

5-2009

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<http://publish.wm.edu/honorsthesis/257>

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# **Children's Emotional Expression within a Close Friendship Dyad**

A thesis submitted in partial fulfillment of the requirement  
for the degree of Bachelor of Arts in **Psychology** from  
The College of William and Mary

By

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Accepted for: High Honors

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Williamsburg, VA  
**April 29, 2009**

Children's Emotional Expression within a Close Friendship Dyad

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## Abstract

This study examined how 90, primarily Caucasian children in grades 1-4 express sadness, anger, and pride within close friendships. Emotion discussion tasks were transcribed and coded. The results demonstrated that girls used more positive and negative emotion words for anger, although the overall length of boys' and girls' interactions did not differ. Girls and older children used more positive emotion words for pride. Younger children rated their anger experiences as more intense than older children. For sadness discussion, boys used more dismissing behaviors than girls, whereas girls used more validation than boys. Younger children engaged in more helping behaviors. For anger, younger boys used more dismissing responses than older boys. For pride, older children engaged in more validating behaviors than younger children.

### Acknowledgements

I would first like to thank my advisor, Dr. Janice Zeman, for her guidance throughout this project. I could not have done it without her. I would also like to thank the members of my committee, Dr. Christy Porter and Dr. Sandra Ward, for their assistance. Lastly, I would like to thank my fellow students who assisted in collecting, transcribing, and coding the data for this project.

### Children's Emotional Expression within a Close Friendship Dyad

Children's emotion understanding and regulation recently have become topics of interest in psychological research because of the important role emotion plays in successful social functioning in both large peer settings as well as intimate friendships (Hubbard, 2001). The ability to regulate emotions, particularly negative emotions, helps to determine the outcome of social relationships (Bridges & Grolnick, 1995). Children who are better at identifying, regulating, and processing emotional stimuli were found to better understand how to respond to others' emotional states (Casey, 1996). In particular, children with greater emotion knowledge were found to be more popular and empathic with their peers (Cassidy, Parke, Butkovsky, & Braungart, 1992; Denham, 1986). Almost all social interactions involve an expression of emotion, whether it be decoding or receiving another's affective state or sending or expressing an affective state to another. When examining social functioning, it is important to consider the role of emotion regulation because the two are inextricably intertwined (Denham, 1998).

#### *Development of emotion regulation and understanding*

Although the concept of emotion regulation is difficult to define, it is important to understand the components of emotion regulation, since it has such a significant effect on social functioning. According to Thompson (1994), "emotion regulation consists of the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (27-28). Thus, the ways in which children dysregulate, inhibit, or constructively modify their emotions are all considered to be aspects of emotion regulation. The Functionalist theory of emotion (Barrett & Campos, 1987) posits that adaptive emotion

management involves expressing emotion that is concordant with personally meaningful goals. Because the social environment provides significant information regarding the interpersonal consequences of emotion expression, emotional management choices are hypothesized to be based on the unique socio-contextual demands in the individual's environment. Thus, the expression of emotion is a bidirectional process since the expression can affect the social environment while the social environment can also affect the emotion expression. In accordance with this model, research has begun to examine differences in emotional expression dependent on the specific context and its related socialization pressures (Zeman & Garber, 1996).

Emotion regulation is a complex process of managing one's emotions that involves initiating, inhibiting, and modulating internal feeling states, emotion-related cognitions, emotion-related physiological responses, and emotion-related behavior (Thompson, 1996). One important facet of emotion regulation is effortful control, or the ability to inhibit a dominant response and replace it with a subdominant response that is more appropriate for situational demands. Effortful control has been found to be a milestone in early development that is significant to children's later social functioning (Block & Block, 1980; Derryberry & Rothbart, 1997). Those who are successful at regulating emotion were found to have more positive social interactions, especially when these social interactions involve emotion. They also were found to more easily experience and express sympathy for another's distress (Eisenberg, Fabes, & Murphy, 1996). Eisenberg et al. (1993, 1995) found that children with high ratings of negative emotional intensity coupled with low ratings of attentional regulation also displayed diminished social competence.

The development of emotion knowledge is vital in early childhood and key to social competence. In early development, the emotion system is influential in behavior, but it involves very minimal cognitive mediation. For example, painful stimuli elicit expressions of anger in 2- to 6-month old infants, but at this time they are not yet able to process the situation on the cognitive level (Izard, Hembree, & Huebner, 1987). However, as cognitive abilities develop, they play increasingly vital roles in the processing of emotional stimuli and the regulation of emotional and behavioral responses. Thus, emotion knowledge develops as a result of interactions between the emotions system and cognitive activity (Ackerman, Abe, & Izard, 1998).

Izard (1971) and Odom and Lemond (1972) also examined children's emotional understanding within a social context. They found that by preschool, most children are able to discriminate between the facial expressions for happiness, sadness, anger, and fear. On the other hand, Harris and Saarni (1989) found that only a few emotions are clearly linked to distinct facial expressions, but children rapidly gain a more sophisticated understanding of emotions that can be established based on knowledge of facial expressions alone. It also has been discovered that children between the end of the preschool period and the early elementary school years understand the situational determinants of happy, scared, sad, and angry feelings with the emotions of happiness and fear being understood earlier than anger and sadness (Harris, Olthof, Terwogt, & Hardman, 1987; Mood, Johnson, & Shantz, 1978). In addition, older children were found to have knowledge of situations involving more complex emotions, including such emotions as pride, shame, guilt, gratitude, jealousy, and worry (Harris, Olthof, Terwogt, & Hardman, 1987; Russell & Ridgeway, 1983).

In terms of development of emotion understanding, Harris, Olthof, and Terwogt (1981) discovered a marked shift in children's conception of emotion between 6 and 11 years. In this study, the youngest children focused on publicly observable components of emotion, and they seem to conceive emotion in a simple stimulus-response fashion. However, the older children also considered the mental aspect of emotion in the situation. Harris and Olthof (1982) elaborated on this research, explaining that children approximately 6 years of age, in contrast to 10-year-old children, view a person's emotional reactions as directly linked to his or her current situation in a one-to-one fashion. Thus, young children tend to deny that both a negative and a positive emotion can be provoked by situations where such a conflict of emotions is likely, whereas older children are more likely to admit both emotions. Harter (1979, 1982) also examined children's emotion development. In a study with children between 3 and 13 years of age, children were asked whether they thought the emotions happy, angry, afraid, and sad could occur in combination. The results demonstrated that children up to 7 years of age thought emotions only occurred in a single fashion. However, after age 7, children viewed combinations of emotions as possibilities. Children between the ages of 7 and 9 explained these combinations as a result of two events happening in succession. Children 9 years and older, on the other hand, understood that the simultaneous experience of two different emotions concerning the same situation was possible. Harter's studies (1979, 1982) confirmed results from previous research that posited that young children are preoccupied with the external manifestations of an emotion (Harris et al., 1981).

