Parental Meta-Emotion and Temperament Predict Coping Skills in Early Adolescence

Daniel G. Lagacé-Séguin and Angela Gionet

Mount Saint Vincent University, Halifax, Nova Scotia, Canada

ABSTRACT

The purpose of the current study was to explore if parental emotional styles and adolescent temperament could predict various patterns of coping in adolescence. Previous research studies have shown significant correlations between parenting styles and aspects of child development, such as the ability to regulate emotions and cope with stressful situations. However, within the context of parental meta-emotion, previous research has not directly focused on how parental meta-emotion predicts coping skills in children and how temperament may moderate this association. In the current study, 37 students (between the ages of 10 and 13 years) and their parents completed a number of questionnaires to assess parental meta-emotion, adolescent temperament, and coping skills. Many significant interactions were found and are discussed in terms of the types of coping strategies that adolescents employ and how the strategies relate to their own temperamental dispositions and parents' parenting styles. From this, implications and future directions are provided.

INTRODUCTION

It is clear that knowledge about the development of coping mechanisms in childhood and adolescence is essential to understanding and helping youth. Theories of coping have greatly evolved in the past two decades, yet there is still a somewhat limited understanding of how coping skills develop and the factors associated with the ability to cope. Until recently, the conceptualization of how children and adolescents cope with

Correspondence concerning this article can be sent to Daniel G. Lagacé-Séguin at daniel.lagace-seguin@msvu.ca or at Mount Saint Vincent University, Department of Psychology, 166 Bedford Hwy, Halifax, Nova Scotia, Canada.

challenging situations was largely based on models of coping in adults (Compas, Connor-Smith, Saltzman, Harding Thomsen and Wadsworth, 2001). However, researchers have begun to recognize that personality and contextual factors have implications in child and adolescent coping skills. To this end, the purpose of this study was to examine the prediction of coping in adolescence from ratings of parental emotional styles and temperament.

Temperament

In a longitudinal analysis initiated by Thomas and Chess in 1956, individuals were assessed from infancy to adulthood to investigate the idea of temperament and how an individual's temperament can relate to later development. Based on information from this study, Thomas and Chess (1977) identified nine dimensions of temperament (i.e., activity level, rythmicity, distractibility, approach/withdrawal, adaptability, attention span and persistence, intensity of reaction, threshold of responsiveness, and quality of mood) which clustered together to form three types of "children"; 1) the easy child, 2) the difficult child, and 3) the slow-to-warm-up child.

Thomas and Chess (1977) postulated that temperament is not fixed and unchangeable but rather that environmental circumstances had the potential to alter children's emotional styles considerably. This was further explained through their "goodness-of-fit" model, which described how a child's temperament combines with environmental pressures to affect future development. There has been a long-standing debate about the bi-directionality of the parent-child relationship. The goodness of fit theory is one example that has been used to describe how well a parent's behaviors relate to a child's temperament (e.g., Lagacé-Séguin and Coplan, 2005; Thomas and Chess, 1977). Several studies have found that parents of difficult children are more likely to react negatively towards their child, unlike parents of easy children who tend to be more positive and responsive (Lee and Bates, 1985, Patterson, 1986). According to Thomas and Chess (1977) the temperament of a child is likely to evoke particular responses from parents and that these responses can create "self-fulfilling reinforcements" which have the ability to augment particular temperamental characteristics of a child.

But, is there a relationship between temperament and children's ability to cope in stressful situations? Some researchers have found empirical evidence that children may be biologically

predisposed to have a low threshold for stress (e.g., Kagen, Reznick and Snidman, 1988; Miyake, Chen and Campos, 1985). In addition, other researchers have reported that temperament is an important variable in predicting how well a child is able to cope. In fact, Wyman, Cowen, Work and Parker (1991) found that stress resilient children were more likely to be described by their parents as easy going rather than difficult children.

