JUST AMONG FRIENDS: ASSOCIATIONS AMONG EMOTIONAL EXPRESSION, FRIEND BEHAVIOR, AND FRIENDSHIP QUALITY IN EARLY ADOLESCENT SAME-SEX FRIEND DYADS

BY

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Abstract

To better understand emotional expression within the context of close same-sex friendships of young adolescents, this study examined emotional expressivity among 116 adolescents (58 friend dyads) in Grades 7-8 (12-14 years of age) utilizing a multi-method design that incorporates both observations and multi-informant ratings of emotional expression. A series of actor-partner interdependent models revealed similarities among close friends on parent-reported and observed emotional expressivity, although some of these findings were gender specific and varied according to how emotional expression was measured. Measures of friendship quality appeared unrelated to indicators of emotional expressivity. Loglinear analyses indicated that when friends responded to participants' emotional expressions supportively, rather than dismissively, participants were more likely to disclose emotions in subsequent utterances. Research and clinical implications for early adolescent emotional development are discussed.

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Table of Contents

List of Tables and Figures

Just Among Friends: Associations among Emotional Expression, Friend Behavior, and Friendship Quality in Early Adolescent Same-Sex Friend Dyads

Adolescents often place significant emphasis on developing close interpersonal peer relationships (Phillipsen, 1999) and look to friends more than parents to discuss personal matters and emotions (Buhrmester, 1996; Papini, Farmer, Clark, Micka, & Barnett, 1990; Reis, Lin, Bennett, & Nezlek, 1993). Therefore, it is important to consider the role friends have in the socialization of emotional expression among early adolescents. A number of researchers have called for a broadening of the current conceptual framework for the socialization of emotional expression that, until recently, focused almost exclusively on the role of parents as socializing agents (Denham, Bassett, & Wyatt, 2007; Zahn-Waxler, Klimes-Dougan, & Kendziora, 1998; Zeman, Klimes-Dougan, Cassano, 2007). This work has shown that parents play an important role in the socialization of children's emotional expression beginning in infancy and continuing through childhood (Klimes-Dougan & Zeman, 2007; Malatesta & Haviland, 1982). Although parent-child studies have added to our understanding of the socialization of emotional expression, this body of research is unable to account for the potential influence close friends may have on the expression of emotions during childhood and adolescence. The present study uses the literature on the parent-child socialization of emotional expression as a guiding framework to evaluate how early adolescents may learn about the use of emotional expression within close friend relationships.

Emotional expression is the signaling of subjective emotional experience through facial expressions, non-verbal gestures, tone of voice, and the verbalization of emotions (Kennedy-Moore & Watson, 2001). Among these pathways of emotional expression, the verbalization of emotion terms (ETs) and disclosure of emotional experiences appear to have unique implications

for social and emotional adjustment. The language children and adults use is often indicative of their thinking and a reflection of events and circumstances they have experienced (Fivush & Baker-Ward, 2005). Therefore, caregivers, friends, and others may provide markers of the emotional meaningfulness of events and circumstances through the ETs that they use in their conversations with children (Saarni & Buckley, 2002).

Examining ETs as a form of emotional expression also appears to have clinical relevance, given evidence from adult research suggesting that the use of ETs has mental and physical health benefits (Smyth, 1998). In addition, labeling negative emotions appears to reduce the perceived intensity of these emotions in adults (Berkowitz & Troccoli; 1990; Keltner, Locke, & Audrain, 1993). As a result of these and other findings, teaching adults and youth to label and rate the intensity of emotions is a common element in most empirically-supported cognitive-behavioral therapies (Kazantzis, Reinecke, & Freeman, 2009; Kendall, 2005).

Understanding whether close friends share a role with parents in the socialization of emotional expression may, therefore, have important implications for research on emotion development and psychological interventions with early adolescents. Research on the socialization of emotional expression is presented below, as well as a section on the association between emotional expression and relationship quality. In each section, a review of the parent-children literature is provided along with studies suggesting that similar associations may exist within close early adolescent friendships.

The Socialization of Emotional Expression

Maccoby (2007) has defined socialization as "processes whereby naïve individuals are taught the skills, behavior patterns, values, and motivations needed for competent functioning in the culture in which the child is growing up (p. 13)." Emotional expression is thus socialized as

parents, siblings, and other socialization agents teach children and adolescents how to understand and communicate their emotions. Two pathways indentified by Denham and colleagues (2007) in which emotional expression is thought to be socialized are modeling and contingent reactions.

A number of emotion researchers and theorists believe that children adopt the patterns of emotional expressivity modeled by their parents, including the use of ETs (Bauer et al., 2005; Burch, Austin, & Bauer, 2004; Halberstadt & Eaton, 2003). Most of the evidence for parent modeling as a mechanism of emotion socialization comes from correlational studies using cross-sectional self-report data or observational studies orchestrated within laboratory studies (Eisenberg et al., 2001; Feng, Shaw, Skuban, & Lane, 2007; Valiente et al., 2004), which show similarities in emotional expressivity between parents and their children. A few longitudinal studies provide even stronger evidence of socialization within the parent-child relationship. In one such study, Bauer and colleagues (2005) found that the frequency of mothers' use of ETs to describe a past event involving a tornado predicted the number of ETs in their children's descriptions of the tornado six months later.

In addition to modeling, the parent-child literature on the socialization of emotional expression has identified two types of contingent responses from parents that appear to influence children's emotional expression: supportive and dismissive responses. Supportive responses, which can take place before or after a disclosure of an emotion, include responses that facilitate the expression of emotions as well as those that confirm or validate one's emotional experience. Facilitating the expression of emotion, also known as *emotion coaching* in the parent-child emotion literature, refers to behaviors that coach or label emotions in an effort to help children understand their emotions, build emotion regulation skills, and develop intimacy in their relationships (Gottman, Katz, & Hooven; 1996; Lunkenheimer, Shields, & Cortina, 2007).

Examples include asking children to use ETs to describe an emotional state, such as *"Use words to tell me how you feel*," or the labeling of forms of emotional expression "*I can see that you are feeling sad by the look on your face*." This type of supportive behavior from parents appears to be linked to children's emotional expression (Lunkenheimer et al., 2007), and supported by studies showing that children and adolescents have a tendency to be more emotionally expressive in families that are more accepting and encouraging of emotional expression (Bronstein, Briones, Brookes, & Cowan, 1996; Gentzler, Contreras-Grau, Kerns, & Weimer, 2005; Papini et al., 1990).

Dismissing behaviors from parents include criticizing, invalidating, and minimizing the significance of their children's emotional experiences (Lunkenheimer, Shields, & Cortina, 2007). These types of dismissive or derogatory responses seem to suppress children's emotional expression (Denham et al., 2007; Fabes, Leonard, Kupanoff, & Martin, 2001), as children's emotional expressivity appears to be negatively related to the level of intensity and harshness of their parents' response to their expressions of emotions. These studies collectively suggest that the way parents respond to their children's emotions may play a role in socializing their children's emotional expression.

Socialization of Emotional Expression in Friendships

As mentioned above, the literature on children's friendships suggests that friends may also play a role in the socialization of emotional expression, particularly during early adolescence. As children transition into adolescence, many of them experience an increase in their emotion intensity (Larson & Ham, 1993; Larson & Lampman-Petraitis, 1989) as well as an increase in their desire to form close interpersonal relationships (Hartup, 1993; Sullivan, 1953). Perhaps due to their increased focus on peers during this period, teens are more likely than

younger children to discuss personal matters and emotions with friends than with parents (Buhrmester, 1996; Papini et al., 1990; Reis et al., 1993) and often perceive their parents as being less facilitative of emotional displays (Klimes-Dougan et al., 2007).

Although early adolescents appear to spend more time disclosing and discussing their emotions with their friends than younger children, little is known about how friends may influence the use of ETs or other forms of emotional expression in their conversations. Consistent with the evidence of modeling found within the parent-child context, Laurenceau and colleagues (1998) found, after asking college students to journal self-disclosures within their social interactions, that students' self-reports of their shared personal information and emotions was related to their perceptions of their friend's self-disclosure, suggesting that college students may be influenced by their friends' modeling of expressivity. This same study found that college students were more willing to self-disclose their emotions when they perceived their friends as being responsive to such disclosures, which mirrors research from the parent-child literature on contingent reactions and the importance of support within the family environment.

The association between emotional expression and how others respond to these expressions may also be responsible for many of the gender differences found in emotional expressivity. Boys have a tendency to utilize more restriction in their emotional expression than girls (Polce-Lynch, Myers, Kliewer, Kilmartin, 2001), whereas girls more often express feelings of sadness in social settings than boys (Buckner & Fivush, 1998). One of the major explanations of these gender differences in emotional expression has been differences in the way parents socialize emotional expression in boys and girls with boys having a tendency to receive less support for their expression of emotions than girls (Fuchs & Thelen, 1988; Klimes-Dougan, Brand, et al., 2007; Zeman & Shipman, 1997). These patterns have not been uniformly

supported, with at least one study finding that girls, rather than boys, anticipate more negative peer reactions for negative emotional expressions (Underwood, 1997). Nevertheless, these studies stress the importance of considering peers and gender when evaluating the associations between the expression of emotions and the ways other people respond to these emotions.

Emotional Expression and Relationship Quality

The emotional expressivity of children and adolescents may also be related to the overall quality of the relationship in which emotions are shared. There is considerable evidence for a positive association between emotional expression and relationship quality in the literature on parent-child attachment and socioemotional development (see Fivush, Reese, & Haden, 2006). Much of this research has relied on observations of parent interactions with their preschool-aged children, and has shown that securely attached children tend to discuss their emotions more freely than insecurely attached youth when discussing past events (Farrar, Fasig, & Welch-Ross, 1997; Laible, 2004; Laible & Thompson, 2000). It has been suggested that these associations reflect reciprocal influences between emotional expression and relationship quality, with close relationships both promote and are enhanced by greater emotion disclosure (e.g., Fivush et al., 2006).

