

Mothers' Responses to Children's Negative Emotions and their Effects on Emotion
Regulation

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Abstract

Research on the socialization of emotion has examined the role of parents' behavioural responses to children's negative emotions in the development of a number of psychosocial outcomes for children. Parents' unsupportive socialization practices have predicted poorer social and emotional functioning both in childhood and later in adulthood. The current study aimed to broaden existing knowledge of the nature and impact of parent emotion socialization practices on emotion regulation. This was done through an exploration of the emotional, cognitive, and behavioural aspects of mothers' responses to their children's anger and sadness; by examining the impact of factors such as child gender and age as well as contextual factors on mothers' responses; and by examining the impact of socialization practices on the development of emotion regulation.

An online community sample of 114 mothers of 6- to 10-year-old children read a series of hypothetical situations in which they were asked to imagine their child responding with either anger or sadness. Mothers reported on their emotional responses, their acceptance of their child's reaction, their causal attributions, and their socialization responses. Mothers also completed measures that assessed perceived social support, recent stressful life events, and the emotion regulation abilities of their child.

Mothers were generally positive and supportive in their responses. Mothers were more likely to endorse negative responses to anger than sadness. Responses did not differ according to the gender or age of the child. There was general consistency in the tendency to react positively or negatively. High levels of stressful life events predicted anger and punishment responses to child anger. Minimization of sadness was predicted by lower educational status. No other contextual factors were significant. As expected,

minimization of sadness and anger both emerged as significant predictors of poorer emotion regulation in children; problem-focused responses predicted better emotion regulation for anger not sadness; unexpectedly emotion-focused responses to anger predicted poorer emotion regulation.

Results are discussed in relation to the existing literature on the socialization of emotion and child outcomes. Limitations of this study and future directions for the research are discussed.

Introduction

Overview

Emotion regulation has been conceptualized as being central to healthy social, emotional, and psychological functioning. Its development throughout childhood depends on a complex interplay of physiological and social processes. Poor emotion regulation has been associated with a host of negative outcomes including internalizing and externalizing behaviour problems, peer rejection, and academic and other adjustment problems, both during the childhood years and later in life (Eisenberg et al., 1995, 1997). Researchers are becoming increasingly interested in identifying the factors that influence the development of emotion regulation in children. They have pinpointed a variety of aspects of parenting such as abuse and maltreatment, family emotional expressiveness, and emotion coaching philosophy that play a role in this aspect of emotional development (Cicchetti, Ganiban & Barnett, 1991, Cumberland-Li, Eisenberg, Champion, Gershoff & Fabes, 2003; Eisenberg et al., 2001; Gottman, Katz, & Hooven, 1996).

Recently, there has been increasing concern with the *socialization of emotion*, parents' behavior, beliefs, and affective reactions to children's emotions. Of special interest has been the socialization of children's understanding, experience, expression, and regulation of emotion (Eisenberg, Cumberland & Spinrad, 1998). One significant means by which parents influence the developing emotion regulation skills of their children is in how they respond behaviourally to their children's normative negative emotions when they occur (Cole, Dennis, Smith-Simon & Cohen, 2008; Ramsden & Hubbard, 2002). The aim of the current study was to broaden the existing understanding of how parents influence the development of emotion regulation by examining parents' contingent responses to children's normative expressions of the negative emotions of anger and sadness.

Hypothetical situations were used to explore parents' responses to their children's negative emotions. Much of the literature in this area has focused on parents' behavioural responses to children's negative emotions while excluding consideration of parents' beliefs about and emotional responses to their children's expressions of negative emotion. However, in order to understand behaviour it is necessary to know about the thoughts and feelings that go along with it. Therefore, of particular interest in this study were parent's emotional reactions to their children's negative emotions of anger and sadness, their beliefs about the acceptability of and the causes of their children's expressions of these two negative emotions, and their socialization (i.e., behavioural) responses to their children's expressions of these two emotions. Theories of parental sensitivity serve to link the emotional, cognitive, and behavioural aspects of the socialization of emotion. The relations among these aspects of parents' reactions were also explored.

A number of factors are thought to moderate parents' responses to their children's negative emotion. The impact of parent and child gender, the age of the child, and the type of negative emotion expressed by the child (anger versus sadness) on parents' responses to children's negative emotions were considered here. Contextual factors also play a role in parenting. A number of life circumstances were examined to determine their role in influencing parents' responses to children's negative emotions, including parents' occupational status and income, perceived social support, and stressful life events.

A second aspect of this study was to measure the degree to which parents' beliefs and their emotional and behavioural responses to children's negative emotion predict emotion regulation in their children. Emotion regulation has been identified as a significant factor contributing to the social competence of children. Negative or unsupportive parental responses to children's normative expression of negative emotion predict numerous

negative social and emotional outcomes, whereas supportive responses tend to predict positive outcomes (Eisenberg & Fabes, 1994). It is important to consider that many of these child outcomes are also predicted by poor emotional regulation. It may be that negative parental responses to negative child emotions are related to these outcomes by their impact on the development of emotion regulation. While there is some evidence that parental response to negative emotions impacts directly on emotion regulation (Ramsden & Hubbard, 2002), more research is necessary to confirm this hypothesis. Understanding how and why parents respond to children's negative emotions, as well as the impact of those responses on the development of emotion regulation, are important steps in the promotion of optimal child social and emotional development.

Emotion Regulation, Child Adjustment, and Parenting

In the last 25 years, the role of emotion regulation in psychological functioning has gained significant attention such that it now comprises the largest body of research on emotional development (Eisenberg & Sheffield-Morris, 2002). The study of emotion is characterized by numerous theoretical perspectives that also guide the study of emotion related regulation. Cicchetti et al. (1991) defined emotion regulation as, "the intra- and extra-organismic factors by which emotional arousal is redirected, controlled, modulated, and modified to enable an individual to function adaptively in emotionally arousing situations" (p. 15). It encompasses the processes individuals use to monitor and adjust their emotional responses and subsequent behavioral reaction to a given situation (Waiden & Smith, 1997). This concept overlaps with the notion of self-regulation, which is defined as the self's capacity to alter its behaviours in accordance with some standards, ideals, or goals stemming from internal or societal expectations (Baumeister & Vohs, 2007). Emotion

regulation could be considered a necessary process in the achievement of self-regulation. Well-regulated children would have the ability to respond to ongoing environmental demands with a range of responses that are socially acceptable and sufficiently flexible to allow for spontaneity as well as inhibition of behavior. In contrast, poorly regulated children would show excessive emotional reactivity and/or emotional deficits, including constricted emotions, attenuated empathy, and contextually inappropriate affective displays (Kim & Cicchetti, 2010).

Research on emotional regulation has established a strong link to important social and emotional outcomes for children. Empirical analyses have provided support for the role of emotion regulation in the quality of children's social functioning including social competence, adjustment, and prosocial behaviour (Eisenberg & Sheffield-Morris, 2002). Emotion regulation has also been linked to internalized compliance, moral behaviour (low cheating), rule-abiding behaviour, and/or low selfish/antisocial solutions to hypothetical dilemmas in early childhood (Kochanska, Murray, Jacques, Koenig & Vandegest, 1996; Kochanska, Murray & Coy, 1997). Eisenberg and colleagues' (2002) review of the literature on the relation between emotion regulation and child outcomes delineated both internalizing and externalizing problems as negative outcomes of poor regulation. Findings tend to be clearer and more abundant for the prediction of externalizing problems than for internalizing problems. Low scores on behavioural measures of delay of gratification, stop-go tasks of inhibitory control, persistence tasks, and performance on a Stroop task, as well as adults' reports of low attentional control, low ego control, and high impulsivity (constructs associated with emotion regulation), have all predicted externalizing problems. With respect to attentional control, teachers' reports of 4-6 year-olds' attentional control (i.e., attention shifting and focusing) were found to predict children's social competence at

school, 2, 4, and 6 years later (Eisenberg, et al., 1995, Eisenberg et al., 1997; Murphy, Shepard, Eisenberg & Fabes, 2001; Eisenberg et al., 2002). Although the evidence is less abundant, early problems with emotion regulation have also been associated with the development of internalizing problems such as anxiety (Eisenberg & Sheffield-Morris, 2001). Theorists have also suggested that maladaptive emotional development is central to psychopathology and its treatment, although few studies have actually examined the role of emotion regulation in non-normative samples (Shields & Cicchetti, 1998; Shore, 1994).

Socialization of Emotion

Current theories of emotional development identify a number of factors as being involved in emotion and emotion-related regulation including physiological, cognitive, behavioural, and social processes (Eisenberg & Sheffield-Morris, 2002). The social environment serves to routinely and systematically modify biological processes that are tied to emotions (Garside & Klimes-Dougan, 2002). Over the last few decades, there has been increasing concern with what has been labeled *socialization of emotion*, especially the socialization of children's understanding, experience, expression, and regulation of emotion (Eisenberg, Cumberland, and Spinrad, 1998). Parents are powerful agents of this developmental process. Parke (1994) described three ways in which parents and other individuals socialize children in regard to emotion. The first is the indirect teaching of the child by parents and siblings through everyday interactions. The second is direct teaching or coaching about things such as the differences among emotions and the rules about the expression of emotion. The third is the provision of opportunities to learn about emotions through exposure to different types and intensities of emotions.

Much of the existing research on the socialization of children's emotions has focused on this latter form of influence, in particular the role of family emotion expressiveness (e.g. Eisenberg, et al., 2001). Less work has been carried out on the direct and indirect forms of teaching about emotion and their link to child adjustment (Parke, 1994). Parents teach their children about emotions in their everyday interactions including when they react when their children express negative emotion. Children learn to regulate their emotions, in part, as a result of the implicit and explicit messages they receive from significant others when they express their emotions. The sensitivity of parents' responses to their children's expression of emotion can influence how their children learn to cope with their own affective experience. For instance, children who receive negative reactions when they display negative emotions may gradually learn to hide their emotions, but become physiologically aroused in contexts involving negative emotion because of the association between such situations and negative sanctions (Greenspan, 1997). Parental reactions that are punitive or dismissing may interfere with children's ability to regulate physiological arousal (Eisenberg, Fabes, & Murphy, 1996; Gottman et al., 1996) and to process information about emotional events. These kinds of unsupportive responses may also lead children to view emotions as threatening, to avoid emotionally challenging situations, and ultimately to miss opportunities to learn about and cope with negative emotions (Eisenberg et al., 1998). In contrast, by responding positively and supportively, using problem-solving or emotional comfort parents may help to reduce their children's arousal, and implicitly teach their children that they believe their behaviour is socially appropriate, which may influence the children's self-esteem and emotional functioning (Eisenberg et al., 1996). Supportive responses may also foster social competence through the child's openness to explore emotional events and meanings, and may also focus and shift attention to emotional

stimuli in appropriate ways (Eisenberg et al., 1998; Gottman et al., 1996). Research by Buck (1987), which was built upon by Roberts and Strayer (1987) and by Eisenberg et al. (1996), suggests that negative reactions to children's displays of negative emotion are likely to heighten and extend children's emotional arousal in emotion-evoking contexts, and, consequently, to increase the likelihood of children's engaging in dysregulated or nonconstructive behaviour. Parental practices that heighten or extend children's negative emotional arousal (both in the specific context and in future emotion-provoking situations due to learning) would also be expected to undermine learning about emotions and their management during emotional events. The socialization of emotion process has recently been found to mediate the well-established relationship between child maltreatment and poor emotion regulation (Shipman et al., 2007).

Components of the Emotion Socialization Process: Parents' Emotional Responses, Beliefs, and Behavioural Responses to Children's Negative Emotions and Child Outcomes

In her 1992 review of the state of the socialization literature, Maccoby stated that socialization used to be seen as a top-down process whereby parents were the primary transmitters of culture to their children, who were seen essentially as empty vessels to be filled. She argued that more recent approaches consider the socialization process to be one involving mainly bidirectional and interactive processes (Maccoby, 1992). However, as will be seen in the ensuing review, much of the socialization literature remains concerned with how parent behaviour impacts on the child, with limited consideration of the effects of the child on the parent in the emotion socialization process. The socialization of emotion perspective places parents' behavioural responses to children's negative emotions at the heart of this parenting role. Parents are believed to modify their children's emotions over

time through their supportive or nonsupportive behavioural reactions, such as their comforting or punishing behaviours (Halberstadt, 1991). The emotional and cognitive aspects of parents' socialization of child emotion have received little attention. The limited research on parents' emotional reactions to their children's negative emotions has explored the role of parental distress in the socialization of emotion process (Eisenberg et al., 1996). However, the role of discrete emotional responses in this process is unclear.

Parents' beliefs about children's expression of negative emotion have been virtually ignored by researchers, even though it has been acknowledged that beliefs about emotions and their expression can serve to organize parents' goals in the socialization process. Different parents may have different goals in regard to the socialization of emotion, which may influence the messages given to their children about emotion. For example, some parents may believe that emotions, especially negative emotions, are bad and should be controlled and not expressed. Other parents may feel that it is desirable to be in touch with one's emotions and to express them in socially acceptable ways. Also, parents' attributions regarding the causes of their children's behaviours have been shown to influence parents' responses to their children's behaviours (Gottman, Fainsilber, Katz, & Hooven, 1996; Mills and Rubin, 1990); however, we do not know the causes to which parents attribute their children's negative emotions. By restricting the focus of the socialization of emotion to behavioural reactions and indiscrete emotional reactions such as general distress, researchers have neglected the opportunity to develop an understanding of just how children's negative emotions impact on parents and why they respond to their children's negative emotions in the ways they do.

It is for this reason that the current study involved an exploration of the following three distinct but interrelated components of the socialization of emotion process: (a)

parents' emotional reactions to their children's negative emotions; (b) their beliefs concerning the acceptability of their children's expressions of negative emotion as well as their attributions regarding the causes of the children's negative emotions; and (c) their behavioural responses.

As mentioned, the socialization of emotion has been linked to a number of child outcomes. While the child outcome of interest in the present study is emotion regulation, a review of what is known about the relationship between parents' responses to negative emotions and a range of child outcomes will help provide a sense of whether and how parents' responses and emotion regulation might be related.

Parents' emotional responses to children's negative emotions and child outcomes.

Parents' emotional responses to their children are believed to guide children's socialization insofar as they result in the overt expression of emotion towards children and influence parents' behaviours towards their children. The socialization of emotion perspective suggests that the primary caregiver reacts in either rewarding or punishing ways to the child's expressions of emotions, thus modifying them over time. According to this perspective, an optimal response would enable the child to maintain positive affect and reduce negative affect, both of which are useful in developing self-regulation and in behaving appropriately in social situations. Emphasizing the emotionally positive aspects of a situation and modulating their own affect are some ways parents might respond optimally (Denham, 1993).

Internalizing and externalizing behaviour problems in children (including aggression and withdrawal, as well as anxiety, depression, psychosomatic complaints, and delinquency) are related to global negative emotionality and difficulties with emotion regulation. However, different negative emotions are thought to relate to these two types of

behaviour problems. In general, irritability due to frustration and anger has been hypothesized to predict externalizing problem behaviour, whereas sadness, anxiety, fear, and distress are believed to predict internalizing problem behaviour (Eisenberg et al., 2001). Parents' responses to aggression and withdrawal would therefore be expected to be similar to their responses to anger and sadness.

Mills and Rubin, (1990, 1992) examined mothers' emotional responses to children's aggression and social withdrawal. Parents were most likely to report feelings of concern for both aggression and withdrawal, although displays of aggression elicited more negative emotions in parents than did social withdrawal. Aggression elicited more anger and disappointment, whereas social withdrawal elicited more puzzlement and surprise in parents. The tendency for child aggression to elicit more negative emotional reactions than withdrawal has also been reported by Hastings and Rubin (1999).

Less is known concerning how parents respond to children's more normal expressions of negative emotions such as anger and sadness. Research in this area has tended to focus on the prediction of child socio-emotional outcomes based on parental responses, rather than the responses themselves. However, Denham (1993) studied mothers' and toddlers' contingent emotional responding and found that mothers reacted to their children's anger with anger of their own. Child sadness elicited feelings of anger or neutral emotions, and mothers most often responded to fear with tenderness. Eisenberg et al. (1996) examined parental distress in response to children's negative emotions and found no significant correlations between different negative emotions and parents' distress responses.

In the available literature, the evidence fairly consistently shows that negative emotional responses to children's negative emotions have a negative influence on child

socio-emotional development, whereas more positive or constructive emotional responses seems to predict positive outcomes, although the evidence is weaker. The range of negative emotional reactions a parent might experience in response to a child's expression of negative emotion varies from study to study. Some studies consider discrete emotional responses such as concern, puzzlement, anger, sadness, anxiety, tension, and fear. However, in many studies discrete parental emotional reactions are not assessed; rather, parental distress is used to describe general negative emotionality. In the majority of studies, negative emotional reactions such as parental distress and anger predicted negative outcomes in children such as internalizing and externalizing emotions (Eisenberg et al., 1999), verbal and physical aggression, less sharing and social avoidance (Carson & Parke, 1996), high emotional intensity and general negative affect, low venting of anger (Eisenberg & Fabes, 1994), teacher ratings of low social competence (Denham et al., 1997), lower emotional understanding (Denham, Zoller & Couchoud, 1994), and poor recognition of angry situations (Garner et al., 1994).

In a study using videotaped observations, mothers' angry responses to child anger displays resulted in reduced latency to the child's next anger display. In these children, the display of anger, when responded to with anger by their mothers, resulted in more anger and incrementally less time between anger episodes on the part of the child (Snyder, Stoolmiller, Wilson, & Yamamoto, 2003).

Krause, Mendelson, and Lynch (2002) studied adults' recollections of their parents' distress reactions to their negative emotions during childhood. Parental distress correlated with emotional inhibition and psychological distress in their children during adulthood. In fact the relationship between parental emotional reaction and outcomes was stronger than that between parental socialization strategy (e.g. punishment or minimization) and adult

outcomes in this study. It is not clear why parents' emotional reactions had a greater impact than their choice of socialization strategy; however it could be that children are more sensitive to their parents' emotional state than their more overt behavioural responses.

There is minimal evidence regarding the effects of parents' more positive affective responses to children's negative emotions, although findings do suggest better outcomes. In two studies, children whose parents were more affectively positive in response to their negative emotions had a better understanding of emotions (Denham et al., 1997) and expressed less anger and antisocial behaviour (Snyder et al., 2003). One aim of the present study was to explore parents' negative emotional response to children's negative emotions, and to determine the relationship between these responses and children's emotion regulation.

Parents' beliefs regarding children's expression of negative emotion and child outcomes. Parental practices and behaviours often affect children's emotion-related functioning in a manner consistent with their beliefs, values, and goals regarding emotion (Eisenberg et al., 2001a). In order to understand why parents react the way they do, it is useful to know what they believe about the expression of negative emotion. Do they view it as a healthy, acceptable aspect of emotional life, or do they see it as something negative that should be avoided, suppressed, or punished? Parents likely vary in the degree to which they believe that the expression of negative emotion is acceptable for themselves or their children. Cultural factors and their own past and present experiences with emotion likely contribute to parents' beliefs and goals. Parents may implicitly communicate their beliefs about the expression of emotion to their children. Parents transmit social signals that provide information to the child concerning the acceptability of emotional displays. When these signals become repetitive, cultural values concerning the meaning of emotional events

are communicated to the child and become internalized over time and contribute to children's schemas about emotionality and its expression. A child who learns that emotional expression is acceptable and valued may be more likely to openly express his or her emotions. In contrast, parents who communicate that the expression of negative emotion is not acceptable may implicitly encourage the child to rely on affect-suppressing methods of managing emotional experience (Suuveg, Zeman, Flannery-Schroeder, & Cassano, 2005).

Parents' beliefs about the expression of negative emotion likely inform their emotional and their overt behavioural responses to children's negative emotions, as well. For instance, some parents may believe that negative emotions are bad and should be controlled and not expressed (Gottman et al., 1996). These parents likely experience negative emotions when their children express anger or sadness, and they may also be likely to try to teach their children to minimize, deny, ignore, or prevent the experience and expression of negative emotion (Eisenberg et al., 1998). Parents who are more accepting of the expression of negative emotion may view it as desirable to be in touch with one's emotions and to express them in socially acceptable ways. These parents are likely to experience different emotional responses to their children's negative emotions and to employ more supportive socialization strategies in response to their children's negative emotions (Gottman et al., 1997). Parents' beliefs can determine whether they try to actively reduce or encourage the expression of negative emotion, or the degree to which they focus on the emotion itself or the problem that triggered the particular negative feelings in the child. Moreover, it is possible that parents' beliefs vary across emotions. For example, in some cultures it is acceptable to express sadness but not anger (Eisenberg, et al., 1998).

Few researchers have explored the role of parents' beliefs about children's negative emotions in any detail. Exceptionally, Gottman and colleagues (1996) have attempted to conceptualize parents' beliefs in terms of a meta-emotion philosophy, an organized set of feelings and thoughts about one's own emotions and one's children's emotions. They have found that the presence of a meta-emotion philosophy, especially one that favours emotion coaching as a response to children's displays of emotions, can predict emotion regulation in children. Specifically, these researchers proposed a model in which an emotion-coaching philosophy is related to both the inhibition of parental negative affect and the facilitation of positive parenting. Further, Gottman et al., suggest that such a philosophy directly affects children's regulatory physiology and that this, in turn, affects children's ability to regulate their emotions. Parents who hold this philosophy view their children's negative emotion as an opportunity to strengthen their parent-child relationship, to educate their children, to validate their children's emotion, and to problem-solve with their children by discussing strategies for managing the situation that caused the negative feelings. By contrast, emotion-dismissing parents do not consider the experience or expression of emotion as advantageous or as an occasion for intimacy or instruction. Children of these parents may lack information about emotion regulation or have reduced regulation capabilities themselves, and may deduce that emotions should not be expressed (Gottman et al., 1996).

Other researchers suggest that parents' attributions regarding the cause of their children's behaviours guide their emotional and behavioural responses to their children's social behaviours (Dix, 1991; Mills & Rubin, 1990, 1992). Causal attributions tend to be classified in terms of locus and stability. Specifically, people tend to attribute causes to internal factors that may be stable or unstable, or to external factors. Internal stable factors may be defined as traits or dispositions having the quality of consistency over time and

across situations. Internal unstable factors involve temporary or changeable conditions, including age or age-related factors, transient states (e.g., mood or fatigue), and acquired habits. External factors refer to situational influences such as a recent event (Mills & Rubin, 1992). There is evidence that parents' interpretations of their children's behaviours, particularly those of younger children tend to be positively biased such that they are more likely to regard desirable than undesirable behaviours as stable (Gretarsson & Gelfand, 1988).

There is evidence that parents generally find aggression and withdrawal to be problematic and unacceptable behaviours, and that they tend to attribute these behaviours to transient states rather than acquired habits, at least in mainstream western societies (Mills & Rubin, 1990). It is not known whether this is the case for anger and sadness. It is not clear to what causes parents attribute their children's negative emotional responses, whether they exhibit the same positive bias as with children's social behaviours, nor whether there are differences in their attributions for anger versus sadness (Hastings & Rubin, 1999). Also, it is not clear whether there is a relationship between parents' causal attributions regarding children's negative emotions and their emotional and behavioural responses to their children's expressions of negative emotion.

It is also unknown whether parents' acceptance and causal attributions regarding their children's anger and sadness have any impact on their children's emotional development. The current study aimed to clarify these questions by measuring parents' beliefs about the acceptability of the expression of anger and sadness and whether and how these beliefs relate to their children's emotion regulation.

