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Emotion Regulation and Social Competence in Middle Childhood: The Role of Parental Emotional Competence, Personality, and Emotion Socialization Beliefs, Attitudes, and Practices

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ABSTRACT

Much of what children know about emotions is learned from their parents, so it is important to examine parental beliefs, attitudes, and practices that contribute to emotion socialization. Little is known about how parents' own emotional competence skills and personality contribute to these beliefs, attitudes, and practices. The purpose of this study was to examine the relations among parent emotional competence (i.e., positive expression, negative expression, empathy, reappraisal, and mature defense mechanisms), parent personality (i.e., openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism), emotion-related parenting style (i.e., emotion coaching) and practices (i.e., supportive reactions to children's negative emotions), and parent-reported children's emotion regulation and social competence (i.e., prosocial orientation), comparing mothers and fathers. One-hundred and sixty-three mothers and 29 fathers of children ages 4 to 12 were recruited to complete an online survey, consisting of self-report measures of the study variables. Mothers' data were analyzed using structural equation modeling, whereas fathers' data were analyzed using hierarchical regression. For mothers, partial support was found for the study hypotheses related to the impact of maternal emotional competence on mothers' emotion-related parenting styles and practices, with higher levels of both empathy and positive expression as predictors of higher levels of emotion coaching. Higher levels of positive expression and lower levels of negative expression also predicted higher levels of supportive reactions. When examining indirect effects, only higher levels of both empathy and positive expression were indirectly related to higher levels of supportive reactions through higher levels of emotion coaching. No significant relations for mature defense mechanisms and

reappraisal were found. Additionally, partial support for the study hypotheses related to the impact of mothers' emotion-related parenting style and children's outcomes was found. Higher levels of emotion coaching predicted higher levels of supportive reactions to children's negative emotions, children's emotion regulation skills, and children's prosocial orientation. Contrary to the study hypotheses, higher levels of positive expression and lower levels of negative expression directly predicted higher levels of child emotion regulation skills. Although no model was retained for personality, correlations revealed a pattern of relations that show partial support for the study hypotheses, including positive correlations between emotion coaching and each openness, agreeableness and conscientiousness. Analysis of fathers' data was exploratory because of the small sample size and low power, but revealed similarities to the mothers' results, including higher levels of positive expression and empathy predicting higher levels of emotion coaching, higher levels of emotion coaching predicting higher levels of supportive reactions and children's emotion regulation skills, higher levels of negative expression predicting lower levels of supportive reactions, and higher levels of positive expression predicting higher levels of child emotion regulation skills. In contrast to the mothers' results, higher levels of negative expression and reappraisal predicted better child emotion regulation skills and higher levels of empathy and positive expression were indirectly related to higher levels of child emotion regulation through higher levels of emotion coaching. For personality, positive correlations between emotion coaching and both agreeableness and conscientiousness were found. Results have implications for the importance of expression variables on the overall family emotional climate, emotion socialization, and children's emotional and social skills.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

For much of the history of psychology, research about human functioning often has focused primarily on behavioural and cognitive aspects of human functioning, whereas emotional functioning was seen as irrational and secondary (Leeper, 1948; Mayer, Salovey, & Caruso, 2004; Southam-Gerow, 2013). In recent decades; however, the study of emotions has come to the forefront of research. Emotions are now seen as an essential component of human experience and greatly impact how people, especially children, manage negative events and interact with one another (Denham, 2007; Saarni, 1999; Southam-Gerow, 2013). Parents are often the key role models from whom children learn about how to label, express, understand, and regulate their emotions (Eisenberg, Cumberland, & Spinrad, 1998; Stack, Serbin, Enns, Ruttle, & Barrieau, 2010). Thus, research on how parents teach their children about emotions and how this process is related to children's emotion regulation skills and social outcomes (i.e., emotion socialization) has moved to the forefront of child emotion research. However, little is known about what parent characteristics (e.g., parent personality and parents' emotional competence) are associated with positive parental beliefs, attitudes, and practices related specifically to emotion socialization (Loop & Roskam, 2016; Russell, Lee, Spieker, & Oxford, 2016). Therefore, based on established models of the process by which emotion is socialized in children (Belsky, 1984; Darling & Steinberg, 1993; Eisenberg, Cumberland, et al., 1998; Eisenberg, Spinrad, & Cumberland, 1998; Morris, Silk, Steinberg, Myers, & Robinson, 2007), the purpose of this study was to examine the relations among parent characteristics (i.e., personality and emotional competence),

emotion-related parenting styles and practices, and children's emotion regulation skills and social competence. Mothers and fathers of children ages 4 to 12 completed online measures of their own emotional competence, beliefs, and attitudes about emotions, emotion socialization practices, and their children's emotion regulation and social competence skills. Before undertaking this study, a comprehensive literature review was conducted exploring the topics of emotional and social competence, emotion regulation, emotion-related parenting style and practices, parent personality, and various aspects of parent emotional competence.

Emotional Competence and its Role in Social Competence

One key aspect of positive child adjustment is being socially competent. Social competence refers to "the ability to achieve personal goals in social interaction while simultaneously maintaining positive relationships with others over time and across situations" (Eisenberg, Cumberland, et al., 1998, p. 242) and includes aspects of social skills and prosocial behaviour (Berkovits & Baker, 2014; Ladd, 2005). Better social competence has been associated with fewer internalizing (i.e., a class of psychological behaviours, feelings, and disorders that focus on internal symptoms, such as anxiety or depression) and externalizing behaviours (i.e., a class of psychological behaviours, feelings, and disorders that are evident by visible and overt maladaptive behaviour, such as aggression or Oppositional Defiance Disorder), better peer relationships and school adjustment, and less social misconduct (Ladd, 2005; Sattler & Hoge, 2006). On the other hand, children who have poorly developed social competence skills often have poorer adjustment, including poor peer relationships, loneliness, and depression (Ladd, 2005; Pedersen, Vitaro, Barker, & H, 2007). For example, Pedersen and colleagues' (2007)

French-Canadian study examined longitudinal relations between early behavioural indicators at ages 6 and 7 (e.g., anxiety, social withdrawal, and disruptive behaviour), child and peer reports of peer relationships at ages 8 and 9, the number of friends a child has at ages 10 and 11, and child outcomes at ages 12 and 13 (e.g., depressive symptoms, loneliness, and delinquent behaviour). They found that the links between disruptive behaviour at ages 6 and 7 and depression and loneliness at ages 12 and 13 was sequentially mediated by peer rejection at ages 8 and 9 and number of friends at ages 10 and 11. Overall, this study showed that, even when considering early childhood behavioural indicators, indicators that are reflective of social competence (e.g., lack of peer rejection and number of friends) are important to children's mental health outcomes.

A key contributor to social competence is emotional competence. Emotional competence is defined as the "understanding of one's own and other's emotions, the tendency to display emotions in a situationally and culturally appropriate manner, and the ability to inhibit or modulate experiences and expressed emotion and emotionally derived behaviour as needed to achieve goals in a socially acceptable manner" (Eisenberg, Cumberland, et al., 1998, p. 242). Emotional competence abilities include awareness, understanding, expression, empathy, regulation, coping, and socialization of one's own and others' emotions (Saarni, 1999; Southam-Gerow, 2013). Because communication with others is often emotional in nature (e.g., smiling at someone to indicate happiness or seeing someone frown in response to what another person said), it is essential that one is able to accurately label, recognize, understand, and interpret one's own and others' emotions in communication with others (Halberstadt, Denham, & Dunsmore, 2001; Saarni & Buckley, 2002). It also is essential that one determine the appropriate emotional

message to send, the right intensity for that message, how and when to send the message, and ensure that message is relevant and helpful to the interaction (Halberstadt et al., 2001).

To illustrate the relation between emotional competence and social competence, take the example of a girl who enters a classroom and wants to join her classmates playing with a dollhouse. In sending emotional communication, she will need to ensure several things, including modulating the intensity of her enthusiasm so as not to overwhelm and then be rejected by her peers, taking into consideration the personalities of the peers she is joining (e.g., she would approach a shy classmate differently than an outgoing classmate), and managing her own emotions (e.g., not showing her anxiety or lack of confidence joining the group by looking more happy and approachable; Halberstadt et al., 2001). Then, in receiving emotional communication, one must understand that others in the interaction have sent an emotional message and accurately determine the intent and meaning of the message (Halberstadt et al., 2001). In the example of the girl wanting to play with her classmates, she will look to see, based on facial expressions and nonverbal cues, which classmate would be likely to allow her to join in playing with the dollhouse (e.g., a classmate who is smiling and appears happy). As she joins in playing with the dollhouse, she also needs to be able to distinguish between negative messages that are part of the play and those that are directed at her (e.g., a child who has an angry face while voicing the character of one of the dolls versus smirks of rejection directed towards her; Halberstadt et al., 2001). Thus, emotions are central to social interaction, providing an important source of information for communicating with others and about the meaning of an interaction.

Research has shown that higher levels of emotional competence skills (e.g., emotion regulation) often lead to better social competence, including higher levels of likability, cooperativeness, sensitivity, prosocial behaviour, attention skills, and fewer oppositional behaviours (Bradley, 2007; Denham, 2007; Denham et al., 2003; Eisenberg, Cumberland, et al., 1998; Garner, Dunsmore, & Southam-Gerrow, 2008; Garner & Estep, 2001; Russell et al., 2016; Southam-Gerow, 2013; Southam-Gerow & Kendall, 2002; Stack et al., 2010). On the other hand, children who have lower levels of emotional competence skills often have social challenges, including difficulties getting along with peers, loneliness, oppositional behaviours, and poor socialization (Berkovits & Baker, 2014; Russell et al., 2016). To illustrate, Garner and Estep (2001) examined the relations among observed social interaction (e.g., prosocial behaviour and successful social initiation), child responses to an emotional knowledge task, child emotion expression during a mother-child storytelling task, and mothers' ratings of their own expression of anger and their children's behaviour in a group of American preschool children and their mothers. They found that children who had higher levels of positive emotional expression had a higher frequency of successful social initiation, whereas higher levels of emotional intensity (e.g., greater frequency of strong positive or negative reactions, an indicator of ability to control and regulate emotional expression) were associated with less prosocial behaviour. The authors indicated that those children who were better able to verbalize, display, and manage their emotions were more likely to respond appropriately towards their peers and; therefore, they were more likely to have positive peer relationships.

One key aspect of emotional competence is emotion regulation because it greatly influences the ability of an individual to be able to send and receive emotion

communication to and from others (Eisenberg, 2001; Halberstadt et al., 2001). Although emotion regulation has been defined several ways (Cole, Martin, & Dennis, 2004; Eisenberg & Spinrad, 2004), for the purpose of this study, it is defined as "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (Thompson, 1994, pp. 27–28). Individuals need to be aware of, identify, understand, and manage their own emotions in response to social interactions because these skills can influence how they interpret emotional communication from others, how they will respond to others, and how others will respond to them (Halberstadt et al., 2001). Thus, if individuals are unable to manage their emotions, lack of emotion regulation can significantly interfere with the receipt and interpretation of others' emotions. For instance, in the previous situation of a girl wanting to play with the dollhouse with her classmates, if she becomes overwhelmed by her own anxiety about entering the situation, her strategy to enter the situation (e.g., being overly cautious and hesitant approaching her classmates) may differ than if she is excited (e.g., putting forth a big smile and asking the group directly to join in). Thus, she must regulate her anxiety in order to be able to send the appropriate emotional messages to join her classmates (Eisenberg, 2001; Halberstadt et al., 2001).

Emotion regulation has been studied across the various sub-disciplines in psychology, including lifespan development, personality, psychophysiology, and health psychology (Gross, 2015a, 2015b). Overall, the general consensus among researchers is that emotion regulation is both a conscious and unconscious process, several strategies are used in the emotion regulation process, emotion regulation includes the ability to

modulate the intensity and duration of emotion and the transitions between emotions, display rules vary across culture, and emotion regulation includes reflection on one's own emotional expression (Gross, 2015a, 2015b). How emotion regulation is expressed varies across the lifespan as a child grows and develops and continues to change throughout adulthood (Diamond & Aspinwall, 2003).

As emotion regulation is an important aspect of sending and receiving emotional communication, it is important to consider how emotions are generated and regulated in order to determine the effectiveness of specific emotion regulation strategies (Eisenberg, 2001; Gross, 1998, 2015a, 2015b; Gross & Thompson, 2007; Halberstadt et al., 2001; Sheppes et al., 2014; Sheppes, Suri, & Gross, 2015). According to Gross and colleagues' (Gross, 2015a, 2015b; Sheppes et al., 2015) extended process model of emotion regulation, emotion generation and regulation occur in *valuation systems*. Valuation systems refer to mental processes by which decisions are made based on the value (often subjective) one has assigned to it (Rangel, Camerer, & Montague, 2008). In the context of emotion regulation, valuation systems occur in the emotion generation process by which a person decides if emotion regulation is needed, and if so, what strategy and process is needed for emotion regulation (Gross, 2015a; Rangel et al., 2008; Sheppes et al., 2015).