The literature on early adolescents also provides some evidence for a positive association between parent-adolescent relationship quality and adolescent emotional expression, although unlike the early childhood literature this work relies on self-reports of emotion disclosure rather than direct observation. For instance, securely attached adolescents report being more emotionally expressive than insecurely attached adolescents (Ducharme, Doyle, & Markiewicz, 2002), and adolescents' satisfaction with family relationships tends to be positively related to their self-disclosure (Papini et al., 1990). Likewise, poor relationship quality, as characterized by

high parental criticism, has been negatively associated with adolescent self-disclosure (Rosenthal, Efklides, & Demetriou, 1988). Thus, these findings suggest that youth who enjoy satisfying, secure, and supportive relationships with their parents may be more willing to express their emotions.

Similarly, adolescents may be more willing to self-disclose with peers with whom they share high quality friendships that are emotionally close, satisfying and supportive (Camarena, Sariginana, & Petersen, 1990; Johnson, 2004). Self-disclosure and provision of emotional support appear to be very important within close relationships (Buhrmester, Furman, Wittenberg, & Reis, 1988). Furthermore, adults report disclosing more to individuals that they like (Collins & Miller, 1994: Hornstein & Truesdell, 1988) and with whom they share intimate relationships (Laurenceau et al., 1998). Although friendship quality might set the stage for emotional expression, an alternative explanation may be that friendship quality and emotional expression share a bidirectional association, with friendship quality promoting emotional self-disclosure and emotional self-disclosure, in turn, enhancing the intimacy and quality of existing friendships.

Whereas research suggests emotional expression in established close friendships is positively related to friendship quality, it is also important to note that more is not always better when it comes to emotional expression. Some studies have shown that youth who are indiscriminately expressive of their emotions typically have difficulties making friends (Dougherty, 2006) and have lower scores on measures of social functioning (Murphy, Shepard, Eisenberg, & Fabes, 2004). Thus while emotional expression is associated with intimacy and closeness within existing friendships, it may be alienating when used indiscriminately within the larger peer context.

One limitation of the existing literature on the association between relationship quality and emotional expression among adolescents is that studies in this area have exclusively relied on self- and other-report measures of emotional expression (e.g., Camarena et al., 1990; Ducharme et al., 2002; Johnson, 2004). Notwithstanding this limitation, the characteristics of relationships in which children and teens express emotions seem to be important. Research designs that include observation and rating measures of emotion expression may further illuminate the relationship between friendship quality and emotion expression.

In summary, with most of the research on the socialization of emotion expressivity among children and adolescents focusing on parent-child relationships, close friends have seemingly been overlooked as socialization agents of emotional expression. Although some research has shown a link between friendship quality and emotional expression, it is unclear if, as with parents of younger children, close friends also have a role in the socialization of emotional expression during early adolescence. This gap in the literature on the socialization of emotional expression exists despite research showing that, as children transition into early adolescence, they often place greater emphasis on peer relationships and look to friends as outlets for sharing private information including their emotions. Research incorporating both observations and multi-informant ratings of emotional expression may be helpful in exploring the interplay among emotional expression, friendship quality, provision of supportive and dismissive responses, and gender.

The Current Study

The current study addresses this gap in the literature by studying the associations between features of close early adolescent friendships and emotional expression using several indices of emotion disclosure: self-, friend-, and parent-ratings of competence in self-disclosure, and the

frequency of positive and negative emotion terms observed in conversation between close friends in a lab setting. The current study has incorporated a multi-method design (observations combined with rating scales with multiple informants) to address the need outlined by a number of emotion research theorists (Klimes-Dougan & Zeman, 2007; Larsen & Prizmic-Larsen, 2006; Fivush, 1998) for more comprehensive examination of potential factors contributing to the socialization of emotional expression. Use of multiple methods in this study may inform the refinement and adaptation of existing methodologies used in this field of research.

The study addressed three main research questions: (1) Is early adolescent emotional expression socialized through modeling of close friend behavior? Using the literature on the parent-child socialization of emotion expression as a guiding framework to build my hypotheses, I predicted that there would be similarities in the degree of emotion expressivity among dyad members, as measured by ratings scales and observed use of emotion terms during a structured interaction task, thus suggesting modeling among close friends. (2) Do friends facilitate (or hinder) early adolescents' emotional expression? I predicted there would be evidence of this with supportive responses made by friends in their conversations positively relating to emotional disclosure and increasing the odds of participants' subsequent emotional expression. On the other hand, I hypothesized that dismissive responses would be negatively related to emotional disclosure and decrease the odds of subsequent emotional expression. (3) Is friendship quality related to early adolescent emotional expression? I anticipated that early adolescents who described their friend as having relatively higher positive friendship qualities and lower negative qualities/conflict would be more likely to disclose their emotions.

Method

Participants

The sample in this study was derived from a larger study investigating friendship development among early adolescents. The research team conducting this study recruited 7th and 8th grade boys and girls from the communities surrounding the Midwest university where it was conducted. The team used various strategies to maximize recruitment efforts, including brief presentations at community agencies and programs working with younger adolescents, distributing fliers to adolescents and their parents at cooperating sites and public events in the community, and posting information about the study on websites, newsletters, and bulletin boards of local retail establishments. Fliers were also mailed to families of youths whose names were identified in the local newspaper when being recognized for athletics, the honor role, or other achievements. To be eligible for the study, participants had to be enrolled in the 7th or 8th grade. They also could not have a prior diagnosis of Autism, Asperger's Disorder, or other Pervasive Developmental Disorders (the reason for this exclusionary criterion was to avoid a confounding of social difficulties associated with these disorders). Each youth was required to come with a close friend to form a dyad. The research team required that at least one parent of either of the two dyad members attend the data collection session, although both parents of each dyad member were welcome to attend.

A total of 116 youth (58 dyads; 66 girls, 56.9 %), ages 12-14 (M = 13.07, SD = 0.66), and their parents participated. This population was selected because few studies have examined emotional expression among peers within this age group. Among the sample, ethnicity was not reported by a large percentage of families (21%, n = 24). Among the children for whom ethnicity was reported, 88 percent of the youth identified themselves as European American (n =

81), 5 percent as multi-racial (n = 5), 3 percent as Asian or Asian American (n = 3), 2 percent as American Indian or Native American (n = 2), and 1 percent 'other' (n = 1). These findings are consistent with estimates of the ethnic diversity of the surrounding community (US Census Bureau, 2008). An ethnicity variable was not included in the analyses due to concerns that the small proportion of non-European American participants in the sample would interfere with the validity and generalizability of any ethnic group findings that were found to be specific to non-European American group members. Seventy-two percent of the participants' fathers and 53% of the mothers reported having earned a bachelor's degree or higher, which is higher than estimates of degree obtainment among men and women in the community (50.7% with bachelors degree or higher) and considerably higher than estimates found in the United States as a whole (27.4%; US Census Bureau, 2008).

Procedures

Informed written parental (or legal guardian) consent and child assent for both friends was obtained prior to beginning the study's procedures. Attending parents completed the consent on site. The consent forms of children with non-attending parents were mailed to their home, signed by the parents, and returned to the study team via mail or the adolescent at the time of the study session. The study sessions typically lasted 90 to 120 minutes. Each friend completed the same questionnaire in separate rooms individually administered by research assistants. Parents attending the session received a packet of questionnaires to complete in a separate room, whereas, non-attending parents completed questionnaires via the mail. Adolescents then participated in a series of four semi-structured interaction activities: *General Conversation*, *Planning a Party*, *Problem Talk,* and *Planning a Special Activity* (with a parent present). The general conversation task was introduced first for every dyad to acclimate them to

the setting. The remaining three interaction tasks were presented in random order (order determined with the roll of a die). Only the problem talk task was analyzed for the current study. Participating early adolescents and attending parents each received a $20 gift certificate for participating. Non-attending parents who completed the parent questionnaire via mail received a $10 gift certificate for their time.

Behavioral Observation and Coding

Problem talk interaction task. Before the problem talk task, each participant was asked to meet separately with a research assistant. The research assistant primed the youths prior to the task to think about a problem that had been significantly troubling them. They were then asked if they would feel comfortable sharing this problem with their friend. If not, the participant was asked to identify a new problem he/she felt comfortable sharing. Very few participants elected to select a new problem (n = 2). After identifying a problem to share, the friends were reunited in a room and the research assistant read the following script to provide the participants with instructions for the interaction task:

> This part of the study involves talking about problems. Remember how you each came up with a problem? These are the problems you will talk about now. You should talk about each friend's problem, but it doesn't matter whose problem you talk about first. You can talk about anything you want to about the problems.

The research assistant then placed in front of each participant an index card with these instructions and a post-it note with the youth's identified problem. The participants were told that a research assistant would return after 15-minutes and that if they finished talking about their

problems, they could talk about something else or work on a jigsaw puzzle that was left with them in the room. Although the prompt to discuss problems was used as a tool to elicit emotional expression among dyad members, ETs (as well as friend responses to participants' ETs) were coded throughout the interaction task, with coding not limited to discussions of specific problems. In other words, any statements made by participants during the 15 minutes interaction was coded and used in the analyses.

Coding of verbal emotional expression. Each video was transcribed by an upper level undergraduate research assistant and reviewed by a second research assistant to maximize the accuracy of the transcription. After transcription of video of the 15 minute problem talk interaction task was completed, negative and positive ETs were identified and coded by research assistants who read through the transcripts while viewing the video recording of the interaction task. The coding procedure for identifying ETs was adapted from a coding scheme used by Bauer et al. (2005) and is similar to procedures used by others (e.g., Greenhoot, Johnson, & McCloskey, 2005; Shields, Lunkenheimer, & Reed-Twiss, 2002). The negative ET category included explicitly negative ETs, or terms that identify an actual negative emotion (e.g., "I was scared") and descriptions of behaviors commonly associated with negative emotions (e.g., "I was crying"). Similarly, the positive ET category included explicitly positive feeling terms (e.g., happy and love), as well as descriptions of behaviors commonly associated with positive emotions (e.g., "I couldn't stop myself from laughing"). The two ET variables were used for the analyses by calculating the total frequency of negative and positive ETs used by each participant during the interaction task. Identifying both positive and negative expressions of emotions provided a means to examine how these different types of emotions were differentially related to the behavioral responses of friends and other friendship characteristics.