Parents' socialization strategies for children's negative emotions and child outcomes. The literature on parents' behavioural responses to children's negative emotions,

places an emphasis on the impact of various parenting strategies on child outcomes, and does not describe typical parent responses. While this approach provides insight into the effects of parenting in the context of children's negative emotions, it is also useful to know how parents typically respond to their children's negative emotions, whether those responses differ according to the type of negative emotion expressed, and what other contextual factors might influence their responses.

Researchers have shown that parents typically use different socialization strategies in response to aggression and withdrawal. Child aggression tends to elicit strong negative socialization responses, whereas withdrawal elicits more constructive strategies such as information gathering (Hastings & Rubin, 1999; Mills & Rubin, 1990).

Different researchers have used different, although sometimes overlapping, approaches to defining the range of ways that parents can respond to their children's expression of negative emotion. Some researchers (e.g., Eisenberg & Fabes, 1994) have examined the degree to which reactions are punitive or minimizing, problem-focused, emotion-focused, or whether they encourage the expression of emotions. Others examined the role of emotion-coaching (Gottman et al., 1996; Ramsden & Hubbard, 2002); emotion discourse (Denham et al., 1994); leaving, ignoring, rebuffing, pragmatic action, insisting on compliance (during situations involving parental demands), active encouragement of the expression of emotion, the encouragement of control of emotions, and the encouragement or suppression of the expression of emotion (Roberts & Strayer, 1987).

What links these researchers is that they all examined the relationship between these responses and various child outcomes. Only Roberts and Strayer (1987) also investigated the effects of parental response frequency, although they focused on child distress or upset rather than discrete negative emotions. In Roberts and Strayer's study, parents most often

focused on the pragmatic aspects of the situation rather than on the emotion upset, with 59% of parents responding to emotional upset by taking action to resolve the precipitating problem or by insisting on compliance (in cases where upset was precipitated by parent directive). Some responded to crying by discouraging the expression of upset (13%) or by leaving, ignoring, or rebuffing the child (13%). Only 7% were rated as actively encouraging emotional expression, whereas 22% encouraged its control, and 4% attempted to suppress it altogether. Because the researchers only assessed parents' reactions to general distress or upset, it is unclear how parents' responses might differ according to the type of negative emotion that is expressed.

The majority of research on responses to children's emotions examines socialization responses in the context of predicting child outcomes. Overwhelmingly, the results indicate that negative socialization responses are detrimental to children's outcomes. In particular, punitive and minimizing strategies predict an increase in distress, internalizing and externalizing emotions, and behaviour problems (Eisenberg et al., 1999; Hastings & De, 2007); low attentional control, high negative affect and escape when angered (Eisenberg & Fabes, 1994); attempts at suppression of emotion (Eisenberg, et al., 1999); low socioemotional competence (Jones, Eisenberg, Fabes & MacKinnon, 2002); low social competence and avoidant coping (Eisenberg et al., 1996; Hastings and De, 2007); low emotional understanding and low prosocial behaviour (Garner, Jones & Miner, 1994); poor use of emotion regulation strategies (including deliberate self-harm) to cope with negative emotions (Buckholdt, Parra & Jobe-Shields, 2009; Spinrad, Sifter, Donelan-McCall & Turner, 2004).

There is some evidence that parents impact on their children's emotional expression in the immediate context through their socialization responses to their children's displays of

anger. Snyder et al. (2003) found that parents' negative strategies reduced the latency to the next anger display in children. Children, whose parents reacted in negative and dismissing ways or with contempt (e.g., threats, stonewalling, belligerence), were more likely to express anger sooner than those whose parents responded positively. Longer term effects have been seen as well. In a study in which adults were asked to recall how their parents responded to their expressions of negative emotions, adults who recalled invalidating responses by their parents scored higher on current measures of emotional inhibition, suppression of unwanted thoughts, as well as current and chronic avoidant responses to distressing circumstances (Krause et al., 2002).

Supportive, or sensitive, socialization of emotion tends to predict better outcomes in children. For instance, positive responses appear to be inversely related to child anger and antisocial behaviour (Snyder et al., 2003). In the study carried out by Roberts and Strayer (1987), encouragement of the expression of emotion accounted for 46% of the variance in general social competence. However Roberts and Strayer's findings also suggest that it is possible to over-encourage the expression of negative affect and that focusing on emotional expression to the neglect of pragmatic solutions can lead to some degree of learned helplessness. These researchers highlight the importance of considering distress as a "call to action," and propose that comforting can be associated with helplessness, based on the assumption that no action can be taken to remedy the problem. This may apply more to older rather than younger children (Roberts & Strayer, 1987).

There is some evidence that emotion-focused (i.e., comforting), as opposed to problem-focused, strategies are beneficial in that they predict children's use of constructive verbalizations when angered (Eisenberg & Fabes, 1994); however, it may be that child characteristics moderate this effect. For instance, emotion-focused parental responses to

emotionally reactive children predicted poor affective balance and social competence (Jones et al., 2002). For these children it may be better to focus on the practical aspects of the situation and take a more problem-solving approach than for less reactive children.

The positive effects of (at least) moderate encouragement of expression of emotion and problem solving have been replicated in other studies in which expressive encouragement predicts high attentional control (a component of emotion regulation) in boys and low escape when angered (Eisenberg & Fabes, 1994). The ways in which parents respond to children's negative emotion may also predict how children respond to their peers' negative emotion expression, at least in older children. In a study by Denham et al. (1997), parents who provided prosocial responses had children who exhibited prosocial reactions to peers' emotions. In the same manner, benign attention by parents predicted benign attention by their children to peers' emotions.

Children whose parents are more likely to provide constructive solutions in response to their children's negative emotions are likely to be more socially competent in school (Eisenberg, et al. 1996). Children whose parents respond prosocially also tend to provide higher self-reports of their own social skills, suggesting that positive parental reactions foster a confidence in children concerning their social competence (Eisenberg, et al., 1996).

Some preliminary evidence has arisen from the emotion-coaching paradigm to suggest that coaching is negatively related to parental derogation of children, a response that is predictive of negative child outcomes (Gottman et al., 1996). Emotion coaching was also found to be positively correlated with children's regulatory physiology/emotion regulation and social competence (Gottman et al., 1996). However, there have been some difficulties in replicating these findings. Ramsden and Hubbard (2002) failed to find a

correlation between emotion coaching and emotion regulation and aggression in their study of children aged approximately 10 years. (Gottman and colleagues' participants were somewhat younger – aged 4-5 years at the beginning of the study and approximately 8 years at the study's completion). It also appears that simply talking about emotions with children offers some benefit to their development, especially in terms of children's understanding of emotions, including the identification of emotion expressions and situations (Denham et al., 1994).

Overall, the research suggests that when parents respond positively and constructively to children's expression of negative emotions (i.e., using comforting, problem-focused responses, the encouragement of expression of emotion, and emotion coaching), their children fare better on a variety of social and emotional outcomes, including emotion regulation, the outcome of interest in the present study. However, it may be too simple to state that all positive responses are equally beneficial to all children. Generally, negative responses such as dismissing, punishing, and minimizing the child's expression of negative emotion predicted negative child outcomes. However, it also appears as though the absence of parental reaction can be problematic. Denham (1993) found that children of mothers who fail to respond to their expressions of anger and fear, exhibit more anger when their mothers are not present. The failure to respond to children's fear was also associated with more child sadness when their mothers are not present. (Denham, 1993). Functionalist perspectives of emotion emphasize the adaptive purpose of emotions in that they operate as a communication or signaling system indicating a need for assistance, empathy or nurturance (Garside & Klimes-Dougan, 2002). If children perceive that their signals are not effective in eliciting support, they may exhibit more anger as a form of general protest that their concerns are not being heard and their emotional needs are

not being met. Lower maternal comfort and empathy of child negative emotion have been connected to lower levels of emotion regulation in these children (Ramsden & Hubbard, 2003).

In order to develop a comprehensive understanding of the nature of parents' socialization of emotion it is important to understand not just their behavioural responses children's negative emotions, but also their beliefs regarding their children's expression of negative emotion and their emotional reactions to it as well as how these aspects of parents' responses are related. Research on empathy-related responding has examined the relationship between parents' emotional responses and their socialization behaviours. Empathy has been defined as an emotional response stemming from the recognition of another's emotional state or condition, responses that are very similar or identical to what the other person is feeling or might be expected to feel in the situation (Eisenberg et al., 1994). Both sympathy – feelings of concern or sorrow for another based on the recognition of another's emotional state or situation, as well as personal distress – a self-focused, egoistic reaction (e.g., anxiety or discomfort) may result from empathy. Sympathy is believed to related to an optimal level of emotional regulation (i.e., a relatively high level of regulation, but not so high that the individual is overly inhibited and constrained). Personal distress, on the other hand, reflects empathic overarousal and, according to Eisenberg, Cumberland and Spinrad, (1998), predicts self-focused behavioural responses such as attempts to escape the other person's presence or the failure to help others in distress. Individuals experiencing empathic overarousal tend to exhibit more facial distress or fear and less concerned attention, in response to emotionally evocative situations. Thus, it would appear that parents, who experience greater levels of negative emotion in response to their children's expressions of negative emotion, would be more likely to behave in

minimizing or punishing ways in an attempt to manage their own negative emotions.

Hastings and Rubin (1999) found a correlation between negative emotional responses and the use of strong negative socialization strategies. In contrast, parents who experience sympathy or concern, but who are not overwhelmed by their own affective reaction to their children's negative emotions are more likely to engage in constructive responses such as problem or emotion-focused responses.

The emotional, cognitive, and behavioural components of parental socialization of emotion can be linked conceptually through the notion of parent sensitivity, which is thought to involve awareness and accurate interpretation of the child's behaviour, and prompt, predictable, and appropriate responsiveness to the child (Ainsworth, Bell & Stayton, 1974). This notion of sensitivity combines parents' emotional responses, their cognitions regarding children's expressions of negative emotion, and their behavioural responses. Sensitive parents likely hold beliefs that support the expression of negative emotions; they are likely able to identify with their children's experience but also have the regulatory capacity to respond with concern and support. Less sensitive parents may hold more negative attitudes about the expression of negative emotions and may experience more distress in response to their children's expressions of negative emotion, which may interfere with their ability to respond appropriately.

Mills and Rubin (1992) applied this notion of sensitivity to their study of maternal beliefs about children's social behaviours. Their criticism of the literature at the time was that it focused on behavioural interchanges between parents and children while ignoring parents' beliefs about social development. Mills and Rubin highlighted the growing recognition that cognitions may mediate and perhaps reflect parenting behaviours, and they aimed to extend this knowledge in their study. While they did examine parents' affective

responses to their children's behaviours, cognition was at the theoretical centre of their analysis. However, Dix (1991) contended that emotion is what lies at the heart of parenting. When invested in the interests of children, emotions may organize sensitive, responsive parenting. Emotions also serve to undermine parenting when they are not appropriate for the parenting task at hand. It is likely that cognition, emotion, and behavior form part of a broader system of mutual reciprocal interactions that reflect the individual's own temperamental make-up, his or her cultural experience (i.e., family history, broader societal factors) and the context in which the individual's experiences occur. The aim of the present study was not to resolve the emotion-cognition debate, but rather to explore parents' emotional responses, their beliefs, and the behavioural strategies they use to manage their children's negative emotions; as well as to see whether their emotional responses, beliefs, and behavioural responses are related.

Moderators of Parents' Responses to Children's Negative Emotions

Parenting does not operate in a vacuum. Many factors, some of which have been mentioned, have the potential to influence parents' feelings, beliefs, and behaviours. The current study was concerned with a number of variables that are likely to impact on parents' response tendencies. One variable, parent gender, was intended to be examined in the current study. A criticism of the parenting literature (including the socialization of emotion) has been directed at the almost exclusive focus on maternal parenting factors (Winsler, Madigan & Aquilino, 2005). There is limited evidence to suggest that mothers and fathers may differ in their responses to children's negative emotions and that their responses may vary depending on the gender of the child, although the research is mixed and lacks consideration of the potential interactive effects of different parent responses on

child outcomes. Further information on the limited findings on the effects of parent gender may be found in Carson & Parke (1996); Denham, et al., 1997; Eisenberg et al., 1996, 1999; Garside & Klimes-Dougan, 2002; Gottman et al., 1996; and McElwain, Halberstadt and Volling, 2007.

The focus of the current study is on the impact of child gender and age, parent occupational status and education, parent perceived social support, and parent stressful life events on parents' response tendencies.

Child gender effects on parents' emotional responses. The impact of child gender on the relationship between parental emotional response and child outcomes is uncertain. There is some evidence that the influence of parental negative emotional responsiveness on emotional understanding is significant for boys, but not for girls (Denham et al., 1994). Also, Eisenberg et al., (1999) found that in virtually all cases correlations were significantly larger for boys than for girls, suggesting the possibility that boys are more vulnerable to the impact of negative parental emotional responses to their negative emotions.

Child gender effects on parents' beliefs. Research has not been carried out to determine how parents differ in their acceptance of their sons' or daughters' expression of negative emotion, nor their causal attributions regarding children's anger and sadness. In addition to biological differences, males and females are assigned different societal roles, which may lead to differentiated expectations by parents regarding how they should express and experience emotions. The research on child gender effects on parents' socialization strategies (see below) offers some suggestions about possible differences in parents' beliefs about their sons' and daughters' expression of negative emotion.

Child gender effects on parents' socialization strategies. In 13 studies that reported parents' socialization responses to children's negative emotions, four found no significant

child gender effects and three did not measure gender difference. Of the remaining studies, findings were mixed. Krause et al. (2002) found that males recalled their parents using more negative socialization strategies as children than did females. In the retrospective study by Garside and Klimes-Dougan (2002), male children reported being punished significantly more often for expressing anger than did female children. The authors offer possible explanations for this difference, citing that males tend to express anger more often and in a more aggressive fashion. The authors do suggest, however, that it is important to consider at whom the anger is being expressed. Anger directed at a parent may result in a different socialization response from anger directed elsewhere. Eisenberg and colleagues (1996) also reported on different outcomes for boys versus girls. Boys who were likely to comfort others in distress had mothers who engaged in supportive and problem-focused responses. Girls who engaged in comforting behaviours tended to have mothers who provided moderate encouragement of expression of emotion. The correlation between attentional control and punishing and minimizing responses by mothers was strongly negative for boys, but did not reach significance for girls (Eisenberg, 1994). Problem-focused reactions were positively related to social-emotional competence in boys but not in girls. Parent antisocial reactions predicted internalizing emotions in girls but not boys (Denham et al., 1997). Finally, Eisenberg, et al. (1999) found that virtually all correlations between child outcomes and parental behavioural responses were stronger for boys than girls.

Child age effects on parents' emotional responses. Child age is another variable that has been given limited attention in the literature on parents' responses to children's negative emotions. Parents' reported reactions may be relatively consistent over time, reflecting consistencies in their philosophies about emotions, emotion-related parental

temperamental or personality factors, or children's temperamentally-based emotionality (Eisenberg et al., 1999). However, there are some reasons to expect child age-related differences in how parents respond to children's negative emotions and in the impact of socialization on emotional competence (Hops, 1995). For instance, younger children are likely to be thought of as more emotionally vulnerable than older children, and parents may therefore hold different expectations and treat younger and older children differently in emotional contexts (Fabes, Leonard, Kupanoff, & Martin, 2001). Some support for this notion has come from a study that found that mothers perceived their younger children (kindergartners) to be more emotionally reactive than second graders and appeared to try to minimize or modulate younger children's emotional reactions to emotionally evocative stories by displaying more positive facial affect than they did with their older children (Fabes, et al., 1994).

Parents' reactions may become less negative as children become more regulated with age. On the other hand, parents may feel that with age it is more important for children to regulate negative emotions, and consequently parents may become less tolerant of negative emotional reactions as children age (Eisenberg et al., 1999; Klimes-Dougan, et al., 2007). Eisenberg and colleagues (1999) found that parental reactions of distress increased linearly with the age of the child, as did parents' punitive and minimizing reactions. However, a cubic effect was also found for punitive reactions, whereby reports of punitive responses increased from ages 4-6 to 6-8, dropped somewhat from 6-8 to 8-10, and then increased again from ages 8-10 to 10-12. A quadratic effect was also found for minimizing responses: Parents reported using less minimization as children aged until ages 8-10, followed by a substantial increase in minimizing responses from 10-12. Parents also appear to be increasingly punitive and less facilitative in response to children's negative emotions

as they pass through early adolescence (i.e., age 11 through 16) (Klimes-Dougan, et al., 2007). Also, parent gender differences emerge in this age group with mothers tending to reward and magnify negative emotions more than fathers, and fathers being more likely to overlook or ignore their adolescents' expression of negative emotions. Moreover differences emerged depending on the nature of the emotion expressed by the adolescent. Fathers were more likely than mothers to use dismissive or distracting strategies to respond to their children's expression of internalizing emotions (e.g., sadness, fear), and fathers were more punitive than mothers to their sons' expression of anger.

The relationship between parents' negative responses and children's social functioning also appears to strengthen with age. These results lend some support to the notion that parents become less tolerant and accepting of children's expression of negative emotions as their children age. Also, the stronger relationship between parent response and child outcome could be due to the fact that by middle childhood parents have had more time to influence their children's behaviour (Eisenberg, Fabes & Murphy, 1996).

It may also be that different types of parental responses have different effects on children's development, depending on the age of the child. For instance, parents' modeling of prosocial reactions to children's negative emotions appears to be more useful in the promotion of prosocial reactions of children aged 4 and older (Denham et al., 1997). Older children are likely more ready to understand and accept their parents' emotion coaching and more able to accurately model their prosocial actions specifically and in response to emotion. Denham and colleagues' (1997) study found that parents' negative reinforcement of negative emotions especially hindered the growth of younger children's emotion knowledge, reducing the children's willingness to deeply consider emotional events and issues. It is postulated that older children may be better able to perceive the messages

inherent in negative reinforcement, whereas younger children register only the negative affective component of such a response.

The evidence concerning the influence of the child's age on parents' responses to children's negative emotions as well as the effects of those responses on child outcomes is certainly intriguing. However, too little is known as yet to draw definitive conclusions about the role that age may play in the emotion socialization process. Another reason for the limited findings on age effects is that the majority of studies that examine parents' responses to children's negative emotions focus on preschoolers. In spite of the fact that there may actually be a closer link between parents' responses and child outcomes in middle childhood (Eisenberg et al., 1994), findings are limited for children in middle childhood and quite inconsistent for parents' supportive reactions (Jones et al., 2002). The age range of interest in the current study (6-10 years) was chosen because of both the lack of research conducted on older children, as well as the hypothesized stronger relationship between parents' responses and child outcomes.

The Parenting Context

According to Mills and Rubin (1992), parents who are most likely to be sensitive and therefore effective in fostering healthy social and emotional development are those who are faced with relatively few challenges arising from difficult life conditions and child characteristics; who have the resources for handling difficult circumstances; and/or who have childrearing beliefs that are sensitive to their children. In their 1990 study, these researchers articulated the importance of the consideration of contextual factors in the relations between child behaviours and parents' responses. While there are many possible factors that could potentially mediate the relationship between child behaviour and parental

response, Mills and Rubin discovered that stronger negative emotional and socialization reactions were more common in parents who were lower in both socioeconomic status and perceived social support. In the literature on parental responses to children's negative emotions, only a few mediating factors have been considered, including parenting style (Hastings & Rubin, 1999), family emotional expressiveness (Ramsden & Hubbard, 2002), and social desirability (Eisenberg, Fabes & Murphy, 1996). There has been little consideration of the effects of ecological factors such as occupational status and education, social support, and stressful life events on parents' reactions to their children's negative emotions. However there is evidence that parents of lower socioeconomic status, who have fewer resources and face greater obstacles, experience more negative emotion overall. This would likely impact negatively on these parents' abilities to respond sensitively to their children's expressions of negative emotion. Moreover, high stress and low social support environments (which are often linked to lower socioeconomic status) have been found to generally reduce parents' resources for coping with parental tasks, including dealing with children's negative emotions (Dix, 1991). These are the variables that are of interest in the current study.

Purpose of Study and Hypotheses Tested

Research has clearly demonstrated that poor emotion regulation is related to myriad negative outcomes, including internalizing and externalizing problems, low social competence, peer rejection, and academic and adjustment problems (Eisenberg et al., 1995, 1997). Given the role of emotion regulation in healthy psychological functioning throughout the lifespan, it is important to understand the factors that contribute to the development of emotion regulation during childhood.

Parents contribute to the development of emotion regulation in their children in a number of ways, one of which may be through their contingent responses to their children's expression of negative emotion. The overarching aim of the current study was to broaden existing knowledge of emotion regulation and the socialization of emotion. The literature has focused largely on the behavioural aspects of parents' responses, and existing measures used to assess parents' responses to children's negative emotions reflect this bias.

Consequently, there is little understanding of how parents feel when their children express negative emotions and what parents believe about the expression of negative emotion.

Therefore the first objective of the present study was to go beyond the behavioural focus of the literature and to determine how parents typically respond emotionally, cognitively, and behaviourally to their children's expression of normally occurring negative emotion. There is evidence to suggest that parents respond differently to different negative emotions (Denham, 1993; Eisenberg et al., 1996). Therefore, two specific child emotional reactions, anger and sadness, were chosen for analysis. These two emotions have been linked to different kinds of disorders of emotion dysregulation. Excessive sadness is tied to the presence of internalizing disorders and anger to externalizing disorders (Eisenberg et al., 2001a).

The first part of the present study focused on parents' discrete emotional responses (concern, disappointment, anger, sadness, surprise, guilt, puzzlement, embarrassment, amusement, and pleasure); their acceptance of and causal attributions (transient states such as hunger or fatigue; internal unstable such as age or a passing phase; internal stable such as personality or temperament; and situational attributions) for children's anger and sadness; and their socialization responses (problem-focused, emotion-focused, expressive encouragement, punishment, and minimization). There is no previous research measuring a

range of discrete emotional responses to anger and sadness. However, based on the results from Mills and Rubin's (1990, 1992) studies of parents' responses to children's aggression and social withdrawal, it was hypothesized that parents would respond most strongly to anger and sadness with feelings of concern. It was also expected that parents would report more negative emotional reactions (such as anger and sadness) to their children's expressions of anger than to their sadness (Hastings & Rubin, 1999; Mills & Rubin, 1990).

Concerning parents' beliefs about children's negative emotions, it was hypothesized that parents would report more acceptance of the expression of sadness than anger (Eisenberg et al., 1998). It was also expected that parents would more likely attribute their children's expressions of negative emotions (especially their anger) to unstable and external causes (i.e., the situation, transient states, internal unstable), supporting the notion that parents hold positive attributional biases for behaviours they view as less acceptable. It was also expected that parents' unstable and external attributions would be stronger for anger (a less acceptable emotion) than for sadness (Gretarsson & Gelfand, 1988; Mills & Rubin, 1990). Finally, based on evidence from studies examining parents' behavioural responses for aggression and social withdrawal, it was expected that parents would report using more negative socialization strategies such as punishment and minimization in response to anger than to sadness (Hastings & Rubin, 1999; Mills & Rubin, 1990).

It is unclear what conditions moderate parents' responses to children's negative emotions. The evidence is inconsistent concerning how the gender of the parent, gender of the child, or the child's age impact on parents' responses to children's negative emotions, or how these differences impact child outcomes. Therefore, while the effects of child gender and child age were explored in the current study, no specific hypotheses regarding the effects of these variables were made.

One would expect some degree of consistency between parents' feelings, thoughts, and behaviours concerning children's negative emotions, (Eisenberg et al., 2001a). To test this general hypothesis, correlations were calculated among specific parent responses. It was expected that there would be a significant negative relationship between the endorsement of negative emotional responses (e.g., anger, disappointment, sadness) to children's negative emotion, and the acceptance of the expression of anger and sadness. Significant positive relationships were expected between negative emotional responses and unsupportive behavioural responses (i.e., punishment and minimization). Significant negative relationships were also expected between acceptance of the expression of negative emotion and unsupportive socialization strategies (punishment and minimization).

