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# Comparing Enacted and Perceived Parental Communication as Predictors of Adolescents' Emotion Regulation in Families with Harmful versus Non-Harmful Parental Alcohol Use

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Running head: ENACTED VERSUS PERCEIVED COMMUNICATION

Harmful Parental Alcohol Use and Enacted versus Perceived Communication as Predictors of Adolescents' Emotion Regulation

#### Abstract

Associations between parental communication and adolescent emotion regulation are well-documented however, it is unclear whether parent's actual communication behavior or adolescents' perceptions of parent's behavior is a more robust predictor of emotion regulation outcomes. Baumrind's parenting styles typology was used to examine parents' enacted responsiveness and control and adolescents' perceptions of parental communication as competing predictors of adolescents' self-reported emotion regulation. Sixty parent-adolescent dyads participated in an interaction-based study comparing communication between families with (n = 30) and without harmful parental alcohol use (n = 30). Adolescent perceptions of parental communication were stronger predictors of adolescent emotion regulation than observed parental communication. Perceived parental control was more strongly associated with adolescent emotion regulation in families with harmful parental alcohol use.

# Harmful Parental Alcohol Use and Enacted versus Perceived Communication as Predictors of Adolescents' Emotion Regulation

Communication between a parent and child can be very influential in the way children view themselves and the world around them. Children learn how to emotionally respond to experiences in their environment based on early interactions with primary caregivers (Cupach & Olson, 2006). The ability to manage those emotions is referred to as emotion regulation (Gross & John, 2003). Primary caregivers who encourage children to identify and explain their emotions, whether they are positive or negative, facilitate increased emotion regulation ability. Children who are encouraged to label their emotions and practice healthy emotional expression will cultivate the social skills necessary to effectively navigate affective experiences. In contrast, parents who fail to guide children through the experience of emotions, or respond to the expression of emotion in a negative way, can make it difficult for children to explain, manage, and effectively regulate their affective responses to social situations. Especially when confronted with stressful situations, children who are more capable of regulating their emotion are less likely to be negatively affected by the stressful encounter and more likely to demonstrate resilience in the face of adversity (Gottman et al., 1997). Thus, these early interactions with primary caregivers set the foundation for long-term emotional well-being.

The ways in which parents interact with children provide an important foundation for developing emotion regulation ability. Baumrind (1988) identified two primary dimensions of parental communication that are associated with developmental outcomes in children: responsiveness and control. Parental responsiveness encompasses communication behaviors that are attentive to the needs of a child as well as foster independence and is associated with more effective emotion regulation skills, fewer insecurities, and fewer feelings of rejection (Baumrind,

1971; Authors, 2017, 2020). Parental control is communicated through increased discipline and firm demands with children and it is associated with more maladaptive behaviors in children (Aunola & Nurmi, 2005). Although the associations between parental communication behaviors and children's developmental outcomes are well-documented, an unanswered question is whether the actual communication behaviors enacted by parents or children's perceptions of their parent's communication are more robust predictors of adolescent development and adjustment. This study explores the potential differential impact of observed versus perceived parental communication behavior on adolescent emotion regulation.

A second goal of this study was to explore how adverse circumstances within a family may moderate associations between parental communication behavior and adolescent emotion regulation. Specifically, we look to families of harmful parental alcohol use as one context that may introduce barriers to effective parental communication behavior and adolescent adjustment. Research on communication in families of harmful parental alcohol use often documents high levels of conflict, topic avoidance, and inconsistency (Straussner & Fewell, 2011). Exposure to these family communication characteristics can limit children's ability to develop effective skills and strategies for emotion regulation (Davies & Cummings, 1994; Authors, 2016). Thus, this study seeks to document how a parent's harmful alcohol use may moderate associations between observed and perceived parental communication behavior and adolescent emotion regulation.

# Parental Communication and Children's Emotion Regulation

Children's ability to monitor and manage their emotions is an important marker of resilience. *Emotion regulation* is our ability to control emotional arousal following a cognitive appraisal of social stimuli (Ochsner & Gross, 2005). Individuals who learn to successfully manage their emotional arousal tend to demonstrate increased prosocial skills and effective stress

management (Gottman et al., 1997). Thus, emotion regulation is an important social skill that is beneficial for coping with adverse circumstances, promoting personal well-being and resilience. Children learn how to regulate their emotion by modeling behaviors and expectations that are communicated by primary caregivers (Straussner & Fewell, 2011). A supportive and sympathetic parental response to children's emotional expression encourages the child to successfully identify and address their emotion during social episodes and to appropriately regulate themselves during future interactions (Gross & Thompson, 2006). On the other hand, a derogatory parental response to children's emotions can lead to negative adaptation and poor regulatory behavior for children (Hajal & Paley, 2020). Therefore, parents' encouraging or discouraging responses to children's emotional expressions are influential in shaping children's ability to regulate emotion, their conception of self, and their understanding of the social environment (Peterson & Park, 2006).