Coding friends' behaviors toward emotional expression. Coding for *Supportive Responses* and *Dismissive Responses* were based on procedures used by Shields, Lunkenheimer, and Reed-Twiss (2002), a system developed for the coding of parent coaching expression that has been used to examine the role parental emotion coaching has on children's emotion regulation and behavior problems. The system used for the current study was adapted from the researchers' original coding scheme for families with toddlers (Shields, Fausett, & Seifer, 1998) and another system developed by Dunn and colleagues' to measure familial feeling and mental-state talk (Brown & Dunn, 1996). Shields and colleagues (2002) identify emotion coaching as verbal statements or questions made by parents that are used to validate and help their children identify their emotional experiences. Parents are thought to engage in emotion coaching behaviors with the explicit goal of facilitating emotion awareness and regulation of emotions (Gottman et al., 1996; Hooven, Gottman, & Katz, 1995; Shields et al., 2002), whereas these same behaviors may serve different functions among members of close early adolescent friendships. Therefore, for the purposes of the current study, emotion coaching behaviors identified from the parent-child literature will be referred to as supportive responses when observed in discussions between friends.

The interaction task was coded by research assistants who read the transcript while viewing the video recording. The transcript was divided into segments, which were defined as uninterrupted statements made by a participant during a given conversation turn. For example:

Participant A: "I got grounded over the weekend." [segment 1]

Participant B: "Why did you get grounded?" [segment 2]

Participant A: "Because my dad's a jerk. I hate him." [segment 3]

Supportive and dismissive responses often encompassed multiple word utterances rather than single word responses (see coding instructions below for examples). Therefore, supportive and dismissive responses were coded at the segment level. Two response variables were used for the analyses by calculating separate counts of supportive and dismissive response segments produced by each participant during the interaction task.

The research team attempted to code nonverbal behaviors by examining the facial expressions and other body language of participants during the interaction task. Variations in the degree to which subtle non-verbal behaviors were captured in the video-recordings interfered with the accuracy of coding emotionally supportive and dismissive non-verbal behaviors consistently across dyads. Therefore, only verbal responses to emotional expression were included.

Supportive responses. Supportive responses included statements, questions, or comments by participants that assisted their dyad mate by labeling their emotion (e.g., "*Sounds like you were pretty bummed about being grounded.*"), facilitating their further understanding of an emotion (e.g., "*Why do you think your sister Marsha makes you so upset?*"), assisting in the resolution of aspects relating to a difficult emotional experience (e.g., "*What are you going to do to get on your step-dad's good side now?*"), or facilitating the enhancement of a positive emotional experience (e.g., "*I know I always feel better when I have somebody to talk to.*").

*S*upportive responses also included statements by dyad members that validated their partner's emotional experience. These responses were coded in instances in which one dyad member made confirming and validating statements in the segment that followed their partner's use of an emotion term. Examples include statements made by participants that empathically mirrored or reflected the emotional experiences of their dyad mate (e.g., "*Yeah, that was a really*

sad time."), or validated the dyad mate's emotion reactions to an event by describing how these feelings were shared (e.g., "*Oh, yeah, it makes me mad too when my mom is always telling me what to do.*"). Statements were also coded as supportive when participants used enthusiastic one-word or two-word exclamations that reflected agreement with the dyad mate's emotional experiences or about the emotion quality of an event (e.g., "*Exactly*!", "*That sucks,*" or "*Bummer!*").

Dismissive responses. Dismissive responses included statements made by participants that invalidated, minimized, criticized, or interfered with their dyad mate's discussion of their emotional experience (Shields et al., 2002). Dismissive responses also included declarations made by participants that their friend's expression of a given feeling was harmful and/or something that the friend should "just get over." Suggestions that negative feelings will dissipate over time were also coded as dismissive. Abruptly changing the topic, ignoring the emotion disclosure, or talking over the person describing their emotional experience was coded as dismissive as well. Responses were only coded as dismissive when in the context of discussing an emotional event (i.e., when following a segment that included an emotion term), thus criticisms, ignoring, and use of disparaging comments that were made by friends in the absence of an emotional self-disclosure were not coded.

Not every ET used by a participant was linked to a coded response from a friend. For example, a participant may have used multiple ETs within a single conversation turn (e.g., "*I was so scared and sad when my parents got a divorce, I couldn't stop crying*."), followed by a single supportive response (e.g., "*That must have been very heart breaking*."). In this example, the participant would be scored with three negative ETs (for scared, sad, and crying), whereas his or her dyad mated would be coded with only one supportive response. In other instances a

participant's use of ET was not paired with a dyad's response (either supportive or dismissive) when the participant's conversation turn seemed to naturally turn away from the ET before the his or her friend was able to response. For example:

> Participant A: "I am so happy I'm no longer grounded. Now we can go to the mall today. I want to get a new outfit for the party on Friday. What stores to you want to go to?"
>
> Participant B: "Abercrombie for sure!"

In this example, the conversation turned away from the ET (e.g., happy for not being ground) to a new topic so participant B's response was not coded as a dismissive response. However, had participant A's conversation turn been limited to a statement about being happy for being grounded and participant B no addressed the emotion by changing the subject, the friend's response would have been coding as a dismissive. Also not coded were single phrase utterances such as "ohhhhh" or "uhmmmm" used by friends due to the ambiguity and difficulty interpreting the meaning or intent of these responses.

Coder training and inter-rater reliability. Two research assistants who were unaware of the study hypotheses were trained in the coding system using data from the first 5 dyads for training purposes. The transcripts were separated from all other measures and were identifiable only by a participant number during the coding process. This was done to ensure that the coders were blind to information regarding each participant. The coders were asked to produce a frequency count of each of the coded behaviors (positive emotions, negative emotions, supportive responses, and dismissive responses) by counting the number of times they were

observed in the transcript and video recording. A total word count was also calculated for each participant in order to control for the number of words participants used when examining associations between use of emotion terms and other variables. Twenty percent of the transcripts were coded by both coders to determine inter-rater reliability using the Kappa statistic. The emotional expression (positive and negative emotion terms) inter-rater reliability for the raters was Kappa = .82 ($p < 0.001$). Supportive and dismissive response inter-rater reliability for the raters was Kappa = .64 ($p < 0.001$). The strength of agreement between raters was within the Almost Perfect and Good ranges, respectively (Landis & Koch, 1977).

Written Measures

Ratings of adolescent emotion disclosure. The study utilized the self-disclosure subscale from the *Adolescent Interpersonal Competence Questionnaire*, a measure designed to assess adolescents' level of interpersonal competency specific to friendships (AICQ; Buhrmester, 1990). The AICQ includes a total of 40 items, with 8 items as part of the AICQ *Self-Disclosure* subscale. The Self-Disclosure subscale was selected due the subscale item's emphasis on the quality of disclosure of emotion content (e.g., "How good is this person at sharing personal thoughts and feelings with others?", "How good is this person at telling someone his or her true feelings about other people?"). When completing the measure, youth participants were asked to rate themselves and their accompanying close friend using a scale from 1 (*Poor at this*) to 5 (*EXTREMELY good at this*), and parents used the same scale to rate their child's behavior. Thus the AICQ is designed to provide self-, friend-, and parent-ratings of an individual's competence in self-disclosure. For the current sample, alpha coefficients for the AICQ self-disclosure subscale were $\alpha = 0.84$ for the youth self-report, $\alpha = 0.83$ for the peer report, and $\alpha = 0.76$ for the parent report.

Friendship quality. The *Friendship Quality Questionnaire* (FQQ; Parker & Asher, 1993) measured friendship qualities within each dyad. The FQQ is a 40-item questionnaire that assesses the quality of a friendship along five domains, including help and guidance, validation and caring, conflict resolution, companionship and recreation, intimate exchange, and conflict and betrayal. Because participants did not necessarily attend the same school, items explicitly referring to activities in school were modified slightly (e.g., "always play together at recess" was changed to "always hang out together") to reduce a bias toward dyads attending the same school having higher quality friendship. Consistent with other studies (Atzaba-Poria, Pike, & Deater-Deckard, 2004; Rose, Carlson, & Waller, 2007), the *Positive Friendship Quality* subscale score was calculated by taking the average across all positive quality scale items (i.e., all items except those on the Conflict and Betrayal scale). The *Conflict and Betrayal* subscale score was similarly created by taking the average across the conflict and betrayal items, consistent with previous studies using this measure (Simpkins, Parke, Flyr, & Wild, 2006; Simpkins & Parke, 2001). The internal consistency of the FQQ Positive Friendship Quality and the Conflict and Betrayal subscales for the current sample were both $\alpha = 0.93$.

Friendship duration. Each participant indicated the number of months and years they had been friends with their dyad mate. Although agreement between dyad members on the length of their friendship was good (interclass correlation, $r = .84$), there were some discrepancies. Therefore, friendship duration was included in the analyses as a within-dyad variable, such that both dyad members' friendship duration scores were included separately in the model.

Results

Overview of Analyses

The analyses were divided into three phases addressing the main research questions of the current study. These three phases are described below following an account of the descriptive statistics and bivariate correlations between variables. In the first phase, intraclass correlations (ICCs) were used to address the question of whether friends were similar in their degree of emotional expressivity, as measured by ratings scales and observed use of emotion terms during a structured interaction task. The ICC is a type of correlation that can be used to measure relative homogeneity within dyads (within-group variability) in proportion to the total variation across participants (between-group variability) (Griffin & Gonzalez, 1995; Shrout & Fleiss, 1979). Similar to interpretations for Pearson correlations, the maximum value of ICC is 1.0, with positive scores closer to 1.0 indicating strong association between dyad members. ICC scores close to zero indicate no association. Negative ICC values occur when between-dyad variability is less than within-dyad variability, signifying a poor association between variables. The ICCs were produced using a series of Multilevel Models (MLMs) in SPSS. MLM can be used to calculate ICC scores for dyad members by building models with the dyad as the unit of analysis, identifying a given variable as an outcome variable (e.g., negative ETs) with no predictor variables in the model, only the intercept as a fixed factor and two random factors, the dyad covariance and the dyad error variable. The ICC can then be calculated by dividing the dyad variance (i.e., the variance of the dyad intercepts) by the sum of the residual variance plus the dyad variance (for an in-depth summary of this procedure, see Kenny et al., 2006).