Research projects conducted by Rothbart and colleagues (Capaldi and Rothbart, 1992; Ellis and Rothbart, 2001) have been used to create and revise a measure designed to assess aspects of temperament related to self-regulation in adolescents. These studies have revealed ten aspects of temperament that load onto four main factors according to exploratory factor analyses. For the purposes of this project, this four factor model consisting of effortful control (i.e., aspects of attention, activation control, and inhibitory control), negative affectivity (i.e., frustration), surgency (i.e., high intensity pleasure, low levels of shyness, and low levels of fear) and affiliativeness (i.e., desire for closeness) will be utilized. Of course, temperament is not the only factor that is associated with coping skills. Other factors, external to children, may also be associated with coping ability.

Parenting Styles

For many decades, researchers in the field of child development have explored how parenting styles, beliefs, and goals may be associated with childhood adjustment (Baumrind, 1967, 1971; Dix, 1992; Hastings, 1995). More recently, researchers have begun to investigate the importance of parental emotional styles on childhood development (e.g., Gottman and Declaire, 1997; Gottman, Fainsilber-Katz and Hooven, 1996; Lagacé-Séguin and Coplan, 2005). At the crux of this research is Parental Meta-Emotional Philosophy.

Parental Meta-Emotion Philosophy According to Gottman *et al*. (1996) parental meta-emotion philosophy refers to "an organized set of feelings and thoughts about one's own emotions and one's children's emotions" (p. 243). Gottman and colleagues (1996) have postulated that parental meta-emotion is related to parental negative affect and cultivates positive parenting. Furthermore, it is associated to children's regulatory physiology, emotion regulation, and academic and social achievement (Gottman, *et al*., 1996).

Meta-emotion philosophy is the basis of at least two types of parental emotional styles: emotion-coaching and emotion-dismissing (Gottman, *et al.*, 1996). Parents who act as emotion coaches are individuals who: 1) are aware of their own and their child's positive and negative emotions; 2) accept emotions as tools to promote learning; 3) are good emotion regulators; and 4) can verbally express their emotional states. In this respect, these parents accept the negative emotions of their children and perceive these instances as an opportunity for intimacy or teaching their child. When a child is experiencing negative emotions, these parents will help their child verbally label what they are feeling, validate their child's emotions, and participate in problem solving with the child regarding the situation that led to the negative emotion (Gottman, *et al.*, 1996). Emotion-coached children have been found to have high levels of self-esteem and to be successful in both social and academic situations (Gottman and Declaire, 1997; Katz, Wilson and Gottman, 1999). In terms of emotions, these children are able to trust their feelings, regulate their emotions, and are also able to effectively employ adaptive problem-solving skills (Gottman and Declaire, 1997). These children have also been found to be superior, as compared to their peers, in their ability to successfully socialize with peers (Gottman, *et al.*, 1996).

Alternatively, parents who espouse an emotion-dismissing typology are quick to ignore or deny negative emotions and unlikely to engage in problem solving with their child or perceive the incident as an opportunity to relate to and validate their child's emotions (Gottman, *et al.*, 1996). Children of emotion-dismissing parents are taught to believe that their negative feelings are unwarranted and inappropriate (Gottman and Declaire, 1997). Furthermore, these children are likely to have diminished problem-solving abilities due to their parent's inability to teach these skills (Gottman *et al.*, 1997). In other words, being brought up in an environment where emotions are minimized, denied, and ignored can potentially lead to poor social and emotional development (Lagacé-Séguin and Coplan, 2005). It stands to reason that parenting may be related to children's coping strategies, and therefore, coping theories are discussed in the next section.

Coping Theories

One of the most widely cited models of coping can be attributed to Lazarus and Folkman (1984, as cited in Compas, *et al*., 2001) who defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (pp.141).

Other models such as those discussed by Eisenberg *et al*. (1996) viewed coping as part of the larger concept of self-regulation. And still others such as the model proposed by Ebata and Moos (1994) described coping as either active-approach or avoidant approach styles.