*Emotions within social interactions*

It is important to define social competence when considering children's emotional expression. Though there is not yet one accepted definition of social competence for children, two ways to approach the definition have been established. First, social competence is often defined in terms of social skills. Sarason (1981) highlighted specific dimensions as vital to social competence, including problem solving behavior, perspective taking, and person perception. The second approach to defining social competence places more emphasis on the social outcomes a child has achieved as opposed to the acts of social competence. Foster and Ritchey (1979) and Anderson and Messick (1974) both posited that social competence should be defined through the ability to be effective in the realization of social goals. Some of the social outcomes that were suggested in these studies included having friendships, being popular or described as well-liked by other children, and the ability to engage in social interaction with peers.

Because of the important roles emotions play in social interactions, it is necessary to have a way to define and understand how emotions are involved in social competence. Halberstadt, Denham, and Dunsmore (2001) developed the Affective Social Competence (ASC) model to explain the role of emotion in social interaction. This three-part model examines how affective messages are sent, received, and experienced. Each of these three parts includes identifying affect, managing affect across changing social contexts, and regulation of affect. Within the component of receiving affective messages in the ASC model, social competence is a particularly important concept.

*Emotion identification skills.* Many researchers have examined the relationship between social competence and children's abilities to identify emotions in others. For

example, Vosk, Forehand, and Figueroa (1983) conducted a study in which teachers and peers of third- through fifth-grade classrooms rated children's ability to perceive emotions in others. Children with poor peer sociometric nominations were also found to be poor perceivers of others' emotions. Field and Walden (1982) conducted a study with three- to five-year-old children in which they discovered that the ability to identify facial expressions of emotions was positively correlated with high peer sociometric ratings. Custrini and Feldman (1989) examined gender differences in social competence of 9- to 12-year-old children. They found that girls who were rated higher in social competence by parents were better at identifying facial expressions of emotion than were girls who had been rated poorly in terms of social competence. However, these findings did not hold for boys. Manstead and Edwards (1992) found that children's rate of improvement in their ability to match faces to emotion labels was significantly lower if they received negative sociometric nominations. Bryant (1992) found that 4<sup>th</sup>-6<sup>th</sup> grade children who were nominated by peers as successful at calmly resolving conflicts, as opposed to using avoidance or retaliation, were also rated as more socially preferred. Additionally, Chung and Asher (1996) found that peer acceptance was negatively correlated with hostile and adult-seeking strategies for solving conflicts.

It is important to examine children's socialization of emotion both in a peer group setting, or a social group consisting of people who are equal in age, and in a friendship, or a close relationship between two people. Friendships not only provide social support, but they also provide children with companionship, reliable alliances, and validation (Asher & Parker, 1989). Specifically, there are six benefits that children receive from friendships that have been examined in past research (Asher & Parker, 1989). First,

friends have been found to provide children with increased self-esteem (Vandell & Hembree, 1994). Second, friends provide children with emotional security in novel situations (Ispa, 1981). Third, friendships provide children with a venue for self-disclosure (Berndt & Hanna, 1995). Fourth, friendships provide children with help and guidance (Furman & Bierman, 1984). Fifth, friends provide children with reliable allies (Asher & Parker, 1989). Lastly, friendships provide children with companionship and sources of fun (LaGaipa, 1981).

*Emotions within the peer group.* In the past 10 years, researchers have begun to pay more attention to the roles emotions play in children's peer interactions within the peer group, due to the likelihood that children's emotional functioning has a strong influence on their social interactions. The reverse also was found to be true; friendships play an important role in socio-emotional development (Bukowski, Newcomb, & Hartup, 1996). One aspect of friendships that is thought to be particularly positive in children's emotional development is the social support that is provided through friendships (Berndt, 1989). Denham, McKinley, Couchoud, and Holt (1990) conducted a study with four-year-old children in which they discovered that children's abilities to match emotions to social situations was correlated with peer ratings of social preference. Similarly, Goldman, Corsini, and deUrioste (1980) found in their study with four-year-old children that children's ability to match emotions to social situations was also correlated with peer sociometric nominations. In addition, Erdley and Asher (1996) found that the types of strategies that children suggest in response to hypothetical vignettes match their behavioral responses as assessed by their peers. For example, children who responded

with more aggressive strategies were more likely to be rated by their peers as behaving aggressively in problematic situations.

*Gender differences in socio-emotional functioning.* Clear gender differences have been found in the linkage between children's emotion regulation and social functioning. Eisenberg, Fabes, Karbon et al. (1996) found gender differences when studying children's emotion regulation in relation to negative emotionality. Girls who displayed high regulation, or control over emotion, also had high prosocial relations independent of negative emotionality. On the other hand, girls who had low or moderate levels of regulation only had higher prosocial nominations if they displayed lower levels of negative emotionality. However, the opposite effect was found for boys. Boys with low levels of regulation subsequently had low levels of prosocial behavior independent of negative emotionality. On the other hand, boys with moderate to high levels of regulation had high prosocial nominations only if negative emotionality levels were low. Benenson, Apostoleris, and Parnass (1997) looked at age and gender differences in dyadic and group interaction. In their study, 4-year-old and 6-year-old children were put into playgroups based on gender, and the frequencies of dyadic and group interaction were collected. Results indicated that boys and girls of both ages engaged in similar frequencies but diverse patterns of dyadic interaction. In this study, only the 6-year-old boys were observed interacting in groups.

Custrini and Feldman (1989) conducted a study with 9- to 12-year old children in which they discovered that girls who were rated as high in social competence by their parents were more likely to report the expected emotion for a specific situation than were girls who had been rated as low in social competence by their parents. However, this was

not found to be the case for boys. Eisenberg and Fabes (1995) conducted a study with 5-year-olds in which they discovered that for girls only, experiencing negative affect in a naturalistic observation setting was negatively correlated with high peer sociometric ratings and high social skills ratings by teachers. In terms of emotional expression, it has also been found that girls are more likely to dissemble negative emotions than boys are (Saarni & Weber, 1999; Underwood, Hurley, Johanson, & Mosley, 1999). These findings are intuitive considering the fact that girls are socialized to be nice and to give in to preserve relationships (Zahn-Waxler, 2000; Zahn-Waxler & Polanichka, 2003). It also has been suggested that gestures may be a means for girls to express their feelings of disdain and contempt in social interactions (Underwood, 2004).

#### *Methodological issues*

Research on the socialization of emotion has been conducted primarily using data from parent-child dyads and teacher reports of children's emotional expression within the peer context. For example, Eisenberg et al. (2006) used parent and teacher reports to examine children's emotion-related regulation in relation to personality resiliency, adult-rated popularity, and social competence. In addition, Boyatzis and Satyaprasad (1994) conducted a study with four- and five-year-old children in which they found that teacher-rated popularity was found to be positively correlated with the ability to decode emotional gestures and expressions in others. Observation of children's attentional persistence was also used, and in conjunction with the parent and teacher reports, the researchers found some evidence for the mediating role of resiliency with effortful control and popularity. In a study with preschoolers, Eisenberg et al. (1993) found that teacher-rated emotional intensity was negatively correlated with teacher-rated social

skills, observer-rated social skills, and peer ratings. Specifically, anger expression was found to be negatively related to social status (Eisenberg et al, 1993). Eisenberg et al. (1995) conducted a related longitudinal study with preschoolers in which they discovered that low levels of teacher-rated negative emotionality and high levels of teacher-rated attentional control predicted teacher-rated socially appropriate behavior two years later.