In the second phase of the analyses, Actor-Partner Interdependence Models (APIMs) tested whether friends appear to facilitate (or hinder) early adolescents' emotional expression

(Question 2), and whether friendship quality was related to early adolescent emotional expression (Question 3). In addition, these analyses provided further testing of the modeling hypothesis (Question 1) by testing whether ICCs between dyad members' behavior remained significant when controlling for other variables. Gender was added as an interaction term in the models to determine whether gender moderated any of the identified associations. APIM is a statistical approach in which multilevel modeling can account for interdependence of data within dyadic relationships (Kenny et al., 2006). According to Campbell and Kashy (2002), APIM analyses allow researchers to identify how a person's "independent variable score affects both his or her own dependent variable score (known as the actor effect) and his or her partner's dependent score (known as the partner effect)" (p. 328). A generic APIM is displayed in Figure 1. Actor effects are represented by the *a* pathways (i.e., $X_1 \rightarrow Y_1$ and $X_2 \rightarrow Y_2$) from each dyad member's individual predictor variable scores to his or her outcome variable score. Partner effects are represented by the *p* pathways (i.e., $X_1 \rightarrow Y_2$ and $X_2 \rightarrow Y_1$) from each dyad member's individual predictor variable scores to his or her partner outcome variable score. Significant partner effect pathways indicate interdependence among dyad members. The curved lines in the model represent correlations. The correlation on the left represents the correlation between the predictor variables (X_1 and X_2). The correlation on the right between outcome variables (Y_1 and Y_2) specifies the interdependence between the outcome variables that is not accounted for by the predictor variables. When the model in Figure 1 is created using MLMs with no predictor variables, the correlations between outcome variables is an ICC score. When other variables are included in the model to create an APIM, the correlations between the outcome variables becomes a partial ICC, reflecting the proportion of the variance in the

outcome scores that is attributed to dyad membership when the effects of the predictors are held constant.

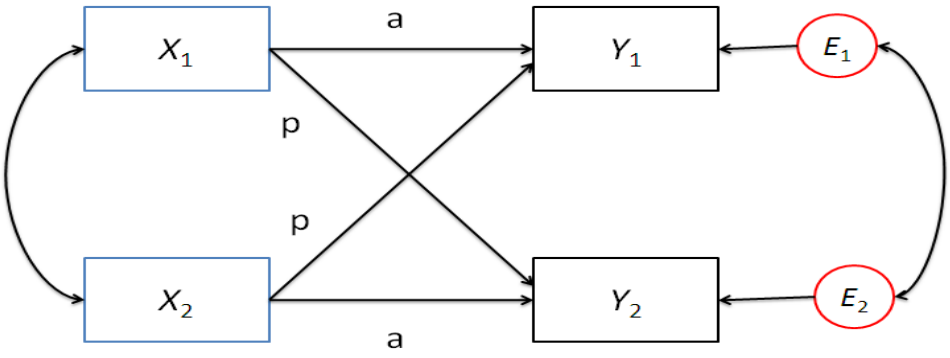

Figure 1. Generic APIM model with *a* as the actor effect and *p* as the partner effect. Adapted from "Analyzing Nonindependent Outcomes in Couple Therapy Using the Actor–Partner Interdependence Model," by W. L. Cook and D. K. Snyder, 2005, *Journal of Family Psychology*, 19, p. 134. Copyright 2005 by the American Psychological Association.

The third phase of analyses involved loglinear analyses to test more strongly Question 2, whether friends facilitate (or hinder) early adolescents' emotional expression. The specific goal was to evaluate whether friend supportive responses increase the odds and dismissive responses decrease the odds of participants' subsequent emotional expression. One limitation of the APIM analyses testing Question 2 is that the associations of partner supportive and dismissive responses with emotion term use were based on the total scores of these variables and, therefore, the APIM analyses could not account for whether partner supportive and dismissive responses influenced subsequent use of emotion terms. Loglinear analyses addressed this issue by providing an examination of the sequential patterns of interactions tested. Loglinear analysis is an extension of the chi-square test that allows for the examination of associations and interactions among more than two groups of categorical variables (Tabachnick & Fidell, 2007).

As shown in Figure 2, there were three levels of responses (pre-response, friend response, post-response) with 12 possible sequences total. The loglinear analyses determined whether some combinations or sequences were more common than others - for example, whether friend dismissive responses following negative ETs were more likely to decrease the odds of subsequent use of negative ETs. In these loglinear analyses, the conversation turn, not the individual ET, was the unit of analysis because some conversation turns included more than one ET. Although the focus of this phase of the analyses was to evaluate whether specific types of friend responses influenced the odds of various types of post-response ETs, pre-response ETs were also included in this level of analyses to determine whether specific pre-response ETs were more likely to be associated with either supportive or dismissive responses.

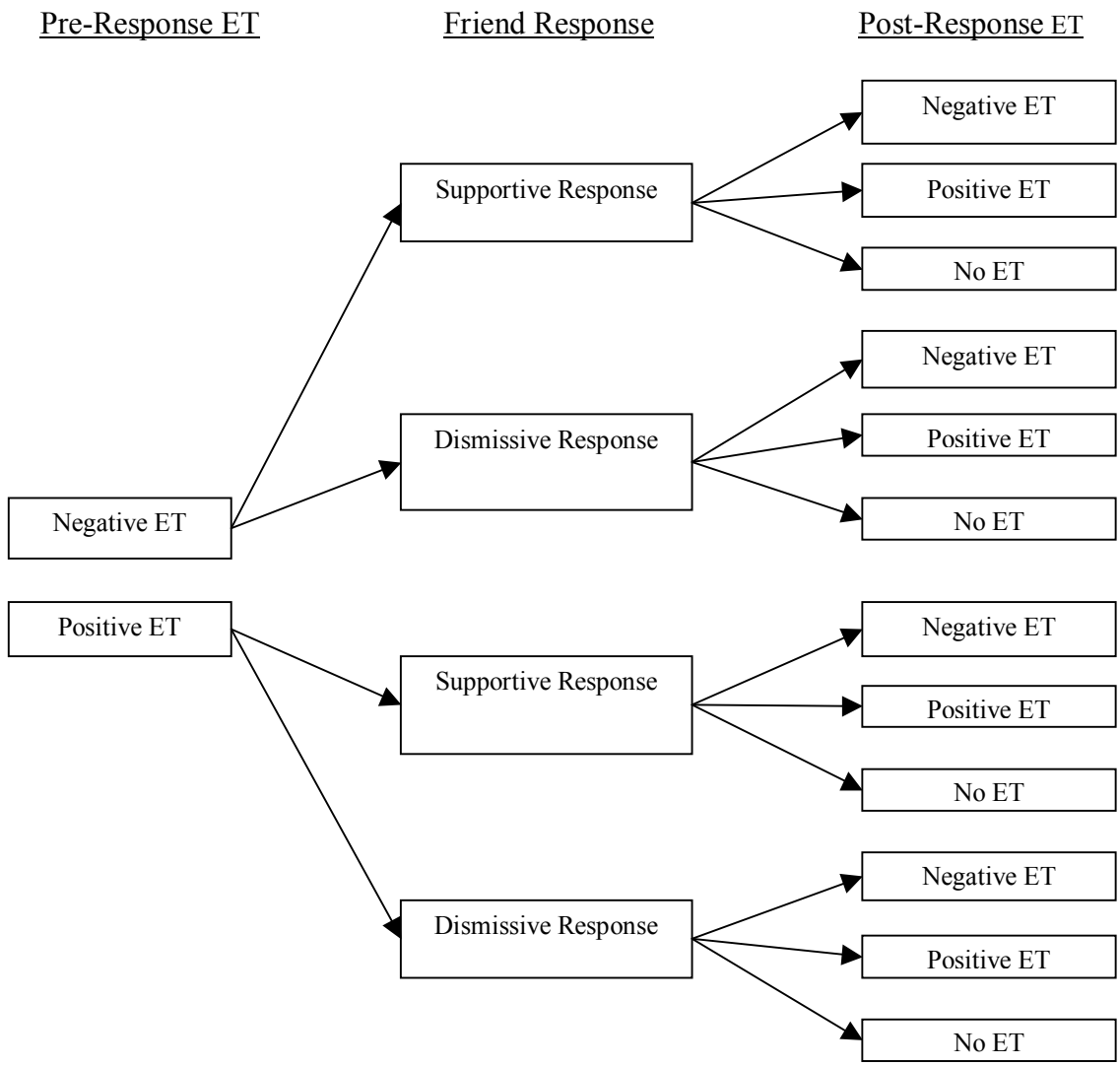

Figure 2. Flow chart specifying the 12 pre-response ET x friend response x post-response sequence combinations analyzed using loglinear modeling.

Handling of Missing Data

Within the data set, less than 5% of data values were missing due to participants omitting individual items within a scale or parents failing to mail in questionnaire packets. The EM imputation algorithm using the PROC MI procedure within SAS provided imputed missing data

to reduce potential bias that might result from missing data (Graham, Cumsille, & Elek-Fisk, 2003).

Preliminary Analyses

Descriptive data and analyses. Means, *SD*s, and ranges for parent-, friend-, and self-reported self-disclosure, friendship quality, conflict and betrayal, friendship duration, gender, and age are provided in Table 1. Girls reported on average higher friendship quality with their dyad mates ($M = 4.17$, $SD = 0.56$), than did boys ($M = 3.77$, $SD = 0.56$), $t(114) = 3.64$, $p < .001$, with a medium effect size, $r = .32$. In turn, boys noted, on average, higher conflict and betrayal with their dyad mates, ($M = 1.80$, $SD = 0.66$) than girls ($M = 1.40$, $SD = 0.46$), $t(114) = -3.85$, $p < .001$, with a medium effect size, $r = .34$. Boys also reported longer relationships with their dyad mates ($M = 5.88$, $SD = 2.75$) than girls ($M = 4.08$, $SD = 3.52$), $t(114) = -3.85$, $p < .001$, with a medium effect size, $r = .34$. In terms of the three ratings of self-disclosure, no gender differences were found on the self- and friend-rated versions. Caregivers did rate their daughters as slightly more competent with emotion self-disclosure ($M = 3.34$, $SD = 0.59$), than their sons ($M = 3.00$, $SD = 0.77$), $t(114) = -2.68$, $p < .01$, with a small effect size, $r = .26$. There was no statistically significant difference in male caregiver vs. female caregiver parent-ratings of their child's competence with emotion self-disclosure, $t(114) = -0.11$, $p = .91$; however, these caregiver rating differences, or the lack thereof, should be interpreted cautiously given that less than 7% of parent raters were male.