One criticism of the past research has been the dichotomous approach to the conceptualization of coping (Compas, *et al*., 2001). In light of this, Ayers, Sandler, West, and Roosa (1996) and Ayers, Sandler, and Twohey (1998), developed and refined a four-dimensional model of coping consisting of active coping strategies (i.e., cognitive decision making, direct problem solving, seeking understanding, positive cognitive restructuring), distraction strategies (i.e., distracting actions, physical release of emotions) avoidance strategies (i.e., cognitive avoidance, avoidant actions), and support seeking strategies (i.e., problem focused support, emotion focused support). This model of coping is much broader than others and allows for a deeper understanding of the possible mechanisms related to coping skills. Based on this research, Ayers and colleagues (1996) developed the Children's Coping Strategies Checklist, which will be used in this study to examine the coping strategies of middle school students.

Temperament and Meta-Emotion in the Prediction of Coping As in many other areas of child development research, the debate between nature versus nurture is plentiful. It is important to explore how a child's temperament interacts with parental behaviors to predict coping skills. According to Ruchkin, Eisemann and Hägglöf (1999), coping skills have both a biological and social basis. These researchers postulate that easy children are more likely to elicit emotional warmth from their parents as opposed to difficult children, who may be more likely to receive negative responses from parents. Furthermore, they go on to explain that increased positive and warm feedback from parents has a greater likelihood of resulting in children with productive coping skills whereas children who receive greater levels of negative reactions may be more likely to develop more avoidant coping behaviors.

However, for children who are temperamentally well-regulated, emotion-focused parenting practices could result in emotionally over-solicitous parenting (see Lagacé-Séguin and Coplan, 2005). Lagacé-Séguin and Coplan (2005) indicate that in this situation, parents "tend to over manage situations for their children, restrict their children's behavior, be overly affectionate, discourage their children's independence, and direct their children's activities" (pp.630), therefore possibly leading to poor development of appropriate coping strategies. For the purpose of this study, it is hypothesized that differing levels of parental meta-emotion will interact with child temperament in the prediction of coping styles in adolescence. For example, it is possible that emotion coaching style may not be associated with positive aspects of coping among children who possess "better" temperamental dispositions.

METHOD

Participants

Participants included 37 students aged 10–13 years (M_{age} = 11.2 years) and their parents, recruited from three middle schools in Eastern Canada.

Procedures and Methods

During visits to school classrooms, students were given a brief description of the study. Interested students were given a package to take home to their parents which consisted of a comprehensive written description of the study, a consent form, a demographic questionnaire, and the Maternal Emotional Styles Questionnaire. After the consent form was returned, students were notified of a specific time and location during which a small group administration of student questionnaires was given. These group administrations were given during noon hours or silent reading periods and consisted of groups ranging in size from three to sixteen students.

During each group administration students were first asked to complete a demographic questionnaire. Students were then given the Children's Coping Strategies Checklist and the Early Adolescent Temperament Questionnaire – Revised, Short Form in alternating order.

MEASURES

Coping Skills

The Children's Coping Strategies Checklist (CCSC, Program for Prevention Research, 1991) was used as a general measure of children's self-reported coping styles. This 54-item questionnaire has been designed for children ages 9–13 and consists of a four dimensional model of coping: 1) active coping strategies, 2) distraction strategies, 3) avoidance strategies and 4) support seeking strategies. Sample questions, answered on a 4-point Likert scale, include: "When you had problems in the past month, you thought about what you could do before you did something" and "when you had problems in the past month, you tried to ignore it". The subscales have been found to have good internal consistency (active coping strategies α = .88, avoidance strategies α = .65, and support seeking strategies α = .86).

Temperament

The Early Adolescent Temperament Questionnaire – Revised, Short Form (EATQ-R, Capaldi and Rothbart, 1992, Ellis and Rothbart, 2001) was used to assess aspects of temperament related to self-regulation. This is a 65-item questionnaire consisting of statements that are rated on a 5-point Likert scale. This scale consists of four main factors of temperament: 1) negative affectivity, 2) surgency, 3) affiliativeness, and 4) effortful control. Each of these scales was found to have moderate to high internal consistency (coefficient alphas ranging from .64 – .81).

