THE RELATIONSHIP OF ATTACHMENT, MATERNAL EMOTIONAL
SOCIALIZATION, AND MATERNAL COPING WITH SOCIAL ANXIETY
DURING ADOLESCENCE

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SUMMARY

The current study investigated specific family factors that may be associated with social anxiety symptoms in early adolescence. The specific factors included adolescents’ attachment security, maternal acceptance of adolescents’ emotions, quality of maternal advice, and maternal coping. Adolescents (ages 11-14) and their mothers participated in the study, during which they completed various questionnaires, interviews, and interaction tasks. Adolescents with greater social anxiety symptoms reported lower attachment security and had mothers who reported providing adolescents with lower quality of advice when the adolescents were upset. Attachment security, maternal acceptance of adolescents’ emotions, quality of maternal advice, and maternal coping accounted for 10% of the variance of adolescents’ social anxiety symptoms, and mothers’ self-reported quality of advice was the only unique predictor of social anxiety symptoms. The current study identified adolescents’ attachment security and mothers’ self-reported problem-focused advice as important factors relating to adolescents’ social anxiety symptoms. The findings add to the current literature on the relationship between parenting factors and social anxiety and have potential implications for the treatment of social anxiety in adolescents. Future research should include adolescents’ perceptions of parental behaviors and could utilize a longitudinal design to determine the directionality between parenting behaviors and adolescents’ social anxiety.
The relationship of attachment, maternal emotional socialization, and maternal coping with social anxiety during adolescence

Anxiety disorders are among the most prevalent mental health disorders in childhood and adolescence (Brown, Antonuccio, DuPaul, Fristad, King, Leslie, et al., 2008). These include disorders such as separation anxiety, generalized anxiety, specific phobias, selective mutism, and social phobia. Anxiety during childhood and adolescence may manifest differently across development such that anxiety is most likely manifested as separation anxiety in early childhood, generalized anxiety in middle childhood, and social anxiety in adolescence (Weems, 2008). Social anxiety is a particularly important anxiety disorder in adolescence considering the increasingly significant role of peer relationships in adolescents’ lives (Beidel, 1998) and the negative impact that social anxiety has on the lives of adolescents, such as decreased academic performance (Beidel, 1991), poorer peer relationships (Inderbitzen-Nolan, Walters, & Bukowski, 1997; La Greca & Lopez, 1998), increased depression (Dalrymple & Zimmerman, 2011), and substance use problems (Buckner, Schmidt, Lang, Small, Schlaugh, & Lewinsohn, 2008). Social anxiety symptoms typically emerge during early adolescence and include excessive fear of social situations that involve unfamiliar people or possible judgment by others due to the fear of being humiliated (Diagnostic and Statistical Manual of Mental Disorders, 4th ed. Text revision, American Psychiatric Association, 2000). The current
study aimed to investigate specific family factors that may be associated with social anxiety symptoms in an adolescent population.

Etiological models of anxiety in youth have focused on biological processes (e.g. psychophysiology and genetic influences), behavioral learning processes (e.g. modeling and classical aversive conditioning), and social and interpersonal processes (e.g. parent-child attachment and parental over-control; Weems & Silverman, 2008). Social and interpersonal processes may be particularly important in the development and maintenance of social anxiety (Vertue, 2003). Parent-child attachment and parental behaviors have often been investigated as social factors relating to anxiety in children and adolescents. Parent-child attachment was first implicated in the development of anxiety by Bowlby (1982) and subsequent research has supported this relationship (Brumariu & Kerns, 2010; Colonessi, Draijer, Stams, Van der Bruggen, Bogels, & Noom, 2011). Bowlby (1982) theorized that infants who have an insecure attachment to their caregiver are uncertain that their parent will be available and responsive and display greater anxiety than those with a secure attachment. Many studies have found empirical support for the relationship between insecure parent-child attachment and anxiety (Colonessi et al., 2011; Roelofs, Meesters, Huurne, Bamelis, & Muris, 2006; van Brakel, Muris, Bogels, & Thomasson, 2006). Evidence also supports the link between insecure attachment and social anxiety symptoms specifically (Bohlin, Hagekull, & Rydell, 2000; Brumariu & Kerns, 2008).

In addition to parent-child attachment, specific parenting behaviors have been associated with higher levels of anxiety during childhood and adolescence as well. Broad
parenting constructs such as rejection and over-control of the child have consistently been linked to increased anxiety during childhood and adolescence (Hudson, Comer, & Kendall, 2008; McLeod, Wood, & Weisz, 2007; Wood, McLeod, Sigman, Hwang, & Chu, 2003). Although these factors have been associated with child anxiety, a meta-analysis completed by McLeod et al. (2007) found that parenting accounted for only 4% of the variance of child anxiety. When they examined the more specific subdimensions of rejection (e.g. withdrawal, aversiveness, warmth) and control (e.g. overinvolvement, autonomy-granting), several of the subdimensions were able to account for more of the variance of child anxiety. For example, autonomy-granting accounted for 18% of the variance of child anxiety. McLeod et al. (2007) suggested that using broad constructs of parenting, like rejection and control, may underestimate the influence that parental factors have on child anxiety and that this is a limitation of the current child anxiety literature. Deconstructing broad parental factors into more specific facets, and investigating the association between these specific factors and child anxiety, could further elucidate the relationship between parenting behaviors and child anxiety (McLeod et al., 2007).

One area of parenting that may have implications for the development of anxiety in children is emotion socialization. Emotion socialization refers to the socialization processes that foster the development of the abilities to regulate one’s own emotions, express emotions, and to identify and respond to others’ emotional expressions through social experiences (Halberstadt, Denham, & Dunsmore, 2001; Saarni, 1999). Parents teach their children how to regulate their emotions by encouraging or discouraging ways
of managing emotions through direct guidance or reactions to children’s emotions (Eisenberg, Cumberland, & Spinrad, 1998; Eisenberg, Fabes, Shepard, Guthrie, Murphy, & Reiser, 1999; Morris, Silk, Steinberg, Myers, & Robinson, 2007). Children also learn how to appropriately express their own emotions through observations of their parents’ expressions of emotions (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Morris et al., 2007). Parents also teach children how to appropriately identify and respond to the emotional expressions of others through direct teaching of appropriate responses (Morris et al., 2007). Thus, parents both directly socialize their child’s emotions as well as serve as models for their child to learn about emotion.

One specific facet of emotional socialization that is related to anxiety in childhood is parents’ non-accepting reactions to children’s expressions of emotion. Parents’ non-accepting reactions to children’s emotions convey information to the child about what emotional expressions are intolerable. Hudson et al. (2008) found that lack of warmth or support and intrusiveness by the parent when discussing recent emotional events the child experienced were related to greater child anxiety. More specifically, mothers of anxious children showed less warmth when discussing anxious situations and more intrusive behaviors in discussion of angry situations compared to a discussion of happy situations with their child. By contrast, mothers of non-anxious children did not differ in their warmth or intrusiveness across situation discussions. Dadds, Barrett, Rapee, and Ryan (1996) also found that parents of anxious children were less likely to listen to their child when discussing ambiguous, hypothetical situations than parents of non-anxious children, indicating a lack of parental support for the anxious children. In another study, mothers of
anxious children discouraged discussion of emotion more than mothers of non-anxious children when discussing a recent emotional event in the child’s life (Suveg, Zeman, Flannery-Schroeder, & Cassano, 2005). Mothers of anxious children also do not discuss their children’s emotions or engage in explanatory discussion of emotions with their children during discussions of children’s negative emotions as much as do mothers of non-anxious children (Suveg et al., 2005; Suveg, Sood, Barmish, Tiwari, Hudson, & Kendall, 2008). One study (Bogels, van Oosten, Muris, & Smulders, 2001) examined the influence of parental emotional warmth, rejection, overprotection, and encouragement of social behavior as they may relate specifically to child social anxiety and found that parental overprotection and family sociability were significant predictors of the child’s social anxiety symptoms.