Means, SDs, and ranges for the four interaction task variables, positive and negative emotion terms (ETs), supportive and dismissive responses, are presented in Table 2. Each of the four interaction task variables was positively skewed and a square root transformation correction

was applied for all inferential analyses. The means, SD, and ranges presented in Table 2 reflect the untransformed data for ease of interpretation.

Negative emotions were relatively more common during the problem talk interaction task than positive emotions, $t(115) = 5.38$, $p < .001$, $r = 0.45$. Dyad mates typically gave a similar number of supportive responses and dismissive responses, $t(115) = -0.72$, $p = .48$, $r = 0.08$. Girls used more positive ETs *(r* = .34), negative ETs *(r* = .27), supportive statements *(r* = .23), and dismissive statements *(r* = .23) during the interaction task than did boys, *t*s(114) = between 2.54 and 3.81, *ps* < .05, with medium to small effect sizes.

Intrapersonal Correlations (Within-Person Associations across Variables of Interest). Tables 2 and 3 show intrapersonal bivariate correlations that reflect within-person associations among the variables used in the analyses. The bivariate correlations were calculated using the individual as the unit of analysis and compared each participant's score on one variable with their rating on another. In terms of the self-disclosure variables, AICQ self-reported self-disclosure scores were significantly correlated with parent-reported self-disclosure and their rating of friendship quality. This finding indicates that participants who rated their own self-disclosure competency as high tended to rate the quality of their friendship higher and had caregivers who rated their self-disclosure competency high as well. None of the bivariate correlations between the other self-reported and interaction task variables were statistically significant. Interestingly, self-reported self-disclosure was negatively related to friend-reported self-disclosure, such that participants who rated themselves high on self-disclosure competency tended to rate their dyad mates lower. Friend-ratings on self-disclosure were not correlated with any of the parent- or self-report self-disclosure variables or any of the interaction task variables. Parent-ratings of self-disclosure were, however, associated with their child's duration of their

friendship with their dyad mate, gender, use of negative ETs, positive ETs, supportive responses, and dismissive responses. Although self- and friend-reported self-disclosure scores were negatively correlated, there was a strong positive correlation between participants' rating of their friends' self-disclosure and their own self-report score.

Table 1

Intrapersonal Bivariate Correlations among Questionnaire-Reported Self-Disclosure and Friendship Characteristics

	Self-Disclosure (*Self-report*)	Self-Disclosure (*Friend- report*)	Self-Disclosure (*Parent- report*)	Positive Friendship Quality	Conflict & Betrayal	Length of Friendship	Age
Self-Disclosure (*Self-rating*)	---						
Self-Disclosure (*Friend- report*)	-.20*	---					
Self-Disclosure (*Parent- report*)	.20*	-.01	---				
Positive Friendship Quality	.37**	-.08	.14	---			
Conflict & Betrayal	-.15	.02	.10	-.43**	---		
Length of Friendship	.03	.11	-.27**	-.16	-.05	---	
Age	.01	.04	-.01	-.02	.15	-.11	---
Gender (Girls=0, Boys=1)	-.12	-.04	-.24**	-.35**	.34**	.32**	.08
Mean (SD)	3.52 (0.78)	3.59 (0.71)	3.19 (0.69)	4.00 (0.59)	1.57 (0.59)	4.87 (3.23)	13.08 (0.61)

Table 2

Intrapersonal Bivariate Correlations among Reported Self-Disclosure, Friendship Quality, and Observed Emotion Disclosure

	Negative Emotions	Positive Emotions	Supportive Response	Emotion Dismissing	Word Count
Self-Disclosure (*Self- report*)	.11	.12	.05	.10	-.06
Self-Disclosure (*Friend- report*)	.11	.13	.17	.05	.10
Self-Disclosure (*Parent- report*)	.33**	.31**	.27**	.26**	.27**
Positive Friendship Quality	.21*	.17	.08	.13	.11
Conflict & Betrayal	.01	-.04	.03	.05	-.09
Length of Friendship	-.20*	-.30**	-.22*	-.12	-.10
Age	-.03	-.01	.08	-.02	.12
Gender (Girls=0, Boys=1)	-.27*	-.34**	-.23*	-.23*	-.25**
Negative Emotions	--				
Positive Emotions	.42**	--			
Supportive Response	.33**	.36**	--		
Emotion Dismissing	.30**	.32**	.34**	--	
Word Count	.40**	.40**	.16	.23*	--
Mean (SD)	4.82 (3.87)	2.97 (2.90)	1.69 (1.91)	2.34 (2.30)	823.85 (337.22)
Range	0—17	0—16	0—9	0—11	125-2240

* $p < .05$. ** $p < .01$.

Phase 1 Analyses: Interpersonal Correlations (Similarity between Dyad Members)

Intraclass correlation (ICC) scores are provided in Table 3. Because ICC is a ratio of the between variance and total variance, positive scores can be viewed as the proportion of variation in the outcome variable that can be attributed to the dyad (Kenny, Kashy, & Cook, 2006). This interpretation does not hold for negative ICC scores, as negative ICC scores signify a lack of association between variables. The ICC for the combined sample is provided in the first column of the table, whereas ICCs for girl and boy dyads are presented in the second and third columns. The difference between these scores is presented in the last column. To test whether the difference in gender group scores was significant, a Fisher r-to-z transformation was used to convert gender group ICCs into z scores and these z scores were compared.

The purpose of the ICC analyses was to assess whether friends were similar in their degree of emotion expressivity, as measured by ratings scales and observed use of emotion terms during a structured interaction task. The total scores for AICQ parent-rating of self-disclosure, negative ETs, and positive ETs were significant. A significant gender group difference emerged in the magnitude of ICC scores for negative ETs, such that only girl dyad mates used similar frequencies of negative ETs during the interaction task. The AICQ self-disclosure ICC scores for self- and friend-reports were negative. An analysis of variance (ANOVA) approach was substituted to calculate these negative ICCs because the MLM procedure for calculating ICC scores used an algorithm that estimates the dyad variance as zero when encountering dyadic variables with negative ICC scores, thus causing the model to fail to converge (Kenny et al., 2006). The negative self- and friend-report ICC scores produced by the ANOVA analyses indicate dissimilarity among these variables within the dyads. Collectively, these results provide some support for similarity between friends in their degree of emotion expressivity, at least in

parent-reported self-disclosure and, for girls only, observed use of positive ETs and negative ETs. These findings are consistent with the notion that early adolescent emotional expression could be influenced by modeling from their close friends and/or that perhaps they affiliate with peers who express emotions similarly. Inconsistent with hypotheses, however, dyad mates' self- and friend-reports of self-disclosure were unrelated.

Table 4 includes ICC scores for the remaining variables used in the study, which were each significant except for Positive Friendship Quality. Although these results were not central to the research question that the ICC analyses were used to address, these findings do help explain many of the APIM findings provided in the second phase of analyses. As with the observed use of Negative ETs, different gender patterns emerged in the magnitude of ICCs with other scores, with girl dyad mates display stronger similarities in supportive response and total word count scores, and boy dyad mates showing greater consistency in friendship duration and dismissive response scores.

Table 3

Intraclass correlations for main study variables (k = 58 dyads)

	ICC Scores			
	Total (n = 116)	Girls (n = 66)	Boys (n = 50)	Differences in ICC Gender Group Scores
Paper-and-Pencil Measures				
Self-Disclosure				
self-rating	-.16	-.04	-.31	.27
friend-rating	-.28	-.30	-.25	.05
parent-rating	.19*	.09	.18	.09
Positive Friendship Quality	.13	.17	.04	.15
Conflict and Betrayal	.16*	-.04	.10	.14
Friendship Duration	.84*	.91*	.60*	.31*
Problem Talk Task Observation				
Negative ET	.28*	.55*	-.03	.58*
Positive ET	.52*	.47*	.45*	.02
Supportive Response	.33*	.52*	.18	.34*
Dismissive Response	.21*	.14	.55*	.41*
Total Word Count	.25*	.37*	-.22	.59*

* $p < .05$

Phase 2 Analyses: Actor-Partner Interdependence Models (APIMs)

Actor-Partner Interdependence Models (APIMs) addressed Questions 2 and 3 related to relations of emotional expression with friends' supportive and dismissive responses and friendship quality. Five sets of APIMs were created, three sets with self-, friend-, or parent-ratings of self-disclosure competence identified as the dependent variable (DV), and two sets of models using negative ETs and positive ETs as DVs. These models included between-dyad variables (i.e., variables that are similar across the members of a given dyad but vary from dyad to dyad) and mixed predictors (i.e., variables that are allowed to vary within and across dyad members; Campbell & Kashy, 2002). Models using supportive responses and dismissive

responses as independent mixed variables examined the associations of early adolescents' use of ETs with the total number of partner supportive and dismissive responses with participants' use of ETs (Question 2). Models with ratings of positive friendship quality and friendship conflict and betrayal as independent mixed variables addressed whether emotional expression was associated with positive and negative friendship qualities (Question 3).

Gender and word count were included in each model. Gender was included as a between-dyad variable to control for potential between-dyad gender differences in emotional expression that have been noted in other studies (Buckner & Fivush, 1998; Polce-Lynch et al., 2001). Word count was included as a mixed covariate in all models to control for the overall verbosity of the individual (i.e., how many words spoken by a participant during the interaction task) to rule out the possibility that individuals who spoke more would have better odds of using more emotion terms, supportive responses, and dismissive responses. Actor- and partner-reported friendship duration scores were initially included as mixed predictor covariates, but friendship duration was not statistically significant in any of the models and was thus dropped from this portion of the analyses. Models predicting self- and friend-reported self-disclosure competency would not converge due to poor inter-dyadic agreement between self- and friend-reported self-disclosure (i.e., interpersonal correlation) and were not included in the APIM analyses that follow.

Actor and partner predictors were examined in separate models rather than concurrently, due to power constraints. Although many of the actor and partner effects were not assessed concurrently, the conjunction "and" will be used when discussing multiple actor-partner effects across models for ease of communication.