There are two dimensions of parental communication that are especially relevant in addressing children's emotional experiences (Baumrind, 1991): responsiveness and control. *Parental responsiveness* refers to verbal and nonverbal communication that aims to nurture a child's emotional experiences while encouraging individuality (Peterson & Hann, 1999). *Parental control* describes communication behaviors that firmly regulate children's behavior and emotions. Prior research on parental responsiveness and control has tended to focus on parents' self-reported attitudes about parenting or their perceptions of their own parenting behavior (Aunola & Nurmi, 2005; Hubbs-Tait et al., 2008). Fewer studies have examined parents' actual communication behaviors during interaction with their child (see Estlein & Theiss, 2014; Authors, 2017, 2020), and we know of no research that has specifically considered children's perceptions of their parent's communication.

#### **Enacted and Perceived Parental Responsiveness as Predictors of Emotion Regulation**

Given that individuals may have a biased view of their own parenting behavior, exploring how communicative manifestations of responsiveness and control are associated with children's emotional reactivity during interaction is an important contribution to the literature. Parental responsiveness can be demonstrated through both verbal and non-verbal communication. Examples of responsiveness in verbal communication include directness and sincerity (Segrin & Flora, 2011). Directness involves statements of engagement and explicit recognition of a child's needs. Parents demonstrate sincerity through words of comfort, identification, and encouragement. For example, parents may soften their voice and slow down the rate of speech in an effort to calm an upset child, demonstrate attentiveness to emotional experiences, and provide assistance in addressing the emotion (Van Egeren & Barratt, 2004). In addition, eye contact from a parent signals to the child that they are listening or that it is the child's turn to participate in the interaction, and physical touch can signify warmth and support (Hertenstein, 2002). Observing features of parental responsiveness in interaction provide a clearer view of the strategies that parents enact to help children cope with emotion and the immediate effects of those behaviors on children's emotion regulation.

Responsive parental communication can be an important factor for promoting children's emotion regulation. Children of responsive parents often exhibit healthy emotion regulation by demonstrating effective support-seeking strategies and positive emotions (Kliewer et al., 1996; Authors, 2020). In addition, demonstrations of sympathy and problem-solving attempts from parents are associated with decreased anxiety and distress in children (Eisenberg et al., 1991). Moreover, children tend to demonstrate more effective coping strategies when parents suggest different ways of managing upsetting situations (Kliewer et al., 1996). Taken together, this

evidence suggests that responsive parental communication can help adolescents regulate their emotions more effectively. Thus, the following hypothesis is proposed:

H1: Observed parental responsiveness during interaction is positively associated with adolescents' self-reported emotion regulation.

Although outside observers may recognize markers of responsiveness in parents' communication behavior, adolescents' perceptions of their parents' communication might be influenced by their relationship history, previous interactions, or their current emotional state. In families characterized by caregiver depression and family instability, children tend to make more biased attributions of anger and other negative emotions (Healy et al., 2015). One study found that adolescents who perceived that their mother cared a great deal about them reported higher self-esteem, lower levels of depression, and fewer suicide attempts than adolescents who perceived that their mother cared about them very little or not at all (Ackard et al., 2006). This evidence suggests that adolescents who perceive that their parents are responsive, attentive, and caring may have more confidence in their ability to effectively manage their emotions. Thus, we present the following hypothesis:

H2: Adolescent perceptions of parental responsiveness are positively associatedwith their own self-reported emotion regulation.

An unanswered question is whether a parent's actual communication or the adolescent's perceptions of the parent's behavior is more influential in the development of adolescents' emotion regulation ability. Adolescence is often characterized as a period of heightened "storm and stress" marked by increased conflict with parents, mood disruptions, and risk behaviors as adolescents begin to seek emotional autonomy and independence from parental influence (Arnett, 1999). Under these circumstances, adolescents may perceive their parents'

communication differently than outside observers might. Thus, we wonder if adolescents' emotion regulation is more strongly influenced by a parent's actual behaviors during interaction or by the adolescent's perceptions of those communication behaviors. Accordingly, we advance the following research question:

RQ1: Is observed or perceived parental responsiveness a more robust predictor of adolescents' self-reported emotion regulation?

#### **Enacted and Perceived Parental Control as Predictors of Emotion Regulation**

Parental control is also enacted through verbal and nonverbal communication behaviors that predict adolescents' emotion regulation. A parent's controlling communication can inflict restrictions that are psychological or behavioral in nature. *Psychological control* describes parents' efforts to restrict children's actions through emotional manipulation (Aunola & Nurmi, 2005). There are three forms of psychological control that include: love withdrawal, disappointment, and intrusiveness. *Behavioral control* is communicated through physical and/or explicit demands (Galambos et al., 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.