In addition to a lack of acceptance of children’s emotions, the quality of advice that parents provide children is another specific parental factor involved in emotional socialization of children that has been associated with anxiety in childhood and adolescence. As indicated above, one of the ways in which parents socialize children’s emotions is through encouraging or discouraging ways of managing emotions through direct guidance (Eisenberg et al., 1998; Eisenberg et al., 1999; Morris et al., 2007). Parents of anxious children have been shown to provide poorer quality of advice to their children by suggesting, encouraging, and rewarding children’s avoidant responses in anxiety-provoking social situations (Barrett, Rapee, Dadds, & Ryan, 1996; Dadds et al., 1996). Anxious parents are also less likely to suggest or approve of prosocial ways of responding to anxiety-provoking situations and less likely to emphasize positive
consequences of a situation compared to parents of non-anxious children (Barrett et al., 1996; Dadds et al., 1996). Chorpita, Albano, and Barlow (1996) found that parents who responded anxiously to ambiguous, hypothetical scenarios were more likely to have children who decided to change how they would respond in a hypothetical situation to a more anxious plan, after discussing with the parents. However, Cobham, Dadds, and Spence (1999) found that discussion with parents did not influence children to choose more negative interpretations or avoidant reactions to an anxiety-provoking video-taped speech task. Although the majority of studies examining the association between parental quality of advice and anxiety in youth have found support for this, not all of the results are consistent suggesting the need for more research on the topic.

Anxiety in youth may not only be related to how parents directly respond to children’s emotions and the quality of advice they provide, but it may also be related to how parents cope with their own emotions. Thus, parents may serve as models for coping with anxious emotions. Coping can be defined as the process of an individual attempting to manage the stress produced by a particular situation (Lazarus, 1993). Two aspects of parental coping that may be associated with child anxiety include parental use of avoidant coping strategies (Sales, Fivush, & Teague, 2008) and problem-focused coping (Hughes, Hedtke, & Kendall, 2008). Social learning theory (Bandura, Ross, & Ross, 1961) posits that children learn social behaviors by watching other people and imitating them. Children may observe their parents’ patterns of coping, and imitate those coping skills when faced with a difficult situation.
Avoidance is one maladaptive coping strategy that may be related to anxiety in childhood and adolescence. If parents are faced with an anxiety-provoking situation, they may choose to avoid talking about or solving the problem as a way of coping with their anxiety. This maladaptive coping strategy may serve as a model for how to manage anxiety-provoking situations that adolescents learn from observing their parents. There is limited research on the relationship between parents’ use of avoidance when coping with their own emotional stress and children’s anxiety. One study by Sales et al. (2008) directly examined the association between parental coping and child anxiety and found that mothers who reported greater use of avoidant coping strategies had children who reported more anxiety symptoms. Dadds et al. (1996) found that parents of anxious children had a greater probability of reciprocating their children’s avoidant coping strategies than parents of non-anxious children, although parents’ own coping strategies were not directly measured. Barrett et al. (1996) also found that both mothers and fathers of anxious children were more likely to suggest avoidance as a coping strategy when their child was faced with a challenging social situation, although how mothers and fathers coped with their own problems was not assessed. Additional research is needed on the link between parental coping strategies and children’s anxiety. It is likely that parents who utilize avoidance as a coping strategy may be more likely to have adolescents who experience greater levels of social anxiety symptoms.

Conversely, problem-focused coping is an adaptive coping strategy that may be inversely associated with anxiety in youth. Parents who actively try to solve challenging situations rather than avoiding them serve as models of adaptive coping for their children.
Children who imitate their parents’ use of active problem-solving in stressful situations may be less likely to have problems with anxiety. There has also been limited research investigating the relationship between active problem-solving of the parent and child anxiety, and studies that have examined parental problem-solving have found inconsistent results. Barrett et al. (1996) found that parents of anxious children were less likely to take a problem-solving approach to a difficult scenario and more likely to choose an avoidant response than parents of non-anxious children. Hughes et al. (2008) also found that fathers of anxious children reported worse problem-solving skills than fathers of non-anxious children. However, they (Hughes et al., 2008) did not find a difference on problem-solving between mothers of anxious and non-anxious children. Further research is needed on the relationship between parents’ problem-focused coping and anxiety in children and adolescents.

While parent-child attachment and various parental behaviors discussed above have been linked to anxiety in childhood, the majority of studies have not looked at how these factors relate specifically to social anxiety symptoms in an adolescent population. Many of the studies included children with different types of anxiety disorders or symptoms, and they did not separate the effects of the parental factors by the specific type of anxiety. Therefore, there is a lack of evidence of specificity in how parental factors relate to social anxiety specifically. In addition, it is important to examine social anxiety in an adolescent population, because anxiety may be more likely to manifest as social anxiety during adolescence, mirroring the normative increase in social evaluative concerns during this developmental period (Weems, 2008). Many of the studies included
participants whose ages spanned the developmental periods of both middle childhood and adolescence. Peer relationships become increasingly important during adolescence (Beidel, 1998), and difficulties forming or maintaining social relationships due to social anxiety may be particularly harmful during the developmental period of adolescence. A limitation of the current literature, therefore, is a lack of consideration of developmental differences. Given that social relationships are of particular importance during adolescence, and anxiety is most likely to manifest as social anxiety during adolescence (Weems, 2008), it is especially important to study parental factors that may be related to social anxiety in an adolescent population.

The current study aimed to examine specific family factors that may be related to social anxiety symptoms during adolescence. Adolescents and their mothers participated in the current study by completing various measures about the parent-child relationship, ways of coping with their own emotions, and anxiety symptoms. In addition, mothers and children participated in an interaction during which they discussed anxiety-provoking situations. It was hypothesized that lower attachment security, non-accepting parental reactions to adolescent’s emotional expressions, and poorer quality of maternal advice given to the adolescent would be associated with more social anxiety symptoms in the adolescents. It was also anticipated that greater use of maternal avoidant coping strategies and less use of maternal problem-focused coping strategies would be related to greater social anxiety symptoms in adolescents.
Method

Participants

One hundred three mother-child (51 girls, 52 boys) dyads from the mid-western United States participated in the study. The children were in the 7th or 8th grade at the time of recruitment and ranged in age from 11.92 – 14.67 years ($M = 13.41$, $SD = .72$). The majority of participants identified themselves as Caucasian (87%), while others identified themselves as African American (6%), Hispanic (3%), and Other/Biracial (4%). Maternal years of education ranged from 10 to 20 years ($M = 14.32$, $SD = 2.05$).

This study was a part of a larger research study on the relationship between parenting and depression and anxiety during adolescence. Participants were recruited through local middle schools and newspapers. Interested families contacted the research team if they wished to participate. Participants completed two in-lab study visits, each of which lasted approximately 1.5-2 hours, and one week of at-home daily assessments. Participants received $100 and entry into a raffle for a free laptop to compensate them for their participation in the study.