Specific measures have been developed to measure parent and teacher reports on children's social competence. Cassidy and Asher (1992) developed a classroom behavior inventory to be completed by teachers in which teachers use a 5-point rating scale to assess children's likeability with their peers, behavioral attributes, exclusion from activities by peers, and avoidance. Similarly, Asher, Singleton, Tinsley, and Hymel (1979) developed sociometric interviews to be conducted in classrooms that assess children's likeability by asking students to nominate three classmates they most like to play or spend time with, and three classmates that they dislike playing with. In this measure, children are also asked to nominate three classmates for prosocial behaviors, looking/acting sad, avoidance, having a good sense of humor, verbal and physical aggression, and keeping others from being included in their peer group.

Although socialization of emotion in peer groups has been examined, there has been little research conducted on socialization of emotion in friendships. Although research has been conducted that examined social competencies required by children to establish or maintain peer acceptance, there is little research regarding social competencies required for establishing high quality friendships in childhood (Rubin, Bukowski, & Parker, 1998). It is important to examine socialization of emotion in friendships to better understand how socialization of emotion affects the specific

friendship but also because friendships influence children's interactions with other peers (Hartup & Abecassis, 2002).

*Present study*

Although research has been conducted both on children's emotional regulation as well as children's social interaction within the peer group, little research has been done examining children's emotional regulation within friendships, particularly close friendships. In fact, as of yet there are no studies involving children's direct discussion of their emotions with their best friend within an early elementary school age period. An investigation into the means by which friends communicate about emotions and manage emotions in the context of a close friendship might further our understanding of children's emotional development and expression. Thus, the primary goal of this study was to examine emotional development in dyadic friendships in order to learn more about the ways in which peers socialize each other's emotional regulation processes as a function of gender and age group. Further, this study was designed to examine how children discuss sadness, anger, and pride experiences with a peer, as opposed to measuring how they respond to emotional situations or vignettes. These three emotions were chosen since they are common childhood experiences that can be linked to internalizing and externalizing functioning in childhood (Zeman, Cassano, Adrian, & Stegall, 2006). We examined emotional expression within reciprocally nominated, same-sex, best friend dyads with children in grades 1 through 4. Children were placed into "best friend" dyads from their classroom based on sociometric assessments. This study builds on the pre-existing research through its focus on emotional expression in friendship and its novel use of a dyadic interaction task.

*Hypotheses.* We hypothesized that gender differences would be found between the girl and boy friendship dyads. In terms of the quantitative codes, we expected that girls would be more expressive overall and would therefore use more emotion words in their conversations in the friendship dyads than boys. This is based on research that indicates that boys interact in groups more than girls, and girls are more likely to have dyadic relationships than boys (Benenson, 1990; Ladd, 1983). Also, girls have been found to have more intimacy in their friendships beginning at an early age (Bigelow, 1977). We also expected that older children would use more positive emotion words when discussing pride. Since pride is a more complex emotion than anger or sadness, older children would likely have a more thorough understanding of what it means to be proud than younger children. In terms of the qualitative codes, we anticipated that girls would be more supportive to their friend, especially when discussing sadness. This is consistent with past research that suggests that girls are more prosocial than boys (Chung & Asher, 1996; Rose & Asher, 1999). Similarly, research has found that girls display more empathy in social situations than boys (Bryant, 1982; Roberts & Strayer, 1996). We expected that girls would be more apt to express sadness, and boys would be more apt to express anger as measured by the length of their discussions. There is support for gender specific socialization of emotion that posits that girls suppress anger and boys inhibit sadness due to a perceived loss of support for nonstereotypical expression of emotion (Zeman & Shipman, 1997).

## Method

### *Participants*

Participants were 90 children, 54 boys and 36 girls, in the first through fourth grades recruited from one public elementary school. Children in the first and second grades were placed into a younger age group (23 boys,  $M=7$  years and 7 months,  $SD = 9.12$  months; 15 girls,  $M = 7$  years and 5 months,  $SD = 11.33$  months). An older age group was comprised of third and fourth grade children (31 boys,  $M = 9$  years and 2 months,  $SD = 10.12$  months; 21 girls,  $M = 9$  years and 1 month,  $SD = 5.61$  months). There were no significant mean age differences for boys or girls in either age group. Based on the Hollingshead (1975) system, the sample was primarily upper middle class ( $M = 2.52$ ,  $SD = .92$ ), in which 8.9% were categorized as level 1, 43.3% at level 2, 20.0% at level 3, and 17.8% at level 4. There were no significant SES differences as a function of age group or gender. Regarding racial/ethnicity identification, the sample was 80% Caucasian, 10% African American, 3.3% Latino/a or Hispanic, 3.3% Native American or American Indian, and 1.1% biracial.

### *Measures*

*Sociometric measure.* Children completed a sociometric form in which they were presented with a list of all of the children in their class, with the exception of themselves, who had parental consent to participate in the study. A 40% participation rate is recommended for a class to participate in such a study (Terry & Cole, 1991). The three first-grade classes had a consent return rate of 83% and an average classroom participation rate of 45.67%. The two first-grade classes that qualified to participate in the study each had participation rates of 52%. The three second-grade classes had a

consent return rate of 76.33% and an average classroom participation rate of 42.67%. The two second-grade classes that qualified to participate in the study had participation rates of 50% and 45%. The three third-grade classes had a consent return rate of 83.33% and an average classroom participation rate of 51.33%. The three third-grade classes that qualified to participate in the study had participation rates of 45%, 48%, and 61%. The three fourth-grade classes had an average return rate of 77.33% and an average classroom participation rate of 41%. The two fourth-grade classes that qualified to participate in the study each had participation rates of 45%.

On the sociometric form, in order to assess social acceptance, children were asked to circle the names of three children with whom they like to play. To determine reciprocal friendships, children were then asked to star the one child from the list with whom they most like to play. After children completed the sociometric forms, they were placed into reciprocally nominated "best friendship" dyads. These dyads were same-sex dyads, since it has been discovered that girls and boys interact with same-sex peers more frequently than with peers of the opposite sex (Bukowski, Gauze, Hoza, & Newcomb, 1993). In a few cases, a child was asked to participate in two interaction tasks since there was an uneven number of children from that class who had consent to participate in the study. In this case, data was only collected for this child in the first interaction. Also, in three cases, a child had no reciprocal nominations. In this instance, the child completed the interaction task with one of the peers he or she nominated but data was only collected on the child who did not have a reciprocal nomination. The other child engaged in a second interaction task with a reciprocally nominated friend, and this was the data that was used for that child.

*Interaction task.* In order to assess children's ability to express anger, sadness, and pride with their friends, children participated in an emotion discussion task. Dyads were instructed by a researcher to "Talk to your friend about a time when you felt mad," "Talk to your friend about a time when you felt sad," and "Talk to your friend about a time when you felt proud" with their close friend. A researcher was present throughout the interaction to prompt the children but remained quiet throughout the interaction. Researchers instructed the children to take turns sharing their stories for each emotion. Interactions were audiotaped, transcribed, and coded.