According to Gross (2015a, 2015b) and Sheppes and colleagues (2015), the emotion regulation process begins with emotion generation, when an emotion is elicited in response to some situation or event. This emotion is perceived (i.e., the person becomes aware of the emotion in relation to how he or she wants to feel), evaluated (i.e., the person evaluates how he or she feels and weighs the costs and benefits of the

emotions in relation to his or her goals), and acted upon (i.e., the person's behaviours, experiences, and physical sensations of an emotion). For instance, in the previous example of the girl wanting to play with the dollhouse, she wants to join her classmates, but may feel some anxiety in approaching her classmates to ask to play with them. She perceives this emotion, evaluates it (e.g., she senses the anxiety, but does not necessarily want to feel the anxiety), and then acts upon the emotion (e.g., she recognizes that her anxiety may affect her ability to ask her classmates to play with the dollhouse).

Continuing in Gross and colleagues' model (Gross, 2015b, 2015a; Sheppes et al., 2015), after the emotion generation process, a subsequent valuation system for emotion regulation is initiated that has the goal of modifying this initial, emotion-generation cycle. The regulation process happens in three stages. First, in the *identification stage*, the emotion activation triggers the perception that a goal of regulation is needed, evaluated (i.e., emotion and regulation are weighted and evaluated considering past experiences and personal goals), then an action is taken as to whether regulation occurs or not. In the instance of the girl and the dollhouse, she may recognize that she needs to regulate her anxiety if she is going to successfully ask her classmates to play with the dollhouse. If regulation is required, the emotion regulation cycle moves to the *selection stage* that determines which emotion regulation strategy type will be used. In the case of the girl and the dollhouse, she recalls several possible types of emotion regulation strategies and evaluates each possibility based on past experiences and likely effectiveness in this situation. Finally, in the *implementation* stage, a specific regulation strategy is implemented. Here, the specific strategies within a regulation type are perceived, evaluated, and a specific strategy chosen and implemented. For example, the little girl

may choose a specific strategy to help calm herself and then initiate social contact with her peers to ask to join them in playing with the dollhouse.

The effectiveness of emotion regulation strategies depends on the context in which individuals find themselves and where in the process of emotion regulation the strategy is applied (Gross, 1998, 2015b, 2015a; Sheppes et al., 2015). In understanding how emotions are generated and regulated according to the extended emotion process model, four points can be identified at which emotion regulation strategies can be applied in the initial, emotion-generation cycle (Gross, 1998, 2015a; Gross & Thompson, 2007). These strategies can be grouped into two general categories, including *antecedent-focused strategies*, which are applied to earlier components of the emotion-generation cycle (e.g., perception), and *response-focused strategies*, which are applied to later components of the emotion-generation cycle (e.g., action; Gross, 1998, 2015a; Gross & Thompson, 2007).

Gross and colleagues (Gross, 1998, 2015a; Gross & Thompson, 2007) have identified four main types of antecedent-focused strategies. The first strategy type is *situation selection*, occurring earliest in the emotion generation process, which involves choosing which situation to respond to and allows a person to control what situations and emotions they encounter. For example, situation selection occurs when a child avoids another child at school to avoid being teased. The next strategy type is *situation modification*, which involves changing the situation in some way to mitigate and/or change the emotional impact of a situation. For instance, common problem-focused coping strategies are used to modify a situation, such as when confronted by a bully, a child asserts that she does not like being teased and asks the bully to stop. Both strategy

types directly impact the early situational input of the emotion-generation cycle. A third emotion regulation strategy is *attentional deployment*, which impacts the perception component of the emotion-generation valuation cycle. This strategy type involves changing how individuals perceive and attend to a situation, including using distraction or concentration techniques. For example, when a child feels sad because he misses his mother when she is away from home, the child can think about a positive memory about his mother. The last antecedent-focused strategy is *cognitive change*, a strategy type that impacts the valuation component of the emotion generation cycle. This strategy type involves changing the way one thinks (and therefore the meaning and value) of the situation. For example, when confronted by an angry friend, a child may reappraise the event by not taking the friend's words personally and understanding that the friend is angry about something else (Gross, 1998, 2015a; Gross & Thompson, 2007).

Gross and colleagues (Gross, 1998, 2015a; Gross & Thompson, 2007) identify one class of response-focused strategies: *response modulation*. Modulation impacts the action component, late in the emotion generation valuation cycle. This strategy type is focused mostly on an individual's direct response to managing the behavioural, physical, and experiential elements of emotions after they are fully activated, such as engaging in activities to supress emotion or cope with the physiological effects of the emotions. For example, a child may use a relaxation technique, such as deep breathing, when faced with feelings of anxiety.

Research about the relation between emotion regulation and social competence has suggested that better emotion regulation is associated with better social skills and likeability. In contrast, poorer emotion regulation has been associated with poorer social

skills and higher levels of anger expressiveness, relational aggression, and physical aggression, which could impact whether or not a child is well received by his or her peers (Baker, Fenning, Crnic, Baker, & Blacher, 2007; Berkovits & Baker, 2014; Blossom, Fite, Frazer, Cooley, & Evans, 2016; Denham et al., 2003; Eisenberg, Fabes, Guthrie, & Reiser, 2000). For example, Eisenberg and colleagues (2000) examined the longitudinal relations between ratings of children's ego control (i.e., aspects of children's emotion-related behavioural regulation), ego resiliency (i.e., children's use of flexible coping strategies in response to situational demands), parent ratings of children's internal emotion regulation (i.e., attentional control—being able to maintain one's focus doing a task and shift one's focus from one activity to another), observed child behavioural regulation during a puzzle task, and ratings of children's affect intensity, social competence, and peer likability in an American sample of children in Kindergarten through grade 3. They found that ego resiliency mediated the relation between attentional control and social status, as well as the relation between attentional control and socially appropriate behaviour, at both time points in the study. This study illustrated that being able to regulate one's emotions and behaviour is important for social competence outcomes.

Overall, children's emotional competence, in particular emotion regulation, is important to children's social competence. Considering the importance of emotional competence to children's social competence, it is important to understand how children develop these emotional skills and what it means for their overall social well-being (Denham, 2007; Saarni, 1999). Children learn much about their emotions and how to manage them from their parents (Eisenberg, Cumberland, et al., 1998; Saarni, 1999).

Therefore, it is important to understand how parents teach their children these skills (Eisenberg, Cumberland, et al., 1998). This study will examine how parents socialize emotions, factors associated with parents' emotion socialization, and how that socialization is associated with children's emotion regulation and social competence.

Emotion Socialization

A key process in the development of emotional competence is how children are socialized by their parents or other role models to understand, express, and manage their emotions (Eisenberg, Cumberland, et al., 1998; Saarni, 1999; Southam-Gerow, 2013). How parents directly and indirectly teach children these skills is referred to as emotion socialization (Eisenberg, Cumberland, et al., 1998; Southam-Gerow, 2013). Researchers have proposed two main components to parents' emotion socialization: *parenting style* and *parenting practices* (Darling & Steinberg, 1993; Morris et al., 2007) and these constructs are key components of several emotion socialization models (Darling & Steinberg, 1993; Eisenberg, Cumberland, et al., 1998; Eisenberg, Spinrad, et al., 1998; Morris et al., 2007). These two components encompass key aspects of emotion socialization, including beliefs, attitudes, and practices.

Emotion-Related Parenting Styles

A key component of emotion socialization is emotion-related parenting style, which encompasses parents' beliefs and attitudes about emotions. These styles emerged from research on general parenting style, which is "a constellation of attitudes toward the child that are communicated to the child that, taken together, create an emotional climate in which the parent's behaviors are expressed" (Darling & Steinberg, 1993, p. 488). In essence, parenting style is a specific contextual variable in the children's environment

that reflects parents' beliefs and attitudes about their children and influences how parents think about and behave towards their children (Darling & Steinberg, 1993). Characteristics of general parenting style can include many components, including warmth, responsiveness, and behavioural control (Baumrind, 1971; Morris et al., 2007). For example, when examining specific parenting style patterns as described by Baumrind (1971), authoritative parents are responsive and warm towards their children, but also set appropriate behavioural limits, striking a good balance between these two dimensions of parenting. On the other hand, authoritarian parents show less responsiveness and more control, and permissive parents show higher levels of responsiveness, but less behavioural control. Each of these styles sets the climate in which parenting practices occur (Baumrind, 1971; Darling & Steinberg, 1993).

Emotion-related parenting style (i.e., parenting style related to emotion socialization) is guided by the concept of parents' *meta-emotion philosophy*, which has been found to be a specific factor in parent emotion socialization, separate from general parenting style (Gottman, Katz, & Hooven, 1996). Parental meta-emotion philosophy encompasses the thoughts and feelings parents have about their own and their children's emotions, and these beliefs and attitudes underlie parenting behaviours (Gottman et al., 1996; Gottman, Katz, & Hooven, 1997). Gottman and colleagues (1996) identified four main types of meta-emotion philosophies, including emotion coaching, laissez-faire, emotion dismissing, and emotion disapproving. The first type, *emotion coaching,* Gottman and colleagues found to be particularly adaptive. In their study, parents who had higher levels of emotion coaching believed emotions, emotional expression, and emotion regulation were important for their children to learn, and these parents had the attitude

that children's expression of emotion was an opportunity for intimacy and teaching. Having an emotion coaching parenting style also was associated with various parenting actions, including recognition of low-level emotions in themselves and their children, validating their children's emotions, assisting their children to label their emotions, assisting their children with problem solving, and setting appropriate behavioural boundaries.

The other three meta-emotion philosophies identified by Gottman and colleagues (1996, 1997) were considered to be less adaptive. First, some parents demonstrated characteristics like emotion coaching parents in that they were accepting of their children's expression of emotions, but they offered little guidance about how to cope with and regulate emotions. These style characteristics were classified as *laissez-faire*. Next, some parents demonstrated characteristics indicating that they saw emotions as unimportant and ignored or dismissed their children's emotions. These style characteristics were classified as *emotion dismissing*. Finally, some parents demonstrated characteristics indicating that they saw their children's emotions as harmful and inappropriate, dismissing and punishing their children's emotions. These style characteristics were classified as *emotion disapproving*.

Recent research has reconceptualized these classifications (Paterson et al., 2012). In addition to having an *emotion coaching* style as examined by Gottman and colleagues (1996, 1997), Patterson and colleagues (2012) noted the laissez-faire style had aspects of acceptance of children's negative emotions; thus, they proposed a similar construct labeled as *parental acceptance of negative emotion,* which referred to parenting style characteristics of accepting children's emotions, but not necessarily recognizing the

opportunity for teaching and helping the children to understand and problem solve when they feel negative emotions as parents with emotion coaching characteristics do. In addition, the researchers recognized that the outcomes of children with parents who have characteristics of emotion dismissing and emotion disapproving were often similar and frequently combined when being researched (Gottman et al., 1996, 1997; Paterson et al., 2012). Paterson and colleagues (2012) combined these two classifications into a *parental rejection of negative emotion* category. In addition, among parents with children with developmental disabilities, they found evidence for another style, labeled *uncertainty/ineffectiveness*, to characterize those parents who felt confused and distressed about how to help their children understand and deal with their emotions.

Although parent meta-emotion philosophy shares several characteristics with parental disciplinary style, it is also distinct from disciplinary style (Gottman et al., 1996, 1997). Gottman and colleagues (1996, 1997) identified that emotion coaching parents see their children's emotions as an opportunity for *teaching*, going beyond disciplinary style characteristics of setting limits and being responsive. They referred to this teaching characteristic as *scaffolding-praise*, referring to parents' general approach to leading and teaching their children. Parents who use scaffolding-praise break a task into manageable steps, respond to their children, and help their children as needed, in addition to being enthusiastic and praising children's efforts without overwhelming or confusing their children. Scaffolding-praise is similar to scaffolding and zone of proximal development as characterized by Vygotsky (1978). However, scaffolding-praise goes beyond the cognitive and physical support parents give, but also includes the emotional support aspects of scaffolding described in the research literature (de Oliveira & Jackson, 2017;

Neitzel & Stright, 2003). Studies that have examined a multi-faceted approach to scaffolding have found that emotional support was positively related to task persistence, behavioural control, academic achievement, less negative affect, and interacted with other aspects of scaffolding (Gottman et al., 1996, 1997; Neitzel & Stright, 2003). For example, Neitzel and Stright (2003) examined the relations among various aspects of maternal scaffolding, including cognitive support (i.e., metacognitive information and manner of instruction), emotional support (i.e., rejection and encouragement), and transfer of responsibility (i.e., overcontrol and encouragement of children's cognitive involvement), and children's academic self-regulatory behaviour (i.e., metacognitive talk, task persistence, behavioural self-control, progress monitoring, and assistance seeking). Four-year-old children and their mothers participated in four laboratory problem-solving tasks, and children's academic self-regulatory behaviour was observed and assessed one year later during Kindergarten. With respect to emotional support, they found that children were more likely to seek assistance from a teacher if mothers had higher levels of positive emotional support. Emotional support also was found to moderate the relation between mothers' cognitive support and help seeking, in that higher levels of quality instruction and higher levels of emotional support was associated with an increase in help seeking in the classroom. They also found that emotional support, especially when mothers had not encouraged autonomous behaviour, was associated with better child behavioural control. Overall, emotional support in scaffolding is important for child self-regulation outcomes. This ability to offer emotional support in scaffolding is correlated with an emotion coaching approach, as parents who are high in emotion coaching are

likely to use scaffolding-praise to teach their children about emotions and approach their children with empathy (de Oliveira & Jackson, 2017; Gottman et al., 1996, 1997).