Procedure

Mothers and adolescents came to the research lab where they individually completed various questionnaires, including the Security Scale (Kerns, Aspelmeier, Gentzler, & Grabill, 2001), Coping with Children’s Negative Emotions (CCNES; Fabes,
Eisenberg, & Bernzweig, 1990), COPE-revised (Carver, Scheier, Weintraub, 1989), and the Social Anxiety Scale for Adolescents (SAS-A; La Greca & Lopez, 1998). After each member of the dyad finished their respective questionnaires, they were brought together to complete a series of interaction tasks. The first five minutes of the interaction consisted of a relaxation period during which the mother and child listened to relaxing music. Next, the dyad conversed about everyday events, such as plans for dinner or what they like to do for fun, for five minutes. Following this discussion, the mother and child discussed a recent time when the child had felt anxious or nervous about something for six minutes (Appendix A). Next, they discussed several hypothetical social scenarios for eight minutes. They then relaxed for six minutes, and lastly, they spent four minutes discussing happy memories. In total, the entire mother-child interaction took approximately 40 minutes. Only the discussion of a recent anxiety-provoking event that the adolescent experienced was coded for this study.

Measures

Attachment security.

Adolescents reported about the attachment security of their relationships with their mothers via the Security Scale (Kerns et al., 2001). The Security Scale (Appendix B) included 15 items (Items 1, 2, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18, 19, and 21) such as “some kids find it easy to trust their mom but other kids are not sure if they can trust their mom” and “some kids go to their mom when they are upset but other kids do not go to their mom when they are upset.” For each item, adolescents first decided if they were
more like the kid on the left or on the right, then they decided if that statement was
“really true” or “sort of true” for them. Each item yielded a score from 1 to 4 with higher
scores reflecting greater attachment security. The scale yielded acceptable reliability ($\alpha = .88$).

**Maternal reactions to children’s emotional expressions.**

*Observed maternal acceptance of children’s emotions.* Coders rated the
mother’s reactions to the children’s emotional expressions from the mother-child
interaction task on a 5-point scale (Appendix C). Higher scores indicated reactions to the
child’s emotional expressions that were characterized by openness, acceptance, being
emotionally available, and validation of the child’s emotions and point of view. Lower
scores indicated non-accepting reactions to the child’s emotional expressions that were
characterized by punitive, dismissing, or distressed reactions, being emotionally
unavailable to the child, and no instances of validating the child’s emotions and point of
view. Interactions were coded independently by two coders. Coders were trained on 10
training videos. One coder served as the primary coder who independently coded 100% of
the video-taped interactions. The second coder served as the reliability coder who
independently coded approximately 20% of the interactions. The coders met to discuss
the interactions and coding discrepancies. The single measure intraclass correlation
coefficient was .61, indicating the inter-rater reliability was acceptable but somewhat
low.
**Negative Reactions to Children’s Negative Emotions.** Mothers indicated how they would react to their children’s negative emotional expressions in various hypothetical situations on the Coping with Children’s Negative Emotions Scale (CCNES; Appendix D; Fabes et al., 1990). The CCNES included 10 situation stems such as “If my child becomes disappointed or upset because he/she cannot go to a friend’s party, I would:”. Six potential reactions were listed after each question, and mothers were instructed to rate the likelihood that they would respond in that way for each possible reaction on a Likert scale from 1 (very unlikely) to 7 (very likely). Two subscales of negative parental reactions to children’s emotional expressions were utilized for the current study. These included punitive reactions (i.e. “Send my child to his/her room to calm down”; Items 1A, 2F, 3F, 4A, 5D, 6E, 7E, 8E, 9B, and 10C), and minimization reactions (i.e. “Tell my child not to make a big deal out of missing the party”; Items 1D, 2C, 3B, 4C, 5B, 6D, 7D, 8C, 9F, and 10A). The two subscales were moderately correlated ($r = .61, p < .001$), and they were, therefore, aggregated to form a 20-item scale of negative maternal reactions to adolescents’ emotions which yielded high internal reliability ($\alpha = .85$).

**Quality of maternal advice.**

**Observed quality of maternal advice.** Coders rated the quality of maternal advice from the mother-child interaction task on a 5-point scale (Appendix E). Higher scores indicated maternal advice that was characterized by the mother’s encouragement of the child to actively problem-solve, not to avoid anxiety-provoking situations, and to have
confidence in his/her ability to effectively cope with the situation. Lower scores indicated maternal advice that was characterized by the mother’s encouragement of avoidance or lack of encouragement to actively problem-solve and her lack of encouraging the child to have confidence in his/her ability to effectively handle the situation. Interactions were coded independently by two coders. Coders were trained on 10 training videos. One coder served as the primary coder who coded 100% of the video-taped interactions. The second coder served as the reliability coder who independently coded approximately 20% of the interactions. The single measure intraclass correlation coefficient was .81, indicating good inter-rater reliability.

**Problem-focused maternal reactions to children's negative emotions.** Mothers indicated how they would react to their children’s negative emotional expressions on the CCNES (Fabes et al., 1990; details of the measure provided above). The subscale of mothers’ problem-focused reactions to children’s emotional expressions (Appendix D; Items 1C, 2D, 3C, 4F, 5F, 6A, 7B, 8D, 9E, and 10D) was utilized for the current study, indicating the extent to which mothers help their child solve a problem. The subscale included 10 items such as, “Help my child figure out how to get the electronic fixed or replaced” and “Help my child think of constructive things to do when other children tease him/her (e.g. find other things to do).” The problem-focused reactions subscale yielded high internal reliability (α = .86).

**Maternal coping.**
Maternal avoidant coping. Mothers rated the extent to which they utilize avoidant coping strategies on the COPE-revised (Appendix F; Carver et al., 1989). The current study used the denial subscale as an indicator of avoidant coping. The denial subscale consisted of four items (Items 3, 11, 17, and 23). Examples of items from the denial subscale include, “refused to believe that it has happened” and “pretended that it hasn’t really happened.” Items were rated on a Likert scale from 1 (I usually don’t do this at all) to 4 (I usually do this a lot). The items yielded adequate internal reliability (Cronbach’s $\alpha = .72$).

Maternal problem-focused coping. Mothers also indicated the extent to which they used problem-focused coping strategies on the COPE-revised (Carver et al., 1989). The current study used the active coping (Items 2, 10, 19, and 24) and planning (Items 7, 13, 16, and 22) subscales as indicators of maternal use of problem-focused coping strategies. Each subscale contained four items. Examples of items from the active coping subscale included “I concentrated my efforts on doing something about it” and “I took direct action to get around the problem.” Examples of items from the planning subscale included “I made a plan of action” and “I tried to come up with a strategy about what to do.” Items were rated on a Likert scale from 1 (I usually don’t do this at all) to 4 (I usually do this a lot). The active coping and planning subscales were moderately correlated, $r = .61$, $p < .001$, and therefore, were aggregated to form a single, 8-item indicator of problem-focused coping. The items yielded high internal reliability (Cronbach’s $\alpha = .85$).
Adolescents’ social anxiety symptoms.

