</u>						
Emotion Regulation	.26	.79	3.44	1.01	3.38	.79
Self-Efficacy	-.26	.80	3.88	.92	3.94	.82
Impulsivity	-2.01	.05*	2.59	.65	2.99	.82
<u>Parent Pre-Interaction</u>						
Emotion Regulation	-.10	.92	1.82	.55	1.84	.51
Self-Efficacy	.47	.64	4.21	.50	4.14	.63
Impulsivity	-.41	.68	2.35	.73	2.43	.81
Responsiveness	-.09	.92	2.32	.59	2.34	.78
Control	-.21	.83	4.84	.92	4.90	1.02
Emotion Coaching	-2.26	.03*	3.33	.44	3.66	.60
Emotion Dismissing	1.51	.14	3.32	.70	3.01	.85
<u>Observed Variables</u>						
Responsiveness (Unhappy)	.12	.90	3.63	.44	3.61	.62
Responsiveness (Happy)	-2.14	.04*	2.59	1.00	3.15	.98
Control (Unhappy)	.20	.84	2.62	.69	2.59	.68

Control (Happy)	1.46	.15	2.62	.58	2.39	.59
Emotion Coaching (Unhappy)	.80	.43	3.74	.41	3.63	.53
Emotion Coaching (Happy)	-1.84	.07	2.52	.87	2.95	.89
Emotion Dismissing (Unhappy)	1.06	.29	3.15	.86	2.90	.91
Emotion Dismissing (Happy)	-.29	.29	2.49	.66	2.54	.74
Emotion Regulation (Unhappy)	.20	.84	3.73	.77	3.69	.71
Emotion Regulation (Happy)	-.18	.86	3.71	.59	3.73	.74
Impulsivity (Unhappy)	-.71	.48	2.01	.73	2.15	.75
Impulsivity (Happy)	1.85	.07	3.27	.92	2.78	1.07

---

*Note.* Males ( $N = 24$ ), Females ( $N = 35$ ).

\*  $p < .05$ .

Table 4

*Independent Samples t-test (Male vs. Female Parents)*

	<i>t</i> -statistic	p-value of <i>t</i>	Male Mean	Male SD	Female Mean	Female SD
<u>Adolescent Pre-Interaction</u>						
Emotion Regulation	.50	.62	3.50	.76	3.36	.93
Self-Efficacy	1.21	.23	4.16	.78	3.84	.87
Impulsivity	.44	.66	2.92	.83	2.81	.77
<u>Parent Pre-Interaction</u>						
Emotion Regulation	2.72	.01**	2.16	.63	1.75	.46
Self-Efficacy	-2.01	.05*	3.85	.54	4.22	.61
Impulsivity	1.82	.07	2.71	.82	2.29	.73
Responsiveness	1.63	.11	2.60	.81	2.25	.65
Control	1.06	.29	5.10	1.20	4.78	.92
Emotion Coaching	1.97	.05*	3.78	.60	3.45	.53
Emotion Dismissing	1.42	.16	3.37	.93	3.02	.77
<u>Observed Variables</u>						
Responsiveness (Unhappy)	-1.01	.32	3.48	.68	3.65	.50
Responsiveness (Happy)	1.09	.28	3.18	.83	2.84	1.07
Control (Unhappy)	2.01	.05*	2.95	1.00	2.53	.55

Control (Happy)	.05	.06	2.49	.62	2.48	.59
Emotion Coaching (Unhappy)	-1.65	.10	3.46	.61	3.72	.46
Emotion Coaching (Happy)	-1.05	.30	2.55	.93	2.84	.88
Emotion Dismissing (Unhappy)	.48	.63	3.11	.90	2.98	.89
Emotion Dismissing (Happy)	.64	.53	2.63	.98	2.49	.60
Emotion Regulation (Unhappy)	-3.25	.00***	3.21	.91	3.87	.57
Emotion Regulation (Happy)	-2.73	.01**	3.32	.85	3.86	.56
Impulsivity (Unhappy)	3.16	.00***	2.60	.81	1.93	.65
Impulsivity (Happy)	1.11	.27	3.25	.95	2.90	1.05

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*Note.* Males ( $N = 14$ ), Females ( $N = 44$ ).

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 5

*Bivariate Correlations of Adolescent and Parent Self-Reports*

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
V1: Ad. Self Efficacy	---	.61***	.05	.23	-.05	.18	.23	.01	.27	.12
V2: Ad. Emotion Regulation	.54**	---	.02	.11	.10	-.12	-.07	.03	.16	.08
V3: Ad. Behavior	-.13	-.05	---	.11	.22	.41*	.31	-.09	.15	.02
V4: PP Emotion Regulation	.20	.01	.52**	---	-.57***	.59***	.72***	.48**	.43*	.50**
V5: PP Self Efficacy	.04	-.16	-.29	-.58***	---	-.28	-.38*	-.45*	-.32	-.28
V6: PP Behavior	.11	.14	.47**	.74***	-.46*	---	.90***	.35	.29	.37*
V7: Parent Responsiveness	.10	.20	.46**	.80***	-.57**	.90***	---	.31	.35	.44*
V8: Parent Control	-.03	-.18	.10	.24	-.04	.07	.10	---	.60***	.55**
V9: Parent Emo. Coaching	-.30	-.26	.13	-.10	.34	-.05	-.14	.22	---	.59***
V10: Parent Emo. Dismissing	-.11	-.09	-.23	-.03	.24	-.16	-.14	.47**	.40*	---

*Note.* Alcoholic families' ( $N = 30$ ) scores are reported below the diagonal, non-alcoholic families' ( $N = 30$ ) scores are reported above the diagonal. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 6