An emotion coaching parenting style has been positively linked to the development of children's emotional competence (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Gottman et al., 1996, 1997; Lunkenheimer, Shields, & Cortina, 2007). Overall, research has shown that children who have parents with higher levels of emotion coaching characteristics tend to have better emotion regulation skills and are better able to recognize, label, and explain their emotions (Castro, Halberstadt, Lozada, & Craig, 2015; Garner et al., 2008; Gottman et al., 1996, 1997; Loop & Roskam, 2016; Miller, Dunsmore, & Smith, 2015). For instance, Gottman and colleagues (1996) examined longitudinal relations between parent emotion coaching and child outcomes, including regulatory physiology, emotion regulation abilities, academic achievement, and peer social competence in a group of families (mother, father, and their child) in Illinois. When children were 4 to 5 years old, the researchers interviewed both parents about their meta-emotion philosophy, measured child physiological regulation, and examined parenting behaviours (e.g., engagement, warmth, limit setting) during a parent-child interaction task. When children were 8 years old, the researchers obtained teachers' ratings of children's behaviour problems, child temperament, child academic achievement, child health, and parent ratings of child emotion regulation. They found that higher levels of emotion coaching were significantly associated with higher levels of scaffolding-praise and less derogatory parenting behaviour during the interaction task. Higher levels of emotion coaching also were associated with various positive child outcomes, including higher achievement, higher

ratings of peer competence, and better health. In addition, emotion coaching also was positively related to child physiological regulation, which predicted child emotion regulation ability and child outcomes.

In another study, Lunkenheimer and colleagues (2007) examined the effects of emotion coaching and emotion dismissing (i.e., statements, questions, and behaviours during a family narrative task) in relation to mothers' and fathers' ratings of children's emotion regulation and behaviour in a group of American families with children ages 8 to 12. They found that families with a higher frequency of emotion coaching discourse during the family narrative task, especially from mothers, had children with less lability, negativity, and fewer internalizing behaviours. In addition, they found that parents with a higher frequency of emotion dismissing discourse had children with lower rated emotion regulation skills and more externalizing behaviours. Overall, emotion coaching appears to be one mechanism by which children develop emotional competence skills, including how to effectively express and regulate their emotions.

As emotional competence skills are important aspects of social interactions, it also stands to reason that parental emotion-related beliefs and attitudes are important in the development of children's social competence (Gottman et al., 1997). Children with parents who have higher levels of emotion coaching tend to develop emotional skills that are important to the development of social competence, which includes being able to accurately recognize emotions in others and respond accordingly (Gottman et al., 1996). Research has shown that children of parents who have higher levels of emotion coaching display more prosocial behaviour and less aggressive behaviour (Garner et al., 2008; Katz & Windecker-Nelson, 2004; Miller et al., 2015). For example, Katz and Windecker-

Nelson (2004) compared American families with a 4- to 6-year-old child with conduct problems and families with a child without conduct problems. These researchers found that mothers who had a child with conduct problems had less awareness and understanding of their own emotions, tended to show fewer emotion coaching characteristics, and generally had difficulty distinguishing between different emotions. Nevertheless, children from both groups demonstrated better peer relations when their mothers had higher levels of emotion coaching. Although these results were correlational, they highlight how emotion-related parenting styles are linked to child social competence.

In another study, Cunningham, Kliewer, and Garner (2009) interviewed American mothers about their meta-emotion philosophy and rated their 9- to 13-year-old children's academic competence, and internalizing and externalizing behaviours. Then, six months later, they interviewed children about their emotion regulation and understanding, mothers provided additional ratings about their children's emotion regulation and temperament, and mothers and teachers provided additional ratings of children's academic competence, internalizing behaviours, and externalizing behaviours. They found that higher levels of maternal emotion coaching were associated with higher levels of several emotional and social competence indices, including understanding of multiple emotions and social skills at both time points for girls, and emotion regulation and control of emotions in boys. In addition, higher levels of emotion coaching also were associated with lower levels of negative reactivity, internalizing behaviours, and externalizing behaviours at both time points for boys. The authors also found evidence of mediation, with higher levels of emotion understanding mediating two pathways: (1)

between higher levels of emotion coaching and lower levels of internalizing behaviour in boys, and (2) between higher levels of emotion coaching and better social skills in girls. Emotion regulation also mediated the relations between higher levels of emotion coaching and several emotional and social outcomes for boys, including higher grades, lower levels of internalizing and externalizing behaviour, and better social skills. In sum, the research shows that higher levels of parent emotion coaching tend to be associated with better emotional and social competence skills in children.

Emotion-Related Parenting Practices

A second important component of parent emotion socialization is specific parenting practices, which are likely to be influenced by one's own attitudes and beliefs about emotions (Darling & Steinberg, 1993). In the case of emotion-related parenting styles, both beliefs and attitudes about emotions and the specific behaviours enacted towards their children are part of their meta-emotion philosophy. Parenting practices encompass those specific behaviours and techniques parents use to advance their goals for their children's development and are the primary mechanisms of how parental attitudes and beliefs are enacted towards their children (Darling & Steinberg, 1993). As parenting practices influence how parents interact with their children, it is important to consider specific parenting practices that promote parents' emotion socialization goals. Parenting practices related to the development of children's emotional competence include direct methods, such as direct teaching and reactions to children's emotions, and indirect methods, such as modeling (Darling & Steinberg, 1993; Denham, 2007; Eisenberg, Cumberland, et al., 1998).

Parents can socialize emotions by directly teaching their children how to understand, label, and regulate their emotions, either in the moment of their children's experience of a specific emotion or direct teaching at other times (Denham, 2007; Eisenberg, Cumberland, et al., 1998). At these times, parents may use that moment as a teaching opportunity and verbally guide their children in labeling the emotion they are feeling and actively direct their children in managing their emotions and behaviour. For example, if their child begins to cry, parents might begin by asking their child how he or she is feeling, assisting him or her to label the emotion they are feeling, and suggesting strategies to help the child cope with his or her emotion. Another method of direct teaching that parents may use is setting aside time to discuss emotions, reactions, and situations with their children when their children are not experiencing a distressing emotion (Denham, 2007; Denham et al., 1997). For instance, before going to bed, parents can discuss a situation that happened earlier that day at school in which a person experienced anger and discuss with their child the best ways to handle anger. In addition, parents can use various interactive contexts, such as storytelling, to directly teach and discuss emotions with their children (Denham, 2007; Eisenberg, Cumberland, et al., 1998; Saarni, 1999).

Direct teaching and discussion about emotion has been shown to be associated with better emotional and social competence. For example, Garner and colleagues (2008) examined emotion discussion during a storytelling task with their children, children's emotion knowledge and anger perceptions, children's prosocial behaviour, and children's physical and relational aggression during a play task in a group of American mothers and their preschoolers. They found that mothers who explained emotions more frequently had

children with better emotion situation knowledge and prosocial behaviour. When mothers' discussion had positive emotional themes, children had lower levels of anger perception bias. Overall, this study showed that children's emotional and social competence was positively associated with direct methods of emotion socialization.

Parents also directly socialize emotions by how they react to their children's emotions. These reactions have been categorized into *supportive* and *unsupportive* reactions (Fabes, Leonard, Kupanoff, & Martin, 2001). Several supportive strategies have been noted, including *problem-focused reactions* (e.g., helping children solve the problem that elicited the emotion), *emotion-focused reactions* (e.g., helping children to label and cope with their emotions), and *expressive encouragement* (e.g., allowing children to positively express their emotions; Fabes et al., 2001). On the other hand, several unsupportive reactions have been noted, including *punitive reactions* (e.g., punishing children for their negative emotions), *minimizing reactions* (e.g., lessening the importance of or ignoring children's emotions), and *distress reactions* (e.g., the parent becoming upset in response to their children's negative emotions; Fabes et al., 2001).

Whereas supportive reactions have been positively related to children's emotion knowledge, better emotion regulation, adaptive coping skills, social skills (e.g., friendship quality), prosocial behaviour, and child adjustment (Blair et al., 2014; Eisenberg, Fabes, & Murphy, 1996; Gunzenhauser, Fäsche, Friedlmeier, & Suchodoletz, 2014; Han, Qian, Gao, & Dong, 2015; McDowell, Kim, O'Neil, & Parke, 2002; Miller-Slough, Zeman, Poon, & Sanders, 2016; Perlman, Camras, & Pelphrey, 2008; Sanders, Zeman, Poon, & Miller, 2015; Smith et al., 2006; Swanson, Valiente, Lemery-Chalfant, Bradley, & Eggum-Wilkens, 2014), research has shown that unsupportive reactions have been

associated with less adaptive outcomes for children's emotional and social competence (Blair et al., 2014; Eisenberg et al., 1996; Gunzenhauser et al., 2014; Paczkowski & Baker, 2007; Perlman et al., 2008; Sanders et al., 2015; Swanson et al., 2014). For example, Eisenberg and colleagues (1996) examined American mothers' and fathers' report of their supportive and unsupportive reactions to their elementary school (i.e., grades 3 to 6) children's emotions, parent and teacher ratings of children's emotional and behavioural regulation, and social functioning (e.g., social skills, peer acceptance, and prosocial behaviour), and children's prosocial behaviour during a laboratory task. They found that maternal problem-focused reactions were associated with positive social functioning and prosocial behaviour in children. Higher levels of maternal expressive encouragement also were associated with higher levels of children's comforting behaviour during a prosocial behaviour task, especially for boys. On the other hand, they found that maternal minimizing and punitive reactions were associated with higher levels of poorer coping skills (e.g., avoidant coping) in children, and lower levels of constructive coping and social skills.

To further illustrate the relations among supportive reactions to children's negative emotions and children's outcomes over time, Blair and colleagues (2014) examined the longitudinal relations among reactions to children's negative emotions at age 5, children's emotion regulation skills at age 7, and friendship quality at age 10 in a group of American mother-child dyads. At each time point, mothers, teachers, and children completed measures of these variables. Higher levels of supportive reactions at age 5 were associated with better emotion regulation skills at age 7, whereas higher levels of unsupportive reactions at age 5 were negatively associated with child emotion

regulation skills at age 7. Furthermore, higher levels of supportive reactions at age 5 were indirectly related to higher levels of positive friendship quality and lower levels of negative friendship quality at age 10, a relation mediated by better child emotion regulation skills at age 7. On the other hand, unsupportive reactions were indirectly related to higher levels of negative friendship quality and lower levels of positive friendship quality at age 10, a relation also mediated by better child emotion regulation skills at age 7. These findings highlight the importance of parental reactions to children's negative emotions to children's emotional and social outcomes.

Parenting practices also can be indirect. Indirect parenting practices are not specifically directed towards a goal of helping children label, understand, and regulate their emotions, but still influence the development of their children's emotion and coping skills, including modeling and regulating the opportunities to experience emotions (Denham, 2007; Saarni, 1999). First, when parents face their own difficult situations, they model for their children how to cope with emotions and children observe and learn from these displays (Denham, 2007). For instance, if a parent comes home from work angry at his or her boss and begins to swear and call his or her boss names, his or her children will see this and may emulate this behaviour when in a similar circumstance with a teacher. Another indirect parent emotion socialization practice involves regulating the opportunities their children have to experience situations in which they could use their emotional competence skills (Eisenberg, Cumberland, et al., 1998). For example, if parents are overprotective and do not allow their children to frequent the playground with their peers, their children have limited opportunities to learn to negotiate situations in which they would be required to show emotional competence. Thus, these indirect

emotion-related parenting practices may impact how children's emotional and social competence skills develop.