Adolescents’ social anxiety symptoms were measured with the Social Anxiety Scale for Adolescents (SAS-A; Appendix G; La Greca & Lopez, 1998). The SAS-A is a 22-item (4 filler items) continuous measure of fear of negative evaluation, social avoidance and distress in general, social avoidance specific to new situations or unfamiliar peers, and total social anxiety. The measure included items such as “I worry about what others say about me”, “I get nervous when I meet new people”, and “It’s hard for me to ask others to do things for me” that were rated on a Likert scale from 1 (not at all) to 5 (all the time). The 18 items from the total social anxiety scale generated high internal reliability (Cronbach’s α = .91; all items except 2, 7, 11, and 16). The distribution of the residuals of adolescents’ total social anxiety symptoms was normal and contained no outliers.
Results

The relationships between the demographic variables and the main study variables were first examined to determine whether subsequent analyses would need to control for any demographic variables. Next, the correlations between the predictor variables were examined. Then, correlations between the predictor variables and adolescents’ social anxiety symptoms were inspected. Lastly, all of the predictor variables were entered into a regression analysis predicting adolescents’ social anxiety symptoms to determine the overall contribution of the variables in predicting social anxiety symptoms as well as the unique contribution of each variable while controlling for all other variables in the model.

Demographic and main study variables

The demographic variables included the adolescents’ gender, age, ethnicity as well as maternal years of education. Mothers tended to give higher quality of advice to males ($M = 3.20, SD = .97$) than to females ($M = 2.78, SD = .97$), $t(86) = -2.01, p = .05$. Mothers reported reacting in a problem-focused way to adolescents’ emotional expressions less as adolescents’ age increased, $r = -.25, p = .02$. Mothers with more years of education tended to have adolescents who reported greater attachment security ($r = .28, p = .005$), were observed to be more accepting of adolescents’ expressions of emotion during a discussion of an anxious event with their adolescent ($r = .29, p = .007$), were observed to provide better quality of advice during a discussion of an anxiety-
provoking event with their adolescent \((r = .39, p < .001)\), and used less avoidant coping strategies \((r = -.23, p = .03)\). Subsequent bivariate and partial correlation analyses were performed between the main study variables (see Table 1). Controlling for gender, age, and years of maternal education did not change the results of the regression analysis, therefore, the results from the regression analysis without controlling for the demographic variables are reported for the sake of simplicity. The correlation and regression analyses were also performed separately for male and female adolescents, but because a similar pattern of results emerged for both genders, the analyses reported hereafter are based on the complete sample.
Table 1  
Correlations among the study variables

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<td>2. Observed maternal acceptance of emotion</td>
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<td>3. Negative maternal reactions to adolescents’ emotions</td>
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<td>4. Observed quality of maternal advice</td>
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<td>5. Maternal problem-focused reactions to adolescents’ emotions</td>
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<td>6. Maternal use of avoidant coping</td>
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<td>8. Adolescents’ social anxiety symptoms</td>
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Note. Partial correlations controlling for adolescents’ age and gender and mothers’ years of education are provided in parentheses.

* p < .05. ** p < .01.
Intercorrelations of predictor variables

Overall, the predictor variables were relatively independent of one another. The intercorrelations between the predictor variables ranged from .02 to .35 with a median correlation of .13 (see Table 1). Adolescents with greater attachment security had mothers who used less problem-focused coping when facing their own problems. In addition, mothers who exhibited greater acceptance of adolescents’ emotions during a discussion of an anxiety-provoking event self-reported fewer negative reactions to adolescents’ emotional expressions and were also observed to provide greater quality of advice to adolescents during the interaction. Mothers who reported greater problem-focused reactions to adolescents’ emotional expressions also reported greater use of problem-focused coping when facing their own difficulties.

Correlations between predictor variables and adolescents’ social anxiety symptoms

Attachment security and social anxiety symptoms. As hypothesized, adolescent attachment security was significantly related to adolescents’ social anxiety symptoms (See Table 1). Adolescents who reported lower attachment security also reported experiencing greater social anxiety symptoms.

Maternal reactions to adolescents’ emotional expressions and social anxiety symptoms. Contrary to expectations, observed maternal acceptance of adolescents’ emotional expressions was not significantly related to adolescents’ social anxiety symptoms. Similarly, self-reported negative maternal reactions to adolescents’ emotional
expressions, such as punitive and dismissing reactions, were not significantly related to adolescents’ social anxiety symptoms.

**Quality of maternal advice and social anxiety symptoms.** Although, the observed quality of advice mothers provided to adolescents during the in-lab anxiety-provoking discussion was not significantly related to adolescents’ social anxiety symptoms, mothers’ self reports of increased use of problem-focused reactions to adolescents’ emotions were associated with fewer social anxiety symptoms reported by adolescents.

**Maternal coping and social anxiety symptoms.** Contrary to the hypotheses, neither maternal use of avoidant coping strategies nor maternal use of problem-focused coping strategies were significantly related to adolescents’ social anxiety symptoms.

**Overall contribution of predictor variables to adolescents’ social anxiety symptoms**

As shown in Table 2, the regression model including all of the predictor variables explained a significant proportion of variance in adolescents’ social anxiety symptoms, $R^2 = .17$, Adjusted $R^2 = .10$, $F(7, 77) = 2.28$, $p = .04$. The regression analysis revealed that maternal problem-focused reactions to adolescents’ negative emotional expressions was the only significant unique predictor of adolescents’ social anxiety symptoms. For every one standard deviation increase in maternal problem-focused reactions to adolescents’ emotions, there was a .29 predicted standard deviation decrease in adolescents’ social anxiety symptoms, $p = .01$. 
Table 2

*Summary of regression analysis predicting adolescents’ social anxiety symptoms*

<table>
<thead>
<tr>
<th>Family Factors</th>
<th>B (SE B)</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment security</td>
<td>-5.23 (2.81)</td>
<td>-.21</td>
</tr>
<tr>
<td>Maternal reactions to adolescents’ emotional expressions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observed maternal acceptance of emotion</td>
<td>1.42 (1.42)</td>
<td>.12</td>
</tr>
<tr>
<td>Negative maternal reactions to adolescents’ emotions</td>
<td>.57 (1.71)</td>
<td>.04</td>
</tr>
<tr>
<td>Quality of Maternal Advice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observed quality of maternal advice</td>
<td>.22 (1.36)</td>
<td>.02</td>
</tr>
<tr>
<td>Maternal problem-focused reactions to adolescents’ emotions</td>
<td>-5.16 (1.94)</td>
<td>-.29*</td>
</tr>
<tr>
<td>Maternal Coping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal use of avoidant coping</td>
<td>-.22 (.65)</td>
<td>-.04</td>
</tr>
<tr>
<td>Maternal use of problem-focused coping</td>
<td>.43 (.27)</td>
<td>.18</td>
</tr>
</tbody>
</table>

* p < .05.
Discussion

In summary, more socially anxious adolescents were less securely attached and had mothers who did not often respond to their emotional expressions in a problem-focused way. In addition, mothers’ problem-focused reactions to adolescents’ emotional expressions was the only unique predictor of adolescents’ social anxiety symptoms, when controlling for all other predictor variables. Overall, attachment security, maternal reactions to adolescents’ emotions, quality of maternal advice, and maternal coping explained 10% of the variance in adolescents’ social anxiety symptoms, consistent with previous literature that has shown a relationship of small magnitude between parenting behaviors and child anxiety (McLeod et al., 2007).