Parental Emotional Styles

Parental Emotional Styles were assessed using the 14-item Maternal Emotional Styles Questionnaire (MESQ, Lagacé-Séguin and Coplan, 2005) which consists of subscales measuring emotion-coaching and emotion-dismissing parental emotional styles. Sample questions include "when my child gets sad, it's a time to get close" and "when my child gets angry my goal is to get him/her to stop". This scale has been found to have good internal consistency for each subscale (emotion-dismissing α = .92, emotion-coaching α = .90) and adequate test-retest reliability for each of the subscales (emotion-coaching $\underline{r}$ = .58, emotion-dismissing $\underline{r}$ = .53).

RESULTS

The primary goal of this study was to examine how the interaction between parental meta-emotion and temperament are associated with coping skills in middle school students. Many preliminary analyses were conducted prior to the major moderated analyses. However, in the interests of page allotment and focus, they are not presented in this paper.

Moderated Regression Analyses

Overview. To examine moderated (interactive) pathways in the prediction of coping skills, interactions between predictor variables (temperament and parental meta-emotion) were explored using multiple regression analyses. Cohen's partialled products technique (Cohen, 1978; Cohen and Cohen, 1983) was employed where independent variables are first entered into the regression equation as a block, followed by the interaction terms (as represented by their multiplicative products). At each step, the significance in R^2 change was assessed to determine if each main effect or interaction added to the predictiveness of the overall equation.

As such, standardized interaction terms were created by combining the temperament dimensions (i.e., negative affect, effortful control, affiliativeness, and surgency) with each parental meta-emotion style (i.e., emotion-coaching and emotion-dismissing). Once the interaction terms were created they were then re-standardized and these interactions (i.e., eight interactions representing each dimension of temperament x each type of parental meta-emotion) were tested in the prediction of coping skills.

In order to assess the moderating effects (i.e., each of these interaction terms), specific blocks of variables were entered into the hierarchical regression analyses. The first block included the specific temperament dimension. The second block included one of the styles of parental meta-emotion. The third block included the interaction term (the combination of the specific temperament dimension and parental meta-emotion style).

Where significant interactions were detected (i.e., a significance in R^2 change), follow-up analyses were conducted.

Temperament and emotion-coaching parenting predict coping skills. Results from the regression analyses revealed several significant

interactions between temperament and emotion-coaching in the prediction of coping skills. A significant interaction was found between emotion-coaching and negative affect in the prediction of distractive coping skills (F $(3, 36)$ = 4.50, $p < .05$, R^2adj = .23). The interaction was explored by re-computing the regression analyses separately for participants scoring above and below the median in terms of negative affect (i.e., high negative affect and low negative affect). Similar procedures to examine interactions and simple effects have been outlined by many different researchers (e.g. Aiken and West, 1991; Calkins, Gill, Johnson and Smith, 1999; Gottman, Fainsilber and Hoovan, 1997; Rubin, Cheah and Fox, 2001). Results from follow-up analyses indicated that emotion-coaching parenting was not associated with distractive coping skills for those individuals with high negative affect (r = .02, ns). However, emotion-coaching was significantly and positively related to distractive coping skills for participants with low negative affect (r = .42, $p < .05$).

A second significant interaction was found between emotion-coaching and surgency in the predication of distractive coping skills (F $(3, 36)$ = 5.02, $p < .05$, R^2adj =.25). Results from the follow-up analyses indicated that emotion-coaching parenting was not associated with distractive coping skills for those individuals with low surgency (r = –.21, ns) but that emotion-coaching parenting was significantly and positively related to distractive coping skills for participants with high surgency (r = .55, $p < .05$).