### *Coding*

*Quantitative codes.* The quantitative codes included: a) total word count, b) total number of emotion words (i.e., sad, mad, proud, or any other word describing an emotional state), c) total number of negative emotion words (e.g., sad or mad), d) total number of positive emotion words (e.g., proud or happy), e) the number of times that children provided discrete pieces of information about the emotion eliciting events (e.g., my brother really made me mad; my brother stole my favorite doll), and f) the number of emotion laden expressions. These latter expressions were coded when children elaborated on the intensity with which they experienced a certain emotion (e.g., "When my cat died, I was really, really sad, and I cried a lot."). Children were also asked to indicate the intensity of the emotion eliciting event for each of the three emotions using the Thermometer Rating Scale of 0-100 in which 100 reflected high emotional intensity.

*Qualitative codes.* The coding scheme for qualitative codes was initially based on Denton and Zarbatany's (1996) event-coding scheme from their study examining age differences in the use and effectiveness of social support processes used by

preadolescents (10-12 year olds), adolescents (15-20), and adults (19-24) when discussing past negative events. This coding scheme included codes for the type of negative event disclosed, the use of support strategies, and friend's responses to the participants' excuses that they made for themselves for the occurrence of the negative event. First, the negative events that the children disclosed were classified into four categories: achievement (e.g., academic failure), family (e.g., relative relationship problem), nonfamilial social (e.g., peer relationship problem), and other (e.g., property theft). These categories provided an initial basis for the development of our content codes for mad, sad, and proud events. Second, the support strategy event-coding scheme was based on previous research (Barbee et al., 1990). It was designed to be a thorough list of supportive behaviors exhibited by children in response to their friends' shared negative events. The unit of coding was each supportive thought expressed verbally or nonverbally after a friend's initial disclosure of an upsetting event, but it was sensitive to duration of support. Therefore, continuous series of supportive thoughts were coded even if the type of support did not change. The four types of support were coded as "excuse," "emotional support," "advice," and "distraction." Lastly, children's responses to the excuses that their friends made for themselves were coded as validations (agreement with the friend's excuse) or non-validations (absence of agreement with the friend's excuse.)

Then, based on the responses obtained in this study, these codes were expanded to reflect the rich nature of the interactional material that was expressed by children in reaction to their friend's emotion-eliciting event. Codes were also established for the content of the emotion eliciting event for sadness, anger, and pride. The qualitative codes are as follows:

- a) Agreement. This code refers to times in which a child expressed concordance with his or her friend. For example, child A shared her emotion eliciting event, and Child B responded “That would have made me sad too.”
- b) Supportive. This code refers to the times in which a child made a sympathetic statement in response to their friend’s story. For example, Child B responded to Child A by saying, “I’m sorry that your Grandma died and that you were sad.”
- c) Clarification. This code refers to the times in which a child asked a question related to the situation. For example, if Child A shared a story about being mad at her sister, and Child B asked, “Which sister are you talking about?”
- d) Direct to oneself. This code refers to times in which a child said something about his or herself while his or her friend was talking. For example, Child A shared an emotion eliciting event, but Child B responded by talking about his own emotion eliciting event without acknowledging the story that had just been told.
- e) Reflection. This code refers to the times in which a child repeated or paraphrased what his or her friend said. For example, Child B responded to Child A’s response by stating, “So you got really sad because your pet died.”
- f) Humor. This code refers to the times in which a child made a joke, whether or not it pertained to the interaction topic.
- g) Challenging. This code refers to times in which a child disagreed with his or her friend or provided an alternate interpretation of the situation. For example, after Child A shared an emotion eliciting event, Child B said “That would make me mad, not sad!”

- h) Distracting. This code refers to times in which a child answered his or her friend with a non-related response. For example, child A shared an emotion eliciting event, but Child B did not respond to the story but instead started playing with the tape recorder or tying his shoes.
- i) Ignoring. This code refers to the times in which a child did not respond to his or her friend's statement but instead started talking about an unrelated topic or was silent.
- j) Off-task. This code refers to the times in which a child spoke but did not directly respond to the statements made by his or her friend or engaged in behaviors that were not related to the task (e.g., playing with a pencil). For example, if Child A was talking about something that had happened in class earlier that day that was not part of one of his emotion eliciting events, then this would have been coded as off-task. This code differed from ignoring because children were coded as off-task if they were talking about an unrelated topic at any point in the interaction, even if it was their turn to talk at the time, whereas children were only coded as ignoring if they failed to respond to a story that their friend shared.
- k) Provides help. This code refers to the times in which a child assisted his or her friend in the explanation of the event. For example, if Child A could not think of a word to describe how he was feeling, Child B provided him with the word.
- l) Adult intervention. This code refers to the times in which the researcher had to redirect the child to the task. For example, if the dyad started talking about something unrelated to the task, the researcher had to remind them, "Now we need to talk about a time when we felt sad."

- m) Child direction. This code refers to the times in which one of the children took control and directed the task. For example, Child A says to Child B, "We need to talk about being proud now."
- n) Thinking. This code refers to the times in which a child paused to think of a response and his or her friend remained silent.
- o) Insight elaboration. This code refers to the times in which a child offered a response that was insightful and psychologically oriented. For example, Child A talked about being sad about the loss of a pet and said "I was sad because I will never see my pet again, and I really loved him."

The tapes were transcribed by several research assistants. Then, three coders independently listened to the tapes and read the transcripts. They then coded the transcripts based on the coding categories previously presented. Discrepancies in the coding were resolved through discussion.

## Results

### *Content codes*

Frequencies were calculated for each of the categories represented by the content of the anger, sadness, and pride interactions. For discussions about sad events, the most endorsed categories were "peer relationship problem" (15.6%), loss of family member or friend (14.4%), and "sickness/injury" (14.4%). For discussions about anger events, the most endorsed category was "peer relationship problem" (53.3%), followed by "other" (15.6%), a code which included any events that did not fit into another category, and "blocked goals" (8.9%). For discussions about pride events, the most endorsed

categories were “academic” (26.7%) and “sports/games” (28.9%). See Tables 1-3 for complete listings of content categories by emotion type.

### *Quantitative codes*

Quantitative codes were analyzed through Multivariate Analyses of Variance (MANOVA) in which the dependent variables were: a) total number of words spoken for anger, sadness, and pride; b) total number of emotion words for anger, sadness, and pride; c) number of negative emotion words for anger, sadness, and pride; d) number of positive emotion words for anger, sadness, and pride; e) number of information statements; f) number of emotion laden statements for anger, sadness, and pride; and g) intensity ratings for anger, sadness, and pride. Independent variables included age group and gender. Only significant findings are reported below.

*Total number of words spoken.* There were no significant age group or gender differences or interactions found for total number of words spoken for any of the emotions.

*Total number of emotion words.* MANOVA results revealed a significant main effect for child gender, Wilk's  $\lambda = .96$ ,  $F(3, 84) = 1.12$ ,  $p < .05$ ,  $\eta^2 = .04$ . Tests of between-subjects effects indicated a gender difference for anger,  $F(1, 86) = 7.23$ ,  $p < .05$ ,  $\eta^2 = .08$ . Inspection of scores indicated that girls ( $M = 1.89$ ,  $SD = 2.05$ ) used more emotion labels for anger than boys ( $M = .98$ ,  $SD = 1.14$ ),  $t(88) = 2.69$ ,  $p = .01$ .