The finding that more socially anxious adolescents reported less attachment security is consistent with previous theorizing and empirical evidence. The results from the current study provided support for Bowlby’s (1982) theory that children who are insecurely attached and uncertain about the availability and responsiveness of their caregivers will experience greater levels of anxiety. Previous studies have also found evidence supporting the link between insecure attachment and anxiety in youth (Colonessi et al., 2011; Roelofs et al., 2006; van Brakel et al., 2006). Additionally, the current findings add to the small literature that has examined and found support for the relationship between insecure attachment and social anxiety symptoms specifically in children (Bohlin et al., 2000; Brumariu & Kerns, 2008) and extends this literature by
providing evidence for this linkage in an adolescent sample. Also in line with the hypotheses, quality of advice provided to adolescents was related to social anxiety symptoms, although this was true only for self-reported but not observed quality of advice. Mothers who reported reacting to adolescents’ negative emotional expressions by helping their child come up with solutions to the problem tended to have adolescents who experienced fewer social anxiety symptoms. These results are consistent with previous research that has found that parents who provided advice suggesting problem-solving rather than avoidance were more likely to have children with lower levels of anxiety (Barrett et al., 1996; Dadds et al., 1996). Nevertheless, in the current study, observed maternal quality of advice was not related to adolescents’ social anxiety symptoms. It is possible that the questionnaire on which mothers reported their reactions to adolescents’ negative emotional expressions (the CCNES) captured something important about the advice mothers provided that was overlooked in the observational coding. For example, the items on the problem-focused reactions subscale of the CCNES included the wording “help my child…” suggesting a collaborative effort between the mother and adolescent to problem-solve the upsetting situation, whereas the observational coding of maternal quality of advice focused primarily on the content of the mothers’ suggestions to the adolescent on how to handle an anxiety-provoking situation rather than a joint effort. Future research utilizing observational coding could attempt to analyze the quality of maternal advice in the context of the dyad’s collaborative effort to generate solutions to a distressing situation. An alternative explanation is that the observed quality of maternal advice was not associated with adolescents’ social anxiety symptoms, because the quality
of advice that mothers provided to their children during the in-lab interaction may have been affected by the artificiality of the lab setting and thus may not have been an accurate representation of the advice they typically provide to their adolescent when faced with a problem.

Contrary to hypotheses, greater maternal acceptance of adolescents’ emotions, measured via observational coding and self-report, was not associated with fewer social anxiety symptoms experienced by adolescents. This finding was somewhat surprising in that several previous studies (Dadds et al., 1996; Hudson et al., 2008; Suveg et al., 2005) have found evidence for the relationship between maternal acceptance of children’s emotions and anxiety in youth. It is possible that mothers were not accurate reporters of their negative reactions to adolescents’ emotional expressions, because they did not want to admit these types of negative reactions to the research team. Indeed, the distribution of negative maternal reactions to adolescents’ emotions was positively skewed, indicating that the majority of mothers had scores on the lower end of this scale. On the other hand, it may be that adolescents’ perceptions of parental reactions to their emotional expressions, rather than maternal perceptions or the perspective of outside observers, is the more important contributor to adolescents’ social anxiety symptoms. Bogels et al. (2001) found that children’s reports of parents’ rearing practices were not highly correlated with mothers’ or fathers’ reports of their own parental rearing practices. It may be that adolescents from the current study would have reported differently than mothers about their parents’ reactions to their emotional expressions. Future research should
assess adolescents’ perceptions of their parents’ acceptance of their emotions to determine if their perceptions have a greater impact on social anxiety symptoms.

It is also possible that the measurements of maternal acceptance of adolescents’ emotions from the current study did not adequately capture maternal acceptance expressed in a sensitive and appropriate way. Degnan and Fox (2007) suggested mothers’ overly solicitous behaviors, where mothers are overly and not appropriately sensitive to children’s expressions of anxiety, may serve to maintain children’s anxious behavior, whereas maternal sensitivity and acceptance that is expressed appropriately may lead to more socially adaptive behavior. For example, mothers who attempt to control their child’s experience of anxiety, rather than promote the child’s confidence and decrease negative affect, may maintain the child’s anxiety rather than decrease it (Degnan & Fox, 2007). Kerns, Siener, and Brumariu (2011) found that greater maternal sensitivity was associated with greater anxiety symptoms in children, and they similarly theorized that one aspect of maternal sensitivity, which does not overlap with attachment security, may reflect an inappropriate overinvolvement in the child’s emotions. The researchers (Kerns et al., 2011) suggested that maternal sensitivity that reflects inappropriate overinvolvement may be more likely to be related to the child’s anxiety than maternal involvement that is expressed sensitively and appropriately. Previous literature has found that mothers who were overly warm or overly solicitous had children who maintained their behavioral inhibition across development (Degnan, Henderson, Fox, & Rubin, 2008; Rubin, Burgess, & Hastings, 2002). Future research could attempt to distinguish between
appropriate maternal acceptance and overly solicitous maternal behavior and examine each of their respective associations with social anxiety symptoms.

Contrary to what was expected, maternal coping was not related to adolescents’ social anxiety symptoms. Although not statistically significant, maternal problem-focused coping was positively related to adolescents’ social anxiety symptoms \((p = .07)\). It may be that mothers who reported greater use of problem-focused coping strategies (e.g. active coping and planning) were very focused on their own personal problems and planning what to do about them and were less available or less attentive to their adolescents. Therefore, although they were modeling active coping strategies, these mothers may not have been actively involved and sensitive in helping their adolescents cope with the adolescents’ difficulties, which in turn could contribute to adolescents’ social anxiety symptoms. Future research should attempt to parse out whether mothers’ use of problem-focused coping may protect adolescents against social anxiety, if their own use of problem-focused coping does not interfere with their maternal sensitivity. Maternal use of avoidant coping also was not related to social anxiety symptoms in adolescence, contrary to previous literature that has found evidence for the relationship between parents’ advocacy of avoidant coping and child anxiety (Barrett et al., 1996; Chorpita et al., 1996; Dadds et al., 1996). Although the current study focused on maternal factors associated with adolescents’ social anxiety symptoms, the larger study also included measures of the adolescents’ coping strategies, and analyses of additional data revealed that maternal use of avoidant coping was positively related to adolescents’ use of avoidant coping. Additionally, another project from the current study sample found that adolescent’s use
of avoidant coping was positively associated with their social anxiety symptoms (Mathews & Kerns, 2012, April). It is possible that the relation between mothers’ use of avoidant coping strategies and adolescents’ social anxiety symptoms is mediated by adolescents’ use of avoidant coping strategies. Future research could examine the relationship between maternal avoidant coping and adolescents’ social anxiety symptoms, with the possibility of adolescents’ avoidant coping as a mediator of the relationship.

Another explanation for the non-significant association between maternal avoidant coping and adolescents’ social anxiety symptoms is that mothers may not have been accurate reporters of their own use of avoidant coping strategies or that social desirability influenced mothers’ responses to the items on the denial scale of the COPE-Revised. The four items on the Denial subscale of the COPE-Revised (“I said to myself this isn’t real,” “I refused to believe that it has happened,” “I pretended that it hasn’t really happened,” and “I acted as though it hasn’t even happened”) were very extreme, and the variable was highly positively skewed, indicating that the majority of mothers did not report often using avoidance as a coping strategy when faced with a personal problem. Future research could attempt to assess parents’ avoidant coping strategies in a less face valid way as to prevent demand characteristics. In addition, future research could include other assessment methods of maternal coping strategies, such as adolescents’ reports or observational indicators of parental coping strategies.