*Bivariate Correlations of Observed Unhappy Interactions and HRV Measures*

	EC (Unhappy)	ED (Unhappy)	ER (Unhappy)	Imp. (Unhappy)	Resp. (Unhappy)	Cont. (Unhappy)
V1: SDNN2h	-.04 (-.08)	-.32 (.06)	.13 (.05)	-.19 (-.12)	.28 (.26)	-.27 (-.06)
V2: RMSSD2h	-.08 (-.10)	-.35 (-.02)	.15 (.02)	-.20 (-.22)	.37 (.21)	-.27 (-.07)
V3: pNN502h	-.17 (.02)	-.29 (-.02)	.09 (.09)	-.10 (-.27)	.28 (.40*)	-.21 (-.17)
V4: VLF2h	.01 (.02)	-.36 (.04)	.13 (.17)	-.20 (-.24)	.22 (.09)	-.27 (-.15)
V5: LF2h	.03 (-.12)	-.39* (.02)	.21 (.10)	-.27 (-.18)	.29 (.25)	-.32 (-.30)
V6: HF2h	.03 (.12)	-.34 (-.06)	.07 (.08)	-.12 (-.28)	.36 (.25)	-.18 (-.15)
V7: SDNN3h	-.21 (.08)	-.09 (-.19)	-.19 (.24)	.19 (-.24)	-.09 (.14)	.04 (-.06)
V8: RMSSD3h	-.25 (.14)	-.17 (-.18)	-.12 (.19)	.10 (-.34)	-.05 (.23)	-.01 (-.07)
V9: pNN503h	-.12 (.20)	-.09 (-.19)	-.08 (.27)	.09 (-.47*)	-.02 (.34)	-.04 (-.08)
V10: VLF3h	.00 (-.07)	-.19 (-.15)	-.24 (.20)	.24 (-.02)	-.09 (-.10)	.22 (.08)
V11: LF3h	.03 (-.07)	-.19 (-.18)	-.22 (.20)	.21 (-.04)	-.06 (-.06)	.19 (.10)
V12: HF3h	-.01 (.06)	-.05 (-.29)	-.17 (.20)	.11 (-.24)	-.03 (.19)	.02 (-.08)
V13: SDNN4s	-.00 (-.20)	-.12 (-.11)	.10 (-.18)	-.10 (.18)	.13 (-.03)	-.09 (-.09)
V14: RMSSD4s	-.07 (-.07)	-.30 (-.08)	.14 (.05)	-.16 (-.15)	.17 (.09)	-.11 (-.22)
V15: pNN504s	-.11 (.09)	-.20 (-.05)	.11 (.08)	-.12 (-.18)	.22 (.30)	-.12 (-.32)
V16: VLF4s	.09 (-.10)	-.17 (-.18)	.07 (-.36)	-.01 (.27)	.19 (-.26)	-.05 (-.01)
V17: LF4s	.09 (-.05)	-.25 (-.20)	.14 (-.12)	-.10 (.12)	.19 (-.15)	-.07 (-.04)
V18: HF4s	-.09 (.08)	-.21 (-.09)	.11 (.18)	-.09 (-.29)	.13 (.02)	-.11 (-.18)
V19: SDNN5s	-.05 (.11)	-.02 (-.08)	-.03 (.15)	.08 (-.13)	.02 (.11)	-.04 (-.07)
V20: RMSSD5s	-.03 (.08)	.07 (.03)	.02 (.06)	-.02 (-.07)	.05 (.16)	-.04 (-.06)
V21: pNN505s	-.06 (.19)	.13 (.09)	-.08 (.14)	.10 (-.17)	.01 (.27)	.05 (-.10)
V22: VLF5s	-.35 (-.13)	.14 (-.18)	-.35 (.05)	.35 (.08)	-.31 (-.15)	.04 (.06)



V23: LF5s	.01 (-.05)	.20 (-.13)	.01 (.07)	.05 (.03)	.20 (-.09)	.08 (.02)
V24: HF5s	.05 (.11)	.12 (-.08)	.15 (.17)	-.18 (-.20)	.10 (.13)	-.18 (-.14)

---

*Note.* Alcoholic families' ( $N = 30$ ) scores are reported with non-alcoholic families' ( $N = 30$ ) scores in parentheses.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 7

*Bivariate Correlations of Observed Happy Interactions and HRV Measures*

	EC (Happy)	ED (Happy)	ER (Happy)	Imp. (Happy)	Resp. (Happy)	Cont. (Happy)
V1: SDNN2h	.00 (.09)	-.27 (.04)	.19 (.26)	-.19 (-.17)	.28 (.09)	-.24 (.06)
V2: RMSSD2h	-.07 (.06)	-.28 (-.09)	.23 (.15)	-.16 (-.14)	.11 (.21)	-.28 (.02)
V3: pNN502h	-.11 (.07)	-.26 (-.22)	.15 (.10)	-.04 (-.04)	.02 (.13)	-.25 (.09)
V4: VLF2h	.07 (.16)	-.26 (-.02)	.19 (.15)	-.24 (-.22)	.19 (.13)	-.25 (.04)
V5: LF2h	.15 (.06)	-.24 (-.16)	.24 (.04)	-.33 (.02)	.23 (.01)	-.32 (-.09)
V6: HF2h	-.10 (.12)	-.32 (-.10)	.20 (.21)	-.18 (-.13)	.16 (.12)	-.17 (.07)
V7: SDNN3h	-.22 (.03)	-.08 (-.17)	-.05 (-.43*)	.13 (.12)	-.05 (.16)	.13 (-.02)
V8: RMSSD3h	.18 (.08)	-.09 (-.14)	.03 (-.19)	.09 (.02)	-.10 (.12)	.06 (.07)
V9: pNN503h	-.23 (.15)	-.15 (-.20)	-.01 (-.10)	.20 (-.05)	-.19 (.16)	-.02 (.16)
V10: VLF3h	.03 (-.09)	.19 (.18)	.04 (-.66***)	-.09 (.22)	.17 (.15)	.29 (-.02)
V11: LF3h	.02 (-.08)	.16 (.10)	.05 (-.62***)	-.04 (.21)	.13 (.17)	.22 (-.01)
V12: HF3h	-.26 (.15)	-.08 (-.27)	.02 (-.12)	.18 (-.03)	-.13 (.22)	.13 (-.03)
V13: SDNN4s	-.22 (.15)	-.12 (-.01)	.16 (-.48**)	-.03 (.06)	-.08 (.17)	-.04 (-.07)
V14: RMSSD4s	-.06 (.11)	-.05 (-.18)	.24 (-.23)	-.18 (.05)	-.00 (.08)	-.12 (-.09)
V15: pNN504s	-.08 (.10)	-.13 (-.34)	.19 (-.17)	-.07 (.17)	-.06 (-.03)	-.12 (-.06)
V16: VLF4s	-.06 (.20)	-.12 (.00)	.05 (-.51**)	-.09 (-.01)	.10 (.17)	-.02 (-.00)
V17: LF4s	-.08 (.12)	-.10 (-.03)	.20 (-.60***)	-.21 (.10)	.10 (.18)	-.08 (-.01)
V18: HF4s	-.08 (.17)	-.15 (-.08)	.15 (-.10)	-.15 (-.10)	.02 (.15)	-.12 (-.04)
V19: SDNN5s	-.29 (-.09)	-.04 (-.06)	-.02 (-.45*)	.20 (.24)	-.18 (.04)	.06 (.02)
V20: RMSSD5s	-.35 (-.04)	-.05 (-.10)	.06 (-.33)	.34 (.18)	-.36 (.01)	.04 (.06)
V21: pNN505s	-.33 (-.05)	-.08 (-.15)	-.08 (-.28)	.42* (.19)	-.34 (-.07)	.08 (.17)
V22: VLF5s	.01 (-.03)	.18 (.19)	-.37* (-.65***)	.16 (.18)	-.02 (.18)	.21 (-.03)