The context in which parenting occurs can influence parents' reactions to their children's expression of negative emotions. Parental education, occupational status, stressful life events, and perceived social support are factors that have been studied in the parenting literature. For instance, poor life circumstances have been found to predict more negative parental responses to children's aggression and withdrawal (Mills & Rubin, 1990); however, the effects of these contextual factors on parents' responses to children's negative emotions have been given little attention in the literature on children's negative emotion. It was hypothesized that lower levels of education and occupational status, more stressful life events, and less perceived social support would predict more negative emotional responses (i.e., higher levels of anger, disappointment, and sadness), less acceptance of negative emotion, and greater use of unsupportive socialization strategies (i.e., punishment and minimization). Due to inconsistent findings regarding the effects of child gender and age, no specific hypotheses were made for these moderators.

There is some evidence to suggest that parents' unsupportive socialization responses to the expression of negative emotions predict poorer emotion regulation in children. The final goal of the current study was to examine the relationship between the socialization of emotion and emotion regulation. In particular, it was expected that parents' behavioural responses to children's negative emotions (problem-focused, emotion-focused, expressive encouragement, punishment, and minimization) would predict emotion regulation in the child. There is little research evidence of a direct link between parent socialization of emotion and emotion regulation; rather, much of the evidence suggests a strong link between socialization responses and myriad outcomes associated with emotion regulation (see Eisenberg et al, 2002 for review). Thus, a positive relationship was expected between supportive strategies (i.e., problem-focused, emotion-focused, and expressive encouragement) and emotion regulation (Denham et al., 1999; Snyder et al., 2003); whereas a negative relationship was expected between unsupportive strategies (i.e., punishment and minimization) and emotion regulation (Carson & Parke, 1996; Denham, Zoller & Couchoud, 1994; Denham et al, 1999; Eisenberg & Fabes, 1994; Eisenberg et al. 1999; Garner et al, 1994; Krause, Mendelson & Lynch, 2002). No specific hypotheses were made with respect to the relative strength of the contribution of each strategy to the prediction of emotion regulation.

Method

Participants

English-speaking biological parents of children aged 6-10 were recruited from the Internet and the local Ottawa, Ontario community. Step parents and other family members were excluded due to uncertainty regarding the nature and length of their relationship with the child. Using Cohen's (1992) standards, effect sizes at an alpha level of .05 in this area of research have been found to range from small to large (.24 to .90) in some studies (e.g., Mills & Rubin, 1990, 1992) and small to medium (.20 to .54) in others (e.g., Eisenberg, et al., 1996). With the expectation of finding medium effects at an alpha level of .05, it was expected that 128 participants would be required, with a minimum of 64 parents with boys and 64 parents with girls. To determine age effects one half of the sample would need to be aged 6-8:5 and the other half aged 8:6-10:11. Children aged 6-10 were chosen for study as this represents an understudied age range within the existing literature. In order to fulfill the objective of comparing younger to older children, this particular division was made to ensure that the two groups span an equal number of months. Originally the aim was to recruit 64 fathers and 64 mothers in order to have enough power to compare for parent gender effects. However, because very few fathers participated, this division was not obtained.

Procedure

The study protocol was reviewed and approved by the Research Ethics Board at the University of Ottawa. For both the Internet and paper-pencil versions of the study, notices about the study were posted on various internet sites, newsgroups, and email lists that are

typically used by parents of school-aged children (see Appendix A). Notices were also posted in community and medical centres and other locations frequented by parents of young children. They were also posted in local newspapers and other forms of media. The notices included a brief description of the study as well as the requirements for participation. Also provided was the web address for the website that was created for this study using surveymonkey.com, as well as contact information for parents who wished to complete the paper pencil version of the study. Parents who chose to complete the study were asked to respond to a series of hypothetical situations in which their children expressed a negative emotion. They were also asked to complete a demographic questionnaire as well as a number of other measures.

Internet version. The Internet methodology used was based on recommendations by Smith and Leigh (1997) and Schaefer and Dillman (1998). The Internet is a unique research environment because recruiting volunteers must be performed differently than with traditional methods and because participants, in most cases, do not directly interact with the researcher. As such, research over the internet provides for some additional ethical considerations. Four unique ethical guidelines have been proposed by Smith and Leigh (1997) to ensure participants receive fair treatment. These issues were considered in the current study and are briefly described, along with their solutions, here. First, there must be a reasonable expectation that potential readers of the notice are capable of giving informed consent (i.e., be over 18 years of age). For the current study, recruitment notices that were placed on line were posted to those sites that were targeted to adult populations. When possible, newsgroup moderators were contacted to determine the appropriateness of the study to their readers and to obtain permission to post the notice. Second, a reasonable method to obtain informed consent electronically must be in place. Participants implied

their consent to participate by completing the whole survey. Third, it is important to allow a participant to withdraw at any time without penalty. In the current study it was indicated on the information page that participants could discontinue the study at any time simply by leaving the website the same way they would any website in which they were not interested. Fourth, the issue of anonymity and security of data is particularly important in a networked environment. The website for the current study was placed in a secure web server on SurveyMonkey where all information was encrypted. The server was highly secure (128 bit SSL encryption) which made it virtually impossible for anyone other than the researcher to access the data.

Individuals who visited the study website were provided with detailed information about the study, including information pertaining to confidentiality and anonymity. A \$100 cash draw with a 1 in 200 chance of winning, was offered as an incentive to participate. Individuals who were interested in participating were asked to provide an email address in order to be informed if they won the cash draw. Each participant was entered and the winner was informed by email following completion of the study. Participants were told that their email would not be used for any other purpose. Participants were not removed from the draw if they chose to withdraw prematurely from the study. Participants were also informed that they could save their information part-way through completion of the questionnaires and return to them at a later time. The cash draw took place after data collection was complete. An individual uninvolved in the study was asked to pick two random numbers from 1 to 287 (the number of participants who began the study). The two numbers chosen were matched to the same case numbers in the data file. The winners were then contacted by email and informed of their win.

Participants were asked to complete a number of demographic questions and measures described below. After completion of the study participants were instructed to click on a "submit" button. This took participants to a final webpage. This page thanked them for their participation and asked their partner to participate in the study – with a link to the beginning of the study – if they had not done so already.

The questionnaires took approximately 20-45 minutes to complete. In situations where both parents from one family agreed to participate, they were asked to fill out their questionnaires independently of one another so as not to bias their responses. They were also asked to consider the same child when completing the questionnaires. In addition, participants were asked to provide a code word, and when both parents participated they were asked to use the same code word in order to be able to match their responses for analysis.

Paper/pencil version. A paper/pencil version of the study, which was identical to the internet version, was also available to all participants in case they did not have access to the Internet or preferred to complete the questionnaires by hand. Participants who contacted the researcher for information regarding the paper/pencil version of the study were asked to provide their mailing addresses and were mailed the questionnaire package. A postage paid return envelope was included in the package and participants were asked to mail back their completed questionnaires.

Parents' reported responses to children's negative emotions. Parents were provided with brief descriptions of hypothetical situations in which their child expresses a negative emotion (either anger or sadness), in order to measure parents' self-reported emotional responses, acceptance, causal attributions, and socialization responses. This questionnaire was adapted from the Coping with Children's Negative Emotions Scale (CCNES) (Fabes,

Eisenberg, & Bernzweig, 1990). The CCNES is a self-report instrument designed to assess how parents typically respond to young children's (preschool to early elementary school) negative emotions. The scale presents parents with 12 hypothetical scenarios in which their child is upset or angry. These hypothetical situations represent common emotionally-evocative events that young children are exposed to. Parents are asked to rate the likelihood of responding to the scenario in each of six possible ways, with each of the six responses representing theoretically different ways of responding to children's negative emotions.

Standardization of this instrument was conducted (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002) on 101 parents, primarily mothers (96 mothers, 5 fathers) of 3-6 year-old children enrolled in 27 private preschools, selected randomly from those listed in the telephone directory. The sample was primarily middle-class caucasian mothers who had an average of 2.05 children: 86% Caucasian, 9% Hispanic, 3% Black, 1% Asian heritage, 1% mixed origin. Family income ranged from \$4000 to \$140 000 (mean income = \$47 000). Mean level of education was 15 years.

As part of the standardization of the CCNES parents filled out a battery of instruments including the CCNES, a demographics questionnaire, the Parent Attitude Toward Children's Expressiveness Scale, the Parental Control Scale, the Parent Affect Test- Anger subscale, and the Interpersonal Reactivity Index. They also included an index of social desirability. The relations of the CCNES to other parent indexes provide construct validity for the subscales of the CCNES. Tests of internal consistency revealed that the supportive parental responses were significantly, positively correlated with one another. Likewise, the nonsupportive parental reactions were significantly positively related with each other. Test-Retest reliability was based on 35 participants who completed the CCNES

b. get angry at my child	1	2	3	4	5	6	7
c. help my child think about ways that he/she can still be with friends (e.g., invite some friends over after the party)	1	2	3	4	5	6	7
d. tell my child not to make a big deal out of missing the party	1	2	3	4	5	6	7
e. encourage my child to express his/her feelings of anger and frustration	1	2	3	4	5	6	7
f. soothe my child and do something fun with him/her to make him/her feel better about missing the party	1	2	3	4	5	6	7

The hypothetical situations used in the current study comprise 10 stories, five describing the expression of sadness, and five describing the expression of anger.

Participating parents were asked to answer questions based on these stories. In order to elicit parents' feelings, thoughts, and behavioural strategies in the sequence least likely to produce carryover effects, they were asked about feelings first, beliefs about acceptability and causality second and third, and behavioural strategies last (Mills & Rubin, 1990) (see Appendix C for questionnaire). Because the hypothetical situations and questions used in the current study were significantly altered from those found in the CCNES it would not be appropriate to assume that those used in the current study hold the same validity.

Parents were first asked how they would feel seeing their child behave this way. They were given the following 10 emotions to rate in terms of intensity on a 7-point likert scale from 1 (very mildly) to 7 (very strongly): angry, embarrassed, amused, disappointed, concerned, pleased, surprised, puzzled, sad, and guilty. Nine of these emotional reactions were chosen because of their use in Mills and Rubin's (1990) study. "Sad" was added to reflect parents' possible mirroring of their child's sadness.

Then parents were asked about the degree to which they believed their child's expression of emotion was acceptable on a scale from 1-7. The third question asked parents to rate the likelihood of each of four different causal factors contributing to their child's reaction on a scale of 1-7. As mentioned, parents' attributions regarding the cause of their children's behaviours are believed to guide their emotional and behavioural responses to their children's social behaviours (Dix, 1990; Mills & Rubin, 1990, 1992). The four response choices reflect four types of attributions parents can make for their children's behaviour: transient states (e.g., fatigue, hunger), internal stable traits (e.g., personality), internal unstable traits (e.g., age, maturity), and situational factors (e.g., the event itself).

Finally, parents were asked to rate the likelihood (again on a 7-point likert scale) they would engage in each of five different behavioural responses. These responses, as described below, reflect the different unsupportive (punitive, minimizing) and supportive (problem-focused, emotion-focused, expressive encouragement) socialization responses parents tend to use as described in the literature by (Fabes, Eisenberg & Bernzweig, 1990).

1. Punitive Reactions (PR). This reflects the degree to which parents respond with punitive reactions that decrease their exposure to or need to deal with the negative emotions of their children.

2. Minimization Reactions (MR). This reflects the degree to which parents minimize the seriousness of the situation or devalue the child's problem or distressful reaction. Again, this is thought to reduce the parent's exposure to the child's negative emotions.

3. Problem Focused Reactions (PFR). This reflects the degree to which parents help the child solve the problem that caused the child's distress (i.e., oriented towards helping the child solve his/her problem or coping with a stressor).

4. Emotion Focused Reactions (EFR). This reflects the degree to which parents respond with strategies that are designed to help the child feel better (i.e., oriented towards affecting the child's negative feelings, such as comforting their child).

5. Expressive Encouragement (EE). This reflects the degree to which parents encourage children to express negative affect or the degree to which they validate child's negative emotional states (i.e., "it's ok to feel sad.").

Measures

Parental occupational status and level of education. The first two measures, parental occupational status and level of education, provided an estimate of the socioeconomic status of the family. Parents reported their own occupation as well as that of their spouse, if available. Occupations were coded using the Standard Occupational Prestige Scale (Ganzeboom & Treiman, 1996) which ranges from 0-7000, with lower scores indicative of greater prestige. For dual-employed families, the occupation with the higher score was used to index occupational status.

Parents were asked to indicate their level of education using the following classification: "high school incomplete" (1), "high school" (2), "college" (3), "university" (4), "advanced degree" (5). Again, in two parent households, participants were also asked to indicate the educational level of their spouse, and the higher level of education was used to index the household level of education.

Stressful life events. The third index of life circumstances was provided by parental responses to the Revised Social Readjustment Rating Scale (SRRS-R) (Hobson & Delunas, 2001). This 51-item scale, which takes approximately 10 minutes to complete, was originally conceptualized to measure the required social readjustment or stressfulness associated with various life events (Holmes & Rahe, 1967). The selection of items for the original scale was done by reviewing comprehensive "life-charts" of over 5000 patients in an urban setting in the Northwestern United States. Holmes and Rahe intended to identify events that tended to coincide with the initial onset of a major illness or disease. Using this methodology these authors chose 43 life events for inclusion in the original SRRS. A psychophysiological scaling technique was applied by a convenience sample of 394 adults to review and evaluate the 43 items. Participants were asked to assume that the event of marriage had an arbitrary value of 500 (the amount of social readjustment required), then were told to proportionally estimate the amount of social readjustment required by the other 42 events. Mean scores for life events were calculated then divided by 10 to provide weights for all items (Holmes & Rahe, 1967). Since its development, the Social Readjustment Rating Scale has been one of the most widely used and cited assessment instruments in the literature on stress and stress management (Hobson, et al., 1998).

In 1998, Hobson and colleagues revised and updated the SRRS, in response to a number of criticisms of the existing scale, including flawed sampling, confounding of discrete life events and stress symptoms, and outdated, biased life-events. A review panel of 30 ethnically diverse male and female professionals was formed to review the existing list of items/events for currency, relevance, and potential bias. The panel members were

asked to indicate which items/events should be deleted or added to the list (Hobson et al., 1998).

The revised scale was administered to a national sample of 5000, which had been carefully selected to represent an appropriate cross-section of the U.S. adult population in terms of gender, ethnicity, age, income level, and geographic location. Participants were asked to rate the stressfulness of each life event on a 1-100 scale. Response rate was 62.4% (n = 3122). Major results included statistically and practically significant differences in mean ratings for the 51 life events, five overlapping themes in the top 20 rated life events, and a significant level of agreement concerning perceived stressfulness regardless of gender, age, or income level (Hobson et al., 1998). Later, Hobson and Delunas (2001) calculated life event frequency rankings and added these to the stressfulness rankings of each life event to produce life-event significance ratings. For instance, the most significant life-event "death of a close family member" had a rating of 5 (# 3 in terms of frequency; #2 in terms of stressfulness).

Perceived social support. Perceived availability of social support was assessed based on parents' completion of Part 2 of the Personal Resources Questionnaire 85 (PRQ 85; Weinert & Brandt, 1987). This measure requires respondents to rate on a seven-point Likert scale their agreement with 25 statements describing supportive or self-enhancing social contacts. The relational functions of social support and the subscales of the PRQ85 include nurturance, intimacy, self-worth, social integration, and assistance/guidance. Total scores on this measure can range from 25 to 175, with higher scores reflecting a higher level of social support as perceived by the parent. The instrument is self-administered and requires approximately 15 minutes to complete.

The PRQ has undergone systematic psychometric evaluation over the past 20 years, resulting in the PRQ82, PRQ85 and the PRQ2000. The PRQ2000 shows promise of strong reliability and validity (Weinert, 2003). However, this measure requires further evaluation of its psychometric properties, which is why the PRQ85 was chosen for the current study. The PRQ85 has been validated on a combined sample (from three available data sets) that consisted of 248 men and women, who were primarily white, middle-class adults drawn from the general population. For this sample an alpha level of .87 was obtained for the full 25-item scale. Subscale alphas ranged from .62 for Assistance to .74 for Intimacy. Moderate intercorrelations among the five subscales ranged from .38 to .59. The subscale to total scale correlations ranged from .70 for Nurturance to .81 for Intimacy (Weinert, 1987).

Evidence of construct validity was obtained by correlating the scores of the PRQ85 with the scores from instruments measuring depression and anxiety. As expected, significant moderate correlations were obtained between the PRQ85-Part 2 (total perceived social support) and BDI ($r = -.33$) and the Trait Anxiety Scale ($r = -.39$) (Weinert, 1987). Test-retest reliability was established over a 4- to 6-week period, with $r = .72$, $p < .001$ (Weinert & Brandt, 1987).

Children's emotion regulation. Mothers and fathers completed the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997). The ERC is a 24 item adult report measure of children's emotion regulation. It may be completed in about 10 minutes by adults familiar with the child. The checklist includes both positively and negatively weighted items rated on a 4-point Likert scale (1= rarely/never, 2= sometimes, 3= often, 4= almost always). These items target processes central to emotionality and regulation, including affective

lability, intensity, valence, flexibility, and situational appropriateness of emotional responses. Sample items include “Exhibits wide mood swings” and “Can modulate excitement (doesn't get carried away in high energy situations)”. Although all of these items index emotion-related behaviour, none of them describe acts of physical, verbal, or relational aggression.

Participants in the validation study were 143 maltreated children (52 girls and 91 boys) who were at enhanced risk for deficits in self-regulation (Cicchetti, Ganiban & Barnett, 1991), and non-maltreated comparison children. The 80 comparison non-maltreated children (29 girls and 51 boys) were matched on a number of important demographic indexes, including age, sex, low SES, and minority status, so the entire sample experienced variable degrees of risk for negative developmental outcomes. Ages were 6-12 years ($M = 9$ years 11 months). (Shields & Cicchetti, 1997).

Internal consistencies, assessed through Cronbach's alpha, were .96 for Lability/Negativity and .83 for Emotion Regulation. The two subscales were significantly negatively correlated ($r = -.50$, $p < .001$). The ERC showed strong convergence with other more established behavioural measures (e.g., Minnesota Behaviour Ratings, Child Behaviour Checklist). The ERC demonstrated an alpha of .96 reflecting its ability to distinguish between well-regulated and dysregulated children (Shields & Cicchetti, 1997).

Because the focus of the current study was concerned with parents' reports of their children's emotion regulation rather than their emotional negativity or lability, only the 8 items from the Emotion Regulation subscale was used. This subscale includes items describing situationally appropriate affective displays, empathy, and emotional self-awareness. Sample items include: “Is empathic towards others”, “Displays appropriate negative emotions (anger, fear, frustration, distress) in response to hostile, aggressive or

intrusive acts by peers”, and “Can say when s/he is feeling sad, angry or mad, fearful or afraid (Shields & Cicchetti, 1997).” Higher scores on this subscale indicate a superior capacity to modulate one's emotional arousal such that an optimal level of engagement with one's environment is fostered (Shields & Cicchetti, 2001).

Results

Data Screening

The online study was accessed by 283 participants, whereas 4 participants opted to complete the paper-pencil version of the study, for a total of 287 initial participants. Due to the small number of paper/pencil participants, it was not possible to compare that subsample to those who completed the online study. Because the paper/pencil group was considered unlikely to exert a significant effect on the overall results, the two groups were combined for the study. Prior to analyses, all cases were examined in order to remove participants who indicated their desire to withdraw from the study by terminating prior to completing all the questions. In all, 118 participants terminated their participation prior to reaching the final question and were removed from the study. The large number of drop-outs may be due to the anonymity associated with completing the study online, the length of time it took to complete all the questionnaires, and the fact that participants were informed that they would remain eligible for the cash draw even if they withdrew from the study prior to termination. This was done in order to prevent participants from feeling coerced into completing the study.

Data were then examined visually for patterns suggestive of random responding by participants (i.e., answering very few questions on each page or clearly random responses). There were 5 apparent cases of random responding, which were eliminated from the analyses. A further 24 cases were removed because the identified child was outside the required age range (i.e., younger than 6:0 or older than 10:11). The remaining sample consisted of 140 participants. There was a poor split on *parent relationship to child* (114

mothers, 15 fathers, 7 stepmothers, 2 stepfathers, 2 “others”) which truncates its correlations with other variables. Because it is not possible to determine the length and nature of the relationship between children and step-parents and those who defined their relationships as “other”, these cases were recoded as “system missing data”. Data from fathers (n=15), were analyzed for descriptive characteristics. Gender differences were assessed, however, because this subsample was so small (in some cases, cell sizes were have been as low as 1) these results are presented for descriptive purposes only. None of the fathers who did participate were married or co-parenting with participating mothers, therefore spousal comparisons were not made. Difficulties with the recruitment of fathers for research on child development are addressed in the discussion section. The main focus of the analysis was on the 114 mothers and their children.

With respect to demographic information, there were few missing values. One participant failed to identify country of origin, and for two participants there was no information regarding highest level of occupational status or education among the parents. Because the omission of this information was infrequent and random, the data of these participants were retained. Three participants did not indicate the gender of the child in question, three did not indicate their relationship to the child, and three did not answer the question regarding their marital status. These missing values were imputed using PASW-18 Expectation Maximization.

Next, data were assessed for missing items on the study measures. In all 1.3 % of data were missing prior to calculating questionnaire totals. PASW-18 Expectation Maximization was used to impute missing data. Because the omission of this information was infrequent and appeared random, the data of these participants were retained.

Scores on the variables were then examined for the assumptions underlying multiple regression. See Appendix I for detailed results of the examination of assumptions and how data were handled.

Characteristics of the Sample

Mothers. The majority of the mothers who participated in this study ($n = 114$) were residents of Canada (71.9%). Another 20.3% were residents of the United States, and 5.4% were from the United Kingdom. Additionally, there was one mother from Australia, one from Singapore, and one mother who failed to provide this information. Most of the mothers were married (76.4%). The rest were single (9.6%), divorced (5.3%) or living in common-law relationships (7%). Two mothers described their marital status as "other".

The highest reported level of educational status within the household (i.e., among parents) was used as one indicator of socioeconomic status. Information regarding educational status is found in Table 2. Participants tended to be quite well educated, with most participants having at least college level education or higher. They also tended to have more prestigious occupations. Occupational status is reported in Table 3. Lower numbers reflect occupations with greater prestige. Child gender was fairly evenly split among mothers with 54.4% reporting on sons and 45.6% reporting on daughters. There was a less even split between the two child age groups with 63.2% of mothers reporting on children aged 6 - 8:5 and 36.8% reporting on children aged 8:6 – 10:11.

Fathers. The majority of the fathers ($n=15$) were residents of Canada (93.3%) with the remaining residing in the United States (6.7%). Most of the fathers were married (86.7%), but none of them were married to any of the mothers who were kept for analysis. One father was single, and another was in a common-law relationship. Educational and

occupational status are reported in Tables 2 and 3. Fathers were fairly well educated and came from household with fairly high levels of occupational status. Sixty percent of fathers reported on sons and 40% reported on daughters. There was also an uneven split between age groups with 86.7% percent of fathers reporting on children aged 6 – 8:5 and 13.3% reporting on children aged 8:5 – 10:11.