Although many of the hypotheses were not supported, the current study had several strengths. First, the current study examined more specific aspects of parenting (i.e. attachment security, acceptance of emotions, quality of advice, coping), going
beyond the broad constructs of parental warmth and control, as suggested by the conclusions of the meta-analysis performed by McLeod et al. (2007). Second, the practice of grouping children from different developmental periods together has been a common trend in past research. The current study was more developmentally sensitive and examined youth in early adolescence between the ages of 11 and 14. In addition, previous studies have often investigated the relationship between parental variables and overall anxiety, grouping children with different types of anxiety symptoms and disorders together, whereas social anxiety symptoms were the specific focus of the current study. Lastly, the current study utilized a variety of assessment methods, including both observational and self-report measures.

Although the current study had several strengths, there were also various limitations. The major limitations of the current study were the lack of adolescents’ reports on their perceptions of parental behaviors and the correlational nature of the data. The addition of adolescents’ perceptions of parental behaviors would have provided valuable information and may have illuminated the greater importance of adolescents’ perceptions of parental behaviors, compared to maternal reports and observations of maternal behaviors, for social anxiety symptoms. Furthermore, the current study relied solely on correlational data, and therefore, the directionality between the familial factors and adolescents’ social anxiety symptoms could not be determined.

In addition to the suggestions for future research provided above, future studies should also investigate how additional specific parental variables are related to adolescents’ social anxiety symptoms. For example, it may be that how parents discuss,
encourage, and provide opportunities for social relationships with adolescents may be particularly important for social anxiety symptoms. Rather than focusing on how parents generally respond to adolescents’ emotional expressions or provide advice for general anxiety-provoking events, future research may aim to focus on parent-adolescent interactions as they relate to discussion of social events or a social context. Future research may also benefit from utilizing a daily sampling strategy for data collection. This may yield data that provides a more accurate representation of the parent-adolescent dyad as they behave in their everyday lives. 

The current study identified adolescents’ attachment security and maternal problem-focused reactions to adolescents’ emotional expressions as important factors relating to adolescents social anxiety symptoms, and these findings may have implications for the treatment of adolescents with social anxiety symptoms. Current treatments for anxiety in childhood and adolescence, such as the cognitive-behavioral treatment program called Coping Cat (Kendall, Kane, Howard, & Siqueland, 1990), focus on increasing emotional awareness in the child and modifying children’s maladaptive cognitions and behaviors in anxiety-provoking situations and parents are included in only two sessions. The Coping Cat treatment program may more effectively treat children’s and adolescents’ anxiety by incorporating psychoeducation and skills training for parents. Parents could be informed about the importance of being available and responsive to their children as well as reacting to children’s negative emotional expressions in a more problem-focused way. Treatment for children’s anxiety could also integrate skills training for parents to learn and practice these specific parenting behaviors.
Although the current study focused primarily on family factors that may contribute to adolescents’ social anxiety symptoms, there are several other potential contributing factors that were not investigated. Adolescents’ social anxiety symptoms may also be influenced by biological processes (e.g. behavioral inhibition, genetics, and psychophysiology), behavioral learning processes (e.g. conditioning events during social interactions and maladaptive cognitions), and other social and interpersonal processes (i.e. negative experiences with peers; Weems & Silverman, 2008). A developmental psychopathology perspective indicates that many different factors, independently and in combination, contribute to the development of psychopathology, and therefore, it is likely that various processes contribute to social anxiety in adolescence. Additional research is needed on how each of these processes may contribute to the development and maintenance of social anxiety.
References


Appendices

Appendix A

Anxiety-provoking event discussion

Instructions

Please think of a recent time when your child felt anxious or nervous about something.

We’d like the two of you to discuss the situation by answering the questions listed below.

You will be given 6 minutes to discuss these questions. The experimenter will come back into the room after 6 minutes has passed.

1. What happened, that made your child feel anxious or nervous?

2. How were each of you feeling about the situation?

3. What, if anything, did you each of you do?

4. What, if anything, would you each do differently if the situation happened again
Appendix B

Security Scale

Instructions to Child:

This questionnaire asks about what you are like with your mother – like how you act and feel around her. Before we get to those questions, let’s try a practice question. Each question talks about two kinds of kids, and we want to know which kids are most like you. Decide first whether you are more like the kids on the left side or more like the kids on the right side, then decide whether that is sort of true for you, or really true for you, and circle that phrase. For each question you will only circle one answer.

Practice Question:

Some kids would rather play sports in their spare time.  BUT  Other kids would rather watch T.V.

Really true for me  Sort of true for me  Sort of true for me  Really true for me
Now we are going to ask you question about you and your mom, or whoever you think of as your “mom.”

I am filling this out about my (circle one):  mother  step-mother  grandmother  other:_____________

1. Some kids find it easy to trust their mom BUT other kids are not sure if they can trust their mom.

2. Some kids feel like their mom butts in a lot when they are trying to do things BUT other kids feel like their mom lets them do things on their own.

3. Some kids find it easy to count on their mom for help BUT other kids think it’s hard to count on their mom.

4. Some kids think their mom spends enough time with them BUT other kids think their mom does not spend enough time with them.

5. Some kids feel more confident trying new things after talking to their mom about it BUT other kids do not feel more confident trying new things after talking to their mom about it.

6. Some kids do not really like telling their mom what they are thinking or feeling BUT other kids do like telling their mom what they are thinking or feeling.

7. Some kids do not really need their mom much BUT other kids need their mom for a lot of things.
8. Some kids are sure their mom wants to hear what they think, even when they disagree with their mom BUT other kids are not sure if their mom wants to hear what they think.

9. Some kids wish they were closer to their mom BUT other kids are happy with how close they are to their mom.

10. Some kids worry that their mom does not really love them BUT other kids are really sure that their mom loves them.

11. Some kids do not feel like their mom encourages them when they try new things BUT other kids do feel like their mom encourages them when they try new things.

12. Some kids feel like their mom really understands them BUT other kids feel like their mom does not really understand them.

13. Some kids are really sure their mom would not leave them BUT other kids sometimes wonder if their mom might leave them.

14. Some kids feel like their mom lets them decide enough things by themselves BUT other kids feel like their mom does not let them make enough decisions by themselves.

15. Some kids worry that their mom might not be there when they need her BUT other kids are sure their mom will be there when they need her.
16. Some kids think their mom does not listen to them \textbf{BUT} other kids do think their mom listens to them.

17. Some kids think their mom encourages them to be themselves \textbf{BUT} other kids do not think their mom encourages them to be themselves.

18. Some kids go to their mom when they are upset \textbf{BUT} other kids do not go to their mom when they are upset.

19. Some kids wish their mom would help them more with their problems \textbf{BUT} other kids think their mom helps them enough.

20. Some kids are really sure their mom is proud of them \textbf{BUT} other kids are not sure if their mom is proud of them.