A third significant interaction was found between emotion-coaching and effortful control in the prediction of distractive coping skills (F $(3, 36)$ = 3.83, $p<.05$, R^2adj = .19). Results from the follow-up analyses indicated that emotion-coaching parenting was not associated with distractive coping skills for those individuals with high effortful control (r = -12, ns) but that emotion-coaching parenting was significantly and negatively related to distractive coping skills for participants with low effortful control (r = -.49, $p<.05$).

A significant interaction was also found between emotion-coaching and affiliativeness in the prediction of distractive coping skills (F $(3, 36)$ = 5.11, $p < .05$, R^2adj = .26). Results from the follow-up analyses indicated that emotion-coaching parenting was not associated with distractive coping skills for those individuals with low affiliativeness (r = .09, ns) but that emotion-coaching parenting was significantly and negatively related to distractive coping skills for participants with high affiliation (r =.-.47, $p < .05$).

Last, a significant interaction was found between emotion-coaching and affiliativeness in the prediction of support seeking coping skills (F (3, 36) = 4.74, p < .05, R²adj = .29). Results from the follow-up analyses indicated that emotion-coaching parenting was not associated with support seeking coping skills for those individuals with low affiliation (r = .19, ns) but that emotion-coaching parenting was significantly and negatively related to support seeking coping skills for participants with high affiliation (r = –.31, p < .05).

Temperament and emotion-dismissing parenting predict coping skills. Results from the regression analyses revealed a significant interaction between affiliativeness and emotion-dismissing parenting in the prediction of support-seeking coping skills (F (3, 36) = 4.02, p < .05, R²adj = .20). Results from the follow-up analyses indicated that emotion-dismissing parenting was not associated with support seeking coping skills for those individuals with low affiliation (r = .14, ns) but that emotion-dismissing parenting was significantly and negatively related to support seeking coping skills for individuals with high affiliation (r = –.59, p < .05).

DISCUSSION

The purpose of this study was to explore if parental meta-emotion and temperament predict coping strategies amongst middle school students. To begin, significant interactions were found between emotion-coaching parenting and each of the four dimensions of temperament in relation to distraction coping strategies. Follow-up analyses were conducted for each of these significant interactions to further explore the interactions.

A significant interaction was found between emotion-coaching and negative affectivity in the prediction of distraction coping strategies. Specifically, a significant positive relationship was found between emotion coaching parenting and distraction coping strategies for children lower in negative affect. Perhaps individuals who are low in negative affect are less likely to become easily frustrated by their problems and therefore more able to use distraction strategies when appropriate. Since they are able to control their levels of frustration they may be better able to shift their attention. As the result of their parents' coaching, these individuals may have learned the types of situations that are controllable. For example, Compas (1998) notes that the actual or

perceived controllability of the situation is important in the type of coping skill that is utilized. In other words, if the individual is in a situation that does not have a controllable solution it may be beneficial to utilize a distraction coping strategy.

This may also be the case in the second significant interaction where it was found that emotion coaching parenting was significantly and positively related to distraction coping for children high in surgency. However, this second interaction was somewhat surprising when considering the definitions used in describing the construct of surgency. According to Ellis and Rothbart (2001), individuals high in surgency derive pleasure from activities involving high intensity or novelty and have low levels of shyness (behavioral inhibition to novelty and challenging social situations) and fear (unpleasant affect related to the anticipation of distress). Intuitively, it would seem that these children would have been unlikely to use distraction strategies and more likely to deal with problems directly. Perhaps these individuals show higher levels of distraction coping strategies when their parents are emotion-coachers simply because they do not feel the need to sit and discuss the problem and possible solutions with their emotion-coaching parent. These students may use distraction strategies to move on from a problem as they would rather return to social situations and other high intensity and novel tasks.

A third significant interaction was found between emotion-coaching parenting and effortful control in the prediction of distraction coping skills. Follow-up analyses revealed that there was a negative relationship between emotion coaching parenting and distraction coping for children low in effortful control. Perhaps, since emotion-coaching parents model problem-solving skills so efficiently, these children tend to face problems directly and try to use other coping strategies even when an event is uncontrollable. They may have learned from their emotion-coaching parents that distracting oneself from the problem is not beneficial. A second explanation could also be considered. Compas *et al*. (2004) suggested that individuals who are high in effortful control may be more capable of complex cognitive coping strategies such as shifting their attention away from the situation. Intuitively, it would seem that those low in effortful control would therefore find shifting their attention difficult.