Parents who assert more control in their communication may inhibit children's motivation and ability to regulate their own emotion and to respond to emotional situations appropriately (Houck & Lecuyer-Maus, 2004). Children exposed to an authoritarian parenting style and extreme control have a tendency to become overly aroused and demonstrate poor emotion regulation abilities (Shaw & Starr, 2019). One study found that aggressive and dominating communication behavior, which are often employed in parental control, were

associated with poorer emotion regulation ability following exposure to a stressful situation (Calkins et al., 1998). 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:

*H3:* Observed parental control during interaction is negatively associated with adolescents' self-reported emotion regulation.

Whereas outside observers may recognize expressions of parental control as consistent with norms and expectations for parental roles, adolescents who are on the receiving end of controlling communication may perceive their parents' actions in a more negative light. For example, adolescents tend to perceive demonstrations of parental control as oppressive rather than setting appropriate boundaries (Kerr & Stattin, 2000). One study found that adolescents' self-reported feelings of being over-controlled were positively associated with norm-breaking and depressive symptoms and negatively associated with self-esteem, and that feeling over-controlled fully mediated associations between these outcomes and parental control (Kakihara et al., 2010). Based on this evidence, we advance the following hypothesis:

H4: Adolescent perceptions of parental control are negatively associated with their own self-reported emotion regulation.

Given the nature of parental control, it is likely that adolescents perceive their parents' controlling communication differently than outside observers might. Outside observers are more likely to view controlling communication as expressions of discipline or authority that are consistent with parental roles. Through this lens, an appropriate level of rule setting and discipline is suitable to parental communication and necessary for promoting positive emotional and psychological adjustment (Grolnick & Pomerantz, 2009). On the other hand, adolescents

who are trying to assert their independence tend to perceive normative levels of parental control as intrusive, oppressive, and excessive (Kakihara & Tilton-Weaver, 2009; Kerr & Stattin, 2000). Thus, an important question is whether adolescents' motivation and ability to effectively regulate their emotions is a product of appropriate parental expressions of control or their own perceptions and interpretations of parental control. To explore these competing possibilities we advance the following research question:

*RQ2*: Is observed or perceived controlling communication a more robust predictor of adolescents' self-reported emotion regulation?

#### Communication and Child Outcomes in Families with Harmful Parental Alcohol Use

The communication climate in families with harmful parental alcohol use may differ from that of families with non-harmful alcohol use and contribute to poorer emotion regulation abilities among adolescents. The use of alcohol as a coping mechanism often leads to antisocial behavior, narcissism, and denial (Jacob et al., 2001). Parents who harmfully consume alcohol are known to neglect their family and work obligations, have a low frustration tolerance, experience high levels of anxiety, and have low self-esteem (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), which may make it difficult for children to interpret how to appropriately perceive communication and respond (Fonagy et al., 2002). Taken together, the features of communication in families with harmful parental alcohol use may present unique challenges to children's healthy emotion regulation development.

Previous research has documented emotional shortcomings as a common characteristic among children of parents who harmfully consume alcohol. Children of parents who harmfully

consume alcohol often report low self-esteem and high levels of depression (Rangarajan & Kelly, 2006). Consistent exposure to a strained environment can reduce feelings of emotional security and inhibit appropriate development (Davies & Cummings, 1994). Along these lines, children with parents who harmfully consume alcohol are more likely to develop poor internalizing and externalizing behaviors than children without a dangerous drinking parent (Schuckit et al., 2007). Thus, children of parents who harmfully consume alcohol are known to demonstrate impulsive behaviors and poor management of emotion.

In light of this evidence, we consider the potential moderating effect that harmful parental drinking may have on associations between parental communication and adolescent emotion regulation. Given that expressions of affection and emotion tend to be suppressed in families with harmful parental alcohol use (Jones & Houts, 1992), adolescents from these families might reap fewer benefits from responsive parenting that is highly infrequent compared to their peers from families without harmful parental alcohol use where expressions of affection and caring are more typical. On the other hand, adolescents with a parent who harmfully consumes alcohol might benefit more from a rare instance of responsive parenting because it is so atypical, whereas adolescents without harmful parental drinking may come to take their parents' attentiveness and responsiveness for granted and, therefore, experience fewer benefits for their own emotion regulation. With regard to control, another commonly reported characteristic of families with harmful parental alcohol use is inflexible discipline (Stanger et al., 2004). Thus, parental control may be less influential for adolescents' emotion regulation in families with harmful parental alcohol use because they are not conditioned to anticipate or respect parental authority in the same way that adolescents from families with non-harmful parental alcohol use might be. Moreover, given that parenting is more inconsistent in families with harmful parental alcohol

use, children in families with harmful parental drinking might demonstrate more reactance to parents' efforts to exert control if they perceive that the parents lack discipline themselves. To examine possible differences between families with and without harmful parental alcohol use, the following research question is proposed:

RQ3: To what extent does a family's harmful parental alcohol use status, moderate the associations between observed and perceived parental communication and adolescent emotion regulation?