21. Some kids feel better when their mom is around \textbf{BUT} other kids do not feel better when their mom is around.
Appendix C

Maternal acceptance of children’s emotions coding guide

**Mothers’ Openness to/Acceptance of Emotion**

This code assesses the mothers’ openness to and acceptance of emotions when discussing an anxiety-provoking event. Openness/acceptance is based on the extent to which the mother attends to and/or validates the child’s emotions, initiates discussion of emotions, and creates a general climate of emotional openness through her attitude towards and encouragement of emotions, as well as reactions to the child’s emotional expressions.

**5 = Very open to and accepting of emotions**

The mother responds to the child’s emotional expressions with openness and acceptance, evident in her facial expressions, body language, and verbalizations. The mother listens to the child as he/she speaks and attends to, labels, and validates the child’s emotions. If the child does not explicitly verbalize his/her feelings, the mother initiates discussion of emotions and may ask the child to discuss how he/she felt about the situation. Throughout the entire interaction, there is a general climate of openness to and acceptance of emotion created by the mother’s attitude towards and encouragement of emotions as well as reactions to the child’s emotional expressions.
4 = Open to and accepting of emotions

Most of the interaction is characterized by openness to and acceptance of emotion, although the mother’s openness to and acceptance of emotions is not so exceptional as to earn a score of 5. There may be less elaboration or encouragement by the mother.

3 = Moderately open to and accepting of emotions

The mother does not exhibit any overtly negative attitudes or behaviors, but she also does not elaborate on emotions or encourage emotional discussion or expression that would indicate explicit efforts to create a climate of openness to and acceptance of emotions.

2 = Not open to and accepting of emotions

There are instances when the mother listens to the child and attends to, labels, and validates the child’s emotions, but there also instances when she may ignore what the child has to say (not respond to, dismiss, or interrupt the child) or minimize the child’s feelings. She may also ignore emotions expressed by the child or fail to validate those emotional expressions. The mother may initiate some discussion of emotion or ask the child how he/she felt in some instances, but she may fail to do so in other instances. The mother may also ask appropriate questions, but the way she asks the child questions (i.e. close-ended questions, “drilling” the child for info) does not create a climate of openness and acceptance.

1 = Lack of openness to and acceptance of emotions
Most of the interaction is characterized by lack of openness to and acceptance of emotion, however there are some instances which are not. The mother creates an overall climate of being closed-off to and non-accepting of emotion. The mother does not really listen to the child as he/she speaks, and may ignore what the child says or interrupt the child while speaking. If the child does not explicitly verbalize his/her feelings, the mother makes no attempt to initiate discussion of emotions.
Appendix D

Coping with Children’s Negative Emotions Scale

**Parent Attitude/Behavior Questionnaire**

Instructions: In the following items, please indicate on a scale from 1 (very unlikely) to 7 (very likely) the likelihood that you would respond in the ways listed for each item. Please read each item carefully and respond as honestly and sincerely as you can. For each response, please circle a number from 1-7.

1. If my child becomes disappointed or upset because he/she cannot go to a friend’s party, I would:

   a. Send my child to his/her room to calm down
   b. Feel uneasy or uncomfortable
   c. Help my child think about ways that he/she can still be with friends (e.g. invite some friends over another time)
   d. Tell my child not to make a big deal out of missing the party
   e. Allow my child to express his/her feelings
   f. Soothe my child and do something fun with him/her to make him/her feel better about missing the party
2. If my child breaks an expensive electronic item (i.e. IPod, Playstation, computer, etc.) and then gets sad or upset, I would:

   a. Remain calm and not let myself get anxious
   1 2 3 4 5 6 7
   b. Show my child I understand how he/she is feeling and comfort him/her
   1 2 3 4 5 6 7
   c. Tell my child that he/she is over-reacting
   1 2 3 4 5 6 7
   d. Help my child figure out how to get the electronic fixed or replaced
   1 2 3 4 5 6 7
   e. Tell my child it's ok to be upset
   1 2 3 4 5 6 7
   f. Tell my child to stop being upset or he/she won’t be allowed to use his/her electronic again any time soon
   1 2 3 4 5 6 7

3. If my child loses some prized possession and gets upset, I would:

   a. Become upset or anxious
   1 2 3 4 5 6 7
   b. Tell my child that he/she blowing things out of proportion
   1 2 3 4 5 6 7
   c. Help my child think of places he/she hasn’t looked yet
   1 2 3 4 5 6 7
   d. Be available for my child to talk to and to provide comfort
   1 2 3 4 5 6 7
   e. Tell him/her it’s completely understandable that he/she is upset
   1 2 3 4 5 6 7
   f. Tell him/her that’s what happens when you’re not careful
   1 2 3 4 5 6 7
4. If my child is afraid of injections and becomes anxious while waiting his/her turn to get a shot, I would:

a. Tell him/her to shape up or he/she won’t be allowed to do something he/she likes to do (e.g. watch TV)  
   1 2 3 4 5 6 7
b. Tell my child it’s ok to be afraid or anxious  
   1 2 3 4 5 6 7
c. Tell my child not to make a big deal of the shot  
   1 2 3 4 5 6 7
d. Feel embarrassed or upset by my child’s fearful reaction  
   1 2 3 4 5 6 7
e. Comfort him/her before and after the shot  
   1 2 3 4 5 6 7
f. Talk to my child about ways to make it hurt less (e.g. relaxing so it won’t hurt or taking deep breaths)  
   1 2 3 4 5 6 7

5. If my child is participating in an activity with his/her friends and makes a mistake and looks embarrassed, I would:

a. Be available if my child wanted to talk about it or needed comfort  
   1 2 3 4 5 6 7
b. Tell my child that he/she is over-reacting  
   1 2 3 4 5 6 7
c. Feel uncomfortable and embarrassed myself  
   1 2 3 4 5 6 7
d. Tell my child to straighten up or he/she won’t be allowed to spend time with friends again anytime soon  
   1 2 3 4 5 6 7
e. Allow my child to express feelings of embarrassment  
   1 2 3 4 5 6 7
f. Help my child identify ways to handle embarrassing situations  
   1 2 3 4 5 6 7
6. If my child is about to appear in a recital or sports activity and becomes visibly nervous about people watching him/her, I would:

a. Help my child think of things that he/she could do to get ready for his/her turn (e.g. to do some warm-ups and not to look at the audience) 1 2 3 4 5 6 7
b. Be there to help soothe my child’s nerves 1 2 3 4 5 6 7
c. Remain calm and not get nervous myself 1 2 3 4 5 6 7
d. Tell my child that he/she is being a baby about it 1 2 3 4 5 6 7
e. Tell my child that if he/she doesn’t calm down he/she won’t be allowed to do anything fun when we get home 1 2 3 4 5 6 7
f. Tell him/her it’s ok to feel nervous 1 2 3 4 5 6 7

7. If my child receives a low grade on an important test at school and looks obviously disappointed, I would:

a. Allow my child to express his/her disappointment 1 2 3 4 5 6 7
b. Help my child think of better studying and test-taking strategies 1 2 3 4 5 6 7
c. NOT feel anxious or uncertain 1 2 3 4 5 6 7
d. Tell my child that he/she is over-reacting 1 2 3 4 5 6 7
e. Scold my child for not trying/studying harder 1 2 3 4 5 6 7
f. Be available to listen to how my child feels and remind him/her of other things they’ve done well in the past 1 2 3 4 5 6 7
8. If my child is frightened and can’t go to sleep after watching a scary movie, I would:

a. Listen as my child talks about what scared him/her 1 2 3 4 5 6 7
b. Get upset or feel unsettled by my child’s distress 1 2 3 4 5 6 7
c. Tell my child to stop being a baby about it 1 2 3 4 5 6 7
d. Help my child think of something to do so that he/she can
   get to sleep (e.g. leave the lights on) 1 2 3 4 5 6 7
e. Tell him/her to go to bed or he/she won’t be allowed to watch
   anymore movies 1 2 3 4 5 6 7
f. Do something to soothe my child (e.g. talk about a happy memory
   or listen to calming music) 1 2 3 4 5 6 7