Table 4 summarizes the results of the APIM analyses. The correlation coefficients in Table 4 represent the partial ICCs for the outcome variables for each model.

Table 4

Partial Intraclass Correlations and Unstandardized Regression Coefficients (and Standard Errors) from APIMs Predicting Parent-Reported Emotion Self-Disclosure and Observed Emotion Disclosure.

Variable	Self-Disclosure (parent-report) Models		Negative ET Models		Positive ET Models	
	r	B (*SE*)	*r*	B (*SE*)	*r*	B (*SE*)
Gender (Girls=0, Boys=1)	.15	-0.34* (0.14)	.23*	-0.53* (0.20)	.47*	-0.63* (0.20)
Gender (Girls=0, Boys=1)		-26* (0.14)		-0.35* (0.20)		-0.43* (0.20)
Actor Word Count		0.02* (0.01)		0.06* (0.01)		0.05* (0.01)
Partner Word Count	.14	0.001 (0.01)	.22*	0.002 (0.01)	.42*	0.02 (0.01)
Gender (Girls=0, Boys=1)		-0.18 (0.13)		-0.15 (0.16)		-0.17 (0.17)
Actor Word Count		0.02* (0.01)		0.04* (0.01)		0.04* (0.01)
Partner Word Count		-0.003 (0.01)		-0.01 (0.01)		0.01 (0.01)
Actor Supportive Responses		0.10*[a] (0.06)		0.13* (0.07)		0.14* (0.08)
Partner Supportive Responses	.07	0.12* (0.06)	.02	0.42* (0.07)	.31*	0.31*[a] (0.08)
Gender (Girls=0, Boys=1)		-0.20 (0.14)		-0.16 (0.16)		-0.28 (0.17)
Actor Word Count		0.02* (0.01)		0.05* (0.01)		0.04* (0.01)
Partner Word Count		-0.002 (0.01)		-0.01 (0.01)		0.01 (0.01)
Actor Dismissive Responses		0.15* (0.08)		0.16* (0.09)		0.16* (0.09)
Partner Dismissive Responses	.11	0.07 (0.08)	.06	0.58* (0.09)	.34*	0.41* (0.09)
Gender (Girls=0, Boys=1)		-0.32* (0.15)		-0.25 (0.22)		-0.43* (0.23)
Actor Word Count		0.02* (0.01)		0.06* (0.01)		0.05* (0.01)
Partner Word Count		0.003 (0.01)		0.001 (0.01)		0.02 (0.01)
Actor Positive Friendship Quality		0.12 (0.20)		0.39 (0.28)		0.10 (0.26)
Partner Positive Friendship Quality	.17*	-0.43* (0.20)	.21*	0.44 (0.28)	.43*	-0.10 (0.26)
Gender (Girls=0, Boys=1)		-0.43* (0.14)		-0.44* (0.21)		-0.55* (0.21)
Actor Word Count		0.03* (0.01)		0.06* (0.01)		0.05* (0.01)
Partner Word Count		0.004 (0.01)		0.01 (0.01)		0.02 (0.01)
Actor Conflict & Betrayal		0.54* (0.25)		0.41 (0.34)		0.37 (0.31)
Partner Conflict & Betrayal	.07	0.50* (0.25)	.22*	0.10[a] (0.34)	.41*	0.37 (0.31)

* $p < .05$; [a] Moderated by gender with $p < .05$ for girls only.

Self-disclosure (parent-reported) models. As hypothesized, youth whose friends used more supportive responses during the interaction task were judged by their parents as having higher competency in emotion self-disclosure. Contrary to hypotheses, friends' dismissive responses were not related to self-disclosure. Incidentally, participants who used more dismissive responses during the interaction task tended to have higher parent-reported emotion disclosure competency. Gender significantly moderated this finding, $b = -0.26$, $SE = 0.13$, $p < .05$, such that female participants who used more supportive responses during the interaction task had higher parent-reported emotion disclosure competency, $b = 0.19$, $SE = 0.07$, $p < .05$, whereas this same association was not statistically significant among male participants, $b = -0.08$, $SE = 0.11$, $p = .23$. Of note, female youths were viewed as more competent at self-disclosure than males by their caregivers; however, these gender differences disappeared when accounting for the actor-partner effects of either supportive responses or dismissive responses (and when controlling for actor and partner word count effects).

Contrary to hypotheses, results suggest that participants with lower partner ratings on positive friendship quality and higher partner ratings on conflict and betrayal had higher parent-reported emotion disclosure competency.

Word count actor effects were also observed for each of the parent-reported self-disclosure models, even for the two models that did not include interaction task variables. This finding suggests that youth participants who talked more (i.e., greater total word count) during the interaction task had a tendency to be rated by their parents as being competent in emotion self-disclosure.

Only one partial ICC score was significant among the models predicting parent-report of early adolescent self-disclosure: the model with positive friendship quality as a predictor. When accounting for gender, word count, and actor and partner ratings of friendship quality the proportion of variance in parent-reported self-disclosure that was due to dyad characteristics was .17 when all other variables in these models are held constant. That only the positive friendship quality model was significant suggests that parent-rated similarities in self-disclosure may be attributed to other factors.

Negative ET models. Consistent with hypotheses, early adolescents' friend use of supportive responses was related to negative ETs; however, friends' dismissive responses were positively related to negative ETs as well. Incidentally, early adolescents' own use of supportive and dismissive responses was also positively related to their use of negative ETs. Gender main effects emerged, with girls using more emotion terms during the interaction task; however, these gender effects were not statistically significant when taking into account positive friendship quality, supportive response, dismissive response, or parent-reported self-disclosure actor and partner effects. This suggests that these actor and partner variables are stronger than gender as predictors of negative ET use.

Models with positive friendship quality and conflict and betrayal actor and partner effects predicting negative ETs were not statistically significant. However, gender emerged as a significant moderator of the relation between friendship conflict and betrayal and negative ET use, $b = -1.37$, $SE = 0.76$, $p < .05$, such that female participants who rated their friendship as being higher in conflict and betrayal had dyad mates who used more negative ETs during the interaction task, $b = 0.99$, $SE = 0.58$, $p < .05$, whereas this same association was not statistically significant among male participants, $b = -0.23$, $SE = 0.56$, $p = .30$. These findings contradict the

hypotheses that participants who described their friend as having relatively higher positive friendship qualities or lower friendship conflict would engage in more emotional expression. Rather, they indicate that girls who see their friendships as conflictual express more negative emotions.

Five of the seven partial ICC scores were significant for the negative ET models (*r*s = .21-.23). In other words, except in the model that accounted for actor and partner effects for supportive and dismissive responses, the proportion of variance in frequency of negative ET that was due to the dyad was between 21 and 23 percent when accounting for the other variables in these models. These results further support the hypothesis that friends are similar in their emotional expressivity.

Positive ET models. As shown in Table 4, many of the results from the group of positive ET models mirror those found in the group of negative ET models. As with the negative ET models, early adolescents' partner's use of supportive responses, as expected, was positively related to use of positive ETs. Unexpectedly, friends' dismissive responses were positively associated with positive ETs as well. There was a significant interaction between partner supportive response and gender, $b = -1.37$, $SE = 0.76$, $p < .05$, indicating female youths whose friend used more supportive responses used more positive ETs during the interaction task, $b = 0.41$, $SE = 0.09$, $p < .05$. The frequency of friend's use of supportive responses during the interaction task was unrelated to male participants' use of positive ET, $b = -0.23$, $SE = 0.56$, $p = .30$. As with the negative ET models, positive friendship quality and conflict and betrayal actor and partner effects were not statistically significant.

Gender main effects emerged, with girls using more emotion terms during the interaction task; however, these gender differences were not statistically significant when controlling for

differences in supportive response or parent-reported self-disclosure actor-partner effects. Mirroring the results with the negative ET models, this pattern suggests that supportive response and parent-reported self-disclosure actor-partner effects are stronger predictors of the use of positive ETs than gender.

Each of the seven partial ICC scores were significant for the positive ET models (*r*s = .31-.47). According to these results, the proportion of variance in frequency of use of positive ETs that was due to the dyad was between .31 and.47 when all other variables were held constant. Among the three groups of models (self-disclosure, negative ET, and positive ET), partial ICC scores of the positive ET models were the most consistent and robust across models, which provides substantial evidence regarding similarities between friends' frequency of use of positive ETs.

In summary, in reference to Question 2, the various indicators of early adolescents' emotional expression were consistently related to supportive friend behaviors in the observed interaction task. However, contrary to hypotheses, early adolescent emotional expression was unrelated (in the case of parent-rated self-disclosure competence) or positively related (in the case of emotion term use) to friends' dismissive behaviors. Related to Question 3, none of the model results provided evidence of a link between friendship quality and emotional expression. On the contrary, youth who rated their friends poor in quality tended to be perceived by their parents as higher in emotion expressivity. Further, girls whose friend described their friendship as higher in conflict and betrayal used more negative ETs. Consistent with the hypothesis associated with Question 1, the partial ICC findings measuring similarities among dyad members in emotional expression provided further evidence of similarities in observed use of positive and

negative ETs, with limited evidence supporting similarities in parent-reports of emotional self-disclosure.

Phase 3 analyses: Loglinear analyses

As a stronger test of Question 2, loglinear analyses determined whether friend supportive responses increased the odds of participants' subsequent emotional expression and dismissive responses decreased the odds of participants' subsequent emotional expression. According to the loglinear results, the likelihood ratio of the three-way loglinear model was not significant, $\chi^2(5) = 8.53$, $p = 0.13$. This indicates that the highest-order interactions (pre-response ET x friend response x post-response) were not significant. Within the model, however, there were significant main effects for pre-response ETs, $\chi^2(1) = 23.73$, $p < 0.05$, friend's response, $\chi^2(1) = 15.36$, $p < 0.05$, and post-response ETs, $\chi^2(2) = 63.83$, $p < 0.05$. Participant's pre-response ETs that were followed by a friend's supportive or dismissive response were 1.56 times more likely to be negative than positive. The friend's responses were 1.45 times more likely to be dismissive within the sequence (regardless of the pre-response ET used). These findings reflect overall mean differences in positive and negative ETs, as well as the mean differences in supportive and dismissive statements, that were discussed in the descriptive analyses. Among the three post-response ET categories (positive, negative, or none), none (i.e., no ETs used) was 1.21 times more likely than positive ETs and 1.36 times more likely than negative ETs. After collapsing the positive and negative post-response ETs together; however, it is evident that collectively ETs were 1.57 times more likely than no ET response at all, regardless of whether the response was dismissing or supportive.