#### Method

To compare observations of parental communication and adolescents' perceptions of parental communication in predicting adolescents' self-reported emotion regulation, this study utilized data from observations of two 5-minute interactions between parent-adolescent dyads and post-interaction self-report measures completed by adolescents. Participants in this study included 60 parent-adolescent dyads, 30 families with harmful parental alcohol use and 30 families of non-harmful parental alcohol use. Participating families were recruited by posting announcements in social media platforms and local businesses and relying on snowball sampling. Recruitment and data collection efforts were conducted in New Jersey, Texas, and California.

Eligibility requirements for families of non-harmful parental alcohol use specified that (a) the adolescent be between 12 and 19 years of age; (b) parents must be either married and both living at home with the adolescent, or unmarried and share custody of the adolescent with visitation occurring at least once a month; (c) participants must be able to speak, read, and write in English; and (d) the adolescent is not taking any medication for emotional or psychological

disorders. Qualifications were the same for families with harmful parental alcohol use, with the exception that at least one of the parents meets the criteria for an alcohol use disorder.

## Sample

The adolescent participants included 24 young men (40%) and 35 young women (58.3%), with one adolescent declining to report. The average age of adolescent participants was 14.8 years (SD = 1.93), ranging from 12 to 19. For adolescents, most identified as Caucasian (70%), followed by African American (10%), Hispanic/Latino (6.7%), Asian (1.7%), Native American (1.7%), and Other (6.7%), with two adolescents' declining to report (3.3%). Parent participants included 14 men (23.3%) and 45 women (75%), with one declining to report. Average age of parents was 46.62 years (SD = 7.76), ranging from 27 to 63 years. Parents predominantly identified as Caucasian (80%), followed by African American (10%), Hispanic/Latino (8.3%), and Indian (1.7%).

The majority of parents reported they were involved in a committed relationship with the adolescent's other parent (85%), including 3.3% dating but not married, 80% married, 3.3% in a common law marriage, and 13.3% declined to report. For those parents who were not romantically involved with the adolescent's other parent (15%), 37.5% identified as separated, 37.5% divorced, 12.5% widowed, and 12.5% reported never having a committed relationship.

Among families with harmful parental alcohol use, the participating parent identified as the parent with harmful alcohol use in 6 dyads and the non-participating parent was identified in 13 dyads. Both parents identified as harmfully consuming alcohol in 11 of the dyads. An alcohol use disorder was assessed based on consumption of more than 14 drinks per week for males and more than 7 drinks per week for females. In addition, we used the DSM-V as a diagnostic tool that identifies features of alcohol use disorders and classifies individuals who select 2 or more

items from the checklist as having an alcohol use disorder (American Psychiatric Association, 2013).

#### **Procedures**

When parents and adolescents arrived to the laboratory, they were asked to complete consent forms and pre-interaction surveys. Then, each dyad was asked to participate in two interaction tasks, one to discuss a happy experience and another to discuss an unhappy experience (Afifi et al., 2011). Happy and unhappy experiences were generated prior to each interaction by asking adolescents to write down three happy and unhappy experiences that occurred recently on separate note cards (McLaren & Pederson, 2014). Adolescents were then instructed to select one experience from each set of topics that they would be willing to discuss with their parent. The way in which happy and unhappy topics were distributed was randomized to avoid ordering effects. A timer was set to allow 5 minutes for each dyadic interaction. Interactions were videotaped for analysis of parental responsiveness and control. After each interaction, adolescents were asked to complete a post-interaction questionnaire pertaining to their parent's responsiveness and controlling communication during the interaction and their own emotion regulation. Once participants completed their involvement in the study, dyads were debriefed and both parent and adolescent were compensated \$50 for their time.

# **Observation Rating Procedures**

Four research assistants were trained to rate videotaped interactions based on the two dimensions of parental communication. Research team members were not made aware of which dyads came from families with harmful versus non-harmful parental alcohol use. Before rating the interactions, research team members met with the first author to review the rating scheme and practice rating procedures on several interactions. Once the team demonstrated an understanding

of the rating process they were asked to rate several sets of interactions at a time and all team members rated every interaction. Once a week, the research team met with the first author to review sample interactions and rating procedures. Following completion of each set of coded interactions, reliability of raters was confirmed. Reliability was assessed using a consistency-based intraclass correlation coefficient (ICC) (Courtright, 2014). The threshold for acceptable reliability was set at ICC > .60. ICC was compared across families of alcoholics versus non-alcoholics and across happy versus unhappy interactions. All categories had an acceptable reliability of ICC > .60. Since reliabilities across happy and unhappy interactions were similar, they were collapsed. Ratings for family type however, demonstrated greater reliability in one family versus the other. Thus, we report separate ICCs for families with and without harmful parental alcohol use.