To further illustrate the effect of all of these parenting practices (including discussion, reactions, and modeling of emotions) on children's social and emotional competence skills, Denham and colleagues (1997) examined the relations between three parent emotion socialization practices (coaching, reactions to children's negative emotions, and expression of emotional displays observed during a parent-child interaction task and in a daycare setting) and preschool children's outcomes (emotion regulation skills and social competence as rated by parents and teachers and demonstrated by children during a puppet task) in a group of American families with preschool children. They found that all three parental practices were important predictors of child social and emotional competence. Specifically, higher levels of coaching marginally predicted higher levels of social and emotional competence. Furthermore, when parents responded supportively to their children's emotions (e.g., explaining emotions and helping children behave appropriately), children were better able to respond and manage their emotions. Finally, compared to parents who expressed lower levels of negative emotions, parents who expressed higher levels of negative emotions also had children who expressed elevated levels of negative emotions and had low ratings of social competence. Overall, this study illustrated the importance of parenting practices related to both direct and indirect methods of emotion socialization to children's emotional and social competence skills.

Comparing Mothers' and Fathers' Emotion Socialization Style and Practices

While there has been much research on the effect of emotion socialization styles and practices on child outcomes, most of this research has not examined the role of fathers in emotion socialization. Much of the research has been focused exclusively on mothers, as mothers have traditionally been seen in the role of primary caregiver and mothers are more often recruited for research studies (Brody, 1997; Doyle, Weller, Daniel, Mayfield, & Goldston, 2016; Gunzenhauser et al., 2014; Han et al., 2015; Parent, Forehand, Pomerantz, Peisch, & Seehuus, 2017; Parke & McDowell, 1998; Sanders et al., 2015; Shewark & Blandon, 2015). Other studies that have included fathers often include parents, in general, as a mixed group of mothers and fathers, without separate analyses for each of the parents (Baker, Fenning, & Crnic, 2011; Parent et al., 2017; Parke & McDowell, 1998). Indeed, a recent review has found that the proportion of studies that actually analyze data from fathers separately from mothers to be limited, with little improvement over the past 30 years (Parent et al., 2017). Thus, there is a gap in the research regarding the influences of both parents on emotion socialization and child outcomes. This gap may be problematic, as differential effects could be masked. For example, there is evidence to suggest that women appear to be more emotionally expressive than men, possibly because women are socialized based on prevailing social norms and cultural standards to be more expressive, in general (Brody, 1997). Then, as mothers interact with their children, they would be more likely to model these emotions for their children than would fathers (Brody, 1997; Hastings, 2018; Saarni, 1999). Thus, it is possible that mothers' and fathers' emotion socialization practices could differ or have different effects on children's emotional and social competence. However, very

little is known about fathers' contributions to emotion socialization (Baker et al., 2011; Brody, 1997).

Although the research on fathers' emotion socialization styles and practices is only beginning to be researched in more depth, some research results have highlighted possible patterns in fathers' emotion socialization. For instance, some research has shown that parents from the same family often have similar beliefs and attitudes about emotions and that mothers' and fathers' supportive and unsupportive reactions are correlated (Denham & Kochanoff, 2002; Gunzenhauser et al., 2014; Han et al., 2015; Nelson et al., 2016; Shewark & Blandon, 2015; Wong, Diener, & Isabella, 2008). For example, one part of Denham and Kochanoff's (2002) American study examined the associations between mothers' and fathers' emotions, reactions, and values about teaching emotions. They found several significant positive correlations between maternal and paternal variables, including relations between higher levels of maternal positive emotions and reactions, and higher levels of paternal positive emotions and reactions, as well as positive relations between maternal values about teaching emotions and paternal values about teaching emotions. These results highlighted the important link between emotion-related parenting style and emotion-related parenting practices for fathers.

Research results also suggested positive outcomes for children's emotional and social competence in response to fathers' adaptive emotion socialization and negative outcomes for children's emotional and social competence in response to fathers' maladaptive emotion socialization (Han et al., 2015; McDowell et al., 2002; Sanders et al., 2015; Shewark & Blandon, 2015). For instance, McDowell and colleagues (2002) examined parent relationship qualities during a parent-child interaction task (e.g.,

warmth, positive responsiveness, reasoning with their child), interviews with children about their emotional functioning (e.g., coping strategies), and teacher, parent, and peer ratings about children's social functioning (e.g., likability, peer acceptance) in a group of American families with a child in grade 4. They found that when mothers and fathers had higher levels of negative relationship qualities (e.g., blaming of their child for problems and less warmth), children had negative responses to vignettes measuring their coping skills and emotional functioning, indicative of poorer coping skills. Overall, at first glance, it appears that outcomes of fathers' emotion socialization styles and practices are like that of mothers.

However, some research results also have suggested that mothers and fathers appear to make different contributions to children's emotional competence, with mothers often having a more central role, more significant influence on emotional competence, and higher levels of adaptive emotion socialization beliefs and practices (Davidov & Grusec, 2006; Denham & Kochanoff, 2002; Nelson et al., 2016; Wong et al., 2008). For example, Denham and Kochanoff (2002) also examined longitudinal relations among parents' observed and self-reported expression of emotion and socialization of emotions (e.g., reactions to children's emotions, discussion, and coaching of emotion) and preschool children's emotion knowledge. They found that mothers' socialization attitudes and behaviours (e.g., expression, acceptance, and teaching of emotions) were positively associated with child emotional knowledge at ages 3, 4, and 5, whereas fathers' emotion expressions and reactions only predicted child emotional knowledge at age 4. These researchers postulated that due to the lack of relations between fathers' socialization and children's emotion knowledge, compared to the more consistent associations between

mothers' socialization and children's emotion knowledge, mothers appear to be the primary socializers. Fathers may take a "back seat" to socialization efforts, only be involved in certain aspects of socialization, or be indirectly involved in socialization efforts. However, other recent authors (Gunzenhauser et al., 2014) have noted that, especially over the past decade, fathers appear to be more involved in child rearing.

In a more recent example, when examining unsupportive reactions, Sanders and colleagues (2015) examined relations among mothers' and fathers' emotion socialization of sadness and anger, and children's adaptive coping, emotion dysregulation, and depressive symptoms in a group of American families with children ages 8 to 11 years old. In one part of their study, they found that both mothers' and fathers' unsupportive reactions towards anger were positively associated with child dysregulation of anger. They also found both mothers' and fathers' unsupportive reactions towards sadness and anger were positively associated with child depressive symptoms. However, some differences between mothers and fathers were noted. Fathers' unsupportive reactions to anger were positively associated with poorer child ability to cope with anger, whereas this association was not significant for mothers. A similar pattern was observed for unsupportive reactions to sadness. For fathers, their unsupportive reactions were associated with more sadness dysregulation and poor coping with sadness, but these associations were not significant for mothers. Further differences were highlighted in regression analyses, in which mothers' unsupportive reactions to sadness were a significant predictor of child depressive symptoms, but unsupportive reactions to anger was not. The opposite pattern was found for fathers in that unsupportive reactions to anger was a significant predictor of child depressive symptoms, but unsupportive

reactions to sadness were not. The results of these studies suggest that mothers' emotion socialization may be more influential on children's emotional competence; however, these results also highlight that more research is needed to examine the roles of fathers in more detail to determine the specific roles that fathers play in emotion socialization and if these roles are changing over time with societal shifts.

In sum, the available research is supportive of both parenting style and parenting practices as extremely important for the development of children's emotional competence skills. Although emotional competence has been found to be an important part of children's development, especially in relation to social competence, little research has examined the specific links between parenting style, parenting practices, and children's emotional competence (Morris et al., 2007). Furthermore, little research has examined the differential effects of mothers' and fathers' emotion socialization on children's emotional and social competence (Parke & McDowell, 1998). Therefore, the purpose of this study will be to examine these links in more depth.

The Role of Parent Characteristics in Parenting

Given that parent emotion-related beliefs, attitudes, and practices are important for children's emotional competence skills, it is important to study factors that could influence these emotion-related beliefs, attitudes, and practices. Indeed, many models of emotion socialization posit the impact of *parent characteristics* on parent emotion-related parenting styles and practices, but little research has examined this question in more depth. Because less research has focused on exploring how other parent factors relate to parenting and child outcomes (Baker et al., 2011; Belsky, 1984; Breaux, Harvey, & Lugo-Candelas, 2016; Egeli & Rinaldi, 2016; Hooper, Feng, Christian, & Slesnick,

2015), this study will examine parents' own characteristics, including their personality and their own emotional competence skills, in relation to emotion socialization and their perceptions of their children's emotional and social competence.

Parent Personality

According to Belsky's (1984) parenting process model, there are three main determinants of parenting behaviours: parent characteristics, child characteristics, and the environmental context. Of these three, Belsky (1984) considered parent characteristics, including personality and developmental history (e.g., how the parent was parented), to be the most influential because these characteristics could influence how a person reacts to different situations and, therefore, have a direct and indirect effect on parenting behaviour (Belsky & Barends, 2002; McCabe, 2014). For example, if a child engages in disruptive behaviour, parental reactions may differ by their predominant personality traits (Belsky & Barends, 2002). Someone higher in agreeableness or sensitivity may be able to act in a calm manner, respond positively to their children, and empathize with their children readily, whereas someone who is higher in neuroticism and tension may become distressed with their children's behaviour and engage in less adaptive parenting behaviours (e.g., yelling at their children). Thus, examining parent personality is important to the understanding the development of parenting and emotion beliefs, attitudes, and practices.

One of the most common descriptive models of personality is the "Big Five" (Belsky & Barends, 2002). The Big Five consists of five broad, continuous dimensions representing different domains of personality traits (John & Srivastava, 1999). These five domains include *openness to experience* (e.g., artistic, curious, imaginative),

conscientiousness (e.g., organized, reliable, responsible), *extraversion* (e.g., social, outgoing, assertive), *agreeableness* (e.g., kind, sympathetic, generous), and *neuroticism* (e.g., anxious, worrisome, tense; McCrae & John, 1992). Although the Big Five model is only a descriptive framework (i.e., it does not theorize about actual personality structures), much of the literature on examining the relations between personality and parenting uses this model (Prinzie, Stams, Deković, Reijntjes, & Belsky, 2009).

Of these five broad dimensions, four (openness, conscientiousness, extraversion, and agreeableness) have been associated with positive parenting in both mothers and fathers (Achtergarde, Postert, Wessing, Romer, & Müller, 2015; Belsky & Barends, 2002; McCabe, 2014). Prinzie and colleagues (2009) conducted a meta-analysis of 30 studies about the relations among the Big Five personality dimensions and parenting behaviours. Across studies, they found that all four of these positive personality dimensions were associated with warmth (i.e., positive affect and support, nurturance, sensitivity) and behavioural control (i.e., structure, sensitivity, consistency, guidance). In addition, openness and agreeableness were associated with autonomy support (i.e., allowing their children independence, not overactive or overprotective of their children). Other research has shown that these four dimensions also are associated with sensitive parenting (Smith et al., 2007), but patterns of personality dimensions and other positive parenting characteristics differ depending on the parenting skill or practice. For example, higher levels of openness and agreeableness have been associated with perceived parenting competence and parenting knowledge (Bornstein et al., 2007; Prinzie et al., 2009). Higher levels of openness and extraversion have been shown to be associated with greater nurturance (de Haan, Prinzie, & Deković, 2009; Metsäpelto & Pulkkinen, 2003).

Higher levels of openness also has been associated with increased cognitive and autonomy support in problem solving (Neitzel & Stright, 2004). In addition, higher levels of conscientiousness and agreeableness have been associated with higher levels of parental involvement and limit setting (McCabe, 2014; Oliver, Guerin, & Coffman, 2009). Taken together, this research suggests that higher levels of agreeableness, conscientiousness, openness, and extraversion are associated with higher levels of positive parenting practices.

On the other hand, the fifth dimension of the Big 5 personality traits, neuroticism, has consistently been associated with negative parenting practices (Achtergarde et al., 2015; Belsky & Barends, 2002; McCabe, 2014). In their meta-analysis, Prinzie and colleagues (2009) found that higher levels of neuroticism were associated with lower levels of warmth, behavioural control, and autonomy support. In general, studies have supported these links, and have shown that higher levels of neuroticism are associated with lower levels of positive parenting behaviours, such as consistency, nurturance, and sensitivity (Belsky & Barends, 2002; Metsäpelto & Pulkkinen, 2003). A similar pattern was found for parent discipline. Lower levels of neuroticism have been shown to be associated with easier limit setting (Oliver et al., 2009). Higher levels of neuroticism also have been found to be negatively associated with parenting knowledge, competence, and satisfaction (Bornstein et al., 2007, 2003; Metsäpelto & Pulkkinen, 2003) and positively associated with higher levels of rejecting behaviours, hostility, and less support (McCabe, 2014). Taken together, these studies indicated that neuroticism has been associated with negative parenting outcomes.