V23: LF5s	-.20 (-.10)	.09 (.04)	-.05 (-.62***)	.31 (.26)	-.19 (.09)	.23 (-.04)
V24: HF5s	-.47** (.11)	-.25 (-.16)	.17 (-.17)	.36 (.01)	-.44* (.10)	-.02 (-.03)

---

*Note.* Alcoholic families' ( $N = 30$ ) scores are reported with non-alcoholic families' ( $N = 30$ ) scores in parentheses.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 8

*Bivariate Correlations of Observed Measures*

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
V1: Emo. Coaching (Unhappy)	---	.06	.09	-.39*	.41*	.13	-.49**	.15	.54**	-.18	-.34	.14
V2: Emo. Coaching (Happy)	-.03	---	-.86***	-.15	.15	.26	-.20	-.84***	-.07	.78***	-.22	-.11
V3: Emo. Dismissing (Unhappy)	.02	-.66***	---	.02	-.00	-.10	.07	.77***	.18	-.81***	-.04	-.02
V4: Emo. Dismissing (Happy)	-.24	.38*	-.11	---	-.48**	-.19	.39*	-.17	-.60***	.15	.68***	.44*
V5: Emo. Regulation (Unhappy)	.43*	-.20	-.05	-.17	---	.21	-.80***	-.02	.47**	-.03	-.57***	-.35
V6: Emo. Regulation (Happy)	.46*	-.06	-.13	-.14	.87***	---	-.40*	-.42*	.17	.06	-.16	-.07
V7: Impulsivity (Unhappy)	-.46*	.26	.01	.22	-.94***	-.89***	---	.19	-.47**	-.02	.44*	.18
V8: Impulsivity (Happy)	-.05	-.71***	.71***	-.17	-.15	-.30	.12	---	.34	-.82***	-.13	-.07
V9: Resp. (Unhappy)	.52**	-.04	-.12	-.54**	.46**	.41*	-.48**	-.11	---	-.22	-.51**	-.02
V10: Resp. (Happy)	-.07	.76***	-.65***	.17	-.42*	-.34	.47**	-.71***	.07	---	.23	.07
V11: Control (Unhappy)	-.33	.27	-.11	.41*	-.58***	-.53**	.61***	.03	-.22	.39*	---	.60***
V12: Control (Happy)	-.18	.31	-.04	.54**	-.53**	-.46*	.52**	-.03	-.23	.40*	.79***	---

*Note.* Alcoholic families' ( $N = 30$ ) scores are reported below the diagonal, non-alcoholic families' ( $N = 30$ ) scores are reported above the diagonal. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 9

*Adolescents' Self-reported Emotion Regulation and Parents' Perceptions of Adolescent Emotion Regulation*

	Adolescent Self-Report								Parent Self-Report							
	Responsiveness		Control		EC		ED		Responsiveness		Control		EC		ED	
	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$
<u>Step One</u>	.17		.17		.17		.17		.01		.01		.01		.01	
Adolescent Gender		-.02		-.02		-.02		-.02		.09		.09		.09		.09
Adolescent Age		-.05		-.04		-.04		-.04		.02		.02		.02		.02
Parent Rel. Status		.23		.23		.23		.23		.06		.06		.06		.06
No. of Children		-.35*		-.35*		-.35*		-.35*		-.06		-.06		-.06		-.06
<u>Step Two</u>	.09		.09		.10		.09		.60***		.18*		.03		.07	
Family Status		.33*		.31*		.31*		.31*		.05		-.19		-.16		-.17
Responsiveness		.07								.80***						
Control				.02								.41**				
EC						-.10								.10		
ED							-.04									.22
<u>Step Three</u>	.01		.00		.04		.01		.06**		.00		.03		.03	
RespxAlc		-.32								-.101**						
ContxAlc				.06								-.25				
ECxAlc						1.35								1.27		
EDxAlc							.49									.93

Note. Cell entries are  $R^2 \Delta$  statistics and standardized  $\beta$  coefficients.