A fourth significant interaction was found between emotion-coaching parenting and affiliativeness in the prediction of distraction coping. Upon teasing apart the interaction it was determined that a negative correlation existed between emotion coaching parenting and distraction coping strategies for children

high in affiliativeness which again supports the hypothesis noted above. This finding appears logical considering that individuals who are high in affiliativeness have a desire to be close with others and also tend to have high levels of assertiveness therefore resulting in a need to ask others for both emotional and problem focused support. Children high in affiliativeness would be well-suited to emotion-coaching parenting since these parents would often label and validate how a child is feeling and then engage the child in problem-solving conversations. Therefore these children have been taught that seeking both emotional and problem focused support from others is a constructive approach to dealing with problems. And, because they feel close with their parents, they are able to process problem solving skills and an effective manner.

Two more significant interactions were found in the prediction of support seeking coping skills. Interactions were discovered between emotion coaching and emotion dismissing (separately) and affiliation in the prediction of supportive coping. Follow-up analyses revealed that the two parenting styles were negatively related to support seeking coping for children higher in affiliation. A number of different explanations for these findings are possible. First, in a paper by Losoya, *et al*. (1998) it was explained that many studies have found age changes in support-seeking coping skills. It was found that older children utilize these coping strategies less frequently. Perhaps support- seeking coping is not a preferred method to cope for early adolescents, regardless of coaching or dismissing parenting styles. Alternatively, children of parents who espouse an emotion coaching style may not use support seeking coping because they have had the opportunity to learn from their parents how to solve problems independently. And, their higher levels of affiliation would provide a promising environment to learn how to cope independently. Children of parents who espouse an emotion dismissing parenting style may be unlikely to seek support because they have been consistently dismissed by their parents regardless of their desire to have a close relationship.

Caveats, Future Directions, and Implications Taken together, the aforementioned findings are very interesting and do open the door for further speculation and research. There are other emotional parenting styles, not presently studied, that would be interesting to examine. For example, Gottman and DeClaire (1997) discuss another style of parental meta-emotion referred to as disapproving. Disapproving parents tend to reprimand or

punish their children for their emotional expressions regardless of whether or not their actions are appropriate (Gottman and DeClaire, 1997). Gottman and DeClaire (1997) explain that children of disapproving parents tend to have difficulty regulating their emotions and grow up learning that their emotions are inappropriate or not valid. It would be instructive for future researchers to examine the disapproving parenting style (as well as other styles defined by Gottman and DeClaire (1997) such as laissez-faire parenting) to determine the associations with coping and temperament.

Findings from this study have not only contributed to empirical research but also have practical implications as well. For many children, programs that explicitly teach specific coping strategies may be necessary and the current research lends itself well to better understanding how a child's temperament may be related to the type of adolescent coping. Also, as Compas (1998) suggests, individual temperament may limit how well a student is able to utilize certain coping strategies. Therefore, practitioners would be well advised to take an individual's temperament into consideration when planning programs and interventions. Secondly, having a better understanding of how parenting behaviors are associated with coping skills in adolescents can be used in the development of more complete parenting programs. To date, pre-packaged parenting programs do not directly include aspects of parental meta-emotion research. The current study provides support for future programs to contain a component that addresses this significant area of parenting. Interventions that help adolescents increase their use of effective coping skills will have a significant impact on the prevention and treatment of psychopathology (Compas, 1998).