Table 2

Educational Status (Highest Household Level of Education (Percentages))

<u>Education</u>	<u>Mothers' Households</u>	<u>Fathers' Households</u>
High school incomplete	----	----
High school complete	7.9	----
College degree	32.5	20.0
University degree	43.6	40.0
Advanced degree	15.8	40.0

Note. n (mothers) = 114; n (fathers) = 15

Table 3

Occupational Status (Highest Household Occupational Status (Percentages))

<u>Status range</u>	<u>Mothers' Households</u>	<u>Fathers' Households</u>
0-1000	0.9	-----
1000-1999	16.9	40.2
2000-2999	44.5	46.7
3000-3999	24.2	6.7
4000-4999	1.8	-----
5000-5999	8.9	-----
<u>6000-6999</u>	<u>3.6</u>	<u>6.7</u>

Note. Lower values indicate higher occupational status.

n (mothers) = 114; n (fathers) = 15

Table 4 shows the means and standard deviations of the demographic and study variables for mothers and fathers. Independent samples *t*-tests revealed that mothers and fathers differed only on the mean level of household educational status. Fathers reported living in households with slightly higher levels of educational status than did mothers. Internal consistencies, measured using Chronbach's alpha, are also reported for combined results of mothers and fathers on the study variables. The alpha level on the PRQ-85 ($\alpha = .89$) was comparable to that of the standardization sample ($\alpha = .87$). The Chronbach's alpha for the Emotion Regulation subscale of the ERC ($\alpha = .70$) was also fairly consistent with that obtained by the standardization sample ($\alpha = .83$).

Table 4

Means, Standard Deviations, and Internal Consistencies for Demographic and Study Variables

Measure	Mothers		Fathers		α
	M	SD	M	SD	
Educational status	3.68	0.84	4.20	0.78	----
Occupational status	2790.76	1259.80	2223.07	1277.70	----
Social Support	132.72	22.04	129.73	18.93	.893
Stress	509.60	69.04	434.27	462.23	.517
Emotion Regulation	27.16	3.35	26.27	2.55	.703

Notes. Means and standard deviations are for non-transformed variables.

Chronbach alphas were calculated on the combined scores of mothers and fathers.

Correlations Among Measures

The zero-order correlations among the variables for mothers are reported in Table 5. Only correlations relevant to the hypotheses are discussed. Educational status was significantly correlated with occupational status and with stressful life events. Mothers who reported living in more highly educated households reported greater levels of household occupational status, and lower numbers of stressful life events on the SRRS-R. Educational status was not significantly correlated with social support, or emotion regulation.

Occupational status was significantly correlated with stressful life events on the SRRS-R. Mothers who reported higher household occupational status reported having fewer stressful life events occur within the previous year. Perceived social support was

significantly correlated with stressful life events and emotion regulation. Mothers who reported high levels of perceived social support on the PRQ-85 also reported fewer stressful life events on the SRRS-R and described their children as higher in emotion regulation.

Table 5

Bivariate Correlations Among Mothers' Variables

Variable	1	2	3	4	5
1. Educational Status	--				
2. Occupational Status	-.342**	--			
3. Social Support	.002	-.150	--		
4. Stress	-.300**	.198*	.246**	--	
5. Emotion Regulation	.159	-.178	-.198*	-.111	--

Notes. Correlations are based on transformed data.

$p < .05$; ** $p < .01$; $n = 114$

Mothers' ratings of the 10 emotional responses, the four causal attributions, their acceptance, and the five socialization strategies to each of the hypothetical situations were each averaged across the five stories depicting each type of emotional expression, with the resulting scores ranging from 1 to 7. Means, ranges, and standard deviations are provided in Table 6. Many of these variables are skewed (see Appendix I) and have truncated ranges, especially those with lower means. This may have implications for the interpretation of results.

Table 6

Means and Standard Deviations for Mothers' Responses to Children's Anger and Sadness.

Response	Anger			Sadness		
	M	SD	Range	M	SD	Range
Emotional Responses						
Concerned	3.83	1.30	1.00-7.00	5.11	1.42	1.00-7.00
Disappointed	3.12	1.30	1.00-6.60	2.56	1.40	1.00-6.40
Sad	2.93	1.29	1.00-6.20	4.68	1.41	1.00-7.00
Angry	2.56	1.24	1.00-6.00	2.10	1.05	1.00-5.20
Surprised	2.03	1.07	1.00-5.60	1.73	0.94	1.00-4.60
Guilty	1.87	0.91	1.00-4.80	1.93	1.22	1.00-6.40
Puzzled	1.87	1.05	1.00-5.00	1.61	0.86	1.00-4.40
Embarrassed	1.75	0.93	1.00-5.20	1.46	0.83	1.00-4.80
Amused	1.39	0.69	1.00-4.00	1.12	0.35	1.00-3.80
Pleased	1.09	0.31	1.00-2.60	1.01	0.35	1.00-1.23
Acceptability	3.78	1.21	1.20-7.00	5.82	1.04	2.80-7.00
Causal Attributions						
Transient State	3.77	1.67	1.00-7.00	2.48	1.36	1.00-6.40
Internal Stable	3.35	1.73	1.00-7.00	3.03	1.66	1.00-7.00
Internal Unstable	2.90	1.50	1.00-7.00	2.41	1.27	1.00-6.00
Situation	5.66	1.23	2.00-7.00	6.42	0.85	3.60-7.00
Socialization Strategy						
Problem-focused	5.66	0.88	3.20-7.00	6.16	0.73	4.00-7.00
Expressive Encourage	4.91	1.40	1.40-7.00	5.60	1.08	2.60-7.00
Emotion-Focused	4.90	1.13	2.00-7.00	5.40	1.07	2.20-7.00
Punishment	3.58	1.41	1.00-6.80	2.15	0.70	1.00-4.00
Minimization	3.29	1.30	1.00-5.80	2.76	1.11	1.00-5.00

Note. Means and standard deviations are for untransformed data. The range of possible scores is from 1 (very unlikely) to 7 (very likely).

N = 114

Mothers' Responses to Children's Anger and Sadness

The first objective of the current study was to determine mothers' dominant emotional responses to their children's expressions of anger and sadness, their beliefs about the acceptability of the expression of these emotions, their causal attributions, and the parenting strategies they expected to use to respond to these behaviours. To accomplish this, a series of analyses of variance (ANOVA) was computed for each of these four sets of responses. Repeated measures analyses are typically used to analyze differences in scores on the same variable under different conditions, usually across different trials; whereas multivariate analysis of variance (MANOVA) is more typically used to determine differences in scores on different variables. However, one goal of this analysis was to determine how mothers' ratings differ as a function of the type of *emotional response*, which would otherwise be considered the dependent variable. MANOVA does not allow for this kind of comparison, and therefore the repeated measures approach was used. For the purpose of these analyses parents' ratings on each of the 10 *emotional responses* is considered the dependent variable and the type of *emotional response* is an independent variable.

Assumptions underlying repeated measures analysis of variance are similar to those for non-repeated measures and were examined during the screening process. Participants were randomly chosen from the population. Outliers were handled using reduction to the most extreme score + 1. Normal distributions are generally assumed, however, repeated measures ANOVA is not very sensitive to violations of normality (Howell, 2002). In order to facilitate interpretation of main and interaction effects, analyses were run on non-transformed data. Likewise, the homogeneity of variance assumption can also be violated

without significant negative consequences. However, unlike non-repeated measures, repeated measures ANOVA assumes that the variances and covariances follow a pattern called sphericity. Sphericity implies that all of the interactions between any two levels of the independent variable will be equally large (Howell, 2002). Repeated measures analysis of variance is not robust with respect to violations of the assumption of sphericity; however, there are adjustments that can be made to counteract the effects of violation of sphericity. Howell (1997) recommended using the Greenhouse Geiser estimate of sphericity to adjust degrees of freedom when $\epsilon < .75$ and using the Huynh-Feldt correction when $\epsilon > .75$. PASW-18 does not produce a single epsilon value for each analysis but produces epsilon values for each of the Huynh-Feldt, Greenhouse Geiser and Lower Bound estimates. For the purpose of these analyses, when all epsilon values were below .75, the Greenhouse Geiser correction was used. When any epsilon value was above .75 the Huynh-Feldt correction was used.

Effect sizes were calculated using partial eta-squared. Partial eta-squared reflects the percentage of dependent variable variance explained by the independent variables in the sample data after controlling for the effects of other independent variables. These values are provided, with the caveat that they overestimate the proportion of variance in the dependent variable explained by the independent variable in question (Pierce, Block & Aguinis, 2004).

Emotional responses to children's negative emotions. Mothers' ratings of the 10 emotional responses to each of the hypothetical situations were averaged across the five stories depicting each type of emotion expressed by the child (anger, sadness) with the resulting scores ranging from 1 to 7. To identify mothers' predominant emotional reactions

to anger and sadness and to determine whether these reactions differed as a function of the type of emotion expression, gender, or age of the child, a series of mixed between-within-subjects repeated measures analyses of variance was computed for mothers' responses. A mixed-model 2 (gender) X 2 (age group) X 2 (emotion expressed by the child) X 10 (emotional response) analysis of variance was carried out with child gender (male, female) and child age group (6-8:5, 8:6-10:11) as between-subjects factors and emotion expressed by the child (anger, sadness) and emotional response (concern, disappointment, anger, sadness, guilt, embarrassment, surprise, pleasure, amusement, puzzlement) as within-subjects factors. The analysis yielded a significant main effect of emotional response $F(5.59, 614.88) = 215.67, p < .001, \text{partial } \eta^2 = .662$ and a significant interaction between emotional response and emotion expressed by the child $F(5.59, 615.10) = 90.71, \text{partial } \eta^2 = .452$.

Pairwise comparisons using a Bonferroni correction revealed that the predominant emotional response collapsed across type of emotion expressed, child gender, and child age group was concern ($M = 4.46$), which significantly exceeded all other maternal responses (all p values were below .001). The next most strongly endorsed response was sadness ($M = 3.82$), followed by disappointment ($M = 2.80$), then anger ($M = 2.32$), all of which differed significantly from all other responses, $p < .001$. Surprise ($M = 1.90$) was next and was significantly different from all other responses (highest $p = .007$) except guilt ($M = 1.88$), puzzlement ($M = 1.76$), and embarrassment ($M = 1.59$) which were sixth, seventh, and eighth most highly endorsed. Amused ($M = 1.28$) and pleased ($M = 1.06$) were ninth and tenth, respectively, and differed significantly from all other emotional responses, largest $p < .001$.

Differences in scores for emotional response depended on the type of emotion expressed by the child. Tests of simple main effects were carried out using PASW-18 syntax in order to compare the effect of emotional response at each level of emotion expressed by the child (i.e., anger, sadness) (see Table 7). In order to control the familywise error rate the alpha level was adjusted to reflect the number of tests ($p = .05/10 = .005$). Because the error term is derived using all cases in the study, it is much smaller and results in greater statistical power than using a series of t-tests. Tests of simple effects were significant at all levels of emotional response, except guilt. Mothers reported feeling more concerned and sad in response to their children's sadness than to their anger. Mothers reported feeling more disappointment, anger, surprise, puzzlement, embarrassment, amusement, and pleasure in response to their children's anger than in response to their sadness. Figure 1 shows the interaction of mothers' emotional response by type of emotion expressed by the child. Concern was rated as strongest in response to anger and sadness. For child anger, disappointment was rated as next strongest, followed by sadness, then anger. However, for child sadness, sadness was the second strongest response reported by mothers, followed by disappointment, then anger. No other significant main effects or interactions were found. Responses did not differ based on the gender or age of the child.

Table 7

Interactions of Mothers' Emotional Responses by Type of Emotion Expressed by the Child

Emotion Response	Anger (M)	Sadness (M)	F	partial η^2
Concern	3.83	5.11	158.57*	.590
Disappointment	3.12	2.56	25.67*	.189
Sadness	2.93	4.96	293.50*	.727
Anger	2.56	2.10	15.74*	.159
Surprise	2.03	1.73	12.16*	.100
Puzzlement	1.87	1.61	12.06*	.099
Guilt	1.87	1.93	.004	<.001
Embarrassment	1.75	1.46	22.77*	.171
Pleasure	1.09	1.01	11.39*	.094
Amusement	1.39	1.12	30.21*	.215

Note. $df = 1, 110$; * $p < .005$

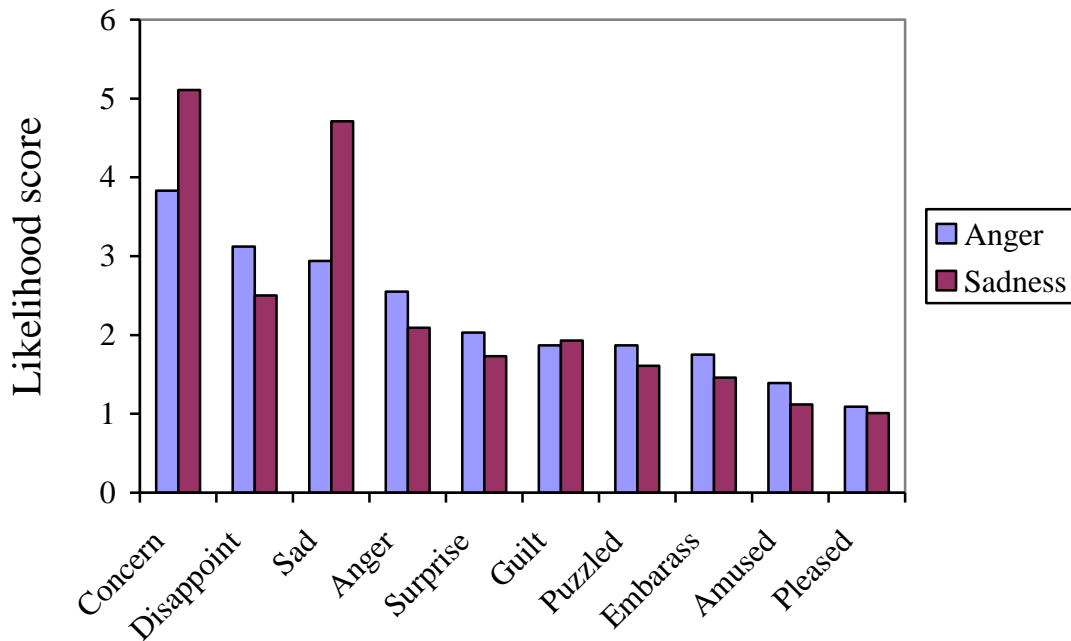


Figure 1. Interactions of mothers' emotional responses and type of emotion expressed by the child.

Note. All differences between emotional responses to anger versus sadness were significant ($p < .005$), except for guilt.

Acceptance of the expression of negative emotion. Mother' ratings of acceptance of the expression of anger and sadness were averaged across the five stories depicting each type of emotion expressed by the child (resulting in one score for sadness and one for anger, each ranging from 1 to 7). To determine whether mothers differentiate between anger and sadness, between daughters and sons, or between older and younger children in their acceptance of the expression of negative emotion, a 2 (child gender) X 2 (age group) X 2 (emotion expressed by the child) mixed-model analysis of variance was computed on mothers' scores for acceptance, with gender and age of the child as between-subjects

factors and type of emotion expressed by the child (anger, sadness) as the within subjects factor.

The analysis revealed a significant main effect for type of emotion expressed, $F(1, 110) = 296.94$, $p < .001$, partial eta-squared = .730. Mothers were significantly more accepting of their children's expressions of sadness ($M = 5.79$) than of anger ($M = 3.68$). No other main effects or interactions were found indicating that mother's acceptance did not differ based on the gender or age of the child.

Causal attributions for children's negative emotions. Mothers were asked to rate the likelihood that their child's response was caused by each of four factors: transient states, such as mood, hunger, or acquired habits; internal stable factors, or traits; internal unstable factors such as age-related factors or a passing phase; and the situation or other factors external to the child.

To determine whether mothers differentiated between anger and sadness, or between boys and girls and between younger and older children in their causal attributions, a 2 (child gender) X 2 (age group) X 2 (emotion expressed) X 4 (causal attribution) mixed-model analysis of variance was computed with gender and age of the child as the between-subjects factors and type of emotion expressed by the child (anger, sadness), and type of causal attribution as the within-subjects factors.

A significant main effect for causal attribution, $F(2.96, 325.32) = 176.38$, $p < .001$, partial eta-squared = .616, and a significant interaction between causal attribution and type of emotion expressed, $F(2.64, 289.80) = 78.20$, $p < .001$, partial eta-square = .416 were found. There were no other significant main or interaction effects. Child gender and child age did not impact on mothers' reported causal attributions. Pairwise comparisons were

made for the main effect of causal attribution using the Bonferroni correction for multiple comparisons. Significant differences were found between situational factors and all the other causal attributions, largest $p < .001$. Mothers were significantly more likely to endorse situational factors ($M = 6.02$) as contributing to their children's expression of negative emotions than transient states ($M = 3.17$), internal stable factors ($M = 3.16$) and internal unstable factors ($M = 2.61$). Transient states and internal stable factors were the second most likely to be endorsed as the cause of their children's emotions, and were not significantly different from each other. Internal unstable factors was the least highly endorsed cause of children's anger and sadness and was significantly lower than all other causal attributions, highest $p < .005$.

Tests of simple effects, with the alpha level adjusted to control for familywise error, ($p = .05/4 = .0125$), revealed that situational factors was endorsed as a more likely explanation for children's sadness than their anger, $F(1, 110) = 79.94$, $p < .001$, partial eta-squared = .421. Transient states $F(1, 110) = 107.55$, $p < .05$, partial eta-squared = .494, internal stable factors $F(1, 110) = 42.97$, $p < .001$, partial eta-squared = .058, and internal unstable factors, $F(1, 110) = 42.79$, $p < .001$, partial eta-squared = .280 were endorsed as more likely explanations for child anger than their sadness. Figure 2 shows the interaction between mothers' causal attributions and emotion expressed by the child. No main or interaction effects were found for child age or gender.

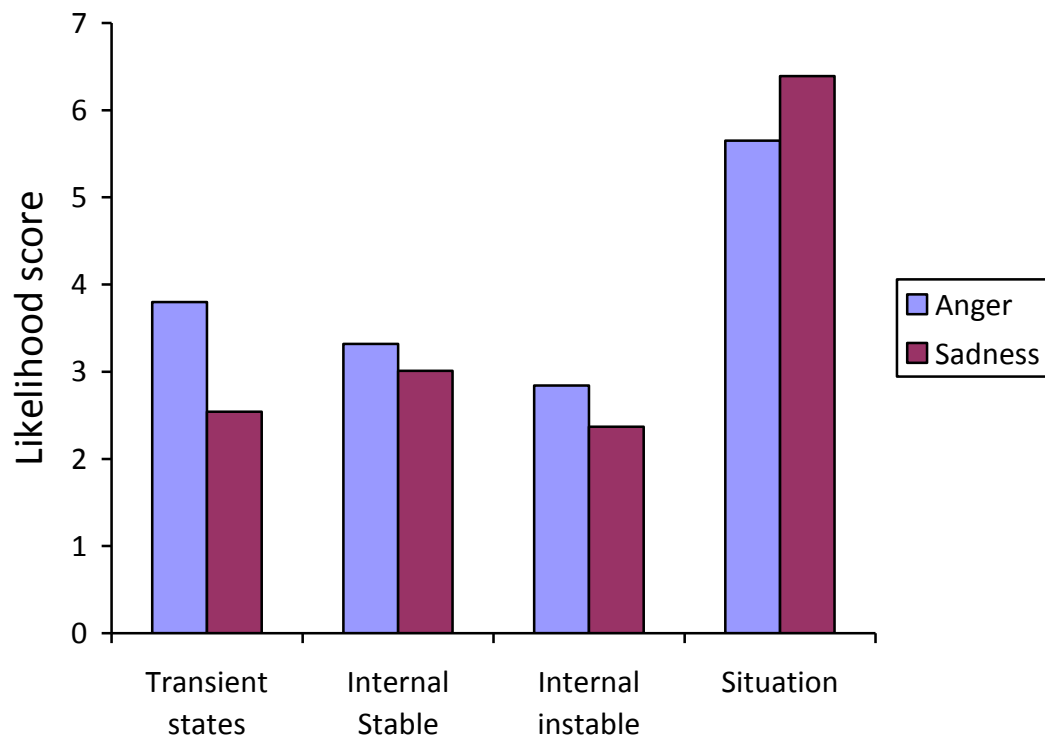


Figure 2. Interaction between mothers' causal attributions and emotion expressed by the child.

Note. Differences in scores for anger versus sadness were significant for transient states, internal stable and situation at $p < .001$ and for internal stable at $p < .05$.

Suggested socialization strategies for children's negative emotions. Mothers' ratings of socialization strategies were averaged across the five stories depicting anger (resulting in 5 scores ranging from 1-5, 1 for each of the 5 types of socialization responses for anger). One of the sadness stories (# 9: "Your child becomes very sad and teary because his/her pet has died,") was discovered to be defective as it did not adequately reflect all 5 possible types of socialization strategy (i.e., there was no punishment response and there were two emotion-focused responses). Therefore one story was dropped from the analysis of socialization responses and mothers' ratings of socialization strategies were averaged across four stories

depicting sadness (resulting in 5 scores ranging from 1-5 for each of the five types of socialization responses for sadness). To determine whether mothers respond differently to their children's negative emotions based on the type of emotion expressed by the child, child gender, or child age, a 2 (child gender) X 2 (age group) X 2 (emotion expressed by the child) X 5 (socialization strategy) mixed-model analysis of variance was computed with gender and age of the child as the between-subjects factors and type of emotion expressed (anger, sadness) and socialization strategy as the within-subjects factors.

The analysis yielded a significant main effect for socialization strategy, $F(2.66, 292.94) = 281.72, p < .001$, partial eta-squared = .719. Pairwise comparisons, using the Bonferroni correction, revealed that, overall, mothers felt they were most likely to use problem focused strategies ($M = 5.90$). This was significantly higher than each of the other socialization strategies (largest $p < .001$). The next most strongly endorsed strategy was expressive encouragement ($M = 5.24$) which was significantly lower than problem-focused strategies ($p < .001$), significantly higher than minimization ($p < .001$), and punishment ($p < .001$), but not significantly different from emotion-focused responses ($p > .05$). The third most strongly endorsed socialization strategy, expressive encouragement ($M = 4.99$) was significantly lower than problem-focused strategies ($p < .001$), and significantly higher than minimization ($p < .001$) and punishment ($p < .001$). Fourth was minimization ($M = 3.03$) which was significantly different from all other strategies except punishment ($p = .862$). Finally, punishment was the least strongly endorsed socialization strategy ($M = 2.87$) and it was significantly different from all socialization strategies except for minimization.

A significant interaction was found for socialization strategy and type of emotion expressed, $F(3.31, 363.99) = 95.74, p < .001$, partial eta-squared = .465. Tests of simple

main effects with an adjustment made to the alpha level ($p = .05/5 = .01$) revealed that mothers' scores were higher in response to children's sadness than their anger for problem-focused responses, $F(1, 110) = 44.59, p < .001$, partial eta-squared = .288; for expressive encouragement, $F(1, 110) = 51.59, p < .001$, partial eta-squared = .319; and for emotion-focused responses, $F(1, 110) = 73.56, p < .001$, partial eta-squared = .319. Scores were higher in response to anger than sadness for minimization, $F(1, 110) = 31.03, p < .001$, partial eta-squared = .220; and punishment, $F(1, 110) = 139.59, p < .001$, partial eta-squared = .559. Tests of simple main effects were also carried out across levels of socialization strategy within each emotion expressed. Within responses to anger, there were significant differences between each socialization strategy except emotion-focused and expressive encouragement which showed no significant difference. Mothers' scores were higher for problem-focused strategies than all other strategies, smallest $p < .001$. Emotion-focused strategies and expressive encouragement were next highest, but were not significantly different from one another, $p > .05$. Punishment was endorsed fourth highest, and was used significantly more than minimization, $p < .001$. Within responses to sadness the pattern was similar except for the use of unsupportive strategies. Problem-focused strategies were highest, smallest $p < .001$, followed by emotion-focused responses and expressive encouragement, which were not significantly different from one another, $p > .05$. Minimization was next most highly endorsed and it was significantly higher than punishment, $p < .001$. Figure 3 shows the interaction between type of emotion expressed by the child and mothers' socialization strategies.