Personality dimensions also have been associated with general parenting styles (Metsäpelto & Pulkkinen, 2003). For example, Metsäpelto and Pulkkinen (2003) examined Finish parents' reports of the Big 5 personality dimensions and child rearing practices. They found that authoritative parents were high in extraversion, openness, nurturance, and parenting knowledge, whereas authoritarian parents were low in these qualities and higher in restrictiveness. Permissive parents also were high in extraversion and openness, but also had higher levels of neuroticism and lower levels of nurturance and restrictiveness. These results indicated that parents' personality plays a role in parenting style and practices, which can set the stage for emotion socialization. Because personality may play a role in parents' beliefs, attitudes, and behaviours, it stands to reason that that personality may impact parents' emotion socialization, including emotion-related parenting style and practices, as well.

When examining variables related to emotion socialization, openness, conscientiousness, extraversion, and agreeableness also have been associated with positive behaviours related to emotion. For instance, Hughes and Gullone (2010) examined mothers' and fathers' ratings of their own personality traits, their reactions to their children's negative emotions, self-expressiveness in the family, and their children's emotions in a large group of Australian families with children ages 10 to 18. They found that both mothers and fathers higher in these four personality dimensions had higher levels of positive emotional expression. In addition, for both mothers and fathers, higher levels of conscientiousness and agreeableness were associated with more supportive reactions to children's negative emotions. But, lower levels of agreeableness in both mothers and fathers were associated with more unsupportive reactions. On the other

hand, for both mothers and fathers, higher levels of neuroticism were associated with more distress reactions to children's negative emotions and more expressed negative emotions. Parents with higher levels of neuroticism also were more likely to use harsher disciplinary techniques. Thus, the results of this study suggests that four parent personality dimensions (i.e., openness, conscientiousness, extraversion, and agreeableness) are associated with positive emotion socialization styles and practices, whereas neuroticism is associated with negative emotion socialization styles and practices.

Although prior researchers found relations between personality and disciplinary style and reactions to children's emotions, few studies have focused on personality and emotion-related parenting styles. One study that did look at this relation, Scammell (2011), examined the relations among mothers' reports of their personality, emotion-related parenting style, reactions to their children's negative emotions, and children's social skills. Results indicated relations between higher levels of two personality traits – conscientiousness and agreeableness – and higher levels of maternal emotion coaching. In addition, emotion coaching mediated the relation between these two personality dimensions and supportive reactions to children's negative emotions. Further analysis indicated that lower levels of agreeableness and conscientiousness also were associated with greater levels of parental rejection of negative emotion, and parental rejection of negative emotion mediated the relation between these personality dimensions and unsupportive reactions to children's negative emotions (Scammell & Babb, 2012). Although little research has been done, results are beginning to indicate some relations

between emotion-related parenting styles and parent personality dimensions, especially agreeableness and conscientiousness.

Taking the research on personality and emotion socialization a step further, some studies have examined differences in this relation between mothers' and fathers' personalities in relation to their emotion socialization beliefs, attitudes, and behaviours. Of the research that has been done, it appears that while some patterns of personality for both mothers' and fathers' are generally similar, there also may be some differences (de Haan et al., 2009; Hughes & Gullone, 2010; Karreman, van Tuijl, van Aken, & Deković, 2008; Vermaes, Janssens, Mullaart, Vinck, & Gerris, 2008). For instance, while the previously mentioned Hughes and Gullone (2010) study found many similarities in the associations between mothers' and fathers' personality and reactions to children's emotions, more associations were found for mothers than fathers. For mothers, higher levels of openness also were associated with more supportive reactions, and lower levels of openness in mothers were associated with more unsupportive reactions. In addition, only for mothers were higher levels of neuroticism associated with more unsupportive reactions. These results mirror those found for the differences between mothers' and fathers' in their emotion-related parenting styles and practices. That is, stronger and more frequent associations were found in emotion socialization for mothers, compared to fathers. Overall, it appears that while there are similarities in how each personality dimension is related to emotion-related parenting style and practices, there also appear to be differences between how mothers' and fathers' personality is related to their emotion socialization practices.

In sum, research has demonstrated that openness, conscientiousness, agreeableness, and extraversion are associated with positive parenting, such as warmth, sensitivity, authoritative parenting style and supportive reactions to children's negative emotions (Achtergarde et al., 2015; Belsky & Barends, 2002; Bornstein et al., 2007; Hughes & Gullone, 2010; McCabe, 2014; Prinzie et al., 2009; Smith et al., 2007). On the other hand, neuroticism tends to be associated with more negative parenting, such as the use of harsh parenting techniques and unsupportive reactions to children's negative emotions (Achtergarde et al., 2015; Bornstein et al., 2007, 2003; Hughes & Gullone, 2010; McCabe, 2014; Metsäpelto & Pulkkinen, 2003; Prinzie et al., 2009). However, several gaps in the research literature have been identified. Few studies and models have examined the relations between personality and beliefs and attitudes about emotions. In addition, few studies have examined the differences between mothers and fathers with regards to the possible associations between their personalities and their emotion socialization beliefs, attitudes, and practices. Furthermore, research has not examined personality in combination with other parent characteristics, such as the parents' own emotional competence. Therefore, the purpose of this study was to examine the relations among parents' personality, emotional competence, beliefs and attitudes about emotions and emotion socialization practices, comparing mothers and fathers.

Parent Emotional Competence

Another parental factor that may play an important role in parental emotion socialization is parents' own emotional competence skills. It is often assumed that parents who have higher levels of the aspects of emotional competence will have positive beliefs and attitudes about emotions and engage in adaptive emotion socialization practices

(Bariola, Gullone, & Hughes, 2011). However, little research has examined how parents' own emotional competence impacts their emotion socialization style and practices (Shaffer, Whitehead, Davis, Morelen, & Suveg, 2017). Therefore, this study will examine parent emotional competence in relation to their emotion socialization style and practices, focusing on key aspects of emotional competence outlined by Saarni (1999), including expression and regulation of emotions, empathy, and key aspects of unconscious regulation and adult integration of these skills, namely mature defense mechanisms.

Most research related to parents' emotional competence skills has focused on two main areas: *emotion expression* and *emotion regulation*. Emotion expression refers to the amount of positive and/or negative emotion expressed by parents toward their children, as well as overall in the home environment (Halberstadt, Crisp, & Eaton, 1999). In general, research has shown that parents who express more positive emotions (e.g., happiness) toward their children are likely to show more positive parenting behaviours, such as supportive presence (i.e., supporting their child, emotionally; Denham et al., 2000; Martin, Clements, & Crnic, 2002; Rueger, Katz, Risser, & Christine, 2011). In contrast, greater expression of negative emotions, such as anger and hostility, has been associated with parenting behaviours that are less positive and more harsh (e.g., critical and/or punitive; Denham et al., 2000; Mills et al., 2012; Rueger et al., 2011). To illustrate, Martin and colleagues (2002) examined mothers' experiences and expression of emotion when interacting with their toddlers during a waiting task (i.e., the mother completed a set of questionnaires while their child waited in the room with only an undesirable toy with which to play). Results indicated that higher ratings of family distress were associated with less sensitive parenting (i.e., emotional responsivity,

structure, support, and guidance of their child), but only for mothers who expressed more negative emotions and fewer positive emotions during the task. When examining the results of the amount of negative emotion expressed during this task, mothers who expressed moderate to high levels of negative emotions had lower levels of sensitivity than mothers who expressed few or no negative emotions.

Research on parent emotion expression has shown that higher levels of positive emotion expressiveness also are associated with several positive child outcomes, including fewer disruptive behaviours, more frequent child positive emotion expressiveness, and better child emotion regulation, coping, social skills, and physiological regulation (Bariola et al., 2011; Duncombe, Havighurst, Holland, & Frankling, 2012; Green & Baker, 2011; Halberstadt et al., 1999; Haskett, Stelter, Proffit, & Nice, 2012; Nelson et al., 2012; Ramsden & Hubbard, 2002; Valiente et al., 2004). On the other hand, studies investigating parent expression of negative emotion have been mixed, but higher levels are usually associated with negative child outcomes, such as poorer child emotion regulation, poor physiological regulation, higher levels of aggression, higher levels of internalizing problems, less prosocial behaviour, and lower self-esteem (Duncombe et al., 2012; Halberstadt et al., 1999; Haskett et al., 2012; Liew, Johnson, Smith, & Thoemmes, 2011; Mills et al., 2012; Nelson et al., 2012). The reason proposed for some of these mixed results was that at lower levels of expression of negative emotions, children are able to learn about negative emotions, but too much negative emotion exposure may be associated with poorer functioning (Brophy-Herb et al., 2013; Halberstadt et al., 1999). To illustrate the associations between parent expression and child emotional and social competence, Haskett and colleagues (2012)

examined parent (i.e., a mixed group of mothers and fathers, mostly mothers) ratings of their own expressiveness and their children's executive functioning skills, teacher ratings of children's behaviour and school adjustment, and children's aggressive behaviour observed on a playground in a group of American parents and their 4- to 7-year-old children. They found that higher levels of positive parental emotional expression were associated with better teacher-reported regulation and classroom competence. Increased negative-dominant (e.g., anger, contempt) and negative-submissive (e.g., sadness) emotional expression was associated with lower rated child regulation. This study highlights the different relations between positive and negative parent emotion expression and the relations to children's emotional and social outcomes.

Some studies have found that the relations between positive expression in parents and child outcomes were not direct; rather, these relations were mediated by child emotion regulation (Duncombe et al., 2012; Eisenberg, Losoya, et al., 2001). For example, Eisenberg and colleagues (2001) examined observed maternal positive and negative affect, in addition to warmth, ratings of their self-expressiveness in the family, and mothers' and teachers' ratings of children's internalizing and externalizing behaviours, and social competence in a group of children in grades 2 to 5. They found no direct paths between parent emotion expression and the three child outcomes. Instead, these relations were mediated by children's emotion regulation abilities (e.g., focusing attention, shifting attention, and inhibiting or initiating behaviours). A similar mediated effect of child emotional regulation also was found between parent negative expression and child outcomes. Overall, parental expression of different emotions may be a principal

factor in their beliefs, attitudes, and practices, in addition to children's outcomes, but more research is needed to fully understand these relations.

Related to the study of emotion expression is the study of empathy. Empathy is defined as "…an affective response that stems from the apprehension or comprehension of another's emotional state or condition and is similar to what the other person is feeling or would be expected to feel" (Eisenberg, 2000, p. 671). Thus, empathy is a component of an individual's emotional competence, as it is an emotional response that reflects both experiencing and expressing a particular emotion and one's emotional and cognitive understanding of another's emotional state (Eisenberg, 2000; Saarni, 1999). Empathy also is important for social interaction, as it involves the understanding of another's emotional state, on which an individual's response to another person could be based (Eisenberg, 2000; Farrant, Devine, Maybery, & Fletcher, 2012; Halberstadt et al., 2001). Thus, empathy is likely to be an important part of one's emotional competence (Saarni, 1999).

However, most research on the relation between empathy and emotional competence has focused on the development of children's empathy, rather than on how parents' empathy contributes to parenting and emotion socialization (Soenens, Duriez, Vansteenkiste, & Goossens, 2007; Stern, Borelli, & Smiley, 2015). The research that has been done on parent empathy has shown that it is positively associated with better parenting quality, including sensitivity, responsiveness, autonomy support, and cognitive and physical scaffolding support during difficult tasks (de Oliveira & Jackson, 2017; Egeli & Rinaldi, 2016; Eisenberg et al., 1993, 2003; Eisenberg & McNally, 1993; Farrant et al., 2012; Leerkes, Crokenburg, & Emma, 2004; Soenens et al., 2007; Stern et al.,

2015). For example, Stern and colleagues (2015) examined the relations among parent empathy and attachment (i.e., avoidance and anxiety), children's perceptions of their parent (i.e., perceptions of parental warmth and the children's dismissal of the parent), and children's attachment security in a group of Dutch parents (mostly mothers) and their 7- to 12-year-old children. When considering the results related to parent empathy, higher levels of parent empathy were positively associated with warmth, child attachment security, and child emotional openness, as well as negatively associated with child dismissal of the parent. Overall, children classified as having a secure attachment had parents with higher levels of empathy than those classified as insecure. Finally, when examining the relation between parent and child attachment, higher parent empathy was found to mediate the relation between lower levels of parent attachment avoidance and higher levels of child attachment security. As empathy appears to be an important factor in how parents respond to their children, this study illustrates the importance of empathy to parenting.