Ratings for parental responsiveness and control were based on Baumrind's (1991) classifications. Raters were asked to evaluate each 30-second interval of the videotaped interaction using a 5-point Likert-scale (1 = not at all responsive/controlling, 5 = completely responsive/controlling). For a responsive communication style, raters were directed to look for verbal and non-verbal expressions of encouragement and support. Raters were directed to identify verbal and non-verbal signs of impatience and discomfort for an unresponsive communication style. Rating reliability for responsiveness was ICC = .66 for families with harmful parental alcohol use and ICC = .75 for families without harmful parental alcohol use (*M* = 3.66, SD = .48). For a controlling communication style, raters were asked to identify verbal and non-verbal expressions of demands and aggression. Raters were directed to look for verbal and non-verbal signs of parent's adaptation and passivity for a low controlling communication

style. The reliability for control ratings was ICC = .87 for families with harmful parental alcohol use and ICC = .80 for families without harmful parental alcohol use (M = 2.55, SD = .59).

#### **Post-Interaction Measures**

All post-interaction scales were subjected to a confirmatory factor analysis (CFA) to assess internal and external validity (Hunter & Gerbing, 1982). The threshold for a good fitting model was set at  $\chi^2/df < 3.0$ , CFI > .90, and RMSEA < .08. All scales exceeded the criteria for acceptable fit.

Adolescent perceptions of responsiveness. Reis' (2003) responsiveness measure was used to assess parental responsiveness. The original measure was modified and shortened to apply to the research context. The assessment operates on a 5-point Likert-scale (1 = strongly disagree, 5 = strongly agree) that refers to one's appraisal of responsiveness within the interaction (e.g., "I felt that my parent often understood me", "My parent made me feel cared for"). Following a confirmatory factor analysis, 4 items were retained for parental responsiveness (Happy: M = 4.50, SD = .53,  $\alpha = .67$ ; Unhappy: M = 4.23, SD = .84,  $\alpha = .76$ ).

Adolescent perceptions of control. The questionnaire included Christensen and Heavey's (1990) measure of marital control, which was modified to fit the parent-child context with 8-items that address the extent of control present in the interaction. Adolescents used a 5-point Likert-scale ( $1 = strongly\ disagree$ ,  $5 = strongly\ agree$ ) to indicate their agreement with eight items reflecting parental control in the interaction (e.g., "Made the interaction very formal", "Tried to dominate me"). Following a confirmatory analysis 7 items were retained (Happy: M = 1.79, SD = .54,  $\alpha = .70$ ; Unhappy: M = 1.82, SD = .54,  $\alpha = .73$ ).

Adolescents' self-reported emotion regulation. Items from the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997) were adapted to assess the adolescent's perceptions

of their emotion regulation during the interaction. Adolescents were asked to rate their emotion regulation ability during the preceding conversation on a 5-point scale (1 = strongly disagree, 5 = strongly agree (e.g., "I was able to quickly recover whenever I became upset or stressed", "I was happy to discuss things with my parent"). Following a confirmatory factor analysis, 11 items were retained ( $Happy: M = 1.81, SD = .55, \alpha = .76$ ;  $Unhappy: M = 1.96, SD = .64, \alpha = .81$ ).

#### **Results**

A series of independent sample t-tests were conducted to identify any differences between groups based on family alcohol status, gender of the adolescent, and gender of the parent. In the first analysis (t(56) = -1.11, p < .02), adolescents from families without harmful parental alcohol use reported a higher mean (M = 1.89, SD = .65) for adolescents' self-reported emotion regulation in the happy interaction compared to adolescents from families with harmful parental alcohol use (M = 1.73, SD = .43). The second analysis examined differences based on gender of the adolescent, in which no significant differences were found. The third independent samples t-test considered differences based on gender of the parent. Observed parental control in the unhappy interaction (t (57) = 2.01, p < .00) was greater for fathers (M = 2.95, SD = 1.00) compared to mothers (M = 2.53, SD = .55). Adolescents perceived greater parental responsiveness by fathers (M = 4.73, SD = .33) during the happy conversation (t (56) = 1.80, p< .01) when compared to mothers (M = 4.43, SD = .57). Adolescents also perceived more parental responsiveness (t (57) = -1.52, p < .02) and control (t (57) = -.19, p < .03) on the part of mothers (responsiveness M = 4.33, SD = .75; control M = 1.83, SD = .49) during the unhappy interactions when compared to fathers (responsiveness M = 3.95, SD = 1.07; control M = 1.80, SD = .71). Adolescents also self-reported a higher mean for emotion regulation with fathers (M =

1.99, SD = .85) compared to mothers (M = 1.94, SD = .59) during the unhappy interaction (t (55) = .25, p < .02).