Gender effects were assessed in the model by testing a gender higher-order interaction in a 2 x 2 x 2 x 3 loglinear model. The model was not statistically significant, $\chi^2(14) = 21.82$, $p <$

0.05. Consistent with other results in this study, female dyads produced 2.29 times more ET/response sequences than their male counterparts, $\chi^2(14) = 21.82$, $p < 0.05$. Since there were no gender interactions with the other categories, the gender category was dropped from the model.

The main effects were modified by a significant pre-response ET × post-response ET interaction, $\chi^2(2) = 15.71$, $p < 0.05$. As shown in Figure 3, the ratio of post-response ET categories (positive, negative, or none) was different across the two pre-response ET categories (positive and negative). Among sequences with positive pre-response ETs, the odds of a negative or positive post-response ET were roughly equal. Among the negative pre-response ET sequences, negative post-response ETs were 3.11 times more likely than a positive post-response ET. This finding indicates that regardless of their friend's response (i.e., supportive or dismissive), participants who initially disclosed a negative emotion within an ET/friend response sequence were more likely to use a negative ET in their post-response ET rather than a positive one.

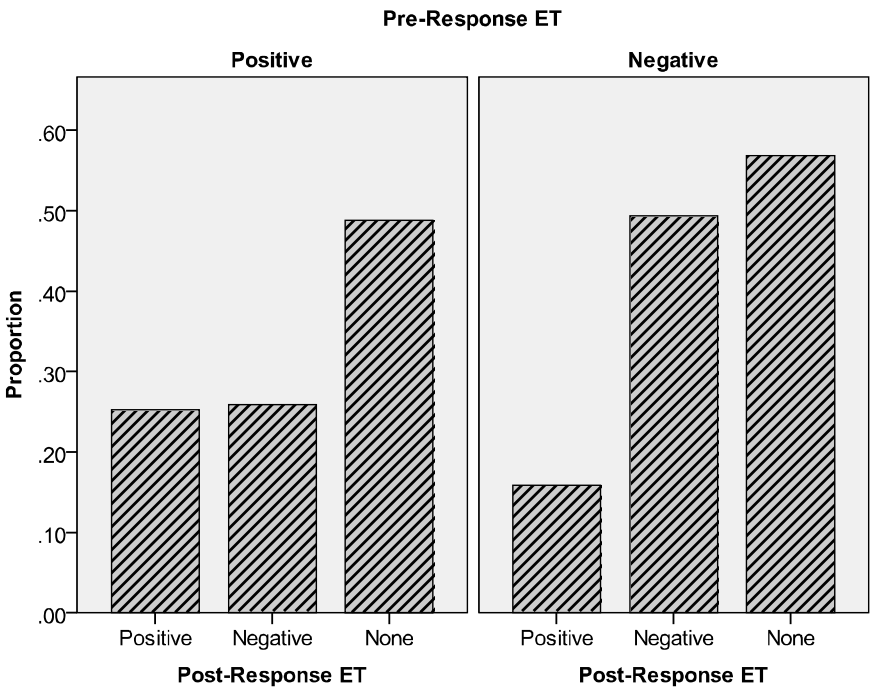

Figure 3. Proportion of post-response ETs by positive versus negative pre-response ETs.

Follow up chi square analyses revealed that the friend's response × post-response ET interaction neared statistical significance, $\chi^2(2) = 4.75$, $p = .09$. An additional chi square analysis was conducted after collapsing two of the post-response ET groups (positive and negative) to ascertain whether collectively ETs were more common following a friend's supportive response. The chi square result for this analysis was significant, $\chi^2(1) = 4.71$, $p < .05$. As represented in Figure 4, in sequences when a friend used a supportive response rather than a dismissive one, participants were 1.52 times more likely to use a subsequent ET. Thus when participants received supportive responses from their dyad mates, they were more likely to express another emotion in the next conversation turn than when they were responded to dismissively.

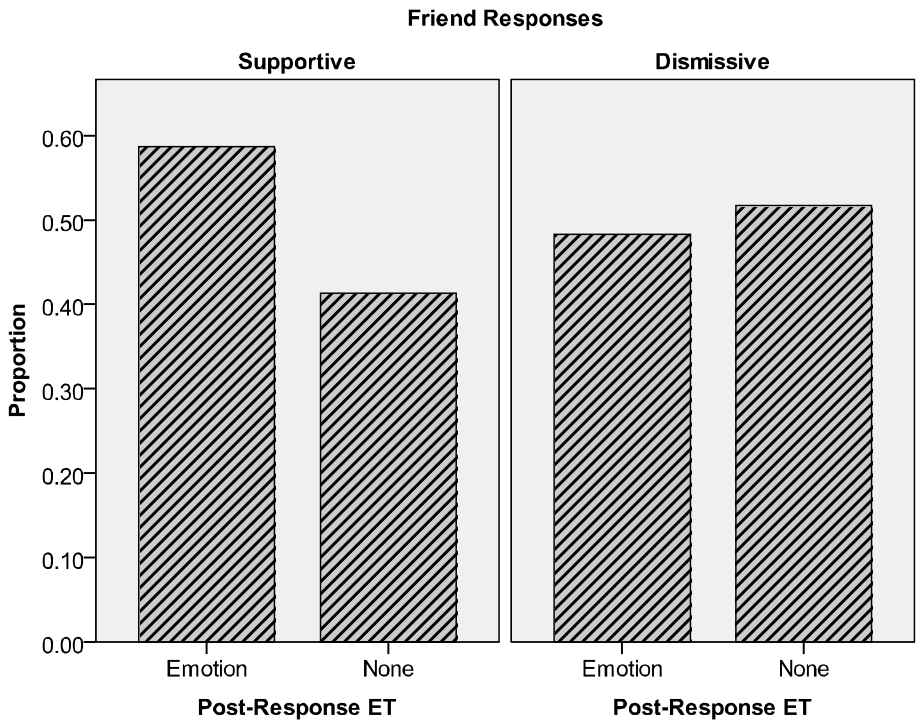

Figure 4. Proportion of post-response ETs by supportive versus dismissive friend statements.

Discussion

The overarching aim of the current study was to investigate whether early adolescents' emotional expression within close same-sex friendships may be socialized through friends' behaviors. Drawing from theory and research on parent socialization of emotional expression, the study posited that close friends influence early adolescents' disclosure of emotion through modeling and their responses to emotion term use in conversation (supportive and dismissing). The study also explored duration and quality of the friendship as potentially important contextual factors for emotional expression in early adolescent friendships. This study is among the first to investigate and find initial support for the notion that early adolescents' emotional expression could be influenced by their close friends' modeling and responses related to disclosure of emotional content and the nature of the relationship. The current study addressed three research questions, each with their own unique implications for understanding early adolescent emotional

expression. These research questions are reviewed below with an in-depth discussion of the related findings and their implications for the measurement and study of early adolescent emotional expression. The discussion of the questions is followed by a section briefly reviewing secondary findings that were not central to the research questions but appear to have additional important implications for the study of early adolescent emotional development.

Is Early Adolescent Emotional Expression Socialized Through Modeling of Close Friend Behavior?

This study yielded some evidence that early adolescents' emotional expression (observed and parent-report ratings, specifically) is similar to their friends' emotional expression. Partial ICCs calculated using APIMs within dyads revealed that similarities in dyad members' use of emotion terms were robust and remained present when controlling for a variety of within dyad and mixed predictor variables. Girls in this study were more emotionally expressive by multiple indices (i.e., parent-ratings, observed positive and negative ETs), consistent with previous studies of emotional expression (Buckner & Fivush, 1998; Polce-Lynch et al., 2001). More interesting were gender differences in the degree of similarity between dyad mates' observed emotional expression. Whereas male and female dyad mates were equally similar in their use of positive emotion terms, girls but not boys evidenced statistically significant similarities in their use of negative emotion terms. Without considering gender in the correlations, it appears that there was more dyadic agreement in the use of positive emotion terms than in the use of negative emotion terms, a finding that has been found in at least one study measuring parent-child similarities in observed emotional expression (Bauer et al., 2005, a study that did not examine partial correlations for gender). This assumption, however, of greater inter-dyadic similarities for positive over negative emotion terms appears to be true only for boys in the current study.

The current findings of higher frequency of negative emotion terms among girl dyads and similarities among female close friends in their use of negative emotion terms mirrors research that shows that girls have a greater tendency than do boys to excessively discuss their problems and negative emotions with their friends (i.e., co-rumination). This co-rumination, in turn, places girls at increased risk for depressive and anxiety symptoms over time (Rose, 2000). Although beyond the scope of the current study, the question whether the similarities in the frequency of use of negative emotion terms found in the current study may contribute to co-rumination and place girls at risk for depressive and anxiety symptoms is an interesting one.

The similarities in emotional expression among friends can be understood as a manifestation of homophily. Akin to the adage, "birds of a feather, flock together," homophily is the tendency for individuals to share various attributes with those with whom they associate (Kandel, 1978). Adolescent friendship homophily has been studied across a wide range of domains, including internalizing symptoms (Hogue & Steinberg, 1995), educational aspiration (Kandel, 1978), teenage drinking (Popp, Laursen, Kerr, Stattin, & Burk, 2008), aggression (Killeya-Jones, Costanzo, Malone, Quinlan, & Miller-Johnson, 2007), and antisocial behaviors (Kiesner, Kerr, & Stattin, 2004). According to Kandel (1978), homophily is produced through either socialization or selection. Whereas the similarities between friends' use of emotion terms may come through socialization, it is also possible that early adolescents select friends who have similar styles of emotional expression. Because the present study utilizes cross-sectional data, it cannot determine whether the similarities identified in the current study are the product of socialization or selection. Although both of these explanations may be plausible, there is some evidence from the parent-child literature that similarities in parent and child expression of emotions are produced through socialization (Bauer et al., 2005). Furthermore, the loglinear

analysis from the current study revealed that friend responses, particularly supportive ones, increased the probability of subsequent use of emotion terms. More longitudinal studies, however, are needed to understand more fully the direction of effects.