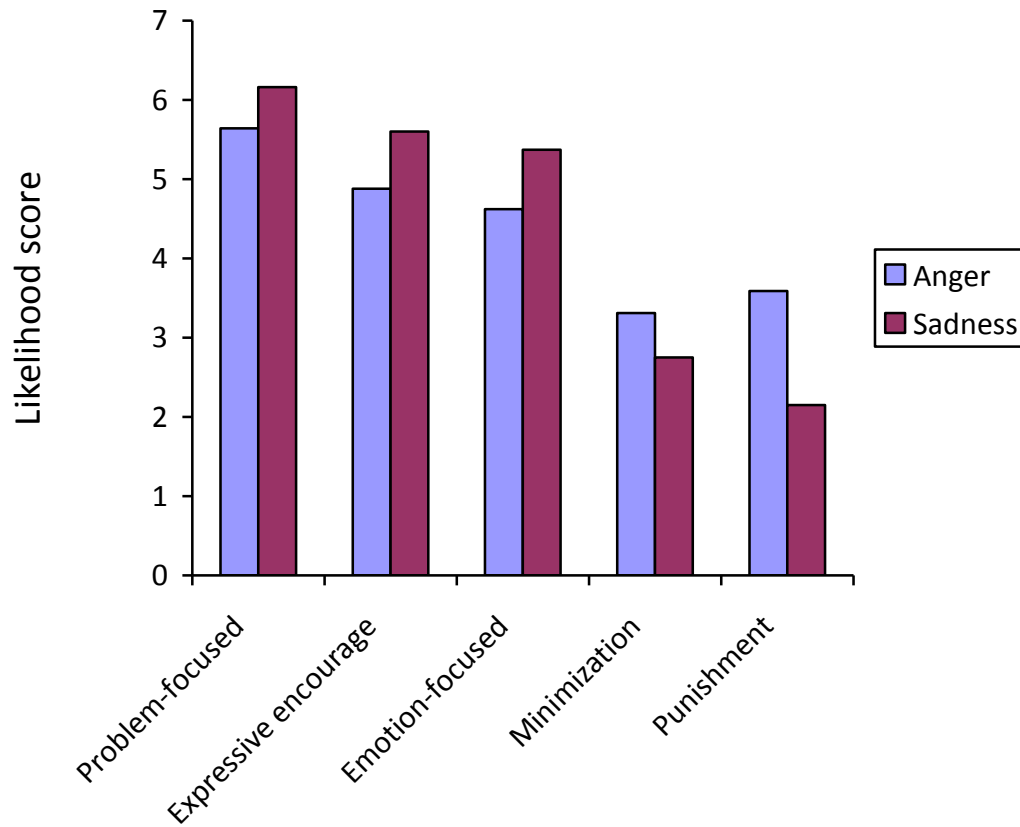


Figure 3. Interaction between mothers' socialization strategies and type of emotion expressed by the child.

Note. Differences between responses to anger and sadness were significant at $p < .001$, at all levels of socialization strategy.

There was a significant interaction between socialization strategy and child gender, $F(2.66, 363.99) = 3.01$, $p < .05$, partial eta-squared = .027. Tests of simple main effects were carried out with an adjustment to the alpha level ($p = .05/5 = .01$) to control familywise error. As Figure 4 illustrates, scores appear higher for girls than boys for problem-focused, expressive encouragement and emotion-focused responses, whereas scores appear higher for boys than girls for minimization and punishment. However, although the difference for

sons and daughters in the use of punishment approached significance, $p < .01$, tests of simple effects of socialization strategy across levels of child gender yielded no significant gender effects, all remaining $p > .10$. This may be due to reduced power due to the need to adjust alpha or to insufficient sample size to detect differences. No other significant main or interaction effects were found.

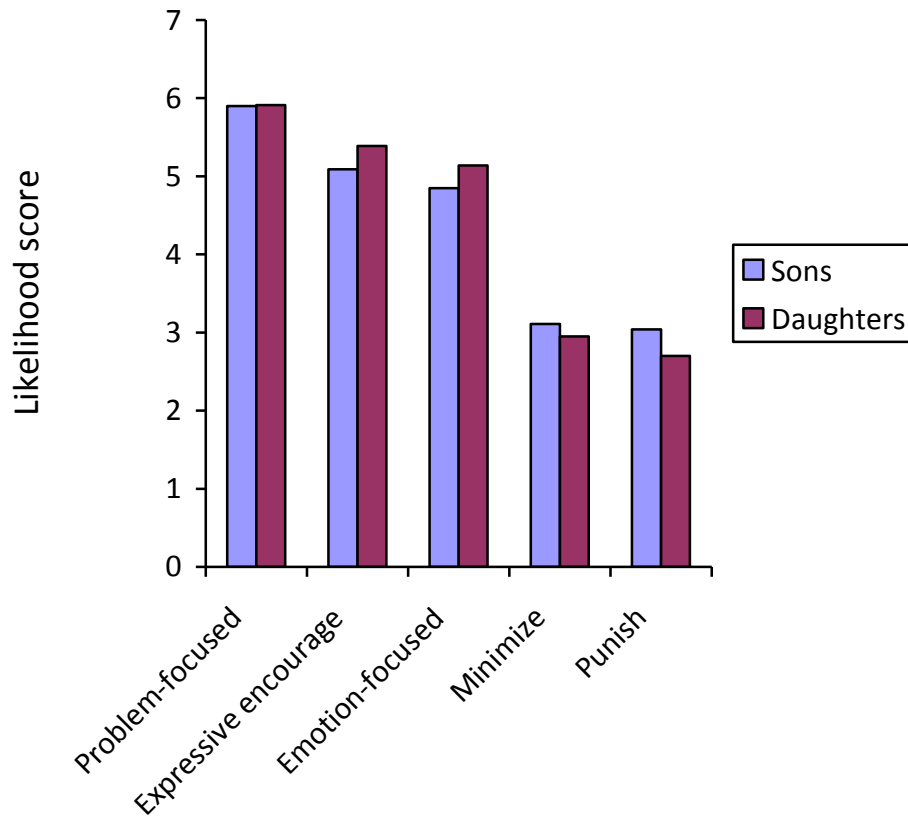


Figure 4. Interaction between mothers' socialization strategies and child gender

Note. Although an interaction effect was found, none of the simple main effects reached significance (all $p > .05$); $n(\text{sons}) = 62$; $n(\text{daughters}) = 52$.

Parent gender differences in emotional responses, beliefs and socialization strategies.

In spite of the uneven sample size, comparisons were made of mothers' and fathers' responses to the hypothetical situation in order to determine whether their responses differed.

Parent gender differences in emotional responses to children's negative emotions.

In order to determine whether mothers and fathers differed in their *emotional responses* to children's negative emotions and whether those differences are related to the type of *emotion expressed by the child* (anger, sadness) or whether they are related to the *type of emotional response*, a mixed-modal analysis of variance was carried out with *parent gender* as the between-subjects factor and *emotion expressed by the child* and *emotional response* as the within-subjects factors. There was no significant main effect of *parent gender*, $F(1, 127) = .657, p = .419$, partial eta-squared = .005. There was no significant interaction between *emotion response* and *parent gender*, $F(5.660, 718.868) = 1.376, p = .225$, partial eta-squared = .011. Parents did not differ overall in their responses to children's negative emotions, nor when compared across each of the ten types of emotional responses. There was also no significant interaction between *emotion expressed by the child* and *parent gender*, $F(1, 127) = .335, p = .564$, partial eta-squared = .003. Parents' *emotional responses* did not differ overall between children's *anger* and *sadness*.

Parent gender differences in acceptability of children's negative emotions. In order to determine whether mothers and fathers differed in their acceptability of their children's negative emotions and whether those differences depend on the nature of the emotion expressed (anger or sadness), a mixed-model repeated measures analysis of variance was carried out with *parent gender* as the between-subjects factor and *emotion expressed* as the

within subjects factor. There was no significant main effect of *parent gender*, $F(1, 127) = .561$, $p = .455$, partial eta-squared = .004. There was also no significant interaction between *parent gender* and *emotion expressed*, $F(1, 127) = 2.737$, $p = .101$, partial eta-squared = .021. Parents were equally accepting of their children's negative emotions regardless of whether they expressed anger or sadness.

Parent gender differences in causal attributions for children's negative emotions. In order to determine whether mothers and fathers differed in their causal attributions for their children's negative emotions and whether those differences depend on the nature of the emotion expressed by the child (*anger* and *sadness*), or the type of *causal attribution* a mixed-model repeated measures analysis of variance was carried out with *parent gender* as the between-subjects factor and *emotion expressed* and *causal attribution* as the within-subjects factors. There was no significant main effect of *parent gender* for *causal attribution*, $F(1, 127) = 1.084$, $p = .300$, partial eta-squared = .008.

There was no significant interaction between *parent gender* and *causal attribution*, $F(2.888, 321.631) = .428$, $p = .726$, partial eta-squared = .003. Mauchley's test indicated that the assumption of sphericity was not met for *causal attribution*, ($\chi^2 = 15.793$), therefore degrees of freedom were adjusted using Huynh-Feldt estimates of sphericity ($\epsilon = .963$).

Parent gender differences in socialization strategies in response to children's negative emotions. To determine whether mothers and fathers differed in their socialization responses to children's negative emotions and whether those differences are related to the *type of emotion expressed by the child* or by the *type of socialization response*, a mixed model repeated measures analysis of variance was carried out with *parent gender* as the between-subjects factor and *socialization strategy* and *type of emotion expressed by the*

child as the within-subjects factors. There was no significant main effect of *parent gender*, $F(1, 127) = 1.561, p = .214$, partial eta-squared = .012. However significant interaction was found between *parent gender* and *socialization strategy*, $F(2.490, 316.284) = 3.321, p = .028$, partial eta-squared = .025. Mauchley's test indicated that the assumption of sphericity was not met for *socialization strategy* ($\chi^2 = 137.776$), therefore degrees of freedom were adjusted using the Greenhouse-Geiser estimates of sphericity, $\epsilon = .623$. Mothers were significantly more likely to use *encouragement of the expression of emotion* than were fathers, $F(1, 127) = 8.482, p = .004$, partial eta-squared = .063. There were no significant differences between mothers' and fathers' responses for any of the four other *socialization responses*.

Relations Among Mothers' Emotional Responses, Beliefs, and Socialization Strategies

One aim of the present study was to test the hypothesis that there is consistency among the different aspects of mothers' responses to children's negative emotions. Given the nature of the data available, there are many ways in which to test such a hypothesis, and many possible comparisons to make. For the sake of clarity, only select hypotheses were tested within the current study, with the acknowledgment that much more information could be derived from the data. It was expected that mothers' negative emotional responses (disappointment, anger, and sadness) would be significantly negatively related to their acceptance of anger and sadness; their negative emotional responses would be significantly positively related to their punishment and minimization of anger and sadness; and their acceptance of anger and sadness would be significantly negatively related to their punishment and minimization of anger and sadness.

Correlations among negative emotional responses and acceptance of anger and sadness. To test the hypothesis that negative emotional responses (disappointment, anger, sadness) are negatively correlated with acceptance of anger and sadness, Pearson's product moment correlation coefficients (Pearson r) were calculated on transformed scores to determine the correlations among these variables (see Table 8). Contrary to expectations, acceptance of anger was not significantly correlated with feelings of disappointment, anger, or sadness in response to anger. There was no relationship between mothers' reported acceptance of their child's expression of anger and their negative emotional responses to anger. With respect to sadness, as expected, acceptance (variable was reversed during transformation) was significantly inversely related to disappointment ($r = .215$) and anger ($r = .196$) responses to sadness. Tests of the magnitude of the effect (r^2) indicated that only 4.6% of the variance in disappointment was accounted for by acceptance of sadness and 3.8% of the variance in anger was accounted for by the acceptance of sadness. Mothers who reported being more accepting of sadness, were slightly less likely to feel disappointment or anger in response to their child's expression of sadness. However, contrary to expectations, mothers' acceptance of sadness was not significantly related to their sadness responses to their child's sadness. Mothers who reported being more accepting of the expression of sadness were no more or less likely to endorse strong feelings of sadness than those who reported being less accepting of the expression of sadness.

Correlations among negative emotional responses and punishment and minimization of anger and sadness. Partial support was found for the hypothesis that negative emotional responses are associated with unsupportive socialization responses. As shown on Table 8, Pearson's r was calculated on transformed scores to determine the

correlations among the three highest emotional responses (disappointment, anger, sadness) and their two negative socialization responses (punishment and minimization) to anger and sadness.

There were significant positive correlations between mothers' disappointment and their punishment ($r = .251, p < .001$) and minimization ($r = .305, p < .001$) of anger. Disappointment accounted for 6.3% of the variance in punishment and 9.3% of the variance in minimization of anger. Mothers who felt more disappointed by their child's anger were slightly more likely to use punishment or minimization to manage their child's anger. There was also a significant positive correlation between mothers' anger responses to anger and their punishment ($r = .359, p < .001$) but not their minimization of their child's anger. Maternal anger in response to child anger accounted for 12.8% of the variance in punishment of anger. There was no relationship between the amount of anger mothers reported feeling in response to their children's anger and their likelihood of using minimization. Mothers who felt more anger in response to their child's anger were slightly more likely to punish their child, but were no more or less likely to minimize their child's anger than mothers who did not feel as angry. There was also no significant correlation between mothers' feelings of sadness in response to their child's anger and their punishment or minimization of anger. Mothers who felt high levels of sadness in response to their child's anger were no more or less likely to punish or minimize anger than those who felt less sadness.

A similar pattern held for mothers' responses to sadness, although the correlations were slightly smaller. Disappointment was significantly correlated with the punishment ($r = .200, p < .05$) and the minimization ($r = .256, p < .001$) of sadness. Disappointment responses to sadness accounted for 4% of the variance in punishment and 6.6% of the

variance in minimization. Mothers who felt more disappointed by their child's expression of sadness were slightly more likely to punish or minimize it than mothers who felt less disappointment. Anger was positively correlated with the punishment ($r = .287, p < .001$), but not the minimization of sadness. Angry responses to sadness accounted for 8.2% of the variance in punishment of sadness. Mothers who felt more anger in response to their child's sadness were slightly more likely to punish their child, but were not more likely to minimize their sadness than mothers who felt less anger. Sad responses to sadness were not significantly correlated with either negative socialization strategy.

Correlations among acceptance and punishment and minimization of anger and sadness. Partial support was found for the hypothesis that mothers who are more accepting of their child's anger and sadness are less likely to respond with punishment and minimization, Table 8 shows the correlation coefficients for acceptance of anger and sadness and punishment and minimization of anger and sadness. Acceptance of anger was significantly negatively correlated with punishment of anger ($r = -.323, p < .001$), accounting for 10.4% of the variance in punishment of anger, but it was not significantly correlated with minimization of anger. Mothers who were more accepting of anger were moderately less likely to punish anger than mothers who were less accepting of anger; whereas there was no relationship between acceptance of anger and the likelihood of minimizing anger.

Acceptance of sadness (reflected variable) was significantly negatively correlated with punishment of sadness ($r = .267, p < .001$), accounting for 7.1% of the variance in punishment of sadness, however, it was not significantly related to the minimization of sadness. Thus, mothers who were less accepting of sadness were slightly more likely to

punish their child's expression of sadness, but no more or less likely to minimize their child's sadness than mothers who were more accepting of sadness.

Table 8

Correlations Among Mothers' Acceptance of Anger and Sadness and their Negative Emotional and Socialization Responses

Response	Disappoint (A)	Sad (A)	Anger (A)	Punish (A)	Minimize (A)	Disappoint (S)	Sad (S)	Anger (S)	Punish (S)	Minimize (S)
Accept(A)	-.078	.012	-.172	-.323**	-.177	.124	.014	.053	-.163	-.001
Accept (S)	-.179	-.180	-.283**	-.170	-.080	-.215*	.057	-.196*	-.267**	-.071
Disappoint(A)	1	.624**	.591**	.251**	.305**	.566**	.594**	.351**	.212*	.231*
Sad(A)	.624**	1	.375**	.146	.157	.451**	.700**	.299**	.163	.160
Anger(A)	.591**	.375**	1	.359**	.271	.227*	.271**	.427**	.310**	.123
Punish(A)	.251**	.146	.359**	1	.566**	.089	.162	.156	.475**	.375**
Minimize (A)	.305	.157	.271	.566**	1	.063	.122	.121	.440**	.654**
Disappoint(S)	.566*	.451**	.227**	.089	.063	1	.454**	.462**	.200*	.256**
Sad(S)	.594**	.700**	.271**	.162	.122	.454**	1	.306**	.129	.097
Anger(S)	.351**	.299**	.427**	.156	.121	.426**	.306**	1	.287**	.156
Punish(S)	.212*	.163	.310**	.475**	.440**	.200**	.129	.287**	1	.358**
Minimize(S)	.231**	.160	.123	.375**	.654**	.256**	.097	.156	.358**	1

Note. Responses to child anger are denoted by (A) and responses to child sadness are denoted by (S).

* $p < .05$, ** $p < .001$, $n = 114$

Relations Among Life Circumstances and Emotional, Cognitive and Socialization Responses

To test the hypothesis that negative life circumstances (lower educational status, lower occupational status, lack of perceived social support, and more stressful life events) result in more negative parent reported, emotions, acceptance, and socialization strategies in response to child anger and sadness, regression analyses were conducted. Existing literature does not offer much evidence regarding which predictors are likely to be significant, therefore the simultaneous method of entry was used for all analyses (i.e., not assigning statistical priority to any of the variables). Preliminary correlational analyses were carried out in order to eliminate redundant predictors (i.e., those with very high correlations of .90 and above).

Occupational status was moderately negatively related to educational status, $r(114) = -.342, p < .001$. High scores on occupational status represent low status, whereas high scores on educational status indicate higher levels of education; therefore, there was a positive association between educational and occupational status. There was also a small relationship between occupational status and recent life events, $r(114) = .198, p < .05$, suggesting that those with lower occupational status reported more stressful life events. The number of stressful life events was significantly correlated with perceived social support, $r(114) = .246, p < .01$. High scores reflect low level of perceived social support (variable was reflected for transformation). Mothers who reported high numbers of stressful life events reported lower levels of perceived social support. The number of stressful life events was also moderately negatively correlated with educational status, $r(114) = -.300, p < .01$. Mothers who lived in households with lower overall levels of education reported higher

numbers of recent life events. Because none of these correlations indicated excessively strong relationships between variables, all four contextual factors were kept for analysis.

Predicting negative emotional responses from contextual factors. A series of multiple linear regression analyses was carried out to develop models for predicting mothers' highest three negative emotional responses (disappointment, anger, and sadness) from contextual factors (educational and occupational status, stressful life events, and perceived social support).

Contextual factors were found to be significant predictors of anger responses to anger when entered simultaneously into the regression equation. Table 9 displays the correlations between the independent variables and the dependent variable, the unstandardized regression coefficients, the standardized regression coefficients, the squared semi-partial correlations (sr^2), and the total and adjusted r^2 . For $n = 114$, the correlation between the observed and predicted values of anger responses to anger, $r = .293$ was significantly different from zero, $F(4, 109) = 3.91$, $p < .01$. Taken together the independent variables accounted for only 9.3% of the variance in the dependent variable, indicating that the regression model was a poor fit. Only one variable, stressful life events showed a statistically significant association with anger response to anger, $t(109) = 3.32$, $p < .01$. Squared semi partial correlations (sr^2) reflect the unique contribution of the independent variable to the total variance of the dependent variable once the contribution of the other independent variables has been adjusted for. Stressful life events (square root) accounted for 30.3% of the variance in anger response to anger when controlling the effects of the other variables. None of the other predictors reached significance.

Table 9

Predicting Anger Responses to Anger from Contextual Factors

	Correlations				Total R ²
	B	β	Zero-order	sr ²	
Educational Status	-.117	-.114	-.178	-.109	
Social Support	-.040	-.091	-.026	-.093	
Stress	.025*	.323	.316	.303	
Occupational Status	-.007	-.097	-.095	-.089	
					R = .354
					R ² = .125
					Adjusted R ² = .093

* $p < .05$

Contextual factors were found to be significant predictors of disappointment responses to anger when entered into the regression equation simultaneously. The correlation between the observed and predicted values of disappointment responses to anger, $r = .293$ was significantly different from zero, $F(4, 109) = 2.56$, $p < .05$. However, taken together, the independent variables accounted for only 5.2% of the variance in the dependent variable, indicating that the regression model is a very poor fit. None of the variables on their own showed statistically significant associations with disappointment in response to anger. None of the squared semi-partial correlations reached significance in this model.

Contextual factors when entered simultaneously into the regression equation were not found to be significant predictors of sadness responses to anger. The correlation between the observed and predicted values of sadness response to anger, $r = .219$ was not significantly different from zero, $F(4, 109) = 1.37, p > .05$. Taken together the independent variables accounted for only 1.3% of the variance in sadness responses to anger, indicating that the regression model is a poor fit. None of the independent variables on their own were significantly associated with sadness responses to anger, even when adjusting for the contribution of the other independent variables.

The multiple linear regression analyses were not significant for disappointment responses to sadness $F(4, 109) = 1.02, p > .05$, for anger responses to sadness $F(4, 109) = .855, p = .434$, or for sadness responses to sadness $F(4, 109) = .947, p = .440$. The correlation between the observed and predicted values of disappointment responses to sadness, $r = .190$, anger response to sadness, $r = .174$, and sadness response to sadness, $r = .183$ were not significantly different from zero. For each equation, taken together the independent variables accounted for less than 1% of the variance in the dependent variable. None of the independent variables on their own were significantly associated with the dependent variables even when adjusting for the contribution of the other independent variables.

Predicting acceptance of anger and sadness from contextual factors. The multiple linear regression equations were not significant for acceptance of anger $F(4, 109) = .453, p = .770$, or acceptance of sadness $F(4, 109) = 1.92, p = .112$. The correlation between the observed and predicted values of acceptance of anger, $r = .183$, and acceptance of sadness, $r = .257$, were not significantly different from zero. For each equation, taken together the

independent variables accounted for less than 1% of the variance in the dependent variable. None of the independent variables on their own were significantly associated with the dependent variables even when adjusting for the contribution of the other independent variables.

Predicting negative socialization strategies (punishment and minimization of anger and sadness) from contextual factors. A multiple linear regression analysis was carried out with punishment of anger as the dependent variable and contextual factors as predictors. Results are shown in Table 10. For $n = 114$, the correlation between the observed and predicted values of punishment of anger, $r = .242$ was not significantly different from zero, $F(4, 109) = 1.69$, $p = .158$. Taken together the independent variables accounted for 2.4% of the variance in punishment of anger. Despite the failure of the model as a whole to reach significance, one variable, stressful life events, on its own was significantly associated with punishment of anger, $t(109) = 1.991$, $p = .049$. Stressful life events accounted for 18.7% of the variance in punishment of anger after controlling for the effects of the other independent variables.