There are however, caveats that should be discussed. This was the first study to use the Maternal Emotional Styles Questionnaire with mothers of an adolescent population. Therefore, future research utilizing this scale with older populations is needed to further examine the associations between parental meta-emotion and adolescent development. Another limitation of the current study was the reliance on self-report measures to examine coping skills. As Compas *et al*. (2001) noted, self-report measures can be limited by the respondents' readiness to endorse items they do not believe to be socially desirable or "correct" and items describing coping strategies that they may have tried but that did not work for them. These researchers emphasized the importance of utilizing observational techniques and reports from multiple informants coupled with self-report measures in gaining a more

complete and detailed report of coping strategies. This may be an interesting approach for future researchers and could help to further fill some of the gaps within the literature.

This research study has revealed several significant findings regarding parental meta-emotion, temperament, and coping skills in adolescence. In all, it has been predicted that aspects of parents' emotional styles, when paired with certain aspects of temperament, will contribute to the prediction of adolescents' coping styles. These findings form a significant contribution because many past findings are based on adult models of coping and do not take into account parental emotional styles. The current results provide an exciting opportunity for future researchers to extend our knowledge about parenting emotional styles, temperament, and coping. By doing so, the complex interactions that exist between these variables in adolescence may be better understood.

REFERENCES

Ayers, T.S., Sandler, I.N. & Twohey, J.L. (1998). Conceptualization and measurement of coping in children and adolescents. In *Advances in Clinical Child Psychology*, (Vol. 20, T. H. Ollendick & R. J. Prinz, eds) pp. 243–301). Plenum Press; New York.

Ayers, T.S., Sandler, I.N., West, S.G. & Roosa, M.W. (1996). A dispositional and situational assessment of children's coping: Testing alternative models of coping. *Journal of Personality,* **64**(4), 925–958.

Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behaviour. *Genetic Psychology Monographs,* **75**, 43–48.

Baumrind, D., (1971). Current patterns of parental authority. *Developmental Psychology Monographs, 4* (no.1, pt.2).

Capaldi, D.M. & Rothbart, M.K. (1992). Development and validation of an early adolescent temperament measure. *Journal of Early Adolescence,* **12**(2), 153–173.

Cohen, J. (1978). Partialed products are interactions: Partialed powers are curve components. *Psychological Bulletin,* **85**, 858–866.

Cohen, J. & Cohen, P. (1983). *Applied multiple regression/correlational analysis for the behavioral sciences.* Erlbaum; Hillsdale, NJ.

Compas, B.E. (1998). An agenda for coping research and theory: Basic and applied developmental issues. *International Journal of Behavioral Development,* **22**(2), 231–237.

Compas, B.E., Connor-Smith, J.K. & Jaser, S.S. (2004). Temperament, stress reactivity, and coping: Implications for depression in childhood and adolescence. *Journal of Clinical Child and Adolescent Psychology,* **33**(1), 21–31.

Compas, B.E., Connor-Smith, J.K., Saltzman, H., Harding Thomsen, A. & Wadsworth, M.E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin,* **127**(1), 87–127.

D'Imperio, R.L., Dubow, E. & Ippolito, M. F. (2000). Resilient and stress-affected adolescents in an urban setting. *Journal of Child Psychology,* **29**(1), 129–148.

Dix, T. (1992). Parenting on behalf of the child: Empathic goals in the regulation of responsive parenting. In I.Sigel, A. McGillicuddy-DeLisi & J. Goodnow, (Eds.), *Parental belief systems: The psychological consequences for children* (2nd ed.). Lawrence Erlbaum; Hillsdale, NJ.

Ebata, A.T. & Moos, R. H. (1994). Personal, situational, and contextual correlates of coping in adolescence. *Journal of Research on Adolescence,* **4**(1), 99–125,

Eisenberg, N., Fabes, R.A., Guthrie, I.K., Murphy, B.C., Maszk, P., Homgren, R. & Suh, K. (1996). The relations of regulation and emotionality to problem behavior in elementary school children. *Development and Psychopathology,* **8**, 141–162.

Ellis, L.K. & Rothbart, M.K. (2001). Revision of the Early Adolescent Temperament Questionnaire. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Minneapolis, Minnesota.

Gottman, J. & Declaire, J. (1997). *Raising and emotionally intelligent child: The heart of parenting.* Fireside; New York.