*Number of negative emotion words.* MANOVA results revealed a significant main effect for child gender, Wilk's  $\lambda = .94$ ,  $F(2, 85) = 2.92$ ,  $p < .05$ ,  $\eta^2 = .07$ . Tests of between-subjects effects indicated a gender difference for anger,  $F(1, 86) = .01$ ,  $p < .05$ ,  $\eta^2 = .07$ . Inspection of scores indicated that girls ( $M = 1.77$ ,  $SD = 1.87$ ) used more

negative emotion words when discussing anger than did boys ( $M = .98$ ,  $SD = 1.14$ ),  $t(87) = 2.48$ ,  $p = .02$ .

*Number of positive emotion words.* MANOVA results revealed a significant main effect for child gender, Wilks's  $\lambda = .901$ ,  $F(3, 84) = 3.07$ ,  $p < .05$ ,  $\eta^2 = .09$ . Tests of between-subjects effects indicated a gender difference for pride,  $F(1, 86) = 13.38$ ,  $p < .05$ ,  $\eta^2 = .06$ . Inspection of scores indicated that girls used more positive emotion words than boys when discussing pride (girls:  $M = 1.81$ ,  $SD = 2.24$ ; boys:  $M = 1.02$ ,  $SD = .92$ ),  $t(88) = 2.31$ ,  $p = .02$ .

*Total number of information statements.* There were no significant age group or gender main effects or interactions found for total number of information statements.

*Total number of emotion laden expressions.* There were no significant gender or age group main effects or interactions found for total number of emotion laden expressions. A correlation was calculated between total number of emotion laden expressions and intensity of emotion to determine whether these two items were highly associated. Significant results were found only for the mad codes, (sad:  $r(82) = .08$ ,  $p = .45$ ; mad:  $r(82) = .26$ ,  $p = .04$ ; pride:  $r(79) = .09$ ,  $p = .39$ ) demonstrating that these two codes differ from one another for sadness and pride but not for anger.

*Intensity.* MANOVA results revealed a significant main effect for age group, Wilk's  $\lambda = .87$ ,  $F(3, 62) = 3.02$ ,  $p < .05$ ,  $\eta^2 = .13$ . Tests of between-subjects effects indicated an age group main effect for anger,  $F(1, 64) = 7.45$ ,  $p < .05$ ,  $\eta^2 = .10$ . Inspection of scores indicated that for anger intensity ratings, children in the younger age group gave higher intensity ratings than children in the older age group,  $t(80) = 3.02$ ,  $p = .001$ . See Table 4 for means and standard deviations.

### *Qualitative Codes*

#### *Data reduction*

*Factor analyses for sadness codes.* Factor analyses were calculated to determine whether there were commonalities across the qualitative codes. Principle components analyses with varimax rotation extracted three factors which accounted for 61.5% of the variance. Factors were only retained if they had eigenvalues above 1.0 and factor loadings above .40 in order to achieve improved accuracy (Cattell & Jaspers, 1967; Stevens, 1996). The eigenvalue of the first factor was 1.91; the second factor, 1.52; and the third factor, 1.49. Seven codes (challenging, distracting, reflection, adult intervention, child direction, thinking, and insight elaboration) did not load onto any factor and thus, they were dropped from analyses.

Three codes loaded on the first factor including agreement, direct to self, and support. All of these items referred to emotional support and validation of sadness experience and was thus labeled, "Validation". This factor accounted for 23.88% of the variance.

Three codes loaded on the second factor, which included humor, ignore, and off-task comments. All of these items referred to invalidation of sadness experience, and this factor was thus labeled "Invalidation." This factor accounted for 19.01% of the variance.

Two codes loaded on the third factor, which included provides help and clarifies information. These items referred to instrumental help and were labeled as such. This factor accounted for 18.62% of the variance.

*Factor analysis for anger codes.* Principle components of analyses with varimax rotation extracted three factors which accounted for 53.28% of the variance. The

eigenvalue for the first factor was 2.13; the second factor, 1.51; the third, 1.16. Six codes (distracting, ignoring, reflection, adult intervention, thinking, and insight elaboration) did not load onto any factor and thus, they were dropped from analyses.

Four items loaded on the first factor: agreement, humor, clarification, and support. These items refer to emotional support, and this factor was thus labeled "Validation". Although humor was viewed as a distracted behavior for sadness, it was viewed as a form of emotional support for anger. This factor accounted for 23.64% of the variance.

Three items loaded on the second factor, which included challenging, off-task comments, and reverse-scored directing to self. All of these factors referred to dismissing of sadness experience, and this factor was thus labeled "Invalidation." This factor accounted for 16.72% of the variance.

Two items loaded on the third factor: child directing the task and reverse-scored providing help. These factors referred to instances of the child offering assistance, and this factor was thus labeled "Instrumental Help." This factor accounted for 12.91% of the variance.

*Factor analysis for pride codes.* Principle components analyses with varimax rotation extracted three factors which accounted for 57.49% of the variance. The eigenvalue for the first factor was 2.01; the second factor, 1.37; the third factor, 1.22. Seven codes (distracting, direct to oneself, provides help, adult intervention, supportive, thinking, and insight elaboration) did not load onto any factor and thus, they were dropped from subsequent analyses.

Three items loaded on the first factor; clarification for pride, agreement for pride, and child directs task for pride. These items referred to instances of the child offering

assistance, and this fact was thus labeled “Instrumental Help.” This factor accounted for 25.13% of the variance.

Two items loaded on the second factor; humor response and reflection. These items refer to emotional support, and this factor was thus labeled “Validation.” This factor accounted for 17.16% of the variance.

Three items loaded on the third factor; ignoring, challenging, and off-task comments. These items refer to dismissive behavior, and thus this factor was labeled “Invalidation.” The third factor accounted for 15.21% of the variance.

#### *Analyses of emotion codes*

A 2 (gender) x 2 (age group) analysis of variance (ANOVA) was conducted for each of the three factors within each emotion type. Significant effects were interpreted using independent sample *t*-tests.

*Sad validation.* The results of the ANOVA did not yield any significant main effects nor interactions although the gender main effect approached significance. Inspection of means suggested that girls engaged in more coaching behaviors than did boys when discussing sadness, though this difference was not statistically significant. See Table 5 for means and standard deviations

*Sad invalidation.* ANOVA results revealed a significant main effect for gender,  $F(1, 89) = 3.40, p < .05, \eta^2 = .04$ . An independent samples *t*-test indicated that boys ( $M = .59, SD = 1.51$ ) engaged in dismissing behaviors when discussing sadness with their friend more than girls ( $M = .17, SD = .38$ ),  $t(88) = -1.98, p = .05$ .

*Sad instrumental help.* ANOVA results revealed a significant main effect for age group,  $F(1, 89) = 5.67, p < .05, \eta^2 = .06$ . Independent samples *t*-test indicated that

children in the younger age group ( $M = 1.68$ ,  $SD = 2.75$ ) engaged in more helping behaviors when discussing sadness than children in the older age group ( $M = .75$ ,  $SD = 1.17$ ),  $t(88) = 1.97$ ,  $p = .05$ .