Table 10

Predicting Punishment of Anger from Contextual Factors

	Correlations			Total R ²
	B	β	Zero-order	sr ²
Educational Status	-.115	-.069	-.084	-.064
Social Support	-.072	-.100	-.071	-.099
Stress	.025*	.201	.171	.187
Occupational Status	-.016	-.132	-.084	-.125
				R = .242
				R ² = .058
				Adjusted R ² = .024

* $p < .05$

A multiple linear regression analysis was carried out with minimization of sadness as the dependent variable and contextual factors as predictors. Results are shown in Table 11. For $n = 114$, the correlation between the observed and predicted values of punishment of sadness, $r = .298$ was significantly different from zero, $F(4, 109) = 2.663$, $p = .036$. Taken together the independent variables accounted for 5.6% of the variance in minimization of sadness, indicating that this is a weak model of the prediction of minimization of sadness. Only educational status was significantly associated with minimization of sadness, $t(109) = -2.820$, $p = .036$, indicating with those mothers who live in households with lower levels of education were significantly more likely to use minimization in response to sadness. Household education accounted for 26.1% of the

variance in minimization of sadness after controlling for the effects of the other independent variables.

Table 11

Predicting Minimization of Sadness from Contextual Factors

	Correlations				Total R ²
	B	β	Zero-order	sr ²	
Educational Status	-.379*	-.286	-.260	-.261	
Social Support	.047	.083	.078	.083	
Stress	.006	.057	.138	.055	
Occupational Status	-.012	-.125	-.004	-.120	
					R = .298
					R ² = .089
					Adjusted R ² = .056

* $p < .05$

The multiple linear regression equations for minimization of anger $F(4, 109) = 1.05$, $p = .387$ and punishment of sadness $F(4, 109) = 1.89$, $p = .117$ were not significant. The correlation between the observed and predicted values of minimization of anger, $r = .192$ and punishment of sadness $r = .255$, were not significantly different from zero. For each equation, taken together the independent variables accounted for less than 1% of the variance in the dependent variables and none of the individual predictors accounted for a

significant proportion of the variance in the dependent variables after controlling for the effects of the other variables.

The hypothesis that negative contextual factors (i.e., low education, low occupational status, lower perceived social support, and higher stressful life events) would predict more negative and unsupportive responses to children's negative emotions only received partial support. These contextual factors were significant predictors of only three aspects of mothers' responses to children's negative emotions. The number of stressful life events was a significant predictor of both mothers' anger responses to child anger and their punishment of child anger. Educational status was a significant predictor of mothers' minimization of sadness. None of the other predictors reached significance.

Predicting Children's Emotion Regulation from Mothers' Socialization Responses

Multiple linear regression was used to test the hypothesis that children's emotion regulation can be predicted by mothers' socialization responses to children's negative emotions. A regression analysis using the simultaneous method of entry was carried out to develop a model for predicting emotion regulation from mothers' five socialization responses (problem-focused responses, emotion-focused responses, expressive encouragement, minimization, and punishment) in response to child anger. Because two regression analyses were being carried out using the same dependent variable, a Bonferroni correction was made to alpha ($p = .05/2 = .025$) in order to control for family-wise error. It is not clear which types of socialization responses are better predictors of emotion regulation, therefore they were entered simultaneously into the regression equation.

For $n = 114$, the correlation between the observed and predicted values of emotion regulation, $r = .483$ was significantly different from zero, $F(5, 108) = 6.57$, $p < .001$ (see Table 12). Taken together the independent variables accounted for 19.8% of the variance in emotion regulation, suggesting that the overall regression model is a moderate fit. Squared semi partial correlations (sr^2) reflect the unique contribution of the independent variable to the total variance of the dependent variable on the contribution of the other independent variables have been adjusted for. The use of problem-focused responses to anger was significantly associated with children's emotion regulation, ($t(108) = 3.56$, $p < .001$), accounting for 32.4% of the variance in emotion regulation after controlling for the effects of the other socialization responses. Children of mothers who report high levels of problem-focused responding have better emotion regulation capabilities than children of mothers who report low levels of problem-focused responding.

Emotion-focused responses to anger were significantly associated with children's emotion regulation, ($t(108) = 2.32$, $p < .05$). accounting for 21.8% of the variance in emotion regulation when controlling for the effects of the other socialization responses. Mothers who report high levels of emotion-focused responses have children with poorer emotion regulation capabilities than children of mothers who report lower levels of emotion-focused responding. Minimization of anger was also significantly associated with children's emotion regulation, $t(108) = 3.38$, $p < .001$ accounting for 30.9% of the variance in children emotion regulation when controlling for the effects of the other socialization strategies. Mothers who reported high levels of minimization of anger have children with poorer emotion regulation capacities than those who report using lower levels of minimization. Expressive encouragement and punishment of anger did not reach significance.

Table 12

Predicting Emotion Regulation from Socialization Responses to Anger

Variable	Correlations				Total R ²
	B	β	Zero-order	sr ²	
Problem-focused	1.141**	.386	.245	.324	
Emotion-focused	-.182*	-.242	-.106	-.218	
Expressive encourage	.022	-.061	.143	.035	
Punish	.056	-.062	-.140	.086	
Minimize	-.234**	-.069	-.337	-.309	
					R = .483
					R ² = .233
					Adjusted R ² = .198

* $p < .025$; ** $p < .01$

A multiple linear regression analysis using the simultaneous method of entry was carried out to develop a model for predicting emotion regulation from mothers' socialization responses to sadness (problem-focused responses, emotion-focused responses, expressive encouragement, punishment, and minimization). For $n = 114$, the correlation between the observed and predicted values of emotion regulation, $r = .468$ was significantly different from zero, $F(5, 108) = 6.04$, $p < .001$ (see Table 13). Taken together the independent variables accounted for 18.2% of the variance in emotion regulation, suggesting that the overall regression model is a moderate fit. Squared semi partial correlations (sr²) reflect the unique contribution of the independent variable to the total variance of the dependent variable once the contribution of the other independent variables has been adjusted for. Expressive encouragement of sadness was significantly associated

with children's emotion regulation, $t(108) = 2.47, p < .025$, accounting for 23.1% of the variance in emotion regulation after controlling for the effects of the other independent variables. Mothers who use high levels of expressive encouragement have children who have better emotion regulation capacities. Minimization of sadness was significantly associated with children's emotion regulation, $t(108) = 4.42, p < .001$, accounting for 37.6% of the variance in emotion regulation after controlling for the effects of the other independent variables. High levels of minimization were associated with lower maternally rated emotion regulation capacities in their children. The other three independent variables were not significantly associated with children's emotion regulation.

Table 13

Predicting Emotion Regulation from Socialization Responses to Sadness

Variable	Correlations			Total R ²
	B	β	Zero-order	sr ²
Problem-focused	.082	.025	.140	.021
Emotion-focused	-.065	-.820	.012	-.072
Expressive encourage	.610*	.251	.254	.231
Punish	.217	.061	-.133	.062
Minimize	-.335**	-.438	-.367	-.391
				R = .468
				R ² = .219
				Adjusted R ² = .182

Note. * $p < .025$; ** $p < .001$

*Additional Analyses**Predicting Emotion Regulation from Emotional Responses, Acceptance and Causal Attributions*

Predicting emotion regulation from emotional responses. Multiple linear regression analysis using the simultaneous method of entry was carried out to develop a model for predicting children's emotion regulation from their mothers' four strongest emotional responses to their children's *anger* and *sadness* (*concern, sadness, disappointment, anger*). Because five regression analyses were being carried out using the same dependent variable, a Bonferroni correction was made to alpha ($p = .05/5 = .01$) in order to control for family-wise error. Results from the standard multiple regression for *emotional responses to anger* are shown in Table 12. It displays the correlations between the independent variables and the dependent variable, the unstandardized regression coefficients, the standardized regression coefficients, the squared semi-partial correlations (sr^2), and the total and adjusted r^2 . For $n=114$, the correlation between the observed and predicted values of emotion regulation, $r = .237$ was not significantly different from zero, $F(4, 109) = 1.625, p = .173$. Taken together the independent variables accounted for only 2.2% of the variance in emotion regulation, indicating that the regression model is a very poor fit. None of the variables show statistically significant associations with emotion regulation. Squared semi partial correlations (sr^2) reflect the unique contribution of the independent variable to the total variance of the dependent variable on the contribution of the other independent variables have been adjusted for. None of the squared semi partial correlations reached significance in this model.

Table 14

Predicting Emotion Regulation from Emotional Responses to Anger

Variable	Correlations				Total R ²
	B	β	Zero-order	sr ²	
Concern	-.001	-.008	.050	-.007	
Sadness	.009	.066	.146	.052	
Disappointment	.002	.018	.170	.012	
Anger	.192	.194	.228	.158	
					R = .237
					R ² = .056
					Adjusted R ² = .022

* $p < .01$

Results from the standard multiple regression for *emotional responses to anger* are shown in Table 13. For $N=114$, the correlation between the observed and predicted values of emotion regulation, $r = .124$ was not significantly different from zero, $F(4, 109) = 0.428$, $p = .788$. Taken together the independent variables accounted for only 2.1% of the variance in emotion regulation, indicating that the regression model is a very poor fit. None of the variables show statistically significant associations with emotion regulation. Squared semi partial correlations (sr²) reflect the unique contribution of the independent variable to the total variance of the dependent variable on the contribution of the other independent variables have been adjusted for. None of the squared semi partial correlations reached significance in this model.

Table 15

Predicting Emotion Regulation from Emotional Responses to Sadness

Variable	Correlations				Total R ²
	B	β	Zero-order	sr ²	
Concern	.026	.036	.048	.033	
Sadness	-.007	.014	-.028	-.046	
Disappointment	.046	.459	.50	.013	
Anger	.122	.126	.101	.092	
					R = .124
					R ² = .015
					Adjusted R ² = .021

* $p < .01$

A multiple linear regression analysis using the simultaneous method of entry was carried out to develop a model for predicting emotion regulation from mothers' *acceptance* of their children's *anger* and *sadness*. As seen in table 14, for $n = 114$, the correlation between the observed and predicted values of emotion regulation, $r = .340$ was significantly different from zero, $F(4, 109) = 7.263$, $p = .001$. Taken together the independent variables accounted for 10% of the variance in emotion regulation, suggesting that the overall regression model is a poor fit. Squared semi partial correlations (sr²) reflect the unique contribution of the independent variable to the total variance of the dependent variable on the contribution of the other independent variables have been adjusted for. The reflected square root of *acceptance of sadness* was significantly associated with *children's emotion*

regulation, ($t(111) = 3.300, p = .001$) accounting for 29.9% of the variance in *emotion regulation* when controlling for the effects of mothers' *acceptance of anger*.

Table 16

Predicting Emotion Regulation from Acceptance of Anger and Sadness

Variable	Correlations				Total R ²
	B	β	Zero-order	sr ²	
AcceptAnger	-.002	-.014	-.170	-.013	
AcceptSadness	.287*	.333	-.340	.299	
					R = .340
					R ² = .116
					Adjusted R ² = .100

* $p. < .01$

A multiple linear regression analysis using the simultaneous method of entry was carried out to develop a model for predicting emotion regulation from mothers' *causal attributions for anger*. Table 15 shows that, for $n = 114$, the correlation between the observed and predicted values of emotion regulation, $r = .377$ was significantly different from zero, $F(4, 109) = 4.527, p = .002$. Taken together the independent variables accounted for 11.1% of the variance in emotion regulation, suggesting that the overall regression model is a poor fit. Squared semi partial correlations (sr^2) reflect the unique contribution of the independent variable to the total variance of the dependent variable on the contribution of the other independent variables have been adjusted for. *Internal unstable attributions* was significantly associated with *children's emotion regulation*, $t(109) = 3.130, p = .002$, accounting for 28.7% of the variance in *emotion regulation* when controlling for the effects

of mothers' other causal attributions. The reflected square root of *situational attributions* was significantly associated with *children's emotion regulation*, $t(109) = 2.934, p = .004$. None of the other causal attributions were significantly associated with *emotion regulation*.

Table 17

Predicting Emotion Regulation from Causal Attributions for Anger

Variable	Correlations				Total R ²
	B	β	Zero-order	sr ²	
Internal/stable	-.007	-.069	-.015	-.072	
Internal/unstable	.032*	.323	.243	.287	
Transient states	-.010	-.085	.021	-.007	
Situation	.206*	.265	.244	.271	
					R = .377
					R ² = .142
					Adjusted R ² = .111

* $p < .01$

A multiple linear regression analysis using the simultaneous method of entry was carried out to develop a model for predicting emotion regulation from mothers' *causal attributions for sadness*. Table 16 shows that, for $n = 114$, the correlation between the observed and predicted values of emotion regulation, $r = .335$ was significantly different from zero, $F(4, 109) = 3.538, p = .009$. Taken together the independent variables accounted for 8.2% of the variance in emotion regulation, suggesting that the overall regression model is a poor fit. Squared semi partial correlations (sr^2) reflect the unique contribution of the

independent variable to the total variance of the dependent variable once the contribution of the other independent variables has been adjusted for. The reflected log of *situational attributions* was significantly associated with *children's emotion regulation*, $t(109) = 2.888$, $p = .005$, accounting for 26.7% of the variance in *emotion regulation* after controlling for the effects of the other causal attributions. None of the other causal attributions were significantly associated with *emotion regulation*.

Table 18

Predicting Emotion Regulation from Causal Attributions for Sadness

Variable	Correlations			Total R ²
	B	β	Zero-order	sr ²
Internal/stable	.068	.076	.175	.074
Internal/unstable	.009	.084	.166	.077
Transient states	.046	.048	.122	.042
Situation	.565*	.071	.302	.267
				R = .335
				R ² = .115
				Adjusted R ² = .082

* $p < .01$

Discussion

The primary goal of the current study was to explore the process of parental socialization of children's emotion and to broaden existing knowledge of how parents' contingent responses to children's negative emotions (anger and sadness) are related to children's emotion regulation. Recently, there has been an increase in interest in the theory and study of the socialization of emotion, especially the socialization of children's understanding, experience, expression and regulation of emotion. One way in which parents may influence the development of emotion regulation in their children is through their contingent responses to their children's normally occurring negative emotions; in other words, how they socialize their children's emotion (Cole, Dennis, Smith-Simon et al, 2008; Ramsden & Hubbard, 2002).

A web based questionnaire was used to achieve the first objective of the present study, to explore how parents respond to children's negative emotions. To this point the literature has presented an incomplete picture of the ways in which parents respond to children's negative emotions. The socialization process has been implicitly defined by the research to constitute primarily parents' behavioural responses to children's negative emotions. Therefore the current study involved an examination of parents' emotional reactions and their beliefs about their children's expression of negative emotion as well as the behavioural strategies they use to manage their children's negative emotions. Also, the impact of child gender and age on the socialization of emotion process was examined.

A second general objective was to explore the role of ecological factors, such as the context in which parenting occurs, in the socialization of emotion process. This involved an examination of the impact of parent education and occupational status as well as perceived social support and stressful life events on parents' socialization of emotion.

Finally, the majority of the research on parents' socialization of emotion focuses on the effects of various socialization practices on children's developmental outcomes. The third objective of the current study was to examine the relationship between parents' responses to children's negative emotions and their children's emotion regulation.

Recruiting Fathers

There is significant evidence demonstrating the important role that fathers play in the process of child development (Allen & Daly, 2002). Research suggests that mothers and fathers may play different roles in the emotion socialization process (Carson & Parke, 1994). However, the precise nature of the differences between mothers' and fathers' responses as well as their interaction effects, are not well understood in part due to a systematic neglect of fathers in the research literature on child development. This neglect appears to be due in part to difficulties recruiting fathers to participate in child development and parenting research. The current study was not immune to this problem. Of the 285 participants who accessed the study website or requested a paper/pencil version, only 22, or 7%, were fathers. Once data had been screened and cleaned to meet the criteria for participation, this number was further reduced to 15 resulting in a significantly uneven split between mothers ($n = 140$) and fathers ($n = 15$). None of these fathers were related to the mothers who participated. Demographically, they were similar to the mothers, except that the fathers reported living in households with higher educational status. Comparisons of their responses to the hypothetical situations revealed few differences between responses of fathers and mothers. The only significant difference that emerged was that mothers tended to encourage the expression of emotion significantly more than fathers, in response to anger and sadness. Due to the very low numbers of fathers these results should be interpreted

with considerable caution as there was not likely sufficient power to detect effects.

Additionally these results should not be generalized to the wider population.

It was expected that the convenience of accessing the current study online would have facilitated fathers' participation. Also, in the instructions for the study, participants were encouraged to have their spouses participate as well, and this would have doubled their chances of winning the cash draw. However, these efforts were not sufficient to ensure adequate participation by fathers. Results of a recent recruitment study by Sherr, Davé, Luca, Senior, and Nazareth (2006) suggest that direct recruitment of fathers in postnatal hospital wards may be the best method of obtaining fathers' participation in child research. However, this method was not possible for the current study. Researchers who endeavour to study the role of fathers in child development may benefit from more direct methods of recruitment.

Due to the failure to recruit adequate number of fathers it was necessary to restrict the focus of the analysis to mothers and to acknowledge that this will impact on the interpretation of the results.

Mothers' Responses to Children's Anger and Sadness

Mothers' emotional responses to children's anger and sadness. Results of the current study provide insight into mothers' emotional reactions to their children's negative emotions (anger and sadness). Although some researchers have examined parents' distress in response to children's negative emotions, none have considered a range of possible discrete emotional responses. Hypotheses for the current study were therefore based on Mills and Rubin's (1990) study of mothers' discrete emotional responses to children's aggression and social withdrawal. Consistent with Mills and Rubin (1990), concern was the

predominant emotional response reported by mothers in response to their children's anger and sadness. Concern has been linked to the concepts of both empathy and sympathy and is considered a healthy and prosocial response to the distress of others. Concern for others is considered a sign of mental health involving a focus on the well-being of others, rather than on the self (Zhan-Waxler & Radke-Yarrow, 1990), and enables one to respond effectively (Eisenberg et al., 1998). The next most highly endorsed emotional response overall was sadness, followed by disappointment, then anger, surprise, guilt, puzzlement, and embarrassment, then amusement, and, finally, pleasure.

As expected, mothers' emotional responses varied depending on the emotion expressed by their child. Mothers were more highly emotional overall in response to anger than sadness. Mothers' feelings of concern and sadness were stronger in response to their children's expressions of sadness, than in response to their expressions of anger. Also, while in response to child anger, mothers felt concern most strongly, then disappointment, followed by sadness then anger; sadness evoked concern most strongly, followed by sadness, disappointment, then anger.

These results suggest a strong propensity for children's expressions of anger and sadness to elicit the same negative emotions in their mothers. This may reflect a vicarious experiencing of children's emotions, a concept that has gained significant attention during the last decade, first through the discovery of mirror neurons in the brains of macaque monkeys, and subsequently via evidence of similar neuron system in humans. These neurons are thought to underlie the process of empathic concern and relational attunement (Gallese, Eagle, & Migone, 2007). The contagion or mirroring of emotion appears to be a necessary precursor to feeling concern for another's distress and therefore to respond effectively (Eisenberg et al., 1998; Zahn-Waxler & Radke-Yarrow, 1990).

Overall, these results support the hypothesis that mothers respond with stronger negative emotion to children's anger than to their sadness, although it also appears that different negative emotions are more commonly evoked by sadness versus anger. Mills and Rubin (1990; 1992) found similar results in their study of maternal responses to children's aggression and social withdrawal. Aggression elicited stronger negative emotions in mothers (i.e., more disappointment and anger) than social withdrawal. Hastings and Rubin (1999) also found aggression to elicit more negative emotional responses than social withdrawal. Denham (1993) found that children's anger tended to elicit feelings of anger in their mothers. However, sadness was also found to produce maternal feelings of anger, as well as neutral emotions in Denham's study, but did not produce maternal feelings of sadness as was the case in the present study.

This pattern of responses did not differ according to the gender of the child, suggesting that mothers of 6 - to 10-year-olds tend to have the same emotional responses to their sons' and their daughters' expressions of anger and sadness. Also, responses did not vary depending on the age of the child (i.e., there was no difference in responses of mothers of 6 - 8:5 year-olds and mothers of 8:6 – 10:11 year olds). In future studies it may be advantageous to choose more age ranges in order to detect effects (i.e., comparing responses of preschoolers' to middle-schoolers' expressions of negative emotion).

Mothers' beliefs regarding their children's expression of negative emotions.

Another way in which the current study has contributed to the literature on the socialization of emotion is by examining mothers' beliefs regarding their children's expression of negative emotion. As expected, mothers were significantly more accepting of their children's expression of sadness than of anger. Greater tolerance of the expression of sadness may reflect the fact that anger tends to be an externalizing emotion, whereas

sadness, an internalizing emotion, has less impact on others. Mothers' acceptance did not vary based on the gender or age of the child. The fact that mothers reported experiencing more negative emotional responses to their children's expression of anger and that they were less accepting of the expression of anger is not likely coincidental. However it is not possible to determine whether parents' emotional responses and acceptance are causally related. Nor can we determine the direction of causality, or whether some other intervening factor(s) account for both responses.

Parents' attributions regarding the causes of their children's behaviours have been thought to guide their emotional and behavioural responses (Dix, 1990; Mills & Rubin, 1990, 1992). Causal attributions tend to be classified in terms of locus and stability. Specifically, people tend to attribute behaviours to internal stable, internal unstable, internal transient, and external factors. There is evidence to suggest that parents' interpretations of their children's behaviours tend to be positively biased, such that parents are more likely to regard desirable than undesirable behaviours as stable (Gretarsson & Gelfand, 1988). Parents generally find aggression and withdrawal to be problematic and unacceptable, and they have been found to attribute these behaviours to transient states rather than acquired habits, at least in mainstream western societies (Mills & Rubin, 1990).

In the current study, mothers' causal attributions differed based on whether anger or sadness was being expressed by the child. The situation was the most highly rated causal attribution for both emotions, perhaps indicating the belief that anger and sadness are considered unacceptable or problematic. The second most strongly endorsed attribution for sadness was internal stable (e.g., personality), followed by transient states (e.g., fatigue, hunger), then internal unstable (e.g., age, maturity) factors. The second most highly rated attribution for anger was transient states, followed by internal stable, and then internal

unstable factors. The general pattern of results for both anger and sadness suggests a slight tendency towards a positive bias (i.e., more unstable and external attributions) for anger, the less accepted of the two emotions.

Mothers' socialization responses to children's negative emotions. Results of the current study indicate that, overall, mothers are most likely to use problem-focused strategies in response to their children's expressions of negative emotion. Roberts and Strayer (1987), who focused on parents' responses to general child upset also found that parents focus mostly on the pragmatic aspects of the situation (i.e., solving the problem that precipitated the upset). Recall that effective and prosocial responding to children's negative emotions depends on the responder's feelings of concern and ability to focus on the needs of the child, rather than the self (Eisenberg et al., 1996; Zhan-Waxler & Radke-Yarrow, 1990). It is therefore not surprising that problem-focused responses were the most frequently endorsed, given that the predominant emotional response was concern.

The two other supportive socialization strategies (emotion-focused and expressive encouragement) were next most likely to be used, and there was no significant difference in the likelihood that mothers would use either these strategies to respond to their children's negative emotion. Overall, therefore, mothers were significantly more likely to use supportive strategies than unsupportive strategies to deal with their children's negative emotions. Punishment was least likely to be endorsed, followed by minimization.

The choice of socialization strategy was influenced by the type of emotion expressed by the child. Mothers were significantly more likely to use an unsupportive socialization strategy (minimization or punishment) in response to their children's anger, whereas supportive responses were more likely to be used for sadness than for anger. Also, for anger, mothers were significantly more likely to respond with punishment than

minimization, whereas for sadness, mothers were more likely to respond with minimization than punishment.

These findings support the hypothesis that mothers respond more negatively to child anger than sadness, which is similar to the finding of Mills and Rubin (1990; 1992) that parents tend to respond to aggression more negatively than to social withdrawal. This is also consistent with the fact that mothers are less accepting of anger than sadness and that they experience more negative emotions in response to anger than sadness. The age and gender of the child did not impact significantly on mothers' choices of socialization strategy for either negative emotion.