In examining emotion socialization, empathy also is implied to be a component in emotion coaching, as emotion coaching involves showing understanding towards children for the emotions they are experiencing (Gottman et al., 1996, 1997; Havighurst et al., 2013; Stern et al., 2015). Although no research has examined parent empathy and emotion-related parenting styles and practices specifically, of the research that has been conducted on variables related to emotion socialization, parent empathy has been positively associated with the encouragement of perspective taking in children, positive emotion communication, and discussion of emotion (Eisenberg, 2000; Eisenberg et al., 1993; Eisenberg & McNally, 1993). In addition, parent empathy also has been associated

with various positive child outcomes, including higher levels empathy and prosocial behaviour, lower levels of internalizing and externalizing behaviours, and higher levels of perspective taking (Eisenberg, 2000; Eisenberg & McNally, 1993; Farrant et al., 2012; Psychogiou, Daley, Thompson, & Sonuga-Barke, 2008; Soenens et al., 2007; Walker & Cheng, 2007). To illustrate, Eisenberg and McNally (1993) examined the longitudinal relations among mothers' self-rated empathy-related characteristics (i.e., sympathy, perspective taking, and personal distress), childrearing practices (i.e., positive emotional communication, support in independence, and reluctance to discipline), and their adolescents' self-rated empathy-related characteristics in a group of American families. They found that higher levels of mothers' perspective taking were associated with higher levels of positive emotional communication with their adolescent and encouragement of independence in their adolescent. In addition, higher levels of positive emotional communication were positively associated with adolescents' perspective taking ability. In sum, parent empathy has been shown to be important for parents' response towards their children and children's emotional and social competence, indicating that it could be a key emotional competence skill that is important in emotion socialization styles and practices.

Another aspect of parent emotional competence that has been examined with respect to emotion-related parenting styles and practices is parents' own ability to regulate their emotions (Bariola et al., 2011; Crandall, Deater-Deckard, & Riley, 2015). Although research has been limited, results have indicated that better parent emotion regulation is associated with more positive parenting, greater positive emotion expression in the family, more supportive reactions to children's negative emotions, and fewer unsupportive reactions (Crandall et al., 2015; Cumberland-Li, Eisenberg, Champion,

Gershoff, & Fabes, 2003; Morelen, Shaffer, & Suveg, 2016; Valiente, Lemery-Chalfant, & Reiser, 2007). For example, Valiente et al. (2007) examined parental effortful control (i.e., an index of emotion regulation ability) and family chaos in relation to parents' reactions to their children's negative emotions, child effortful control, and child behaviour problems in a group of American parents (mostly mothers) and their 7- to 12-year-old children. They found that parents higher in effortful control were more likely to have higher levels of supportive reactions and lower levels of unsupportive reactions to children's negative emotions. Comparable results were found by Perlman and colleagues (2008). They examined the relations among parents' physiological regulation (i.e., vagal tone, a physiological measure of heart rate that is often used to assess emotion regulation, in which high vagal tone indicates better regulation), parents' ratings of their reactions to children's negative emotions, parents' ratings of family expressiveness, and children's emotion knowledge in a group of American parents (mostly mothers) and their preschool children. They found that parents with higher vagal tone had more positive reactions to their children's negative emotions. In response to these findings, Perlman and colleagues (2008) posited that when parents are better able to regulate their own emotions, they can focus more of their attention on emotion socialization behaviours and responding to their children.

Parent emotion regulation also has been shown to impact child emotional and social competence. Parents who are able to regulate their emotions adaptively also tend to have children who are able to regulate their emotions adaptively and who show better adjustment (Bariola, Hughes, & Gullone, 2012; Cumberland-Li et al., 2003; Gunzenhauser et al., 2014; Morelen & Suveg, 2012; Valiente et al., 2007). For example,

results of Valiente and colleagues' (2007) study on parental effortful control, family chaos, parents' reactions to their children's negative emotions, child effortful control, and child behaviour problems also showed that the relation between higher levels of parent effortful control and lower levels of both child internalizing and externalizing behaviours was mediated by higher levels of positive parental reactions to children's negative emotions and higher levels of child effortful control (i.e., multiple mediation).

On the other hand, parent emotion dysregulation (i.e., difficulty in regulating emotions) also has been examined in relation to emotion socialization. Research on emotion dysregulation has focused on two primary areas, including general difficulties in regulating emotions and the impact of types of psychopathology (e.g., anxiety or depression) that are associated with emotional dysregulation. With regards to general difficulties regulating emotions, parents with higher levels of emotion dysregulation often have higher levels of unsupportive reactions to children's negative emotions, as well as lower levels of supportive reactions to children's negative emotions, warmth, and inductive discipline (Choe, Olson, & Sameroff, 2013; Han et al., 2015; Jones, Brett, Ehrlich, Lejuez, & Cassidy, 2014; Morelen et al., 2016). For example, Han and colleagues (2015) examined both mothers' and fathers' emotion dysregulation and reactions to children's negative emotions in relation to their children's emotion regulation skills in a large sample of Chinese families with 7- to 12-year-old children. When examining the results specific to emotion socialization, they found that for both mothers and fathers, higher levels of parent emotion dysregulation were associated with higher levels of unsupportive reactions to children's negative emotions and lower levels of supportive reactions.

Parent emotion dysregulation also has shown impact on children's emotional competence and behaviour. Overall, when parents have higher levels of emotion dysregulation, their children tend to show higher levels of emotion dysregulation and externalizing behaviours, and less effective emotion regulation skills (Choe et al., 2013; Han et al., 2015; Morelen et al., 2016). For example, when considering the results related to child emotion regulation in Han and colleagues' (2015) study, higher levels of emotion dysregulation also were associated with lower levels of child emotion regulation skills for both mothers and fathers. Furthermore, this relation was mediated by parents' unsupportive reactions, showing that parents' emotional competence skills may significantly impact their emotion socialization skills and their children's outcomes.

Results regarding parent emotion socialization and parent psychopathology have shown similar patterns to the general emotion dysregulation research. Specifically, parents with higher levels of psychopathology symptoms (e.g., anxiety and depressive symptoms) are less likely to suggest more adaptive coping skills to their children, have less positive parenting, and use more unsupportive reactions to their children's negative emotions (Breaux et al., 2016; Hautmann et al., 2015; Monti, Rudolph, & Abaied, 2014). For example, Hautmann and colleagues (2015) examined the relations among parental depression and anxiety symptoms, general positive parenting, and child anti-social behaviour in a German sample of parents and their young children. They found that for mothers, higher levels of general positive parenting partially mediated the relations between fewer depressive and anxiety symptoms and fewer child anti-social behaviours. Comparable results were found for fathers, but parenting fully mediated the relations. Partial correlations, controlling for co-morbid symptoms, revealed that maternal

depressive symptoms remained significantly correlated with child anti-social behaviour when controlling for maternal anxiety. Overall, these results illustrated that parental psychopathology likely has a significant negative impact on parents' parenting skills, and, by extension, their emotion socialization skills.

As illustrated by Hautmann and colleagues (2015), parent psychopathology is likely to have an impact on child emotional competence, as well. Specifically, children of mothers and fathers who exhibit psychopathology symptoms (e.g., internalizing or externalizing symptoms) to be more likely to have internalizing problems (e.g., anxiety or depressive symptoms), externalizing problems (e.g., anti-social behaviour), and use less adaptive emotion regulation and coping strategies (Hautmann et al., 2015; Kane & Garber, 2004; Monti et al., 2014; Reeb, Conger, & Wu, 2010; Silk, Shaw, Skuban, Oland, & Kovacs, 2006; van der Pol et al., 2016; West & Newman, 2003). For example, West and Newman (2003) examined the relations between subclinical symptoms of depression and anxiety in parents, and rated and observed measures of children's temperament, internalizing behaviours, and externalizing behaviours in a group of American families of preschool children. They found that parents who had a greater number of depressive symptoms had children with higher ratings of child internalizing, externalizing, and observed difficult behaviour when the child was undergoing psychological testing. Parental depressive symptoms also were negatively correlated with various adaptive temperament dimensions, including attention shifting and soothability. Higher levels of anxiety symptoms were associated with higher frequency of observed difficult behaviour and with lower levels of adaptive temperament dimensions of attention focus, attention shifting, social desirability, and soothability. This study is just one example of how parent

symptoms of emotion dysregulation, such as subclinical symptoms of psychopathology, have been found to be associated with disrupted temperament and child behaviour challenges.

Parents' coping strategies also have been investigated with relation to parenting skills. Although not identical to emotion regulation, coping strategies are often considered part of emotion regulation (Eisenberg et al., 1997). Coping strategies are the "…cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person." (Lazarus & Folkman, 1984, as cited in Gross, 1998, p. 274). These strategies are typically conscious and intentional in response to stressful situations (Cramer, 1998). Overall, research has shown that children's specific coping skills tend to be positively associated with their parents' coping skills (Gunzenhauser et al., 2014; Kliewer, Fearnow, & Miller, 1996; Monti et al., 2014). For example, Kliewer and colleagues (1996) examined the relations among parents' ratings of their socialization of coping, their own adaptive coping skills (e.g., religious coping, active coping, social support), and family environment, and children's ratings of their own coping skills and their parents' behaviour in American families (about two-thirds mothers) with children ages 9 to 12. With regards to parent coping socialization and strategies, they found that there were direct relations between parents' own coping strategies and their children's strategies, in that fathers who used religious coping had daughters who often sought social support, and mothers who used religious coping had sons who often sought social support. In addition, boys' increased use of active coping was predicted by their fathers' increased use of active coping and

mothers' use of reframing. These results indicated the consistent links between parents' adaptive coping and children's adaptive coping skills.

Overall, the literature on parent emotion regulation, dysregulation, and coping skills show significant effects on parenting, emotion socialization, and children's emotional competence and adjustment. In general, higher levels of adaptive emotion regulation and coping skills for mothers and fathers are associated with more supportive reactions to children's negative emotions and higher levels of positive expression, general positive parenting, and positive child outcomes (Cumberland-Li et al., 2003; Morelen et al., 2016; Valiente et al., 2007); whereas higher levels of emotion dysregulation are associated with fewer supportive reactions, less warmth, more unsupportive reactions, and more negative child outcomes (Choe et al., 2013; Han et al., 2015; Jones et al., 2014; Morelen et al., 2016). However, parenting often mediated the relations between parent emotion regulation skills and child outcomes, highlighting the importance of parent emotional competence skills to emotion socialization (Choe et al., 2013; Han et al., 2015; Morelen et al., 2016). Overall, research on this particular emotional competence skill indicates that these types of skills are likely to have a broad impact on parenting style and practices.

Whereas most of the research on parents' emotional competence has focused specifically on expression and regulation, much of the research falls short because what is deemed "adaptive" emotional competence in adulthood may look different than in childhood, with less of an emphasis on specific skills. When conceptualizing emotional competence in adulthood, one also needs to consider the aspect of maturity and integration among these specific emotional competence skills (Labouvie-Vief, DeVoe, &

Bulka, 1989). Indeed, adults are expected to have more knowledge and experience in managing their affective state and interpersonal relationships. Labouvie-Vief and colleagues (Labouvie-Vief, 1998; Labouvie-Vief, DeVoe, et al., 1989; Labouvie-Vief, Hakim-Larson, DeVoe, & Schoeberlein, 1989) have noted that as adults age, they are more likely to express and understand their emotions in a way that integrates inner personal experiences, values, and outward behaviour. There is a greater recognition of an expanded emotional vocabulary, use of reasoning, and inner mental processes to regulate one's emotional state, and the standards for which adults should be able to regulate their emotions and behaviours becomes higher and more complex (Labouvie-Vief, 1998). Thus, examining adults' emotional competence is more than just specific emotional competence skills, such as expression and specific emotion regulation strategies, but reflects how one integrates these skills across domains of living.

One way of examining this integration is to also consider the unconscious processes responsible for adaptive emotional functioning, such as exploring parents' defensive functioning, in addition to the more conscious processes of emotion regulation and expression. Defense mechanisms refer to "…unconscious mental mechanisms that are directed against both internal drive pressures and external pressures, especially those that threaten self-esteem or the structure of the self…[in order] to protect the individual from experiencing excessive anxiety, and to protect the integration of the self" (Cramer, 2006, p. 7). The concept of defense mechanisms originated from psychoanalysis and was expanded upon by Anna Freud (Cramer, 2006; Freud, 1960; Paulhus, Fridhandler, & Hayes, 1997). Although prominently researched in the early part of the twentieth century, research in defense mechanisms succumbed to harsh criticism (Holmes, 1972; Vaillant,

2000) and research mostly ceased (Cramer, 2000; Paulhus et al., 1997). Renewed interest in the last 30 years has reconceptualized the role of defense mechanisms and unconscious emotion regulatory processes in adaptive functioning to encompass the internal, automatic processes involved in managing stress and negative affect and the recognition that adaptive defenses are essential for positive mental health (Cramer, 1998, 2000; Rice & Hoffman, 2014; Sala, Testa, Pons, & Molina, 2015; Vaillant, 2000). According to Vaillant (2000), defense mechanisms serve several purposes, including reducing the effect of sudden emotional changes on one's functioning and allowing a person to function adequately until the new experience or emotional change to reality can be integrated into one's sense of self.