Interestingly, participants rated their friend's self disclosure similarly to their own, but ICC analyses revealed that participants' and their dyad mates' self-ratings of self-disclosure were not similar. And although between-friend similarities in emotional expression can be observed through the interaction task, the observed measures of emotional expression were unrelated to the self- and friend-report measures of self-disclosure. This may suggest that early adolescents may have a tendency to see their friends as more similar to themselves than others may see them.

Do Friends Facilitate (or Hinder) Early Adolescents' Emotional Expression?

This is one of the first studies to apply established observational procedures to evaluate whether mechanisms believed to facilitate or hinder emotional expression in parent-child relationship may be similarly operating within early adolescent friendships. Using a combination of analytical approaches, the current study identifies initial evidence that mechanisms of contingent responding believed to facilitate or hinder emotional expression in parent-child interactions may operate similarly within early adolescent friendships. As expected, APIM analyses found that early adolescents' friends' supportive responses were positively related to observed use of positive and negative emotion terms. Of course, this pattern reflects to some degree how the supportive responses were identified (by coding friend response that followed participant's use of emotion terms). But this finding was further substantiated by loglinear analyses analyzing the frequency with which emotion term use followed supportive versus dismissing friend responses. Specifically, supportive friend responses increased the odds

of subsequent emotional expression within conversations, whereas friend dismissive responses did not appear to change the odds of subsequent emotional expression. The finding that early adolescents are more likely to use emotion terms following a friend's supportive response provides evidence that early adolescent socialization of emotional expression may not only be enacted through the contingent responses of parents (Lunkenheimer et al., 2007; Papini el al., 1990), but also through the contingent responses of friends.

The loglinear analyses findings that subsequent emotion term use does not appear to be related to friends' dismissive responses is surprising. This finding may suggest that dismissive responses among youth do not have the same effect as dismissive or derogatory parent responses, which have been shown in the literature to suppress children's emotional expression (Fabes, et al., 2001; Denham et al., 2007). Interestingly, individuals who frequently expressed their emotions also frequently dismissed their friends' emotions. In addition, dismissive responses were unrelated to measures of friendship quality. These findings beg the question, what role do emotion-dismissive statements have in dyadic friendship relationships among early adolescents? Perhaps early adolescent communication with close friends is more playful and informal than with adults, where teasing and banter regarding emotional expression is mutually understood not to be taken literally. Certainly additional research is needed to better understand the role dismissive responses play within early adolescent close friendships.

Is Friendship Quality Related to Early Adolescent Emotional Expression?

The study hypothesized that participants who described their friendship as relatively high in positive qualities and lower in conflict and betrayal would disclose more emotions; however, this hypothesis was generally not supported. Bivariate intrapersonal correlation analyses revealed that participants who perceived themselves as having higher self-disclosure competency

also reported higher ratings of positive friendship quality. However, once others' perspectives were taken into account in the APIM analyses, a more complex picture emerged. Youth with lower partner ratings on positive friendship quality and higher actor and partner ratings on conflict and betrayal (when controlling for gender and word count) had higher parent-reported emotion disclosure competency. This pattern was not replicated when observed emotion term use was the index of emotion disclosure, and therefore should be interpreted cautiously, but it does have interesting implications. One of many possible explanations for the finding that parent ratings of their child's emotion disclosure and friendship quality were linked to lower friendship quality and higher conflict and betrayal is that younger adolescents at this age who are competent in disclosing their emotions may be more prone to have more tumultuous and lower quality friend relationships. Although this hypothesis would seemingly contradict studies with adults (Collins & Miller, 1994; Laurenceau et al., 1998) and older adolescents (Camarena et al., 1990; Johnson, 2004), which have shown links between emotion self-disclosure and positive quality friendships, other studies have shown that youth who are indiscriminately expressive in their emotions typically have difficulties making friends (Dougherty, 2006) and functioning socially (Murphy et al., 2004). An alternative explanation may be that, in some cases, young adolescents who are perceived as competent in emotion self-disclosure by their parents may be, at the same time, at risk for alienating themselves from their peers. Another possibility may be that teens with more tumultuous relationships have a great propensity to be exposed to more drama (i.e., emotionally salient events), thus may be more willing to complain to their parents. These complaints, in turn, may be interpreted by parents as their teens being more open to talking about feelings.

Although the early adolescents in the current study appeared to having a willingness to share their problems with their close friends (only < 2% elected to change their problem when informed they would be to share it during the interaction task), it does not appear that the quality of their close friendship strongly influence early adolescent's willingness to share emotions with their conversations. These results are in contrast with findings with college students that has linked relationship quality to emotional expression. This may reflect developmental differences in emotional expression, as individuals in the early stages of adolescence may be less discerning in their emotional expression and less experience building close interpersonal relationships. Furthermore, early adolescents may have less developed inhibitory processes and avoidant strategies when discussing emotional events, as has been noted in the literature on children's emotional reactions to negative life events (see Flectcher, 2003).

Secondary Findings

There were two sets of research findings not central to the aims of the current study that were particularly interesting and may have important implications for future research examining the socialization of emotional expression among early adolescents. These findings involved the inconsistency across measures of emotional expression and discrepancies between dyad mates' ratings of their friendship quality. Each of the three measures of self-disclosure competency showed inconsistent patterns of associations with observations of emotional expression, with parent-ratings of self-disclosure having the most significant correlations among the variables included in this study. Of the three types of ratings, parent report was the only predictor of the participants' observed emotional expression during the interaction task. These findings highlight the importance of including multiple reporters and observations when measuring emotional expression that has been noted by other researchers (Gentzler et al., 2005).

The lack of convergence between the observed measures of emotional expression and the self- and friend-report measures of self-disclosure may reflect differences in what these measures are measuring. The AICQ self- and friend-report measure is an indicator of the quality of emotional expression; whereas, the observed measures of emotion expression based on the frequency of use of emotion terms is an indicator of the quantity of emotional expression. Therefore, when evaluating the quality of their emotional expression and the emotional expression of their friends, younger teens may not equate quantity with quality. Parents, on the other hand, may rely of the quantity of emotional expression when determining their youth's competency in emotional expression, given the correlation between observed measures of emotional expression and parent-report measures of self-disclosure. Furthermore, early adolescents are believed to have less developed cognitive abilities than older adolescents and adults, with less advance processing and cognitive self-regulation skills (Keating, 1990). These less developed cognitive functions may interfere with early adolescents abilities to adequately identify their own emotional expression competency and the emotional compression competency of their friends.

There were inconsistencies among dyad members' ratings of the positive qualities of their friendship, as well. Dyad members demonstrated better consensus when rating conflict and betrayal in their friendship but even this association was quite weak. Other studies with child, early-, and mid-adolescent dyads have found small to medium sized ICC friendship quality scores among best friends (Burk & Laursen, 2005; Cillessen et al., 2005; Simpkins et al., 2006). In these classroom-based studies, friend dyads were either selected after reciprocally nominating each other as "best friends" (Cillessen et al., 2005), had over 90% of both participants and their friends label each other as a best or close friend (Simpkins et al., 2006), or required participants

to be accompanied by a best friend to participate (Burk & Laursen, 2005). Among these three studies, the highest correlations (with ICCs across several indicators of friendship quality between .59 and .82) were found in the study by Cillessen and colleagues (2005), in which best friends were reciprocally nominated. The present study did not utilize a formal reciprocal nomination process; rather, participants were first identified and then asked to bring a "close friend" to accompany them in the study. Best friend dyadic relationships, especially those where both members are reciprocally nominated, may be more consistent in their perceptions of friendship quality than friend pairs who may or may not name each other as very best friends. The current study might better represent the spectrum of adolescent close friendships and varying perspectives on how "good" a friendship it is.

Limitations

By incorporating a multi-method approach with multiple informants, the current study helps to illuminate factors associated with adolescents' emotional expression within close friendship dyads. Because the study utilized cross-sectional data, firm causal inferences cannot be made regarding the associations among these variables; however, these findings, especially the loglinear analyses of the dyad members' contingent responses, do provide information about the contexts in which emotional expression is likely to occur. Furthermore, it is hoped that this research will provide the impetus for future longitudinal studies that are designed to understand better the directionality of influence regarding emotional expression within close adolescent friendships.

Despite a variety of creative recruitment efforts used by the research team, the study's modest sample size prevented the inclusion of multiple predictors in the APIM. A larger sample size would have allowed for more complex models that could more readily assess the individual

and combined contributions of the various predictor variables used in the study. Furthermore, although the sample was representative of the location, it did not include enough members of various racial and ethnic groups to include these factors in analyses. Several research studies have found ethnic group differences in mother-child emotion communication (Eisenberg, 1999), which emphasizes the need for more research exploring potential ethnic group differences and similarities in how adolescents share their emotions with their friends.

Conclusions

The present study provides evidence of similarities among close friends in parent-reported and observed emotional expression. The study results also suggest that friends may assist in the socialization of emotional expression through the provision of supportive responses that appear to increase emotional disclosures within conversations. Given the associations between emotional expression and psychosocial functioning established in other studies, understanding the factors that influence emotional expression among early adolescents has important implications for research on emotion development and psychological interventions with adolescents. Parental emotional expression has been shown to be positively related to children's physiological health (Bray et al., 2005), academic achievement (Gottman et al., 1996), prosocial behaviors (Michalik et al., 2007), and use of coping strategies (Gentzler et al., 2005). An inverse association has also been found between maternal emotional expression and adolescent levels of depression (Katz & Hunter, 2007). Conversely, adolescent peers who excessively co-ruminate about emotion events or circumstances and focus on negative feelings may be at increased risk for depression and anxiety (Rose, 2002). Given these findings, the current study brings to light processes that are potentially important to early adolescents' well being by providing initial evidence that friends may serve as socializing agents of emotional

expression during early adolescence. Furthermore, the nuances of findings dependent on the perspective of the observer speak to the importance of multi-method, multi-reporter methodology in further studies of adolescent emotional expression in the context of friendships.

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