As expected there was some consistency across the emotional, cognitive, and behavioural components of mothers' responses to anger as compared to sadness. Mothers responded more negatively to their child's anger than to their sadness: they were more likely to feel disappointment and anger, and were less accepting of the expression of anger. Mothers' causal attributions were more external and unstable, especially for anger, likely reflecting the positive attributional bias that is believed to accompany behaviours that parents find undesirable. Mothers were also more likely to use unsupportive behavioural strategies in response to child anger than to sadness; and to use supportive strategies less often in response to anger than to sadness. Also, they were more likely to use punishment (the harsher of the unsupportive strategies) than minimization for anger; whereas punishment was rated as least likely in response to sadness.

Child gender did not moderate mothers' emotions, beliefs, or socialization strategies in response to children's negative emotions. Very few studies have examined the effects of child gender on parents' responses to negative emotions and only two studies revealed

gender effects with parents responding more negatively to boys than girls (Garside & Klimes-Dougan, 2002; Krause et al., 2002). Four additional studies found no effects. It could be that for the age range studied there are few actual differences in how parents respond to their daughters' or sons' negative emotions. However, if small differences do exist, it is possible that the sample sizes were inadequate to detect them.

Age did not emerge as a significant moderator of mothers' emotional responses, beliefs, and socialization responses to their children's anger and sadness. The evidence concerning the influence of the child's age on mothers' responses to children's negative emotions has been mixed (Jones et al., 2002), with some studies finding increases in the negativity of mothers' responses as children age (Eisenberg et al., 1999; Klimes-Dougan, et al., 2007); and others finding more negativity in response to younger children (Fabes et al., 1994). The majority of the research has focused on children of preschool age, in spite of the hypothesized closer link between parents' responses and child outcomes later in childhood (Eisenberg et al., 1994). The age range of interest in the current study (6-10 years) was chosen due to a lack of research examining mothers' responses to the negative emotion of this age group, as well as to determine whether mothers respond differently to their younger (6-8:5 year-old) and older (8:6-10:11 year-old) children. The lack of age effects in the current study may be due to the fact that this variable was unevenly split with 63.2% of mothers reporting on children aged 6 - 8:5 and 36.8% reporting on children aged 8:6 - 10:11. The unevenness of the two groups may have prevented the detection of age effects.

It is possible that the lack of age effects is indicative of the fact that mothers' reported reactions are actually relatively consistent over this age range, reflecting consistencies in their philosophies about emotions, emotion-related parental temperamental

or personality factors, or children's temperamentally-based emotionality (Eisenberg et al., 1999).

It also may be that the lack of age effects is related, at least in part, to the particular age range chosen for the current study. Comparing responses to the emotions of a larger age range of children (i.e., preschoolers to middle-schoolers to adolescents), may have been more likely to yield differences in responses. Given the limited evidence to date regarding the effects of age on mothers' responses, it is difficult to postulate how responses would differ across such a broad age range. It is likely that some parents would become increasingly positive in their responses as their children become more regulated with age. However, some parents, perhaps those who generally respond more negatively to negative emotions, or those who have children who are less well regulated, might become increasingly negative as their children age.

One final issue to discuss related to mothers' responses to children's negative emotions, pertains to the fact that experienced emotion and the behavioural expression of that emotion may be confounded. The hypothetical situations used in the current study identified the emotion expressed by the child (anger or sadness) and also provided descriptive information about the behavioural expression of that emotion. There is likely some variability in the degree to which mothers actually respond to what they believe to be their child's emotion or their child's particular behavioural expression of that emotion. Gottman et al. (1996) would suggest that emotion-coaching parents who are particularly aware of, accepting of, and sensitive to their child's emotional experience, would be more likely to respond to what they believe to be their child's emotion; whereas dismissing parents might be more likely to respond to their child's behavioural expression of emotion.

In the current study, it was not possible to determine the degree to which mothers responded to what they believed to be their child's experience of sadness or anger, or to the behaviour that is associated with that emotion.

Relations Among Emotional Responses, Beliefs and Socialization Strategies

One of the aims of the present study was to extend the analysis of parental socialization of emotion beyond parent behaviour to include an examination of mothers' feelings and thoughts regarding children's expression of negative emotions and to determine the degree of consistency among these responses.

Because of the large number of variables examined in the current study, in order to maintain clarity, only select relationships were tested: correlations among mothers' strongest negative emotional responses (disappointment, anger, and sadness) and their acceptance, punishment, and minimization of anger and sadness. It was expected that mothers' highest rated negative emotional responses (disappointment, anger, and sadness) would be negatively related to their acceptance of anger and sadness, and would be positively related to their punishment and minimization of anger and sadness.

Relations among negative emotional responses and acceptance of anger and sadness. Results of the current study provide only modest support for the hypothesis of a negative correlation between acceptance of the expression of negative emotion and negative emotional responses. Mothers' acceptance of anger was not significantly related to any of the three highest rated negative emotional responses to anger that were studied (disappointment, sadness and anger). However, acceptance of sadness was significantly negatively correlated with disappointment and anger responses to sadness. These

relationships were quite weak with less than 5% of the variance in either variable accounted for by acceptance of sadness. Acceptance was not related to mothers' experience of sadness in response to their child's expression of sadness.

Relations between negative emotional responses and punishment and minimization of anger and sadness. Statistically significant but weak relationships were found between negative emotional responses and unsupportive socialization strategies. The pattern of relationships was remarkably consistent for responses to anger and sadness.

Disappointment in response to anger and sadness was modestly related to both punishment and minimization responses. Maternal anger (in response to anger or sadness) was most strongly correlated with the use of punishment; however it was not related to the use of minimization. Finally, sadness in response to either anger or sadness was not related to mothers' use of either of the unsupportive socialization strategies.

Mothers who feel more anger in response to child anger are slightly more likely to punish their children, perhaps as a way to alleviate their own distress. However there was no significant correlation between mothers' anger and minimization of their child's anger. There was no significant relationship between mothers' feelings of sadness in response to anger or sadness and their likelihood of responding with punishment or minimization.

Relations between acceptance and punishment and minimization of anger and sadness. It was hypothesized that acceptance of anger and sadness would be negatively related to punishment and minimization responses. Results of the current study suggest that mothers who are more accepting of their children's expression of anger and sadness are significantly less likely to punish their children's expression of these emotions, and vice versa. However, there was no relationship between mothers' acceptance and their

minimization of anger or sadness. Thus, some parents who are accepting of these negative emotions may respond nonetheless in minimizing ways.

The hypothesis that there is consistency among mothers' beliefs, emotions and behavioural responses to their children's negative emotions obtained only partial support from these results. It is possible that the sample was inadequate in size to detect small correlations that actually exist. Moreover, this sample of mothers was most likely to respond prosocially to their children's negative emotions. Therefore most of the negative responses to anger and sadness had fairly low means and standard deviations (see Table 8). It is possible that this truncation reduced the ability to detect correlations that do exist.

Relations Among Life Circumstances and Emotional Responses, Beliefs and Socialization Responses to Children's Negative Emotions

Previous research has suggested that the context in which parenting occurs can impact on parents' responses to children's negative emotions. It was hypothesized that negative life circumstances, such as lower educational and occupational status, lower perceived social support, and more stressful life events would predict more negative and unsupportive emotional responses, beliefs, and socialization strategies in response to children's negative emotions.

The most compelling finding was that the number of recent stressful life events was found to be a significant predictor of mothers' anger and punishment in response to child anger. In fact, stressful life events accounted for over 30% of the variance in angry responses to child anger and 18.7% of the variance in punishment of anger. Thus, it appears that stress increases the likelihood that mothers will respond to their children's anger with anger and punishment. It may be that mothers under stress have higher baseline levels of

distress and anger, and that experiencing their children's expression of anger interferes with their ability to respond in more supportive ways. High stress has been found to generally reduce parents' sensitivity and effectiveness in fostering healthy social and emotional development and to reduce resources for coping with parental tasks, including dealing with children's negative emotions (Dix, 1991; Mills & Rubin, 1992).

Educational status predicted minimization of sadness. Mothers with lower household educational status were more likely to minimize their child's sadness, with 26.1% of the variance in minimization of sadness being accounted for by educational status. It is unclear why mothers with less education would be more likely to minimize their children's sadness. None of the other maternal beliefs, emotional responses, or socialization strategies was predicted by contextual factors.

Relations Among Mothers' Suggested Socialization Strategies for Children's Negative Emotions and Children's Emotion Regulation

Another way in which the current study contributes to the literature on the socialization of emotion is in the exploration of the relationship between mothers' responses to children's negative emotions and children's emotion regulation abilities.

It was expected that mothers' unsupportive socialization responses (punishment and minimization) to their children's expressions of negative emotions would predict poorer emotion regulation and that supportive strategies (problem-focused, emotion-focused, and expressive encouragement) would predict better emotion regulation capacities in their children. Partial support was found for these hypotheses.

In response to anger, problem-focused responding, emotion-focused responding, and minimization strategies were all significant predictors of emotion-regulation in children.

As expected, mothers who indicated that they were highly likely to use problem-focused responding described their children as having better emotion-regulation capacities than did mothers who reported being less likely to use problem-focused responding. This is consistent with Eisenberg and colleagues' (1996) findings on the positive effects of problem-focused responses on children's social competence.

Contrary to expectations, emotion-focused responses (such as comforting and distraction) to anger predicted poorer emotion regulation in children aged 6-10. It is important to consider that this relationship is correlational and that causation cannot be established. It is possible that the expression of anger by children with poorer emotion regulation abilities elicits emotion focused responses in mothers in an attempt to help their child manage their anger. Although they are considered positive and supportive responses, the limited evidence concerning outcomes related to the use of emotion-focused responses has been mixed. For instance, Eisenberg and Fabes (1994) found that emotion-focused responses predicted children's use of constructive verbalizations when angered. However, these researchers conceded that child characteristics may moderate this effect. Emotion-focused parental responses to emotionally reactive children have been found to predict poor affective balance and social competence (Jones et al., 2002). Thus, while mothers of children with poorer emotion regulation are more likely to use emotion-focused responses, it may actually be better to focus on the practical aspects of the situation and take a more problem-solving approach with these children than with less reactive children. Roberts and Strayer (1987) also suggested that, especially for older children, the focus on the emotion to the neglect of pragmatic solutions can lead to learned helplessness.

As predicted, mothers' minimization of anger predicted poorer emotion regulation in their children. Snyder et al. (2003) found that parents' negative or dismissing responses

to anger reduced the latency to the next anger display in children. Previous research has also shown that invalidating responses by parents predict emotional inhibition, suppression of unwanted thoughts, as well as current and chronic avoidant responses to distressing circumstances in adulthood (Krause et al., 2002). Such reactions have been found to interfere with children's ability to regulate physiological arousal and to process information about emotional events, thereby increasing the likelihood of children's engaging in dysregulated or non-constructive behaviour (Eisenberg et al., 1996; Gottman et al., 1996). These kinds of unsupportive responses may also lead children to view emotions as threatening, to avoid emotionally challenging situations, and ultimately to miss opportunities to learn about and cope with negative emotions (Eisenberg et al., 1998). It may also be useful to consider the possibility of the bi-directionality of effects when interpreting the relationship between emotion regulation and minimization. It is possible that mothers of less well-regulated children are more likely to use minimization in an attempt to downplay the importance of a situation or their child's reaction, again as a means to help the child manage his or her emotions.

Findings for mothers' socialization responses to children's sadness were only similar to responses to anger in that the use of minimization strategies was a significant predictor of children's emotion regulation. Mothers who rated themselves as being more likely to respond with minimization to their children's sadness were more likely to have children who were poorly regulated than those who were less likely to use minimization. Expressive encouragement of sadness was also a significant predictor of emotion regulation. Mothers who encouraged their children to express their sadness described their children as having better emotion-regulation capabilities.

The fact that the minimization of anger and sadness predicted poorer regulation abilities suggests that devaluing the situation or the child's reaction to it, may be particularly detrimental to children. However, it may also be that mothers of children who have more difficulty regulating emotion respond with minimization more often as an attempt to mitigate their child's emotional reaction. Problem-focused and emotion-focused responses to anger, not sadness, were significant predictors of emotion regulation; whereas expressive encouragement in response to sadness, not anger, was a significant predictor of emotion regulation. This suggests that different negative emotions may serve different purposes and elicit different types of responses. Functionalist perspectives of emotion suggest that anger might be a call to action to resolve the source of frustration, whereas sadness, which is associated with loss (which may be less amenable to practical solutions), demands a different kind of response (Roberts & Strayer, 1987). Certain maternal responses to children's negative emotions appear to be related to the child's ability to regulate emotion; however, the nature of this relationship appears to depend on the emotion expressed and the response elicited and also may be bi-directional in nature.

Contrary to expectations, punishment and expressive encouragement in response to anger did not emerge as significant predictors of emotion regulation. Also, problem-focused, emotion-focused, and punishment responses to sadness were not significantly predictive of emotion regulation. It is possible that for each of the emotions, these particular responses do not particularly help or hinder the development of emotion regulation. However, it is important to emphasize the fact that many of these predictors have skewed distributions and truncated ranges. Because of inadequate cases at one or the other end of the distribution, it may be difficult to detect correlations within this sample that actually exist within the population as a whole.

Web Based Research

There is a growing body of empirical evidence to suggest that the internet may be a viable and preferable method for survey research. Web based collection of data offers several advantages over traditional surveys with respect to data processing, including automatic data entry and the reduction of data entry errors, and automatic coding for closed-ended questions (Van Selm & Jankowski, 2006). Sills and Song (2002) conclude that for particular populations of internet users the cost, ease, speed of delivery and response, ease of data cleaning and analysis are more favourable for web based research than for other methods.

For participants this method offers greater convenience, accessibility and anonymity. Studies can be completed within the comfort of one's home at any time of the day or night (Bennet & Nair, 2010; Van Selm & Jankowski, 2006). Internet surveys are accessible anywhere in the world there is internet access and there is no direct contact with the researchers resulting in greater anonymity than is possible using interview techniques or even mail surveys. This has been found to result in a reduced effect of social desirability. It is argued by some that this results in increased completeness of responding, especially for more deviant behaviours (Van Selm & Jankowski, 2006). However, Heiervang and Goodman (2011) found a decrease in completeness of responding when comparing web-based to face-to-face interviews. Although the internet has the potential for greater response rates, the lack of contact with the researchers may result in a greater likelihood that participants will fail to complete all the items.

Summary

This study was concerned with exploring the emotions, beliefs, and behaviours that parents exhibit in response to their children's expression of anger and sadness. Recruitment difficulties precluded serious analysis of fathers' responses or parents gender differences and therefore only mothers' responses are discussed in any detail. Mothers generally responded prosocially to their children's anger and sadness. Based on self-reports, mothers were most likely to feel concern when their children were angry or sad. They were fairly accepting of their children's negative emotions and attributed them most often to situational factors. They were also most likely to use supportive strategies, especially problem-focused responses in managing their children's negative emotions. These findings are consistent with those of Mills & Rubin's (1990) study of mothers' responses to aggression and social withdrawal. These results help to expand our knowledge of the socialization of emotion process beyond the behavioural dimension to include information about mothers' discrete emotional responses, their beliefs about the acceptability of and their causal attributions for the expression of anger and sadness.

Mothers responded more negatively overall to anger than to sadness. They were generally less accepting of their children's expressions of anger, which also tended to arouse greater feelings of anger and disappointment. Mothers were slightly more accepting of the expression of sadness and were more likely to report feeling sad when their child was sad than when their child was angry. They were more likely to attribute their children's anger to transient causes, possibly reflecting the fact that they view anger as a less acceptable emotion. With respect to behavioural responses, mothers were more likely to punish and minimize anger than sadness, and were less likely to use supportive strategies such as problem-focused, emotion-focused and expressive encouragement for anger than

for sadness. These differences were not influenced by the gender or age of the child, at least among children aged 6 -10 who were the focus of the present study. It is possible that this is due to the age-range selected, a previously understudied age-group. Mothers' greater negativity in response to anger than sadness is consistent with the literature on aggression and social withdrawal (Hastings & Rubin, 1999; Mills & Rubin, 1992) and represents new insight into how mothers respond to these different emotions.

Mothers' acceptance of children's negative emotions was not strongly related to their emotional responses to children's anger or sadness. Only small negative correlations were found between disappointment and anger responses to sadness and acceptance of sadness. Also, mothers who were more accepting of anger and sadness were slightly less likely to punish their children's expressions of anger and sadness. Acceptance of anger or sadness was not related to minimization responses. For both anger and sadness, disappointment was very modestly related to both punishment and minimization responses. Maternal anger responses were significantly correlated with punishment of anger and sadness. Sadness responses to either anger or sadness did not appear to be related to mothers' use of either of the unsupportive socialization strategies. Mothers who experienced more anger and disappointment in response to child anger were more likely to punish and minimize their children's expressions of anger and sadness, and to be less accepting of anger. Overall these relationships suggest general consistency among positive and among negative responses. The failure of many of the correlations to reach significance may be due to sampling issues which are discussed below.

With respect to the role of contextual factors in predicting mothers' responses, few predictors were significant. Educational status only predicted the use of minimization of sadness, with mothers living in households with lower education more likely to minimize

sadness. A more significant finding was that high numbers of stressful life events predicted greater feelings of anger and increased use of punishment of children's anger. The negative effects of maternal stress on the ability to respond effectively to children's negative emotions suggests that intervention efforts for high risk mothers may benefit from stress reduction efforts and identifying factors that can mitigate maternal stress as a means to improve mothers' capacities to respond effectively to their children's negative emotions.

Partial support was found for the hypothesis that emotion regulation can be predicted from mothers' behavioural responses to children's negative emotions. In particular, the use of problem-focused strategies for anger were associated with better emotion regulation, whereas emotion-focused and minimization strategies for anger were associated with poorer emotion regulation. It was somewhat unexpected that emotion-focused responses would predict emotion regulation and consideration of the possible explanation for this finding raised the issue of the bi-directionality of effects between emotion regulation and socialization responses. The pattern of results is slightly different for sadness with expressive encouragement predicting better emotion regulation and minimization predicting poorer emotion regulation in children. These differences raise the issue of the different functions of different emotions, which suggests that different parental responses may be more appropriate for anger than for sadness and vice versa. That the other variables did not reach significance, however, may also be due to sampling issues as discussed below.

The socialization of emotion research has largely taken a parent-effects approach, whereby parent behaviours in response to children's emotions are used to predict various child outcomes. The largely behavioural focus of this literature has provided some insight into the socialization practices that may help or hinder socioemotional development in

children. One contribution of the current study to the literature is its consideration of the effects of the child's emotional expression on the mother. We have a greater understanding of mothers' emotional reactions to their children's anger and sadness, as well as their beliefs about their children's negative emotions. Differences in these beliefs and emotions are associated with differences in behavioural responses. As Bell (1979) argued, parents' attitudes and knowledge contribute to their expectations and standards regarding their children's behaviour. This includes their children's expression of negative emotion. Information processing is involved in the receiving and the classifying of the behavior of the child, in comparing that with internal standards and expectations, and in the selection of the appropriate response.

Gottman's meta-emotion paradigm reflects this notion of the thinking parent who holds a set of beliefs that guides her responses to her children's negative emotions (Gottman et al., 1996). However, while some parents may hold a set of beliefs based on which they aim to socialize their children, there are circumstances under which this may not happen. In the current study, the finding that greater levels of stress predicted more negative maternal emotional and behavioural responses suggests that in a context of increased life stressors, regardless of a person's beliefs, he or she may be more likely to respond in a certain way. Moreover, certain characteristics or behaviours of the child may predispose parents to respond differently to that child, in spite of the beliefs that they hold. In the current study, for instance, children with poorer emotion regulation had mothers who were more likely to respond with minimization to anger and sadness.

These results highlight the importance of considering emotion socialization as a reciprocal and bidirectional process (Bell, 1979). Socialization was originally conceived as one in which each participant in the parent-child pair was seen as shaping the other through

reinforcements or aversive consequences for one another's behavior. More recently, however, the interest has shifted to the development of reciprocity and linked streams of behavior between parent and child, in other words, the relationship (Maccoby, 1992). From the perspective of the current study it is important to consider that they represent a snapshot of the socialization relationship between mother and child. As parent and child develop a history of interacting with one another each develops a set of expectations regarding the other's behaviour and stereotyped ways of interpreting the other's behavior. It is possible that individuals respond more according to those stereotypes than according to their moment-by-moment behavior (Bell, 1979).

Limitations and Future Directions

These results raise a number of issues that warrant further consideration. This study relied on mothers' self reports of how they believed they would respond to their children's negative emotions. Whether mothers' beliefs about how they would respond align with their actual reactions to these emotions is an important issue to consider. It is possible that the low levels of endorsement of some of the hypothetical situation responses was due to participants wanting to present themselves in the best possible light and not wanting to admit to responding negatively to their children. However, the increased anonymity associated with online research would hopefully help mitigate the likelihood of this occurring. Moreover, to the extent that actual responses and beliefs about how one might respond are related, the results of the present study provide some insight into how mothers respond to children's negative emotions, how those responses are related and affected by contextual factors, as well as how they are related to children's emotion regulation (Mills and Rubin, 1990). More direct methods of testing these relationships, such as naturalistic

observation and lab-based experiments, while requiring more time and resources to conduct would not necessarily provide more valid results. Participants might be equally likely to attempt to present themselves in the best possible light when being observed as when completing self-reports as in the present study.

A related potential limitation concerns the fact that all measures were completed by mothers only, leading to a potential bias in their responses. Including teacher or other outsiders' reports of children's emotion regulation may have alleviated this potential problem. However, it has been argued that mothers observe children across multiple contexts and situations, which places them in the unique position to observe general patterns of behavior (Blandon, Calkins, Kean & O'Brien, 2008); whereas teachers are generally only able to observe children within the school setting. Thus, while it would be beneficial to have multiple sources of information on children's emotion regulation, if only one source is available it could be argued that mothers may be the most appropriate source.

Due to recruitment difficulties this study did not examine fathers' responses. While acknowledging that mothers play a significant role in their children's emotional development, it is impossible to ignore the role of fathers as well as the interactive effects of both parents on their child's development. Future research could offer richer insights into the process of the socialization of emotion by using more direct methods of recruiting fathers and by analyzing the individual and multiplicative effects of both parents.

The failure to recruit adequate numbers of fathers raises questions concerning the adequacy of on-line research as a means to study parenting and child development. It may be that for certain kinds of research more direct methods of recruiting participants are necessary to ensure adequate participation rates from fathers. However internet-based

research offers many advantages to researchers and participants, and it is important not to minimize the benefits of this rapidly growing method of carrying out research.

An important factor that has been alluded to throughout the discussion pertains to the fact that a normative community-based sample was used to explore the typical ways in which parents respond to children's negative emotions. These were fairly highly educated mothers, many of whom accessed the study through parenting and other websites concerned with children and families. From this we may infer that they were fairly high functioning parents interested in using online resources to help in their parenting efforts. These mothers generally responded in positive and supportive ways to their children's expressions of negative emotion and were less likely to endorse more negative responses such as disappointment and anger, and punishment and minimization. As such, some of these variables had skewed distributions and truncated ranges. The lack of sufficient cases at the extremes of the distributions might have prevented some of these predictors from reaching significance. Future studies examining the relationship between socialization of emotion and emotion regulation may benefit from ensuring a better sample of the various emotional, cognitive and behavioural responses. This may be achieved both by ensuring recruitment of a larger sample and by sampling populations that are more likely to exhibit responses at the extremes of the distributions. For instance, it may be beneficial to measure responses of depressed or maltreating parents. Depressed mothers have been shown to exhibit greater levels of negative thoughts, feelings and behaviours (Blandon, et al., 2008), and are more likely to criticize their children (Cicchetti et al, 1991). One might expect this population to also respond with more negativity to their children's expressions of negative emotions. Sampling populations that are more likely to respond in negative ways to children's negative emotions may provide more insight into the relationships among

maternal responses, the role of moderating factors such as stress and the relationship between the socialization of negative emotions and emotion regulation.