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 10

*Observed Predictor Measures and Observed Adolescent Emotion Regulation*

	Happy Observed								Unhappy Observed							
	Responsiveness		Control		EC		ED		Responsiveness		Control		EC		ED	
	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$
<u>Step One</u>	.04		.04		.04		.04		.05		.05		.05		.05	
Adolescent Age		-.02		-.02		-.02		-.02		-.15		-.15		-.15		-.15
Adolescent Gender		.14		.14		.14		.14		.14		.14		.14		.14
Parent Rel. Status		.02		.02		.02		.02		.08		.08		.08		.08
No. of Children		-.12		-.12		-.12		-.12		-.06		-.06		-.06		-.06
<u>Step Two</u>	.11		.17*		.08		.07		.24**		.32***		.31***		.04	
Family Status		.24		.31*		.25		.27		.15		.23		.05		.19
Responsiveness		-.25								.47**						
Control				-.36*								-.54***				
EC						.16								.56***		
ED								-.10								-.05
<u>Step Three</u>	.04		.11*		.00		.00		.01		.01		.00		.01	
RespxAlc		.86								-.90						
ContxAlc				1.94*								.48				
ECxAlc						.14								-.19		
EDxAlc								.20								.33

Note. Cell entries are  $R^2 \Delta$  statistics and standardized  $\beta$  coefficients.

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 11

*SDNN3h and Observed Measures*

LF2h								
	Responsiveness		Control		EC		ED	
	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$
<u>Step One</u>	.06		.06		.06		.06	
Adolescent Gender		-.16		-.16		-.16		-.16
Adolescent Age		.14		.14		.14		.14
Parent Rel. Status		-.13		-.13		-.13		-.13
No. of Children		-.08		-.08		-.08		-.08
<u>Step Two</u>	.12		.06		.05		.03	
Family Status		.22		.16		.18		.17
Responsiveness		.34*						
Control				.18				
EC						.15		
ED								.06
<u>Step Three</u>	.00		.04		.00		.02	
RespxAlc		.25						
ContxAlc				-.19				
ECxAlc						.12		
EDxAlc								-.88

*Note.* Cell entries are  $R^2$   $\Delta$  statistics and standardized  $\beta$  coefficients.

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 12

*VLF3h and Observed Measures*

VLF3h								
	Responsiveness		Control		EC		ED	
	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$
<u>Step One</u>	.07		.07		.07		.07	
Adolescent Gender		-.25		-.25		-.25		-.25
Adolescent Age		.06		.06		.06		.06
Parent Rel. Status		-.03		-.03		-.03		-.03
No. of Children		-.09		-.09		-.09		-.09
<u>Step Two</u>	.09		.02		.00		.04	
Family Status		.01		-.05		-.03		-.07
Responsiveness		.34*						
Control				.14				
EC						.06		
ED								.21
<u>Step Three</u>	.00		.03		.01		.00	
RespxAlc		.18						
ContxAlc				-1.08				
ECxAlc						-.46		
EDxAlc								-.23

*Note.* Cell entries are  $R^2 \Delta$  statistics and standardized  $\beta$  coefficients.

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$ .



Table 13

*pNN504s and Observed Measures*

pNN504s									
	Responsiveness		Control		EC		ED		
	$R^2$	$\Delta$	$\beta$	$R^2$	$\Delta$	$\beta$	$R^2$	$\Delta$	$\beta$
<u>Step One</u>	.05			.05			.05		
Adolescent Gender			-.03			-.03			-.03
Adolescent Age			.09			.09			.09
Parent Rel. Status			-.21			-.21			-.21
No. of Children			-.04			-.04			-.04
<u>Step Two</u>	.21**			.16*			.13*		.19**
Family Status			.35*			.38*			.37*
Responsiveness			.29*						
Control						-.17			
EC						-.00			
ED									-.26
<u>Step Three</u>	.00			.06			.01		.00
RespxAlc			.36						
ContxAlc						-1.29			
ECxAlc									1.24
EDxAlc									.23

Note. Cell entries are  $R^2$   $\Delta$  statistics and standardized  $\beta$  coefficients.

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 14

*Adolescents' Self-reported Self-Efficacy and Parents' Perceptions of Adolescent Self-Efficacy*

	Adolescent Self-Report								Parent Self-Report							
	Responsiveness		Control		EC		ED		Responsiveness		Control		EC		ED	
	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$
<u>Step One</u>	.22*		.22*		.22*		.22*		.05		.05		.05		.05	
Adolescent Gender		.16		.16		.16		.16		-.15		-.15		-.15		-.15
Adolescent Age		-.27*		-.27*		-.27*		-.27*		-.03		-.03		-.03		-.03
Parent Rel. Status		.27*		.27*		.27*		.27*		-.04		-.04		-.04		-.04
No. of Children		-.34*		-.34*		-.34*		-.34*		-.14		-.14		-.14		-.14
<u>Step Two</u>	.07		.09		.07		.07		.25***		.17*		.05		.04	
Family Status		.28*		.25		.27		.26		.06		.22		.19		.20
Responsiveness		.06								-.50***						
Control				.18								-.39**				
EC						.06								.14		
ED								.10								-.07
<u>Step Three</u>	.02		.00		.05		.01		.06*		.02		.12*		.03	
RespxAlc		.63								1.12*						
ContxAlc				.01								-.13				
ECxAlc						1.59								-2.39*		
EDxAlc								.40								-.93

Note. Cell entries are  $R^2 \Delta$  statistics and standardized  $\beta$  coefficients.

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 15

*Adolescents' Self-reported Impulsivity and Parents' Perceptions of Adolescent Impulsivity*

	Adolescent Self-Report								Parent Self-Report							
	Responsiveness		Control		EC		ED		Responsiveness		Control		EC		ED	
	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$
<u>Step One</u>	.09		.09		.09		.09		.06		.06		.06		.06	
Adolescent Gender		.22		.22		.22		.22		-.17*		-.17		-.17		-.17
Adolescent Age		.10		.10		.10		.10		.05		.05		.05		.05
Parent Rel. Status		.15		.15		.15		.15		-.00		-.00		-.00		-.00
No. of Children		-.05		-.05		-.05		-.05		-.14		-.14		-.14		-.14
<u>Step Two</u>	.26***		.09		.09		.09		.31***		.19***		.05		.05	
Family Status		-.19		-.30*		-.30*		-.30*		-.09		-.26		-.23		-.23
Responsiveness		.45***								.54***						
Control				.03								.39**				
EC						.09								.08		
ED								-.11								-.00
<u>Step Three</u>	.01		.02		.00		.02		.00		.00		.05		.08*	
RespxAlc		-.33								.05						
ContxAlc				-.88								.11				
ECxAlc						.39								1.61		
EDxAlc								.69								1.49*

Note. Cell entries are  $R^2 \Delta$  statistics and standardized  $\beta$  coefficients.