We also compared means for the observed variables versus the perceived variables. In both the happy and unhappy interactions, adolescents' perceptions of responsiveness were significantly higher than observers' ratings of parental responsiveness during the interaction (t (58) = -10.73, p < .00; self-reported happy: M = 4.50, SD = .53; observed happy: M = 2.91, SD = .13; t (59) = -5.87, p < .00; self-reported unhappy: M = 4.22, SD = .84; observed unhappy: M = 3.60, SD = .55). In addition, adolescents' perceptions of parental control were significantly lower than observer ratings (t (59) = 6.81, p < .00; self-reported happy: M = 1.79, SD = .54; observed happy: M = 2.48, SD = .59; t (59) = 7.95, p < .00; self-reported unhappy: M = 1.82, SD = .53; observed unhappy: M = 2.62, SD = .69).

# **Test of Hypotheses**

To test our hypotheses and research questions, we used hierarchical linear regression. The analyses consisted of four different models with adolescents' self-reported emotion regulation as the dependent variable. In the first step of the regression, control variables included adolescent age, gender, parent relationship status, number of children, and a dummy coded variable that indicates whether the participating parent harmfully consumes alcohol. The second step of the model included observed and perceived variables of parental responsiveness and control, as well as a dichotomous variable identifying families with and without harmful parental alcohol use. An interaction term was added to the third step of the model to assess potential moderating effects of family alcohol status. Interaction terms were between the substantive predictors and the family alcohol status variable. The observed and perceived variables of parental responsiveness and

control were included as predictors on the same step to examine the relative strength of each variable as a predictor of adolescents' self-reported emotion regulation.

Parental responsiveness. To review, the first set of predictions assumed that observed parental responsiveness (H1) and adolescent perceptions of parental responsiveness (H2) would be positively associated with adolescents' self-reported emotion regulation. A research question was introduced to explore whether observed or perceived parental communication is the stronger predictor of adolescents' self-reported emotion regulation (RO1), followed by another research question to examine whether family alcohol status moderates these effects (RO3). In the first model, the substantive predictors on step two accounted for 23% of the variance in the happy conversation and 61% of the variance in the unhappy conversation (see Table 1). The association between observed parental responsiveness and adolescents' self-reported emotion regulation was not significant in either the happy or unhappy interaction, demonstrating no support for H1. Contrary to our initial predictions for H2, adolescents' self-reported perceptions of parental responsiveness were negatively associated with adolescents' self-reported emotion regulation in both the happy and unhappy interactions. With regard to RQ1, results suggest that adolescent perceptions of parental responsiveness are a more robust predictor of adolescents' self-reported emotion regulation than observed parental communication, though in the opposite direction than was expected. The interaction terms entered on step three were not significant (RO3).

**Parental control.** The second set of hypotheses predicted that observed parental control (H3) and adolescents' perceptions of parental control (H4) would be negatively associated with adolescents' self-reported emotion regulation. We also queried whether observed or perceived parental control is a stronger predictor of adolescents' self-reported emotion regulation (RQ2) and if family alcohol status moderates these effects (RQ3). In the second model, the substantive

predictors on step two accounted for 28% of the variance in the happy conversation and 59% of the variance in the unhappy conversation (see Table 2). Observed parental control was positively associated with adolescents' self-reported emotion regulation in the unhappy interaction only (H3). Similarly, adolescents' self-reported perceptions of parental control were positively associated with adolescents' self-reported emotion regulation in both the happy and unhappy interactions (H4). Each of these associations are in the opposite direction of initial predictions. In response to RO2, although there was a significant association between observed parental control and adolescents' self-reported emotion regulation in the unhappy interaction, the significantly larger effect sizes for adolescents' self-reported perceptions of parental control suggest again that adolescents' emotion regulation is more strongly associated with their perceptions of parental communication than with the parents' actual communication behaviors as evaluated by outside observers. For RO3, the interaction term on step three of the model revealed a significant moderating effect in the happy conversation only and accounted for 22% of the variance in adolescents' self-reported emotion regulation. To evaluate the moderation, we conducted a simple slopes analysis (Preacher et al., 2006). As shown in Figure 1, the association between adolescents' self-reported perceptions of parental control and adolescents' self-reported emotion regulation was positive and significant for families with non-harmful parental alcohol use ( $\beta$ = .94, p < .001) and not significant for families with harmful parental alcohol use ( $\beta = -.05$ , p= .77). These findings suggest that adolescents in families with non-harmful parental alcohol use are more effective at regulating emotions in response to perceived parental control than are adolescents in families with harmful parental alcohol use.