*Mad validation.* The results of the ANOVA did not yield any significant main effects nor interactions.

*Mad invalidation.* ANOVA results revealed an interaction for gender by age group,  $F(1,89) = 3.81$ ,  $p < .05$ ,  $\eta^2 = .04$ . This interaction was best interpreted by examining gender differences with age group. Independent samples  $t$ -test results indicated that in the younger age group, boys engaged in dismissing behaviors for anger more than girls,  $t(36) = -2.59$ ,  $p = .01$ . However, for the older age group, there were no significant gender differences. See Table 6 for means and standard deviations.

*Mad instrumental help.* The results of the ANOVA did not yield any significant main effects nor interactions for the instrumental help factor.

*Pride validation.* ANOVA results revealed a significant main effect for age group,  $F(1, 89) = 6.61$ ,  $p < .05$ ,  $\eta^2 = .07$ . Independent samples  $t$ -test indicated that children in the older age group ( $M = .44$ ,  $SD = .89$ ) engaged in more coaching, supportive behaviors when discussing pride than children in the younger age group ( $M = .03$ ,  $SD = .16$ ),  $t(88) = -3.28$ ,  $p = .001$ .

*Pride invalidation.* The results of the ANOVA did not yield any significant main effects nor interactions for the invalidation factor for pride.

*Pride instrumental help.* There were no significant results for the instrumental help factor for pride.

*Discussion*

This study was designed to examine how children express emotion within the context of a close friendship with the goal of better understanding how peers socialize each others' emotion regulation processes. In particular, we were interested in discovering whether child gender and developmental status would be associated with differences in children's emotional expressivity when discussing emotion-eliciting events related to sadness, anger, and pride. We hypothesized that girls would be more emotionally and verbally expressive overall, especially when discussing sadness. We also expected boys to be more dismissive of sadness and girls to be more dismissive of anger expression based on research demonstrating gender-specific socialization of emotion in which girls are more likely to suppress anger and boys are more likely to inhibit sadness (Zeman & Shipman, 1997). Although our examination of pride was exploratory, we hypothesized that older children would use more positive emotion words when discussing pride because pride is considered to be a complex emotion. Advanced cognitive development in the older children would likely result in a more sophisticated understanding of what it means to feel proud. Overall, the results provided partial support for our hypotheses and introduced many findings that will guide future research efforts. The following discussion will first offer interpretations for the results based on the quantitative codes followed by a discussion of the qualitative code findings. Then, limitations of this study will be presented followed by the study's strengths and future research directions.

*Content of discussions*

The topics discussed in the children's interactions differed based on emotion type. Nearly half of the children focused on a peer relationship problem when discussing anger eliciting events, and over half of the children either focused on an academic achievement or an achievement in a sport or game when discussing pride eliciting events. However, the specific emotion eliciting events for sadness were more varied. As expected, many of the children discussed the loss of a family member or friend, a peer relationship problem, and a sickness or injury, but many of the children provided specific events that did not fall into a clear category. The clear difference in topics based on emotion type lends support for the functionalist perspective of emotional development. Different types of events appear to elicit different emotional reactions, indicating the strong contextual aspects of emotional experience (Barrett & Campos, 1987).

Denton and Zabatany (1996) used similar categories for the contents of negative events that were disclosed in their studies, including academic problems, familial disputes, non-familial social problems, and other. In their study, Denton and Zabatany found that the type of problem disclosed did not affect the nature of the interaction in terms of amount of social support and help offered.

*Quantitative codes*

There were several quantitative codes that yielded significant gender differences including total number of emotion words, number of negative emotion words, and number of positive emotion words. The quantitative codes that had significant age group differences included positive emotion words and intensity of emotion ratings. The gender findings will be discussed first, followed by age group findings.

*Gender differences.* Overall, the length of boys' and girls' shared emotion-eliciting events discussions did not differ, but the emotional content within the interactions did differ by gender. It is surprising that the length of conversations did not differ by gender because research has generally indicated that girls are more verbal than boys (Keenan & Shaw, 1997). It may be that in this somewhat unusual situation, the girls were shyer and more reticent than typical, leading to shorter conversations. In addition, it is possible that the boys spoke more because they perceived the study as an assignment in which they were required to talk a lot. As hypothesized, girls were more emotionally expressive when discussing anger and pride as indicated by the total number of emotion words spoken for anger and the total number of positive emotion words used for pride. This is consistent with prior research in which girls were found to initiate verbal exchanges more frequently and to demonstrate increased responsiveness to the verbalizations of others when compared with boys (Keenan & Shaw, 1997). Surprisingly, girls were not more emotionally expressive than boys when discussing sadness. However, examination of the means revealed that children of both genders used more negative emotion words when discussing sadness than when discussing anger, with the exception of girls in the older age group, who used slightly more negative emotion words when discussing anger. This finding was unexpected, considering that girls tend to be more empathetic in social situations than boys (Bryant, 1982; Roberts & Strayer, 1996). The reported gender difference for anger was unexpected as well, as we had hypothesized that boys would be more comfortable discussing anger. However, it is possible that girls may be better at discussing anger but do not act on their anger expression, whereas boys may feel more comfortable acting out their anger than

discussing the retrospective account of anger inducing situations. It also may be that girls are better at labeling emotional experiences whereas boys can talk about the event in more general ways without explicitly using emotion language. In addition, it has been discovered through research with toddlers that girls use emotion labels sooner than do boys (Denham, 1986).

*Developmental findings.* Interesting findings emerged concerning the use of positive emotion words for pride. Specifically, children in the older age group used more positive emotion words when discussing pride than children in the younger age group, suggesting that children's understanding of the emotion of pride may not develop as rapidly as their knowledge of simpler emotions. Given anecdotal evidence, it appeared that the younger children did not appear to have a firm grasp on the concept of pride in comparison to the older children. This is consistent with past research stating that children's understanding of pride develops somewhat later than their understanding of primary emotions such as sadness and anger. In particular, Griffin (1995) discovered that children do not demonstrate an understanding of self-conscious emotion terms, such as pride, shame, and embarrassment, until they have reached at least 7 or 8 years of age.

With respect to ratings of emotional intensity that were made on a 100-point scale, interesting age group differences emerged for anger ratings. First of all, most children provided emotionally eliciting events that they perceived to be highly intense. That is, the mean ratings for intensity for each emotion were all about 75. Children in the younger age group gave higher ratings than children in the older age group when discussing anger. It is possible that this finding could be interpreted as an artifact of rating scale weaknesses. That is, Chambers and Johnston (2002) conducted research to

examine the effect of child age and the use of response choices on questionnaire items in order to determine if children have a tendency to use extreme response choices (e.g., a 1 or a 5 on a 5-point scale) on Likert scale ratings when answering questions about emotional stress. They found that young children between the ages of 5 and 6 endorsed significantly more extreme response choices than slightly older children between the ages of 7 and 9, who chose more extreme responses than children in the 10- to 12-year old age group. Thus, when considering these findings in light of our results, it is clear that the significant age group anger intensity rating finding is not an artifact of methodology. That is, if it was a rating scale issue, this finding would also have emerged for the sadness and pride ratings. Thus, it is interesting that the younger age group provided more intense anger situations than the older age group. Perhaps, through experience, the older children are well aware that expressing or even recalling intense anger situations is typically met with disapproval by adults and possibly by peers, resulting in lower intensity ratings or recalling more moderately intensity anger situations.