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 16

*Observed Predictors and Observed Adolescent Impulsivity*

	Happy Observed								Unhappy Observed							
	Responsiveness		Control		EC		ED		Responsiveness		Control		EC		ED	
	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$	$R^2 \Delta$	$\beta$
<u>Step One</u>	.10		.10		.10		.10		.05		.05		.05		.05	
Adolescent Age		-.24		-.24		-.24		-.24		.17		.17		.17		.17
Adolescent Gender		.23		.23		.23		.23		-.12		-.12		-.12		-.12
Parent Rel. Status		-.01		-.01		-.01		-.01		-.05		-.05		-.05		-.05
No. of Children		.18		.18		.18		.18		.08		.08		.08		.08
<u>Step Two</u>	.49***		.02		.57***		.03		.18**		.25**		.28**		.01	
Family Status		-.14		-.06		-.04		.06		-.05		-.11		.06		-.08
Responsiveness		-.79***								-.43**						
Control				-.12								.51***				
EC						-.80***								-.55***		
ED							-.16									.05
<u>Step Three</u>	.01		.03		.00		.01		.01		.02		.01		.00	
RespXAlc		-.44								.87						
ContXAlc				-1.03								-.65				
ECXAlc						.01								-.76		
EDXAlc							-.48									.09

Note. Cell entries are  $R^2 \Delta$  statistics and standardized  $\beta$  coefficients.

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 17

<b>Hypothesis</b>	<b>Adolescent Self-report</b>	<b>Parent Self-report</b>	<b>Physiological Measures</b>	<b>Observation Happy</b>	<b>Observation Unhappy</b>
<i>H1</i> : Parental responsiveness is positively associated with adolescents' emotion regulation ability.		supported	supported		supported
<i>H2</i> : Parental control is negatively associated with adolescents' emotion regulation ability.	supported	contradicted		supported	supported
<i>H3</i> : Parental responsiveness is positively associated with adolescents' self-efficacy.		contradicted	NA	NA	NA
<i>H4</i> : Parental control is negatively associated with adolescents' self-efficacy.		supported	NA	NA	NA
<i>H5</i> : Parental responsiveness is negatively associated with adolescents' impulsivity.	contradicted	contradicted	NA	supported	supported
<i>H6</i> : Parental control is positively associated with adolescents' impulsivity.		supported	NA		supported
<i>H7</i> : Parental emotion coaching behavior is positively associated with adolescents' emotion regulation ability.					supported
<i>H8</i> : Parental emotion dismissing behavior is negatively associated with adolescents' emotion regulation ability.					
<i>H9</i> : Parental emotion coaching behavior is positively associated with adolescents' self-efficacy.			NA	NA	NA
<i>H10</i> : Parental emotion dismissing behavior is negatively associated with adolescents' self-efficacy.			NA	NA	NA
<i>H11</i> : Parental emotion coaching behavior is negatively associated with adolescents' impulsivity.			NA	supported	supported
<i>H12</i> : Parental emotion dismissing behavior is positively associated with adolescents' impulsivity.			NA		

Figure 1

*Moderation Effect of Family Status on Parents' Self-reported Responsiveness and Parents' Perceptions of Adolescent Emotion Regulation*