Gottman, J., Fainsilber-Katz, L. & Hooven, C. (1996). Parental meta-emotion philosophy and the emotional life of families: Theoretical models and preliminary data. *Journal of Family Psychology,* **10**(3), 243–268.

Gottman, J., Fainsilber-Katz, L. & Hooven, C. (1997). *Meta-emotion: How families communicate.* New Jersey: Lawrence Erlbaum; New Jersey.

Hastings, P. (1995). *The nature and functions of parents goals during parent-child conflict.* Poster session presented at the 1995 SRCD Conference, Indianapolis.

Kagen, J., Reznick, S. & Snidman, N. (1987). The physiology and psychology of behavioral inhibition in children. *Child Development,* **58**, 1459–1473.

Katz, L.F., Wilson, B. & Gottman, J.M. (1999). Meta-emotion philosophy and family adjustment: Making an emotional connection. In *Conflict and cohesion in families: Causes and consequences* (M.J. Cox & J. Brooks-Gunn, eds), pp. 131–165. Lawrence Erlbaum; Mahwah, NJ.

Lagacé-Séguin, D.G. & Coplan, R. (2005). Maternal Emotional Styles and Child Social Adjustment: Assessment, Correlates, Outcomes and Goodness of Fit in Early Childhood. *Social Development,* **14**(4), 613–636.

Lee, C.L. & Bates, J.E. (1985). Mother-child interaction at age two years and perceived difficult temperament. *Child Development,* **56**(5), 1314–1325.

Losoya, S., Eisenberg, N. & Fabes, R.A. (1998). Developmental issues in the study of coping. *International Journal of Behavioral Development,* **22**(2), 287–313.

Miyake, K., Chen, S.-J. & Campos, J.J. (1985). Infant temperament, mother's mode of interaction, and attachment in Japan: An interim report. *Monographs of the Society for Research in Child Development,* **50**(1/2), 276–297.

Patterson, G.R. (1986). Performance models for antisocial boys. *American Psychologist,* **41**, 432–444.

Program for Prevention Research (1999). *Manual for the Children's Coping Strategies Checklist and the How I Coped Under Pressure Scale.* Arizona State University; Arizona.

Putnam, S.P., Ellis, L.K. & Rothbart, M.K. (2001). The structure of temperament from infancy through adolescence. In *Advances in Research on Temperament* (A.Eliasz and A. Angleitner eds), pp. 165–182. Pabst Science Publishers; Eichengrund.

Rothbart, M.K. and Derryberry, D. (1981). Development of individual differences in temperament. In *Advances in developmental psychology* (M.E. Lamb and A.L. Brown, Eds.), (Vol.1, pp. 37–86). Erlbaum; Hillsdale, NJ.

Rothbart, M.K., Ellis, L.K. and Posner, M.I. (2004). Temperament and self-regulation. In R.F. Baumeister and K.D. Vohs (Eds.), *Handbook of self-regulation: research, theory, and applications* (pp. 357–370). Guilford Press; New York.

Rothbart, M.K. and Hwang, J. (2005). Temperament and the development of competence and motivation. In *Handbook of competence and motivation* (A.J. Elliot and C.S. Dweck, eds), (pp. 167–184). Guilford Press; New York.

Ruchkin, V.V., Eisemann, M. and Hägglöf, B. (1999). Coping styles in delinquent adolescents and controls: The role of personality and parental rearing. *Journal of Youth and Adolescence,* **28**(6), 705–717.

Thomas, A. and Chess, S. (1977). *Temperament and development.* Brunner/Mazel; New York.

Thomas, A., Chess, S. and Birch, H.G., (1968). *Temperament and behavior disorders in children.* New York University Press; New York.

Wyman, P.A., Cowen, E.L., Work, W.C. and Parker, G.R. (1991). Developmental and family milieu correlates of resilience in urban children who have experienced major life stress. *American Journal of Community Psychology,* **19**(3), 405–426.