#### *Qualitative codes*

The qualitative codes provided important insight into the ways in which children socialize the emotions of sadness, anger, and pride. The codes provided a way to look not only at the ways in which children express personal emotion eliciting events, but they also demonstrated the ways in which children engage in support strategies in response to friends' shared emotional experiences. Results demonstrated that boys engaged in more dismissing behaviors for sadness than did girls. Although the result for sadness validation was marginally significant, examination of means revealed that girls engaged more coaching behaviors for sadness than did boys. It is likely that this finding would

have been significant with a larger sample size. The findings for the sad codes support hypotheses and findings from past research that girls are more apt to provide support and boys are more likely to engage in dismissive behavior when discussing sadness (Chung & Asher, 1996; Rose & Asher, 1999). This is not surprising considering that girls are socialized to suppress anger and express sadness in order to express emotion in a socially appropriate manner (Zeman & Shipman, 1997). Due to this socialization process, girls have been found to display more empathy in social situations than boys (Bryant, 1982; Roberts & Strayer, 1996).

For the anger codes, results demonstrated that younger boys were more dismissive of anger than younger girls, though these findings did not hold true for the older age group. Again, this is not surprising considering that boys are socialized to express anger and inhibit sadness in order to behave in a socially appropriate manner (Zeman & Shipman, 1997). It is interesting that these findings only emerged for the younger age group. It's possible that the children in the older age group have learned through experience or observation that it is inappropriate and undesirable to ridicule others' expressions of anger, especially when someone else is present and observing the interaction. That is, such a direct confrontation or lack of support for anger expression may lead to the exacerbation of anger in the other party and could result in conflict..

Although the inclusion of pride in the study was primarily for exploratory research, the findings were interesting. That is, older children engaged in more coaching behaviors when discussing pride than the younger children. It seems likely that the older children engage in more coaching behavior because they have developed more social skills that allow them to be supportive of others' success. Since the pride validation code

is comprised of the codes for humor response and reflection, it is possible that older children may have learned how to help a friend savor positive emotions through these methods.

### *Limitations*

Although this study provided many interesting findings, there were several limitations that warrant mention. First, in order to provide a valid list of peers from which to place children in reciprocally nominated friendships, a 40% classroom participation rate was required (Terry & Cole, 1991). Unfortunately, there were three classrooms that did not meet this minimum threshold. Thus, this reduced our sample size, which was particularly noticeable in the youngest female age group. Since some of our findings only approached significance, we may have reached significance had we been able to obtain a larger sample size. Low participation rates also could have affected the validity of the study, as children's sociometric nominations might have been different with higher classroom participation rates. Children were only allowed to nominate peers who had parental consent to participate in the study, so it is difficult to assess if they were truly nominating a "close friend." However, since the study was conducted in a small school system, it is likely that the children knew their peers well and had established close friendships within their classrooms. Nonetheless, if more children had consented to participate in the study, some children would not have had to participate twice or to have non-reciprocally nominated pairs.

Another limitation is the lack of diversity in our sample. Since our sample was not racially diverse and most children who participated came from upper-middle class families, it is difficult to know if our results would generalize to other settings. It is likely

that different cultures express emotion within friendships and family in different ways than were represented in this sample (Saarni, 1999).

Lastly, it is possible that the interaction task was not an ecologically valid task. Children might not actually talk to each other about their emotions in the ways in which we instructed. Instead, they might express their emotions through less direct ways than verbal communication and may use nonverbal expressions such as eye rolls, shrugging of shoulder, and other behaviors to indicate their emotional states. Moreover, the interaction tasks had to be prompted by researchers, and children may have been more guarded with their emotions with a researcher was present than they would have been with just their close friend in a more spontaneous setting. We also asked children to remember emotionally laden events. There may have been memory differences as a function of age group, and there is no way to ascertain whether the emotional events were true or fictitious or some combination of the two.

Future research could address these limitations and expand upon this study in several ways. A similar study with a larger sample size would provide more opportunity to detect significant differences. Ideally, if the study were to be re-created, it would be beneficial to try to obtain higher percentages for classroom involvement to ensure validity within the sociometric nominations. In addition, it would be beneficial to conduct this study in an area that is more racially and economically diverse so that the results would be more generalizable.

If possible, it would be interesting to conduct the study with a larger range of ages to examine development of emotional expression into early adolescence. Denton and Zarbatany (1996) found that as children aged through adolescence, they were less likely

to engage in dismissive behaviors when discussing a friends' emotion eliciting event, but they found that this shift occurred later than expected (i.e., young adulthood). Thus, it would be intriguing to continue this study with pre-adolescents and adolescents to examine at what age supportive and dismissive behaviors change and if the age differences are affected by gender. In addition, Denton and Zarbatany examined whether the type of emotion eliciting event discussed was related to the nature of the conversation in terms of length, use of emotion words, and expression or support or helping behavior. Although their results were non-significant, future research might look at other ways in which the content codes for the emotion events might relate to the nature of the conversation. Also, future research could examine developmental and gender differences for the content codes. Future research might also look at children's emotion expressivity within a close friendship in comparison to teacher or parent rated scales of emotion expressivity and aggressive behavior within the classroom. In addition, while inclusion of pride was exploratory, future research might examine other complex emotions to see if developmental findings are comparable.

The interaction task could also be altered in some ways without changing the nature of the task. Ideally, future research utilizing an interaction task could involve less involvement on the part of the researcher. Perhaps children could be given instructions on paper to discuss the emotion eliciting events with their friends so that the children would not have to worry about the researcher listening to their conversations or try to engage the researcher in the conversation. In addition, children could be given verbal instructions to discuss emotion-eliciting events but could then be left alone in the room while their conversations were audio-taped.

Despite the limitations of this study, it did produce interesting results that were primarily supportive of past research and our hypotheses. Moreover, it was unique in its use of an interaction task as a means of examining children's emotional expressivity. Past research on children's emotional expression within friendships is very limited, and the available research has generally involved children responding to an emotion eliciting vignette as opposed to discussing a personal emotion eliciting event. Thus, this study not only provided insight into children's emotional expression within the context of a close friendship, but it also provided evidence that interaction tasks can be useful in the examination of children's emotional expressivity. In addition, this study was unique in its examination of individual emotions rather than looking at global negative emotion. Along those lines, the inclusion of positive emotion in this study was unique and adds to the strengths of the study.

This study adds to the literature regarding children's emotional expression within the context of a close friendship. It provides support for the use of an interaction task to examine children's emotional expression, and it demonstrates that there are gender and developmental differences in children's expression of positive and negative emotion. Future research could build upon this study to discover more about the unique ways in which children express emotion within a close friendship dyad.