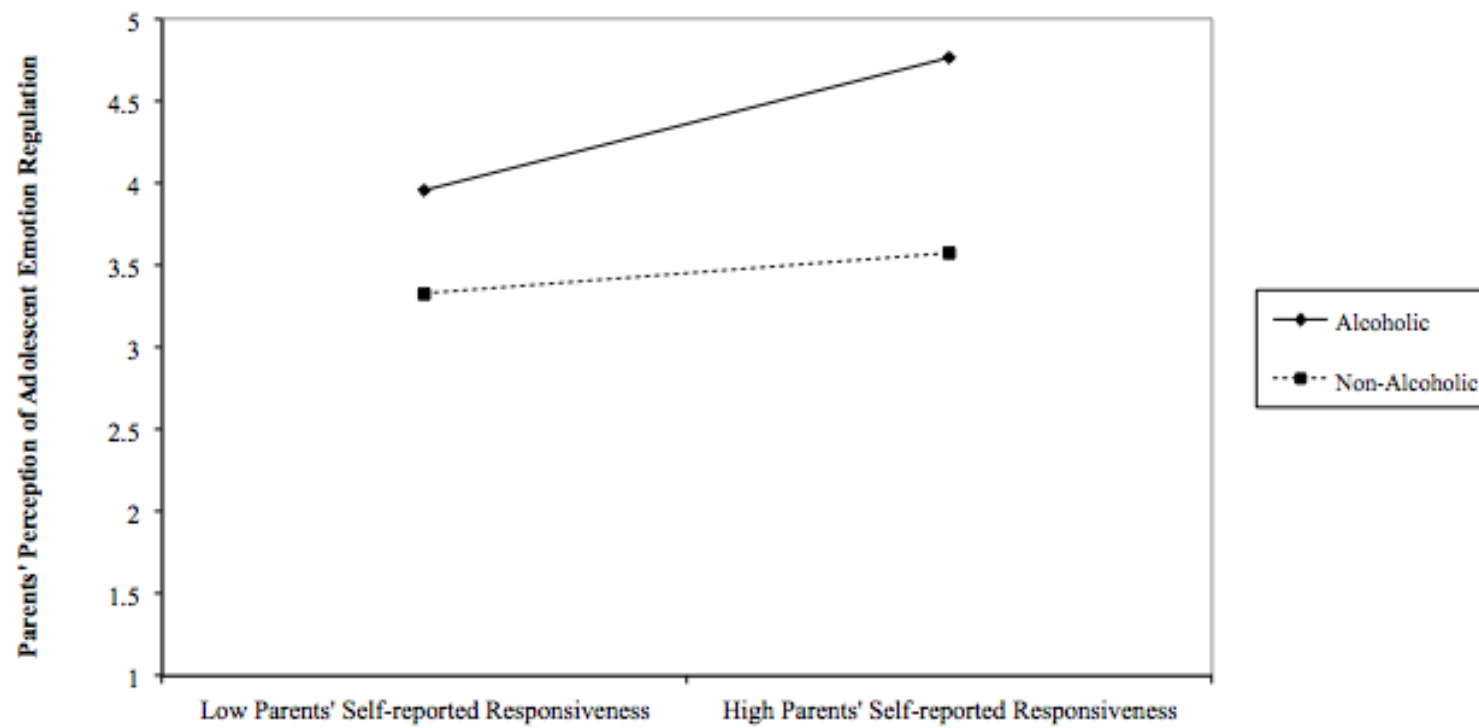


Figure 2

*Moderation Effect of Family Status on Observed Parental Control and Observed Adolescent Emotion Regulation*

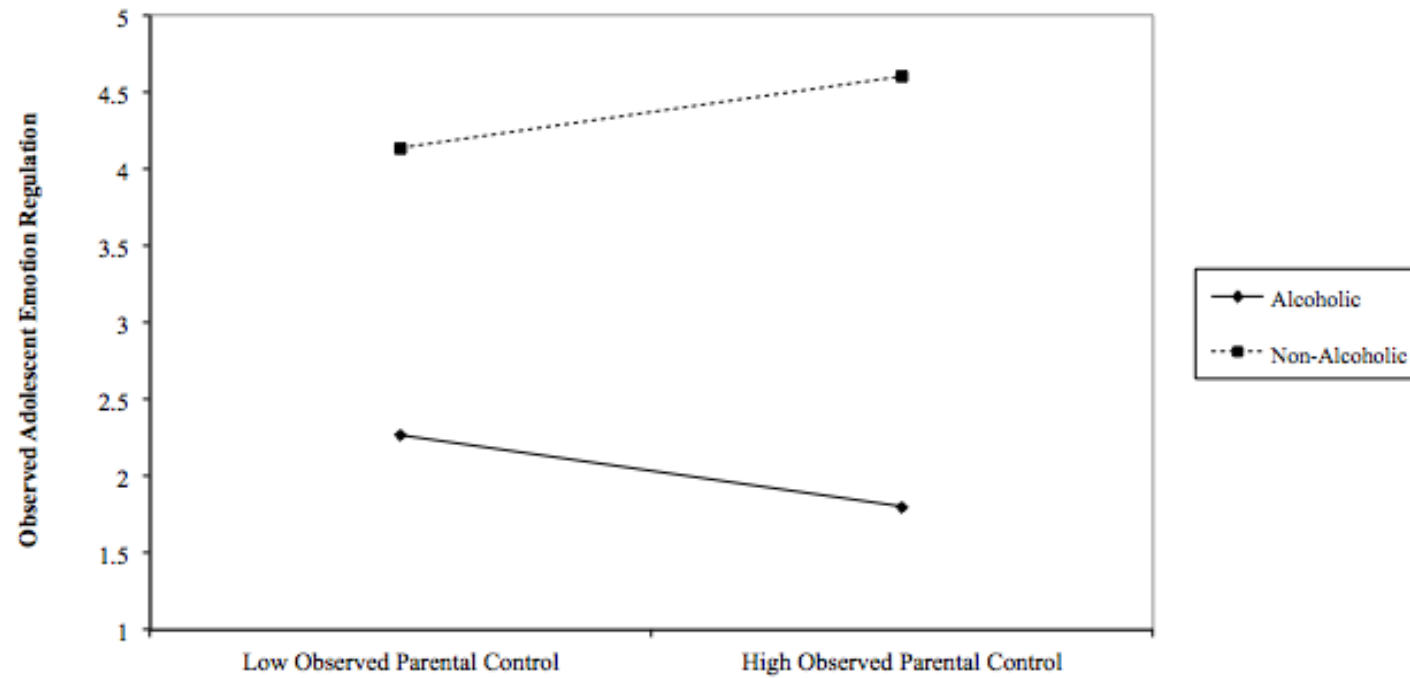


Figure 3

*Moderation Effect of Family Status on Parents' Self-reported Responsiveness and Parents' Perceptions of Adolescent Self-Efficacy*