Although several types of defenses have been researched, two main classes of defenses have been well researched, including mature and immature defense mechanisms (Cramer, 2008; Vaillant, 2000). Maturity in the context of defense mechanisms refers to whether the person is using defense mechanisms that are appropriate for one's age and development. The complexity of defense mechanisms varies and their usage varies as one grows and develops (Cramer, 2000, 2006, 2012; Diehl et al., 2014). For adults, mature defense mechanisms are those that are typically more cognitively complex and are associated with good adjustment if used in the short term (Cramer, 1998, 2008; Erickson, Shirley, & Steiner, 1997). Examples of these defenses include, but are not limited to, identification (i.e., when an individual incorporates the characteristics of some person, group, or cause, such that their own identity undergoes change to maintain the relationship between themselves and the one whose characteristics they are incorporating) and sublimation (i.e., redirecting energy associated with socially

unacceptable behaviours or desires to behaviours and feelings more socially acceptable; Andrews, Singh, & Bond, 1993; Cramer, 2006; Steiner, Araujo, & Koopman, 2001). Immature defenses are typically less complex and developmentally inappropriate, with prolonged use leading to poorer adjustment and possible psychopathology (Bond, 2004; Cramer, 1998, 2008). Examples of these defenses include, but are not limited to, projection (e.g., when characteristics of the unwanted feeling or desire, usually negative, is attributed to another person) and denial (i.e., ignoring or not acknowledging certain thoughts, feelings, or behaviours; Andrews et al., 1993; Cramer, 2006; Steiner et al., 2001). Although defense mechanisms can be grouped into mature and immature categories, several researchers have noted that everyone uses both kinds of defenses (some more than others) and that use of defenses is part of normal development. However, prolonged intense use of defense mechanisms is typically associated with psychopathology (Bond, 2004; Cramer, 2006, 2008; Freud, 1960).

Research on defense mechanisms has highlighted the role of defense mechanisms in emotional functioning, including emotional knowledge, general intelligence, and adaptive emotion regulation (Bond, 2004; Cramer, 1998, 2015; Pellitteri, 2002; Sala et al., 2015). For example, Sala and colleagues (2015) examined the relations between emotion regulation and defense mechanisms in a sample of Italian undergraduate students. They found that the use of adaptive, mature defenses was positively associated with more adaptive emotion regulation strategies, including reappraisal and positive refocusing; whereas, maladaptive, immature defense mechanisms were positively associated with less adaptive emotion regulation strategies, including suppression, self-blame, rumination, catastrophizing, and blaming others, in addition to greater difficulty

regulating emotions. Factor analysis confirmed that underlying both defense mechanisms and emotion regulation were two general adaptive and maladaptive styles. This study highlighted the importance of both defense mechanisms and emotion regulation to emotional well-being.

Furthermore, research has also highlighted the possible impact of defense mechanisms on general adjustment (Bond, 2004; Cramer, 1998, 2008, 2015; Erickson et al., 1997). For example, Erickson and colleagues (1997) examined American adolescents' coping strategy use (e.g., approach and avoidance), defense reactions (e.g., mature, prosocial, and immature) in relation to their overall adjustment (i.e., Global Assessment of Functioning). They found that adolescents who had greater use of immature defense mechanisms also tended to use more maladaptive avoidance coping. For males, greater use of mature defense mechanisms was associated with adaptive approach coping. They also found that greater use of mature defense mechanisms, lower levels of use of immature defense mechanisms, and lower levels of avoidance coping were significantly associated with higher levels of general adjustment. This study and Sala and colleagues' (2015) study highlight the importance of both conscious and unconscious mechanisms for general adjustment and emotional competence. Thus, if emotion regulation, coping, and defense mechanisms make different contributions to adjustment, then it stands to reason that defense mechanisms could have an impact on parents' emotion socialization in a similar way that emotion regulation does and represents a possible parental factor that could influence emotion beliefs and practices.

Although there has been research on parent emotion regulation and coping skills on parenting, virtually no research has examined the role of defense mechanisms in

parenting, likely due to some of the past controversies surrounding defense mechanisms (Paulhus et al., 1997). Defense mechanisms are important unconscious processes that can influence how people react to stressful situations and manage their internal emotions and sense of self, which could also impact on how parents react to their children's emotions, separate from the effects of emotion regulation or coping skills (Erickson et al., 1997). Of the research that has been done, it has been suggested that use of immature defense mechanisms would have a negative impact on parenting (Brennan, Andrews, Morris-Yates, & Pollock, 1990; Cramer & Kelly, 2010; Perry, 2016; Porcerelli, Huth-Bocks, Huprich, & Richardson, 2016). For instance, Cramer and Kelly (2010) examined attachment style and defense mechanisms in a group of American parents (mostly mothers) who had their children removed from their home due to maltreatment. They found that in addition to lower rates of secure attachment and higher rates of dismissive and fearful attachment compared to what is known about the general population, use of less mature defense mechanisms (e.g. denial and projection) also was much higher compared to the general population and what is known about the development of defense mechanisms over the life span (Cramer, 2015; Diehl et al., 2014). Just over half of these parents also reported a personal history of maltreatment. Although causation cannot be established in this study, the authors postulated that because immature defense mechanisms may have been adaptive at one point in their life (e.g., to cope with maltreatment), these defense mechanisms distort the parents' reality, making them unaware of their children's needs and their abusive behaviour and projecting their own negative qualities onto their children (Brennan et al., 1990; Cramer & Kelly, 2010). While this study highlights the possible negative outcomes of immature defense

mechanisms, no research has examined the impact of mature defense mechanisms on parenting.

In addition to the few studies on the relations between defense mechanisms and parenting, few studies have been done examining the relation between parent defense mechanisms and children's outcomes. Of the research that has been done, it has been suggested that the effect of parents' defense mechanisms may not necessarily be directly related to their children's outcomes (Koch, Chandler, Harder, & Paget, 1982; Porcerelli et al., 2016). For example, Porcerelli and colleagues (2016) examined the relations between mature and immature defense mechanisms assessed before their child was born and subsequent toddler attachment security and social-emotional competence in a group of American mothers. They found that higher levels of mature defense mechanisms before the child was born significantly predicted secure child attachment, better child social-emotional competence and fewer behaviour problems. On the other hand, more immature defense mechanisms before the child was born significantly predicted less child social-emotional competence and was associated with insecure child attachment. According to the researchers and Perry (2016), mature defense mechanisms promote sensitive caregiving and lay the foundation for parents' abilities to understand their children's needs better and be more sensitive to those needs; thus, leading to better attachment security and increased social-emotional competence. On the other hand, immature defense mechanisms distort parents' interpretation of their children's behaviour and subjective experience, leading to invalidation of their children's experiences, inappropriate responses to children's behaviour, and negative attributions of their children's behaviour (e.g., blaming their children for the parent's own stress); thus,

leading to more insecure attachment and lower social-emotional competence. These results show that the effects of parents' defensive functioning could be indirectly important for children's outcomes.

Virtually no research has examined defense mechanisms in relation to emotional parenting variables. This gap in the research is surprising, considering that defensive function is taken into account in other contexts, such as in therapy and working with multi-risk families because of the impact it can have on the therapeutic relationship (Bond, 2004; Cramer, 2000; Landy & Menna, 2006). For instance, Cramer (2000) indicated that defensive functioning, as a result of one's attachment style, can impact a client's termination or avoidance of therapy. In addition, defensive functioning also arises and is developed through a number of means, and can be significantly impacted by trauma and early life experiences (Landy & Menna, 2006). Thus, defense mechanisms also may significantly impact the emotional climate in the family and how parents treat their children (Landy & Menna, 2006; Perry, 2016; Porcerelli et al., 2016). For example, de Castro (2007) examined maternal negative projections in two longitudinal samples in relation to various parenting variables, including sensitivity, simulation, and children's later externalizing behaviour and effortful control. She found that at when children were at 6 months-of-age, mothers with higher levels of negative projection were less sensitive toward their child, more detached, and more intrusive with their children. Then, when children were 54 months of age, children of mothers with higher levels of negative projection were 81.3% more likely to exhibit clinical levels of externalizing behaviour, less ability to focus attention, and less inhibitory control. This study illustrated the

possible effects of using immature defense mechanisms on parenting attitudes and behaviours, as well as effects on children's outcomes.

To summarize, of the research done on parents' emotional competence and emotion socialization, adaptive and well-developed emotional competence in parents may lead to more positive general parenting, supportive reactions to children's negative emotions, and better child emotional and social competence (Bariola et al., 2012; Duncombe et al., 2012; Kane & Garber, 2004; Kliewer et al., 1996; Perlman et al., 2008; Silk et al., 2006; Valiente et al., 2007). However, little research has examined how parents' own emotional competence impacts emotion socialization. Although many authors have presented heuristic and conceptual models (e.g., Belsky, 1984; Eisenberg, Cumberland, et al., 1998; Eisenberg, Spinrad, et al., 1998; Morris et al., 2007), these models have focused primarily on emotion socialization and use the broad term *parent characteristics* to conceptualize the impact of parents' own qualities on their general parenting. Unfortunately, *parent characteristics* broadly refers to many constructs, including emotion regulation, emotion reactivity, personality, family and developmental history, mental health, and psychological well-being (Belsky, 1984; Eisenberg, Cumberland, et al., 1998; Morris et al., 2007). Thus, this study will be one of the first to examine a more integrated approach to parent emotional socialization that includes several defined aspects of parent emotional competence (i.e., mature defensive functioning, reappraisal, positive expression, negative expression, and empathy) and personality (i.e., openness, conscientiousness, extraversion, agreeableness, and neuroticism) in relation to their emotion-related parenting styles and practices, and children's emotion regulation skills and social competence.

The Current Study

The present study examined an integrative model of the relations among parent factors (i.e., personality and emotional competence), their emotion socialization beliefs, attitudes, and behaviours, and their children's emotion regulation and social competence skills (see Figure 1). Canadian parents were recruited online from across Canada to complete an online survey with self-report measures of the variables of interest. This study focused on two key areas. First, most research has only examined single aspects of emotional competence (e.g., one aspect of emotion expression or regulation), rather than examining several factors related to emotional competence. Thus, very little research still has not examined an integrative, overarching model exploring how parent emotional competence specifically impacts emotion socialization and its implications for children's outcomes (Belsky, 1984; Egeli & Rinaldi, 2016). Additionally, little research has examined parents' defensive functioning in relation to parenting, even though it is a consideration when working with multi-risk families (Landy & Menna, 2006). Second, little of this research has examined differences between mothers' and fathers' emotional competence and what that means for emotion socialization and children's emotional and social competence. Therefore, the present study sought to fill in these gaps in the literature by examining an integrative model, informed by several conceptual models (i.e., Belsky, 1984; Darling & Steinberg, 1993; Eisenberg, Cumberland, et al., 1998; Eisenberg, Spinrad, et al., 1998; Morris et al., 2007) of how several parent emotional competence and personality factors impact emotion socialization and children's emotion regulation skills and social skills.

Hypotheses

A visual representation of the hypothesized model can be found in Figure 1. This model is primarily based on Eisenberg and colleagues' (Eisenberg, Cumberland, et al., 1998; Eisenberg, Spinrad, et al., 1998) model of emotion socialization, supported by other related models with a similar direction and flow of relations, including Belsky's (1984) parenting process model, Darling and Steinberg's (1993) contextual model of parenting style, and Morris and colleagues' (2007) tripartite model. In essence, Eisenberg and colleagues' model posits a general flow of relations, starting from various contextual variables (e.g., child characteristics, parent characteristics, cultural factors, and family history) on emotion-related parenting practices, then moving to children's emotional arousal, children's outcomes (e.g., expression and regulation of emotion), and then to children's social competence. The current model followed a similar flow of relations, examining the impact of parent characteristics in more depth (i.e., parent emotional competence and personality) on emotion-related parenting styles, emotion-related parenting practices, and parent-reported children's outcomes (i.e., emotion regulation and social competence). Although Eisenberg and colleagues' model included bidirectional relations among the parent and child variables, the current study specifically examined the unidirectional, linear relations of parent-oriented variables on emotion socialization and children's outcomes.