#### **Discussion**

This study set out to examine two dimensions of parental communication, responsiveness and control, as predictors of adolescent emotion regulation. We sought to compare the effects of observed parental communication and adolescent perceptions of parental communication. We also explored the potential moderating effect that harmful parental alcohol use might have on the associations between parental communication and adolescent outcomes. In almost every instance, adolescent perceptions of parental communication were the stronger predictor of adolescents' self-reported emotion regulation, but in the opposite direction from what was expected. Moderation analyses of adolescent perceptions of parental control were more strongly associated with adolescent emotion regulation in families with non-harmful parental alcohol use. The results of this study make theoretical and practical contributions to the family studies literature. Theoretically, this study clarifies whether parents' actual communication behavior or children's perceptions of their parents' communication is more influential in shaping emotional outcomes for children. Pragmatically, this study explores the ways in which adverse conditions in a family can shape communication dynamics and outcomes, which can highlight useful areas to target for interventions.

#### **Observed versus Perceived Communication**

The results of this study indicated that outside observers' ratings of parental responsiveness and control were not significantly associated with adolescents' self-reported emotion regulation, but adolescents' perceptions of their parent's communication were significantly associated with their reported emotion regulation during the interaction. One way to interpret these findings is that adolescents' perceptions of parental communication are more important for shaping their experience and expression of emotion than the actual behaviors of their parent. This news could be a source of consternation or relief for parents of adolescents. On one hand, these findings

suggest that the way parents communicate with their children has a limited, direct correlation to the emotional and behavioral outcomes demonstrated by their child. If this is true, parents may be particularly frustrated that their efforts to shape and socialize their children through communication are ineffectual. On the other hand, some parents might be relieved to learn that their specific communication behaviors in any given interaction have less of a hand in shaping their children's outcomes than they may think. For parents who worry that their actions might be responsible for the negative outcomes experienced by their children, these results may help to alleviate some of those concerns.

The other good news for parents is that their children appear to rate their parents' communication behavior in more favorable ways than outside observers. Results of this study indicated that adolescents perceived more responsiveness and less control in their parent's communication than was acknowledged by outside observers. Whereas cultural stereotypes imply that adolescents tend to be at odds with their parents and often attribute the very worst intentions to their parenting (Kakihara & Tilton-Weaver, 2009; Kerr & Stattin, 2000), our findings suggest that adolescents might make more generous attributions for their parents' behavior than initially realized.

Although adolescent perceptions of their parent's communication behavior emerged as the more robust predictor of their reported emotion regulation, we caution against the assumption that parents' communication behavior is unimportant for developing and promoting healthy expression of emotion. Clearly, adolescent perceptions of parental responsiveness and control are at least partially informed by the communication behaviors that parents perform during interaction and prior research demonstrates that perceptions can mediate associations between parenting behaviors and adolescent outcomes (Kakihara et al., 2010). Moreover, the stronger

associations among the perceived variables in this study could be evident because both were based on self-report. Despite these caveats, the fact that adolescents' perceptions of parental communication were stronger predictors of their emotion regulation than the observed parental communication behaviors, suggest that the way adolescents interpret their parents' communication is important for their development and adjustment. From a practical standpoint, these findings suggest that efforts to improve adolescents' emotion regulation may want to focus less on changing the way parents communicate and more on altering the ways that adolescents' perceive their interactions with a parent.

Although adolescent perceptions of parental communication were the more robust predictor of their self-reported emotion regulation, the effects were in the opposite direction from what was expected. Adolescents reported less emotion regulation under conditions of parental responsiveness and more emotion regulation under conditions of parental control. In hindsight, the direction of these effects makes sense. When parents are perceived as responsive, attentive, and caring, perhaps adolescents feel that it is unnecessary to control their emotions or refrain from expressing negativity. In some ways, parental responsiveness can be interpreted as encouragement, acceptance, and approval of one's actions and behaviors (Baumrind, 1971) thus, under these conditions, adolescents may feel that they do not need to regulate their emotional expressions in order to receive affection and approval from a parent. In contrast, parental control communicates expectations for appropriate behavior, discipline, and regimented action (Grolnick & Pomerantz, 2009). In other words, adolescents who perceive that their parent is controlling may feel increased demands to express their emotions in ways that will be met with approval. Taken together, although the findings in this study run counter to expectations, upon further consideration there seem to be reasonable explanations for the valance of these effects.