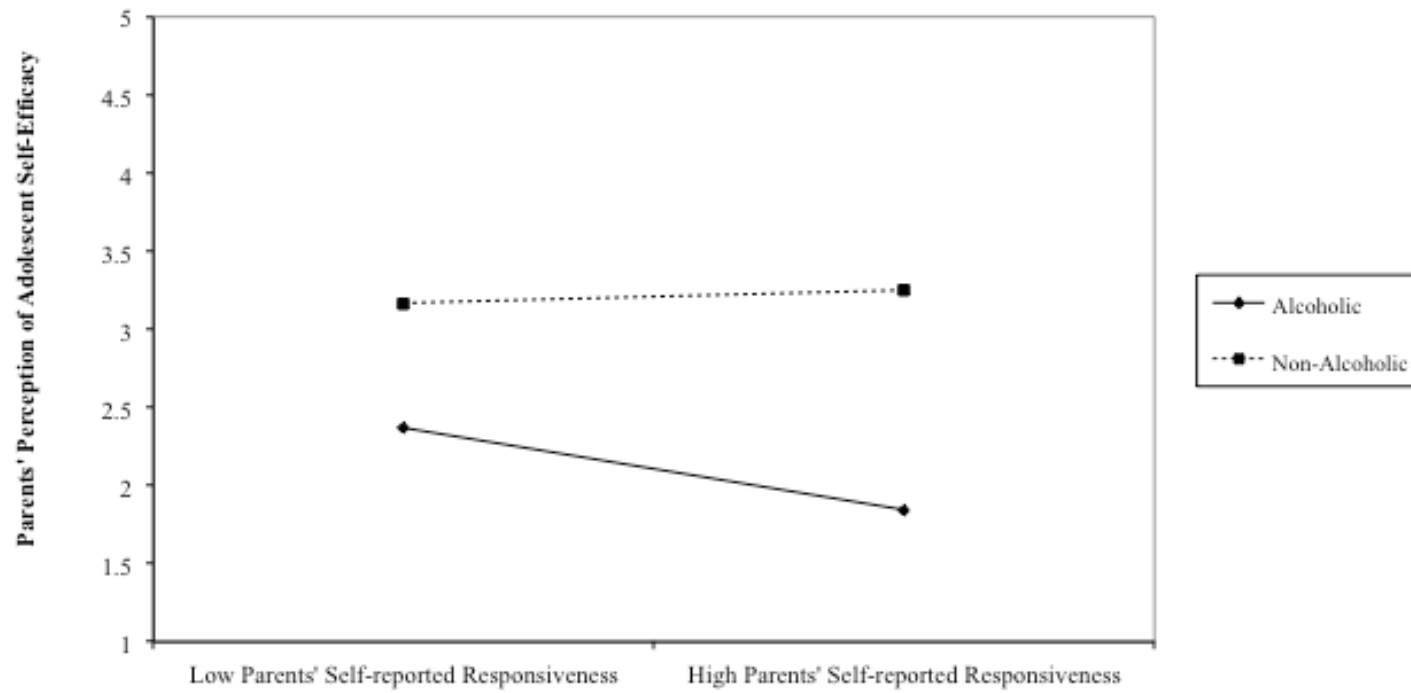




Figure 4

*Moderation Effect of Family Status on Parents' Self-reported Emotion Coaching and Parents' Perceptions of Adolescent Self-Efficacy*

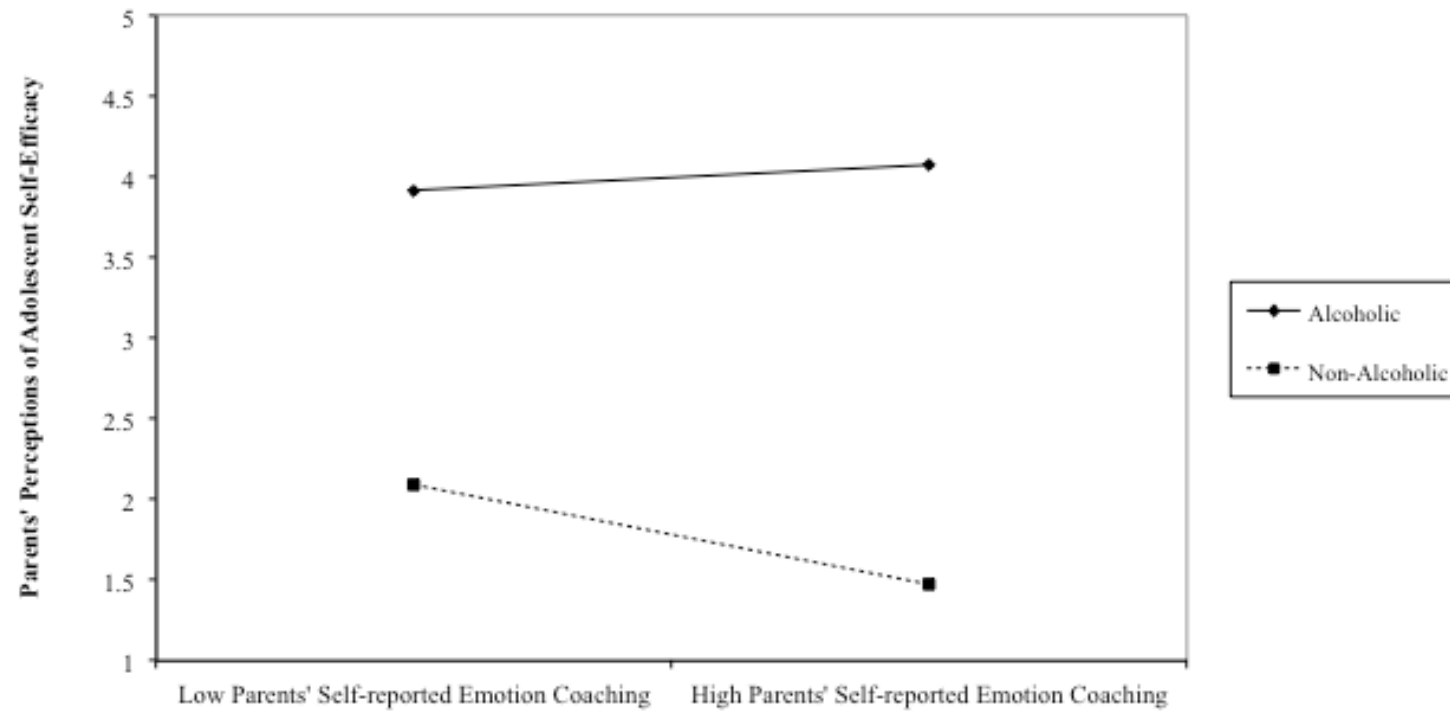
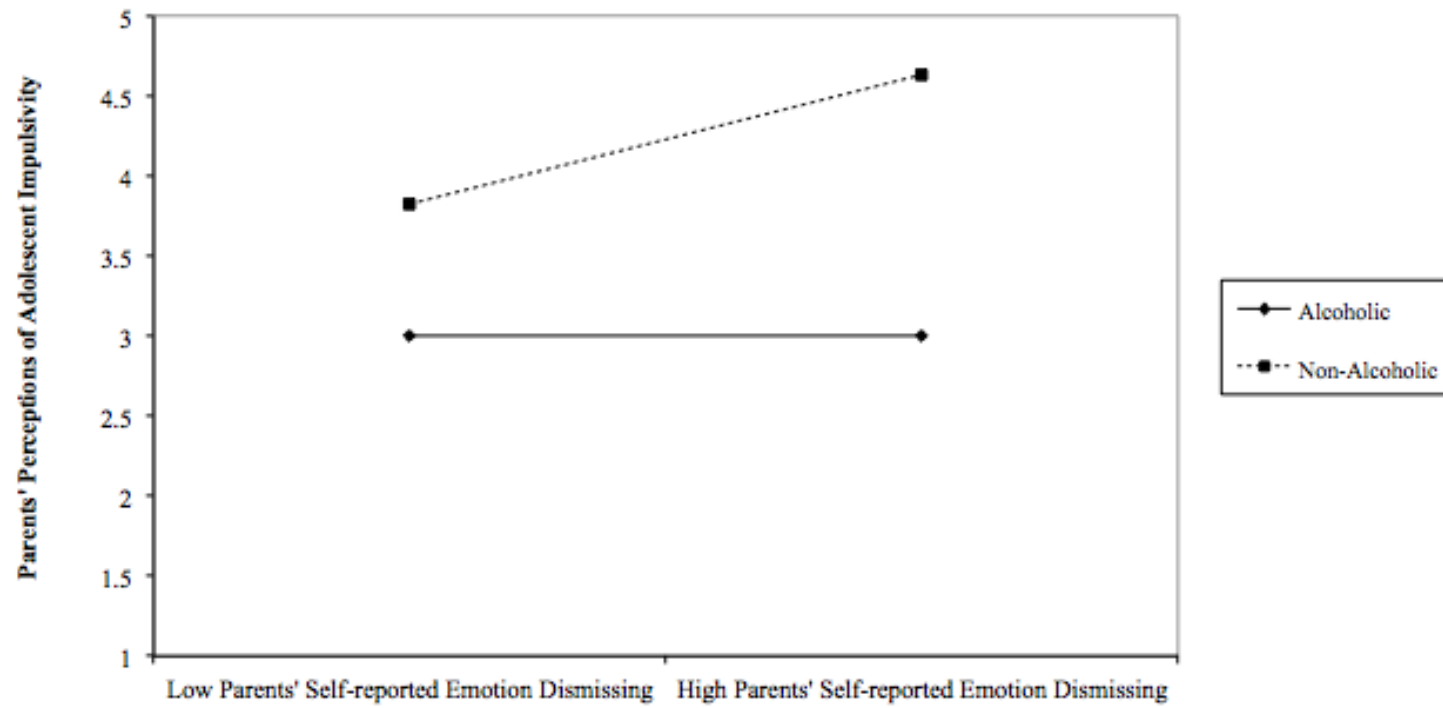