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Table 1

*Content code percentages for sad*

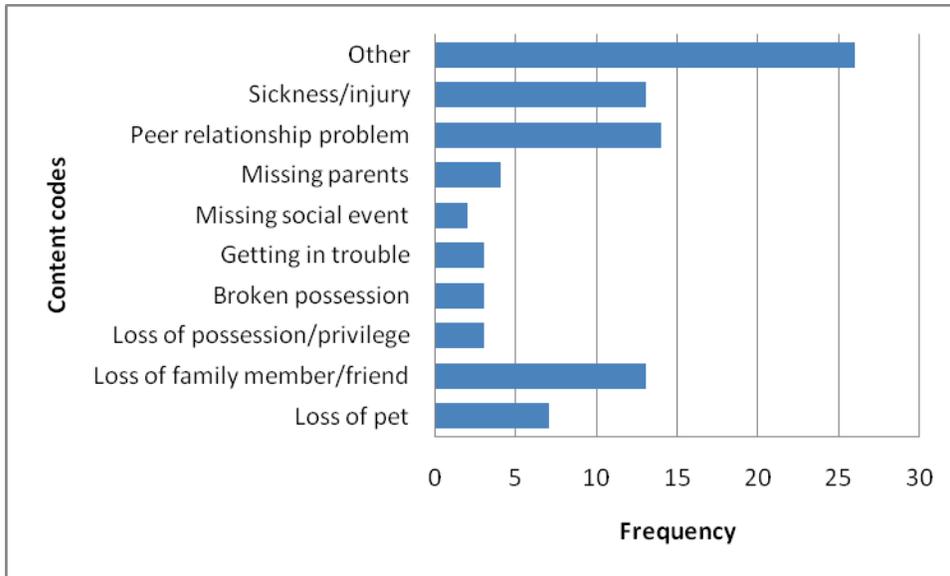


Table 2

*Content code percentages for mad*

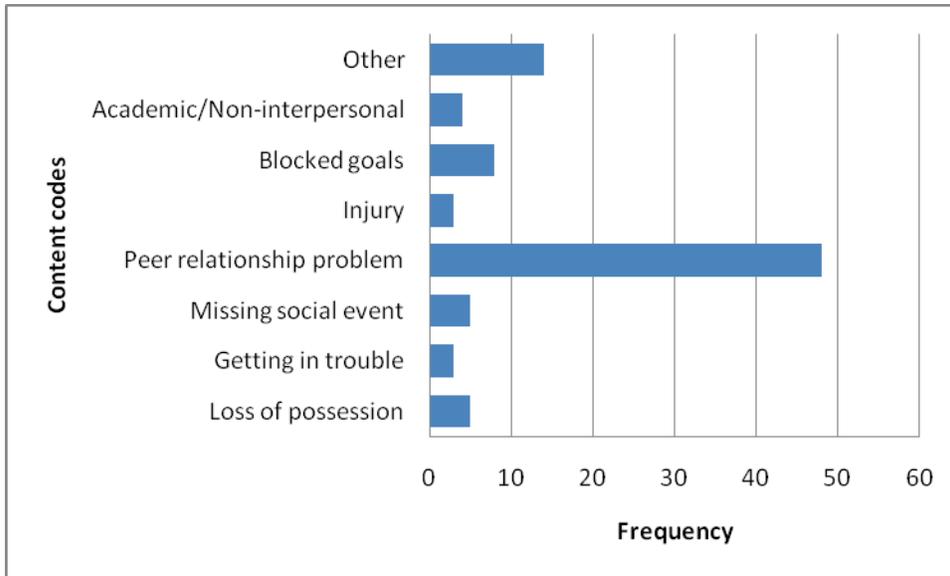


Table 3

*Content code percentages for pride*

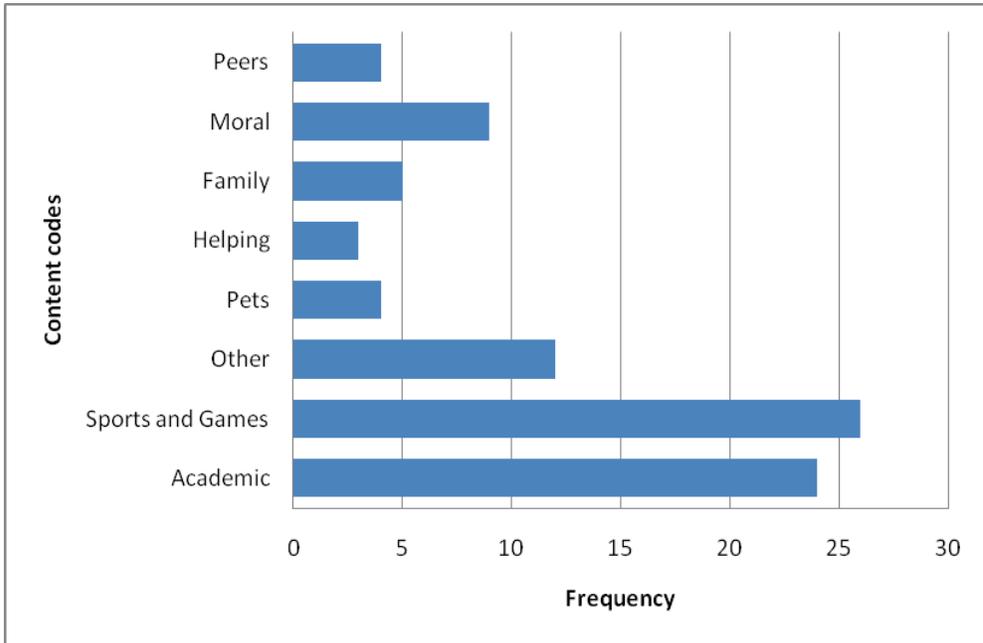


Table 4

*Means and standard deviations for intensity for sadness, anger, and pride*

Emotion	Age group	<i>N</i>	<i>M</i>	<i>SD</i>
Sad	Younger	33	80.61	24.87
	Older	49	72.43	23.94
Mad	Younger	31	91.94 <sup>a</sup>	19.57
	Older	51	75.76 <sup>a</sup>	3.59
Proud	Younger	32	87.81	25.37
	Older	47	86.87	21.15

*Note.* Same superscripts denote means that are significantly different than each other,

$t(80) = 3.02, p = .001$ .

Table 5

*Means and standard deviations for sad validation factor*

Age group	Gender	N	M	SD
Younger	Girls	15	1.47	1.99
	Boys	23	.91	2.02
Older	Girls	21	1.81	4.20
	Boys	31	.84	.82

*Note.* Main effect for gender in which girls' means are marginally significantly different from boys' means,  $F(1, 86) = 2.03, p < .16$ .

Table 6

*Means and standard deviations for mad invalidation factor*

Age group	Gender	<i>N</i>	<i>M</i>	<i>SD</i>
Younger	Girls	15	2.93 <sup>a</sup>	1.33
	Boys	23	4.26 <sup>a</sup>	1.81
Older	Girls	21	3.81	1.44
	Boys	31	3.87	1.31

*Note.* Same superscripts denote that the means are significantly different than each other,

$t(36) = -2.59, p = .01$ .