9. If my child is at a social event and appears sad or anxious because other kids
   exclude him/her from the group, I would:

a. NOT get upset myself 1 2 3 4 5 6 7
b. Tell my child that if he/she gets upset and “makes a scene”
   then we’ll have to go home right away 1 2 3 4 5 6 7
c. Tell my child it’s ok to feel sad or anxious 1 2 3 4 5 6 7
d. Let me child know I am available if he/she wants to talk or that
   we can go home soon if he/she is uncomfortable 1 2 3 4 5 6 7
e. Help my child think of ways to approach the other kids 1 2 3 4 5 6 7
10. If my child is insulted or called names by other kids, and my child becomes visibly distressed, I would:

a. Tell me child not to make a big deal out of it 1 2 3 4 5 6 7

b. Feel distressed myself 1 2 3 4 5 6 7

c. Tell my child to calm down or she/he won’t be allowed to hang out with friends again anytime soon 1 2 3 4 5 6 7

d. Help my child think of constructive things to do when other children tease him/her (e.g. find other things to do) 1 2 3 4 5 6 7

e. Comfort him/her and point out that sometimes kids say mean things that aren’t true 1 2 3 4 5 6 7

f. Listen as he/she talked about how it hurts to be teased 1 2 3 4 5 6
Appendix E

Quality of maternal advice coding guide

**Quality of Maternal Advice**

This code assesses the quality of advice given by the mother to the child when discussing an anxiety-provoking event. The quality of advice rating is based on the degree to which the solutions are realistic, geared towards problem solving (rather than avoidance), and encouraging the child to be active/engaged in handling the situation.

**5 = very good quality of advice**

The mother encourages the child to actively problem solve as a way of coping with anxiety and helps/encourages the child to come up with proactive, realistic solutions to the problem or validates his/her decisions in the past when coping with an anxiety-provoking situation. The mother may reframe the situation that makes it appear as more benign and less threatening. She also encourages the child to focus on goals, strategies for, and potential positive outcomes of the situation. The mother encourages the child to have confidence in his/her ability to effectively cope with the anxiety-provoking situation.

**4 = good quality of advice**

Overall, the quality of advice the mother offers to the child is good, but it may not be as elaborate or consistent to earn a score of 5. There may be an instant or two when the
mother does not encourage problem-solving or confidence in the child and/or offers avoidance as a solution.

3 = average quality of advice

The mother may briefly encourage the child to solve the problem or think about positive outcomes to the problem. However, she may not elaborate on how to use problem solving as a way of coping or help the child come up with proactive solutions to the problem. The mother may not encourage the child to have confidence in his/her ability to cope with anxiety-provoking situations or to regulate his/her emotions.

2 = poor quality of advice

The mother does not encourage the child to problem solve or help the child come up with realistic, proactive solutions to the problem. She may avoid thinking or talking about the problem.

1 = very poor quality of advice

The mother may suggest avoiding the situation as a way of coping or responding in an aggressive way. She also may not validate the child’s past coping skills. The mother focuses on the negative outcomes of the anxiety-provoking situation, does not mention any positive outcomes, and/or does not reframe the situation to offer a benign interpretation. The mother does not encourage and may even discourage the child to have
confidence in his/her ability to effectively deal with the situation. The mother may also deny that the child encountered a problem or that the situation was anxiety-provoking.
Appendix F

COPE-revised

**COPE**

We are interested in how people respond when they confront difficult or stressful events in their lives. This questionnaire asks you to think of a time in the last two months when you felt depressed, anxious or upset.

What happened? (Short description)

Where were you?

Who was with you?

How were you feeling at the time? (Pick 2 or 3 words that describe how you felt)

Why did you pick this event?

Now, thinking about this event, and what you did, respond to each of the following items by circling one number. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU—not what you think "most people" would say or do. Indicate what YOU did in this situation.

1 = I usually don't do this at all

2 = I usually do this a little bit
3 = I usually do this a medium amount
4 = I usually do this a lot

1. I tried to get advice from someone about what to do.  
2. I concentrated my efforts on doing something about it.  
3. I said to myself "this isn't real."  
4. I admitted to myself that I can't deal with it, and quit trying.  
5. I discussed my feelings with someone.  
6. I talked to someone to find out more about the situation.  
7. I made a plan of action.  
8. I tried to get emotional support from friends or relatives.  
9. I just gave up trying to reach my goal.  
10. I took additional action to try to get rid of the problem.  
11. I refused to believe that it has happened.  
12. I talked to someone who could do something concrete about the problem.  
13. I tried to come up with a strategy about what to do.  
15. I gave up the attempt to get what I want.  
16. I thought about how I might best handle the problem.  
17. I pretended that it hasn't really happened.  
18. I asked people who have had similar experiences what
they did.

19. I took direct action to get around the problem.

20. I reduced the amount of effort I'm putting into solving the problem.

21. I talked to someone about how I feel.

22. I thought hard about what steps to take.

23. I acted as though it hasn't even happened.

24. I did what had to be done, one step at a time.
Appendix G

Social Anxiety Scale for Adolescents

SAS-A

Please read each of these sentences. These sentences say things that you may or may not agree with. Think about if they are true for you. Then, circle one number (1, 2, 3, 4, or 5) that describes how much you think that each sentence is true for you.

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Hardly Ever</th>
<th>Sometimes</th>
<th>Most of the time</th>
<th>All the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I worry about doing something new in front of others.
   1  2  3  4  5

2. I like to read.
   1  2  3  4  5

3. I worry about being teased.
   1  2  3  4  5

4. I feel shy around people I don’t know.
   1  2  3  4  5

5. I only talk to people I know really well.
   1  2  3  4  5
6. I feel that peers talk about me behind my back.
   1 2 3 4 5
7. I like to play sports.
   1 2 3 4 5
8. I worry about what others think of me.
   1 2 3 4 5
9. I’m afraid that others will not like me.
   1 2 3 4 5
10. I get nervous when I talk to peers I don’t know very well.
    1 2 3 4 5
11. I like to play with other kids.
    1 2 3 4 5
12. I worry about what others say about me.
    1 2 3 4 5
13. I get nervous when I meet new people.
    1 2 3 4 5
14. I worry that others don’t like me.
    1 2 3 4 5
15. I am quiet when I’m with a group of people.
    1 2 3 4 5
16. I like to be by myself.
    1 2 3 4 5
17. I feel that others make fun of me.
   1 2 3 4 5

18. If I get into an argument, I worry that the other person will not like me.
   1 2 3 4 5

19. I’m afraid to invite others to do things with me because they might say no.
   1 2 3 4 5

20. I feel nervous when I’m around certain people.
   1 2 3 4 5

21. I feel shy even with peers I know very well.
   1 2 3 4 5

22. It’s hard for me to ask others to do things for me.
   1 2 3 4 5