Figure 5

*Moderation Effect of Family Status on Parents' Self-reported Emotion Dismissing and Parents' Perceptions of Adolescent Impulsivity*



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### Footnotes

<sup>1</sup> Study funding was partially supported through a grant courtesy of the Family Process Institute.

<sup>2</sup> To assess emotions that were experienced during the interaction, parents and adolescents were asked to complete an adapted version of Dillard et al.'s (1996) emotion scale. Parents and adolescents were asked to complete a post-interaction questionnaire following each interaction that asked them to indicate the extent to which each emotion item described how they felt during the interaction (1 = *not at all*, 5 = *a lot*). The adapted scale consists of 12-items that can be broken down into four categories: anger (angry, mad, irritated), sadness (sad, gloomy, depressed), happiness (happy, glad), and fear (afraid, scared, frightened). CFA's were conducted to assess the means and standard deviations of each composite variable for both the happy and unhappy interactions. For the adolescent emotional reports during the happy interaction results were: anger ( $M = 1.44$ ,  $SD = .87$ ), sadness ( $M = 1.47$ ,  $SD = .97$ ), happiness ( $M = 3.53$ ,  $SD = 1.37$ ), and fear ( $M = 1.14$ ,  $SD = .40$ ). For the adolescent reports during the unhappy interaction the results were: anger ( $M = 1.51$ ,  $SD = 1.01$ ), sadness ( $M = 1.64$ ,  $SD = 1.13$ ), happiness ( $M = 3.47$ ,  $SD = 1.39$ ), and fear ( $M = 1.16$ ,  $SD = .57$ ). For the parent emotional reports during the happy interaction results were: anger ( $M = 1.21$ ,  $SD = .69$ ), sadness ( $M = 1.23$ ,  $SD = .63$ ), happiness ( $M = 3.87$ ,  $SD = 1.20$ ), and fear ( $M = 1.14$ ,  $SD = .49$ ). For the parent reports during the unhappy interaction results were: anger ( $M = 1.10$ ,  $SD = .39$ ), sadness ( $M = 1.31$ ,  $SD = .67$ ), happiness ( $M = 3.81$ ,  $SD = 1.20$ ), and fear ( $M = 1.12$ ,  $SD = .48$ ). The low means for anger, sadness, and fear may attribute to the nonsignificant findings related to emotion coaching and emotion dismissing behavior.

<sup>3</sup> I ran *t*-tests to compare families with one alcoholic parent to those with two alcoholic parents for both self-report and observed variables. Based on the analyses only one difference was found. Parents' perception of their own emotion coaching behavior was higher for families with one alcoholic parent than families with two alcoholic parents. I also ran ANOVA analyses for each dependent variable to assess whether there were any differences between the two groups, families with one alcoholic parent and families with two alcoholic parents. No significant differences were found.

<sup>4</sup> Bivariate correlation analyses were conducted to examine correlations between parent self-reports and observed interactions. Based on the analysis no significant correlations were found.