Finally, in an attempt to explain the unexpected positive correlation between emotion-focused responses to anger and emotion regulation, the notion of the bi-directionality of influence between emotion regulation and parents' socialization of emotion, was presented. This line of reasoning can be extended to the other predictors of emotion regulation, such as minimization and highlights the importance of distinguishing between correlation and causation in social science research. While it was a main objective of the current study to determine whether mothers' socialization responses to children's negative emotions are associated with children's emotion regulation abilities, it is impossible to determine whether, or the extent to which children's regulatory abilities were responsible for differences in their mothers' responses to their negative emotions. Moreover, while a number of potential moderators of mothers' responses were tested in the present study, there are myriad other potential factors that may influence mothers' emotions, beliefs and behaviours relating to their children's negative emotions as well as the relationship between those responses and children's emotion regulation. In order to further understand mothers' responses to children's negative emotion and their impact on emotion regulation, future studies might explore the role of factors such as child temperament, maternal emotion regulation and psychopathology, and attachment.

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Appendix A

Recruitment Notices

Internet Recruitment Notice

Hello, my name is Rebecca Moore. I would like to inform you about a study I am conducting. I am a doctoral student at the University of Ottawa (Ontario, Canada) and I am inviting parents to complete an online survey of children's emotional development. If you are a parent of a son or daughter, aged 6-10, I am interested in learning about your and your partner's experiences with your child.

The study is anonymous and completely confidential. In appreciation for your help, all participants will be entered in a draw for \$100.00 once the study is complete.

For more information and to complete the study, please go to:
www.surveymonkey.com/parenting_emotional_development

Please feel free to forward this message to anyone who you think might be interested in participating. I apologize for the inconvenience if you do not meet eligibility criteria or are not interested in participating.

Thank you for your consideration.

Community Recruitment Notice

Research Study

Parenting and Children's Emotional Development

Hello, my name is Rebecca Moore. I would like to inform you about a study I am conducting. I am a doctoral student at the University of Ottawa (Ontario, Canada) and I am inviting parents to complete a survey on parenting and children's emotional development. If you are a parent of a son or daughter, aged 6-10, I am interested in learning about your and your partner's experiences with your child.

The study is anonymous and completely confidential. In appreciation for your help, all participants will be entered in a draw for \$100.00 once the study is complete.

Please feel free to pass this information on to anyone who you think might be interested in participating.

Thank you for your consideration.

Sincerely,

Rebecca Moore
School of Psychology
University of Ottawa
Ottawa, Ontario, Canada

Alastair Younger, PhD. (Supervisor)
School of Psychology
University of Ottawa
Ottawa, Ontario, Canada

Appendix B

Study Information and Consent Forms
On-line Version**Study Information (please read carefully)**

Rebecca Moore, Study Supervisor (School of Psychology, University of Ottawa)

Please read this page to find out how to participate in this anonymous and confidential survey and what is involved. Your name will be entered in a draw for \$100 (more on this below).

I am conducting research examining how parents react to their children's emotions and how that relates to children's ability to handle their feelings. I am especially interested in receiving information from both parents of the same child. In order to participate your child must be between the ages of 6 and 10 and you must be proficient in English.

If you agree to participate you will be asked to complete some questionnaires that measure your child's ability to manage his/her emotions, your feelings of social support, and the occurrence of recent stressful events in the family. You will also be asked to imagine your child expressing anger or sadness in a number of situations and then asked how you would respond. In addition, we will ask for some background information.

The questionnaires will take about 45 minutes to complete. If you wish you may complete the study in more than one sitting. However, be sure to complete the page that you are working on and then click "next" or you will have to complete that page again the next time. Please note that if your partner plans to complete the study on the same computer, this can only be done once you have completed the questionnaires and clicked "done".

Cash Draw: To show our appreciation for your help you will be entered in a draw for \$100.00. Your chances of winning will be 1/200 or greater. If both parents participate you will both be eligible to win. Your email address will be used in the draw and to inform you if you have won. We will inform the winner of the draw once the study is complete. Your email address will then be destroyed.

Important: If both you and your partner choose to participate, we ask that you complete your questionnaires privately without consulting with each other. If you wish you may discuss your answers after you have both completed the study.

It is requested that the same child be considered by both parents. Please choose one child and consider that child for all of the questionnaires. We will ask you both for a code word so that we can pair up your responses. Be sure to use the same code word as your partner. There are no right or wrong answers and we encourage you not to think about the questions

for too long. Often the first answer you think of will be the best answer for you.

Participation is completely voluntary, anonymous, and confidential, and you are free to withdraw from the study at any time simply by leaving the website and not submitting your information. Participants who choose to withdraw from the study you may remain in the cash draw. Simply complete the "email address" section on the "Demographic Information" page. Then skip forward to the last page and click "Done".

All information will be kept confidential. No individual responses to this study will be published, and only overall group averages will be reported. All the information you provide will be completely anonymous. You will not be asked to give your name. Only the principal investigator and the co-investigator will have access to the data. This website is on a secure server. No one besides the researchers will be able to access your information when you submit it. Data will be conserved for 10 years in a secured filing cabinet in the researcher's laboratory.

Some of the questions ask about your thoughts and feelings. There is a small risk that completing the questionnaires may produce some negative feelings. We encourage you to talk to someone you are close to if you feel upset afterwards. In addition we have included a toll-free number and links to several websites that can provide you with psychological resources in your area in the unlikely event that you should need them. These are found at the end of the study questionnaires. Should you wish to access them before completing the study, simply skip forward to the last page.

This study has been approved by the University of Ottawa Research Ethics Board. Any information requests or complaints about the ethical conduct of the project may be addressed to the Research Ethics Board for Research Involving Humans of the University of Ottawa, by contacting the Protocol Officer for Ethics in Research, at ethics@uottawa.ca.

When the study is complete grouped results will be available upon request. Please note that individual results will not be available. If you have any questions, do not hesitate to contact me at rmoor015@uottawa.ca (613-562-5800 ext. 4466). By completing and returning the questionnaires you are indicating your consent to participate.

Thank you for your interest in the Study of Parenting and Children's Emotional Development!

(Please ensure that cookies are enabled on your browser. This will allow you to complete the questionnaires in more than one sitting.)

Rebecca Moore, B.A. Hon.
School of Psychology
University of Ottawa
Ottawa, Ontario, Canada

Alastair Younger, Ph.D. (Supervisor)
School of Psychology
University of Ottawa
Ottawa, Ontario, Canada

Paper/Pencil Version

Study information: I am conducting research examining how parents react to their children's emotions and how that relates to children's ability to handle their feelings. I am especially interested in receiving information from both parents of the same child.

If you agree to participate you will be asked to complete some questionnaires that measure your child's ability to manage his/her emotions, your feelings of social support, and the occurrence of recent stressful events in the family. You will also be asked to imagine your child expressing anger or sadness in a number of situations and then asked how you would respond. In addition, we will ask for some background information. The questionnaires will take about 45 minutes to complete.

Important: If both you and your partner choose to participate, we ask that you complete your questionnaires privately without consulting with each other. If you wish you may discuss your answers after you have both completed the study.

It is requested that **the same child be considered by both parents**. Please choose one child and consider that child for all of the questionnaires. There are no right or wrong answers and we encourage you not to think about the questions for too long. Often the first answer you think of will be the best answer for you.

Cash Draw: To show our appreciation for your help your name will be entered in a draw for \$100.00. If both parents participate you will have 2 chances to win. We will inform the winner of the draw by email once the study is complete.

Participation is completely voluntary, anonymous and confidential, and you are free to withdraw from the study at any time simply by leaving the website and not submitting your information. All information will be kept confidential. No individual responses to this study will be published and only overall group averages will be reported. All the information you provide will be completely anonymous. You will not be asked to give your name. Some of the questions ask about your thoughts and feelings. There is a small risk that completing the questionnaires may produce some negative feelings. We encourage you to talk to someone you are close to if you feel upset afterwards. In addition we have provided a toll-free number and links to several websites which can provide you with psychological resources in your area in the unlikely event that you should need them. These are found at the end of the study.

Ready to begin? If you have read the above information and are ready to participate in this study, please sign in the space provided below.

Please note: If your partner is also participating in the study we ask that you both sign both consent forms so that we know you are referring to the same child.

Participant Signature: _____

Partner Signature: _____

Thank you for your interest in the Study of Parenting and Children's Emotional Development!

Rebecca Moore
School of Psychology
University of Ottawa
Ottawa, Ontario, Canada

Alastair Younger, PhD. (Supervisor)
School of Psychology
University of Ottawa
Ottawa, Ontario, Canada

Appendix C

Parent Attitude/Behaviour Questionnaire

Instructions: Below are 10 scenarios in which you are asked to imagine your child reacting to an event. Please read each item carefully and respond as honestly and sincerely as you can.

(Note: Behavioural response strategies are accompanied by an acronym indicating the particular response type. These were not present on the original questionnaires provided to participants.)

EE = Expressive encouragement

EFR = Emotion focused response

PFR = Problem focused response

MR = Minimization response

PR = Punishment response

1. Your child becomes angry because he/she is sick or hurt and can't go to his/her friend's birthday party.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1	2	3	4	5	6	7
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On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit	1	2	3	4	5	6	7
b. this is part of his/her personality/ he/she often reacts this way	1	2	3	4	5	6	7
c. his/her age/a passing phase	1	2	3	4	5	6	7
d. being sick/missing the party	1	2	3	4	5	6	7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following

a. send my child to his/her room to cool off (PR)	1	2	3	4	5	6	7
b. help my child think about ways that he/she can still be with friends (e.g., invite some friends over after the party) (PFR)	1	2	3	4	5	6	7
c. tell my child not to make a big deal out of missing the party (MR)	1	2	3	4	5	6	7
d. encourage my child to express his/her feelings of anger and frustration (EE)	1	2	3	4	5	6	7
e. soothe my child and do something fun with him/her to make him/her feel better about missing the party (EFR)	1	2	3	4	5	6	7

2. Your child falls off his/her bike and breaks it, and then gets upset and cries.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1 2 3 4 5 6 7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit 1 2 3 4 5 6 7

b. this is part of his/her personality/ he/she often reacts this way 1 2 3 4 5 6 7

c. his/her age/a passing phase 1 2 3 4 5 6 7

d. being sick/missing the party 1 2 3 4 5 6 7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. comfort my child and try to get him/her to forget about the accident (EFR) 1 2 3 4 5 6 7

b. tell my child that he/she is over-reacting (MR) 1 2 3 4 5 6 7

c. help my child figure out how to get the bike fixed (PFR) 1 2 3 4 5 6 7

d. tell my child it's OK to cry (EE) 1 2 3 4 5 6 7

e. tell my child to stop crying or he/she won't be allowed to ride his/her bike anytime soon (PR) 1 2 3 4 5 6 7

3. Your child becomes angry because he/she lost a favourite possession.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1	2	3	4	5	6	7
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On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit	1	2	3	4	5	6	7
b. this is part of his/her personality/ he/she often reacts this way	1	2	3	4	5	6	7
c. his/her age/a passing phase	1	2	3	4	5	6	7
d. being sick/missing the party	1	2	3	4	5	6	7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. tell my child that he/she should be more careful with his/her things (PR)	1	2	3	4	5	6	7
b. help my child think of where it could be (PFR)	1	2	3	4	5	6	7
c. encourage my child to talk about his/her feelings (EE)	1	2	3	4	5	6	7
d. help my child to calm down then try to distract him/her (EFR)	1	2	3	4	5	6	7
e. tell my child it's no big deal (MR)	1	2	3	4	5	6	7

4. Your child loses a prized possession and reacts with tears.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1	2	3	4	5	6	7
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On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit	1	2	3	4	5	6	7
b. this is part of his/her personality/ he/she often reacts this way	1	2	3	4	5	6	7
c. his/her age/a passing phase	1	2	3	4	5	6	7
d. being sick/missing the party	1	2	3	4	5	6	7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. tell my child that he/she is over-reacting (MR)	1	2	3	4	5	6	7
b. help my child think of places he/she hasn't looked yet (PFR)	1	2	3	4	5	6	7
c. distract my child by talking about happy things (EFR)	1	2	3	4	5	6	7
d. tell him/her it's OK to cry when you feel unhappy (EE)	1	2	3	4	5	6	7
e. tell him/her that's what happens when you're not careful (PR)	1	2	3	4	5	6	7

5. Your son/daughter becomes angry when he/she doesn't win at a board game.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit	1	2	3	4	5	6	7
b. this is part of his/her personality/ he/she often reacts this way	1	2	3	4	5	6	7
c. his/her age/a passing phase	1	2	3	4	5	6	7
d. being sick/missing the party	1	2	3	4	5	6	7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. tell my son/daughter that people won't want to play with him/her if he/she doesn't lose gracefully (PR)	1	2	3	4	5	6	7
b. encourage my child to talk about his/her feelings (EE)	1	2	3	4	5	6	7
c. try to distract my child by starting another activity (EFR)	1	2	3	4	5	6	7
d. tell my child it's only a game (MR)	1	2	3	4	5	6	7
e. help my child think up other reasons, besides winning, that games are fun (PFR)	1	2	3	4	5	6	7

6. Your child is at a park and appears on the verge of tears because the other children are being mean to him/her and won't let him/her play with them.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1 2 3 4 5 6 7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit	1	2	3	4	5	6	7
b. this is part of his/her personality/ he/she often reacts this way	1	2	3	4	5	6	7
c. his/her age/a passing phase	1	2	3	4	5	6	7
d. being sick/missing the party	1	2	3	4	5	6	7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. tell my child that if he/she ;starts crying then we'll have to go home right away (PR)	1	2	3	4	5	6	7
b. tell my child it's OK to cry when he/she feels bad (EE)	1	2	3	4	5	6	7
c. comfort my child and try to get him/her to think about something happy (EFR)	1	2	3	4	5	6	7
d. help my child think of something else to do (PFR)	1	2	3	4	5	6	7
e. tell my child that he/she will feel better soon (MR)	1	2	3	4	5	6	7

7. Your child is playing with other children and one of them calls him/her names. Your child then becomes sad and tearful.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1	2	3	4	5	6	7
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On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit	1	2	3	4	5	6	7
b. this is part of his/her personality/ he/she often reacts this way	1	2	3	4	5	6	7
c. his/her age/a passing phase	1	2	3	4	5	6	7
d. being sick/missing the party	1	2	3	4	5	6	7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. tell my child not to make a big deal out of it (MR)	1	2	3	4	5	6	7
b. tell my child to behave or we'll have to go home right away (PR)	1	2	3	4	5	6	7
c. help my child think of constructive things to do when other children tease him/her (e.g., find other things to do)(PFR)	1	2	3	4	5	6	7
d. comfort him/her and play a game to take his/her mind off the upsetting event (EFR)	1	2	3	4	5	6	7
e. encourage him/her to talk about how it hurts to be teased(EE)	1	2	3	4	5	6	7

8. Your child becomes angry because his/her friend doesn't want to come over to play.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1 2 3 4 5 6 7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit 1 2 3 4 5 6 7

b. this is part of his/her personality/ he/she often reacts this way 1 2 3 4 5 6 7

c. his/her age/a passing phase 1 2 3 4 5 6 7

d. being sick/missing the party 1 2 3 4 5 6 7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. tell my child to go to his/her room and cool off (PR) 1 2 3 4 5 6 7

b. help my child to express his feelings (EE) 1 2 3 4 5 6 7

c. suggest that he/she call another friend (PFR) 1 2 3 4 5 6 7

d. tell my child that it's not worth getting angry about(MR) 1 2 3 4 5 6 7

e. calm my child and try to distract him/her (EFR) 1 2 3 4 5 6 7

9. Your child becomes very sad and teary because his/her pet has died,

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1	2	3	4	5	6	7
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On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit	1	2	3	4	5	6	7
b. this is part of his/her personality/ he/she often reacts this way	1	2	3	4	5	6	7
c. his/her age/a passing phase	1	2	3	4	5	6	7
d. being sick/missing the party	1	2	3	4	5	6	7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. tell my child we can get another pet (MR)	1	2	3	4	5	6	7
b. tell my child it's okay to feel sad about losing his/her pet (EE)	1	2	3	4	5	6	7
c. help my child come up with ways we can remember his/her pet (PFR)	1	2	3	4	5	6	7
d. comfort my child and try to help him/her feel better (EFR)	1	2	3	4	5	6	7
e. try to distract my child by talking about something else (EFR)	1	2	3	4	5	6	7

10. Your child becomes frustrated and angry when he/she can't figure out a puzzle he/she is working on.

On a scale of 1-7 (1= not at all; 7= extremely strong) rate how strongly you feel each of the following, when seeing your child react this way.

a. anger	1	2	3	4	5	6	7
b. embarrassment	1	2	3	4	5	6	7
c. amusement	1	2	3	4	5	6	7
d. disappointment	1	2	3	4	5	6	7
e. concern	1	2	3	4	5	6	7
f. pleasure	1	2	3	4	5	6	7
g. surprise	1	2	3	4	5	6	7
h. sadness	1	2	3	4	5	6	7
i. puzzlement	1	2	3	4	5	6	7
k. guilt	1	2	3	4	5	6	7

On a scale of 1-7 (1=completely unacceptable; 7=completely acceptable) rate the degree to which you think your child's reaction is acceptable.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that the following contributed to your child's reaction.

a. being tired/ hungry/ in a bad mood/ a bad habit	1	2	3	4	5	6	7
b. this is part of his/her personality/ he/she often reacts this way	1	2	3	4	5	6	7
c. his/her age/a passing phase	1	2	3	4	5	6	7
d. being sick/missing the party	1	2	3	4	5	6	7

On a scale of 1-7 (1=extremely unlikely; 7=extremely likely) rate the likelihood that you would do each of the following.

a. help my child come up with strategies to solve the puzzle (PFR)	1	2	3	4	5	6	7
b. encourage my child to talk about his/her feelings (EE)	1	2	3	4	5	6	7
c. tell my child that if he/she is going to get mad then we might have to put the puzzle away (PR)	1	2	3	4	5	6	7
d. tell my child its not worth getting angry about (MR)	1	2	3	4	5	6	7
e. comfort my child and help him/her to reduce his/her frustration (EFR)	1	2	3	4	5	6	7

Appendix D

Thank You Page and Psychological Resources

Thank you for participating in this study.

If he/she has not done so, please ask your spouse to complete the questionnaires as well. Please remember to refer to the same child when answering the questions. Don't forget to click "done" at the bottom of this page.

Obtaining Psychological Services:

If you experience any negative feelings as a result of completing this study we encourage you to talk to someone close to you. If the feelings are particularly strong you may wish to speak to a psychologist or psychiatrist. If you do not know any in your area and you live in Canada or the United States you may call the American Psychological Association referral service at: 1-800-964-2000.

You may also find useful information at the following websites:

Canadian Mental Health Association: www.cmha.ca

American Psychological Association: www.apa.org

Canadian Psychological Association: www.cpa.ca

Ontario Psychological Association: www.psych.on.ca

If you live outside of North America or are having trouble obtaining help, please feel free to contact us and we will try to assist you in finding help in your area.

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Appendix E

Data Screening for Assumptions Underlying Multiple Regression

Scores on the variables were examined for the assumptions underlying multiple regression. Z-scores were calculated for all data in order to detect univariate outliers (i.e., Z-scores above 2.97). One outlier was found on each of anger response to anger, situational attributions for anger, transient state attributions for sadness, problem focused responses to sadness, perceived social support. Two outliers were found on each of anger response to sadness, disappointment response to sadness, educational status and stressful life events. Three outliers were found on problem-focused response to sadness. Four outliers were found on situational attributions for sadness and occupational status. Values that were found to be significantly lower than other values in the distribution were replaced with values equal to one below the lowest acceptable value within the frequency distribution. Values that were significantly higher than the highest acceptable value were reduced to one value above the highest acceptable value within the distribution.

Variable distributions were then examined for additional remaining outliers once the initial outliers had been dealt with. Disappointment response to sadness was found to have one more outlier. It was reduced and no more outliers were found for that variable. Stressful life events had 4 additional outliers and situational attributions for sadness had 6 additional outliers. It was decided that these outliers would be left and re-examined once necessary transformations were made.

Next, data were screened for normality. Skewness and kurtosis values as well as the histograms for the variables to be included in the analysis were provided by PASW-18 frequencies. Z-scores were calculated by dividing the skewness and kurtosis values by their

standard errors. Z-scores above 2.97 were considered significant and therefore non-normal. Many variables had non-normal distributions and transformations were made based on recommendations by Tabachnick and Fidell (2001) (see Table 13). Eighteen variables had significant skewness and transformations resulted in normal distributions for all but one variable. Stressful life events (square root) remained slightly positively skewed following a square root transformation. This new variable was examined to determine whether any of the 4 outliers that had remained after the initial reduction remained. These 4 outliers were detected and were considered to be related to the remaining skewness. With larger samples, the statistically significant skewness does not deviate enough from normality to make a substantive difference in the analysis (Tabachnick & Fidell, 2001). Therefore this variable, stressful life events (square root), was left as it was. One other variable, situational attributions for sadness (reflected square root), was examined to determine the presence of univariate outliers that had been present following the initial handling of outliers. No remaining outliers were detected in the newly transformed variable.

Mahalanobis distance at $p < .001$ ($df = 20$), $X^2 = 45.32$ was used to detect multivariate outliers, none of which were found. Evaluation of multicollinearity was assessed using the PASW-18 collinearity diagnostic. No multicollinearity was evident on any of the variables of interest in this study.

Table 19

Transformations of Non-Normal Variables

Variable	Skew	Kurtosis	Transformation	New Distribution
Occupational status	Slight pos	None	Square root	Normal
Anger response to anger	Slight pos	None	Square root	Normal
Anger response to sadness	Slight pos	None	Square root	Normal
Disappointment response to sadness	Pos	None	Log	Normal
Concern response to sadness	Slight Neg	None	^a Reflect/Square root	Normal
Acceptance of sadness	Slight Neg	None	Reflect/Square root	Normal
Situational attribution for anger	Slight Neg	None	Reflect/Square root	Normal
Transient state attribution for sadness	Pos	None	Square root	Normal
Internal unstable attribution for sadness	Pos	None	Square root	Normal
Situational attribution for sadness	Neg	None	Reflect/Log	Normal
Problem-focused response to anger	Slight Neg	None	Reflect/Square root	Normal
Punishment of sadness	Slight Pos	None	Square root	Normal

Variable	Skew	Kurtosis	Transformation	New Distribution
Punishment of sadness	Slight Pos	None	Square root	Normal
Problem-focused response to sadness	Slight Neg	None	Reflect/Square root	Normal
Expressive encouragement of sadness	Slight Neg	None	Reflect/Square root	Normal
Stressful life events	Pos	Pos	^b Square root	Slight Pos
Social support	Slight Neg	None	Reflect/Square root	Normal
Emotion Regulation	Slight Neg	None	Reflect/Square root	Normal

Note. Significant skewness and kurtosis were determined by z-scores above 2.97.

^aNegatively skewed variables were reflected by subtracting all values from a constant (one value higher than the highest value). These variables should be interpreted in reverse (i.e., high scores now equal low values and vice versa).

^bBecause this variable contained values of 0 a constant (1) was added prior to transformation.