### **Family Alcohol Status**

After testing for a moderation effect in four separate models, only one significant interaction was found. Family alcohol status moderated the association between adolescent perceptions of parental control and adolescents' self-reported emotion regulation in the happy interaction. More specifically, adolescents from families with non-harmful parental alcohol use reported significantly more emotion regulation in the face of perceived parental control compared to adolescents from families with harmful parental alcohol use.

We believe there are two primary reasons for this finding. First, adolescents from families with harmful parental alcohol use may experience more inconsistent controlling communication from parents who regularly shift between presence and absence (Fonagy et al., 2002), whereas adolescents from families with non-harmful parental alcohol use might confront more consistent parental control as part of their parents' typical communication of discipline and parental authority (Kerr & Stattin, 2000). Because adolescents of parents with non-harmful alcohol use likely experience more consistent control from parents, they are likely socialized to respond to parental control in ways that regulate emotions to conform to expectations and avoid punishment. The effect for children in families with harmful parental alcohol use was nonsignificant, but trending in a negative direction, which could indicate that adolescents are more reactive to perceptions of parental control in families with harmful parental alcohol use where the parents themselves are incapable of regulating their behavior. Second, because adolescents in families with non-harmful parental alcohol use have the benefit of more consistent demands and expectations from parents, they are more likely to understand the behavioral changes that are required to regulate their emotions in ways that are satisfactory to their parents. In contrast, the inconsistent nature of communication in families with harmful parental alcohol

use places adolescents in the position of not knowing how their actions will be received. Thus, adolescents from families with harmful parental alcohol use may struggle to learn appropriate emotion regulation strategies and, therefore, fail to enact acceptable behavioral changes in response to parental control.

Notably, the majority of our moderation effects were nonsignificant, which is good news for adolescents from families with harmful parental alcohol use. These findings suggest that the ability to effectively regulate emotions may not suffer amidst the adversity that children might experience growing up with a parent that harmfully consumes alcohol. Though the potential for negative experiences growing up with a parent who harmfully consumes alcohol are well-documented (Straussner & Fewell, 2011), our results indicate that perhaps the experiences of adolescents growing up in homes where harmful parental alcohol use is present may not be that different from adolescents growing up with non-harmful parental alcohol use.

We present these findings with several limitations and opportunities for future research. Though our sample was sufficient for the purposes of testing our hypotheses it is by no means generalizable. A larger study that included a more ethnically diverse sample of families would be beneficial to address this constraint. Another limitation is the inability to factor in other possible influences such as co-parenting, sibling relationships, and personality traits on adolescent perceptions. An important next step in examining parent-child communication is to develop and research communication-based tools for evidence-based application and implementation.

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Table 1. Observed and Perceived Parental Responsiveness and Adolescents' Perceived Emotion Regulation

	Perceived Emotion Regulation				
	Responsiver	ness Happy	Responsivene	ss Unhappy	
	$R^2 \Delta$	β	$R^2 \Delta$	<u>β</u>	
Full Model	.63	·	.82	·	
Step One	.12		.05		
Adolescent Gender		.08		.07	
Adolescent Age		.29		.09	
Parent Rel. Status		10		16	
No. of Children		.12		.03	
Participating Parent		01		08	
Step Two	.23**		.61***		
Family Alc Status		04		17	
Resp. Observed		11		16	
Resp. Perceived		50***		72***	
Step Three	.04		.00		
RespObservedxAlc		.07		05	
RespPerceivedxAlc		25		.13	

*Note.* Cell entries are  $R^2$  Δ statistics and standardized β coefficients. \*\* p < .01. \*\*\* p < .001.

Table 2. Observed and Perceived Parental Control and Adolescents' Perceived Emotion Regulation

	Perceived Emotion Regulation				
	Control Happy	Control Unhappy			
	$R^2 \Delta$ $\beta$	$R^2 \Delta$ $\beta$			
<u>Full Model</u>	.77	.83			
Step One	.09	.05			
Adolescent Gender	.13	.07			
Adolescent Age	.18	.09			
Parent Rel. Status	10	16			
No. of Children	.14	.03			
Participating Parent	07	08			
Step Two	.28**	.59***			
Family Alc Status	05	15			
Cont. Observed	.03	.27**			
Cont. Perceived	.54***	.69***			
Step Three	.22***	.04			
ContObservedxAlc	19	.26			
ContPerceivedxAlc	.72***	23			

*Note.* Cell entries are  $R^2$  Δ statistics and standardized β coefficients. \*\* p < .01. \*\*\* p < .001.

Figure 1.

Moderating Effect of Family Alcohol Status on the Association between Adolescent Perceived Parental Control and Adolescent Self-Reported Emotion Regulation during the Happy Interaction