To examine the *parent characteristics* label in more detail, this study examined two aspects of parent characteristics (i.e., parent emotional competence and personality). First, a composite, latent variable for parent emotional competence was created from the measures included in this study, as few studies have examined this entire multi-faceted

variable in relation to emotion socialization. Based on a review of the literature and the conceptualization of emotional competence skills put forth by Saarni (1999), the variables comprising parent emotional competence in this study was defined as greater use of mature defense mechanisms, higher levels of empathy, higher levels of positive expression, lower levels of negative expression, and greater use of reappraisal as an emotion regulation strategy. These variables have been associated with more positive emotional functioning in adults (Bariola et al., 2012; Cramer, 2000, 2006; Duncombe et al., 2012; Egeli & Rinaldi, 2016; Kane & Garber, 2004; Kliewer et al., 1996; Perlman et al., 2008; Silk et al., 2006; Valiente et al., 2007). Additionally, more recent literature has pointed out that future studies looking at parent emotional factors need to examine multiple aspects of parent emotional functioning (Egeli & Rinaldi, 2016). Then, each personality factor is considered separately. For consistency with past models and for lack of established relations among emotional competence variables and personality variables, the emotional competence latent variable and the personality variables were considered alongside one another in order to further explore how these variables differentially predict emotion-related parenting style, emotion-related parenting practices, and parent-reported child outcomes in a more comprehensive model. Little is known about how these parent-oriented variables interact, and most models consider these variables under the broad label of *parent characteristics* (Belsky, 1984; Eisenberg, Cumberland, et al., 1998; Eisenberg, Spinrad, et al., 1998; Morris et al., 2007).

Hypothesis 1: Associations between parent emotional competence and emotion coaching. Aspects of parental emotional competence, such as expression, empathy, and regulation, have been found to be associated with aspects of emotion

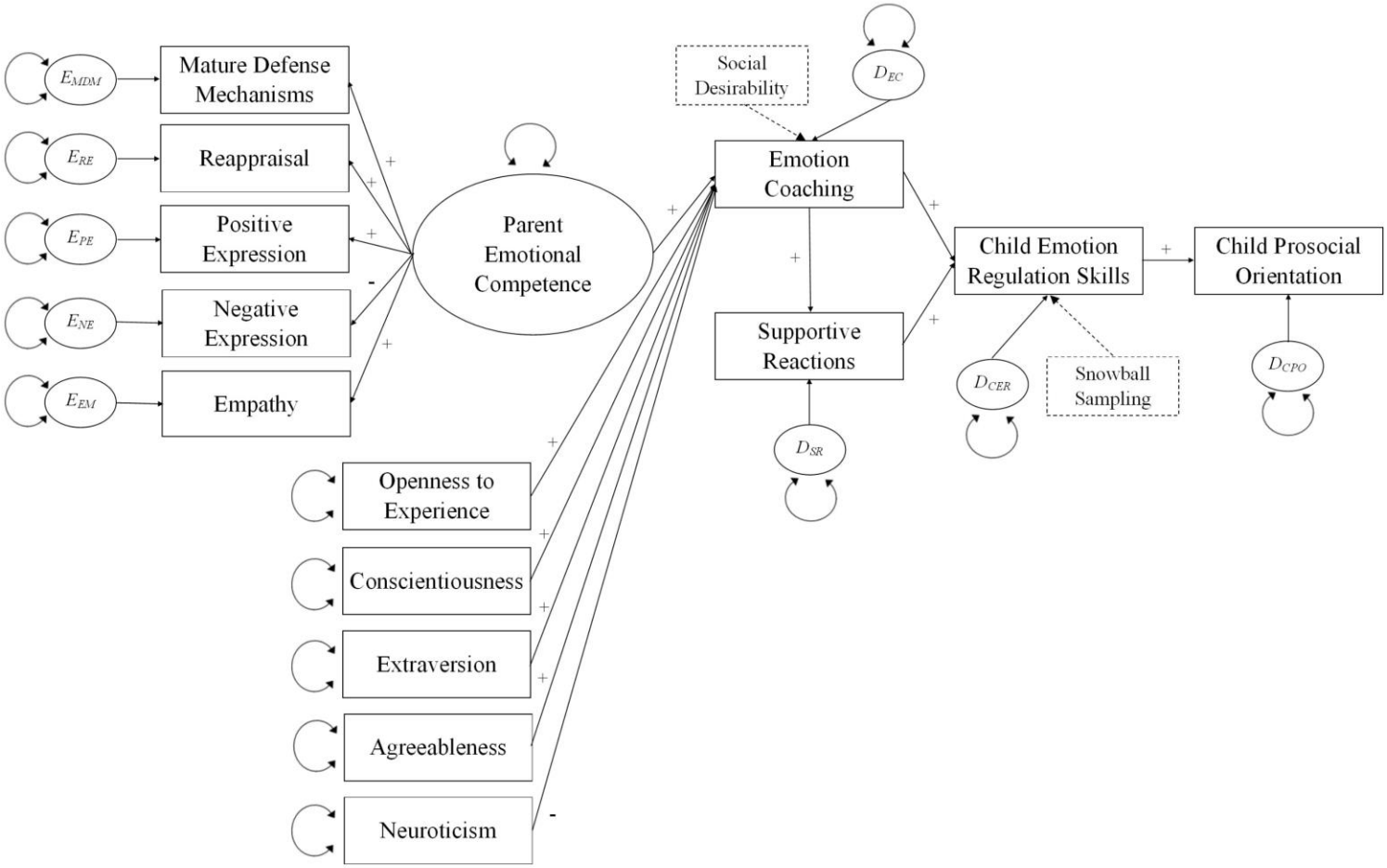

Figure 1. Proposed structural equation model of the relations among parent emotional competence, personality, emotion coaching, and supportive reactions to children's negative emotions, and children's emotion regulation skills and prosocial orientation. Plus and minus signs denote the expected direction of effects. Variables in a box with dashed lines denote covariates.

coaching, including supportive presence and sensitivity (Bariola et al., 2011; Denham et al., 2000; Martin et al., 2002; Stern et al., 2015). Therefore, it was hypothesized that parents with higher levels of emotional competence would have higher levels of emotion coaching (i.e., more positive beliefs and attitudes about emotions).

Hypothesis 2: Associations between parent personality dimensions and emotion coaching. Four dimensions of the Big 5, including openness, conscientiousness, extraversion, and agreeableness, have been found to be associated with positive parenting attitudes and behaviours, including warmth, sensitivity, behavioural control, autonomy support, parenting knowledge, and perceived parenting competence (Achtergarde et al., 2015; Bornstein et al., 2007; McCabe, 2014; Oliver et al., 2009; Prinzie et al., 2009; Smith et al., 2007). When examining emotion coaching in particular, past researchers found that conscientiousness and agreeableness are positively associated with emotion coaching (Scammell, 2011). Therefore, it was hypothesized that higher levels of these four dimensions of the Big 5 would be associated with higher levels of emotion coaching, and that the associations would be stronger for conscientiousness and agreeableness. On the other hand, higher levels of the fifth dimension of the Big 5, neuroticism, have been associated with negative parenting practices, including lower levels of warmth, behavioural control, autonomy support, sensitivity, parental knowledge, and perceived parenting competence (Achtergarde et al., 2015; Belsky & Barends, 2002; Bornstein et al., 2007, 2003; McCabe, 2014; Metsäpelto & Pulkkinen, 2003; Prinzie et al., 2009). Therefore, it was hypothesized that neuroticism would be negatively associated with emotion coaching.

Hypothesis 3: Indirect relations between parent emotional competence and supportive reactions to children's negative emotions, through emotion coaching. Although a few studies have found positive relations between aspects of parental emotional competence and emotion-related parenting practices (e.g., supportive reactions to children's negative emotions; Cumberland-Li et al., 2003; Valiente et al., 2007), most research has not considered the role of parents' emotion-related parenting styles. Emotion coaching has been found to be positively related to positive parenting behaviours (Gottman et al., 1996, 1997), in addition to the findings that attitudes and beliefs about emotions are a contextual variable in which the climate for emotion-related parenting practices take place (Darling & Steinberg, 1993). Thus, it was hypothesized that there would be an indirect relation between higher levels of parent emotional competence and higher levels of supportive reactions to children's negative emotions through higher levels of emotion coaching.

Hypothesis 4: Indirect relations between parent personality and supportive reactions, through emotion coaching. Although a few studies have found positive relations between each of the personality dimensions of openness, conscientiousness, extraversion, agreeableness, and supportive reactions to children's negative emotions, most of these studies have not considered parents' emotion-related parenting style (e.g., emotion coaching; Hughes & Gullone, 2010). Indeed, Scammell (2011) and Scammell and Babb (2012) found that higher levels of emotion coaching mediated the relation between higher levels of two personality dimensions—conscientiousness and agreeableness—and supportive reactions to children's negative emotions. In addition, personality is often considered to have an indirect effect on parenting behaviour,

influencing how a person reacts to different situations (Belsky & Barends, 2002). Thus, it was hypothesized that there would be a positive indirect relation between each of these four dimensions of personality (openness, conscientiousness, extraversion, and agreeableness) and supportive reactions through higher levels of emotion coaching. On the other hand, higher levels of neuroticism have been associated with the use of harsh parenting behaviours and higher levels of unsupportive reactions to children's negative emotions (Hughes & Gullone, 2010). However, this past study also did not consider parents' emotion-related parenting styles. Therefore, it was hypothesized that there would be an indirect relation between lower levels of neuroticism and higher levels of supportive reactions to children's negative emotions through higher levels of emotion coaching.

Hypothesis 5: Associations between emotion coaching and children's emotion regulation skills. A few studies have indicated that higher levels of emotion coaching are associated with better emotion regulation skills in children (Gottman et al., 1996; Lunkenheimer et al., 2007). Therefore, it was hypothesized that higher levels of emotion coaching would be associated with higher levels of adaptive emotion regulation in children.

Hypothesis 6: Indirect relations between parent emotional competence skills, and children's emotion regulation skills, through emotion coaching. A few studies have examined the links between parent emotional competence and child emotion regulation. In general, positive emotional expression and better parent emotion regulation are associated with better child emotion regulation outcomes (Duncombe et al., 2012; Haskett et al., 2012; Liew et al., 2011; Mills et al., 2012; Nelson et al., 2012). More

recent studies have pointed to indirect relations between aspects of parent emotion regulation (e.g., emotion dysregulation) and child emotion regulation via parenting (e.g., supportive reactions; Han et al., 2015; Morelen et al., 2016). However, these studies did not consider emotion-related parenting styles. Thus, it was predicted that parent emotional competence would be indirectly related to parent-reported child emotion regulation through emotion coaching.

Hypothesis 7: Associations between supportive reactions and children's emotion regulation skills. Several studies have noted that higher levels of positive emotion-related parenting practices (e.g., direct teaching about emotions and supportive reactions to children's negative emotions) were positively associated with many aspects of children's emotional competence, including emotion knowledge and better emotion regulation (Eisenberg et al., 1996; Garner et al., 2008; McDowell et al., 2002; Perlman et al., 2008; Smith et al., 2006). Thus, it was hypothesized that higher levels of supportive reactions to children's negative emotions would be associated with higher levels of adaptive emotion regulation in children.

Hypothesis 8: Indirect relations between emotion coaching and children's social competence, through children's emotion regulation. It has been well established in the research literature that child emotional competence, especially emotion regulation, is a very important factor in the development of children's social competence (Eisenberg, 2001; Halberstadt et al., 2001). Indeed, several studies have shown that children's emotional and social competence are linked (Eisenberg, Cumberland, et al., 1998; Halberstadt et al., 2001; Pedersen et al., 2007). In addition, parents who have higher levels of emotion coaching are thought to be able to impart emotion-related skills to their

children who then can use those skills in social interactions (Gottman et al., 1996, 1997; Katz, Maliken, & Stettler, 2012). Thus, it was hypothesized that there would be an indirect relation between higher levels of emotion coaching and higher levels of children's social competence through children's emotion regulation skills.

Hypothesis 9: Indirect relations between supportive reactions and children's social competence through children's emotion regulation. In addition to the importance of children's emotional competence to their social competence, research also has shown positive relations between emotion-related parenting practices and children's emotional and social competence. Parents who use more supportive reactions tend to have children who have better emotion regulation, social functioning, and higher levels of prosocial behaviour (Eisenberg et al., 1996; Katz et al., 2012; McDowell et al., 2002; Perlman et al., 2008; Smith et al., 2006). In addition, past research and theory has indicated the importance of emotional competence to social competence (Halberstadt et al., 2001); therefore, it was hypothesized that there would be an indirect relation between higher levels of supportive reactions and higher levels of children's social competence through parent-reported children's emotion regulation skills.

Hypothesis 10: Differences between mothers and fathers. Overall, across the emotion socialization literature, it has been found that both mothers and fathers contribute to the emotion socialization process of their children, but that the effects are typically stronger and more frequent for mothers (Denham & Kochanoff, 2002; Hughes & Gullone, 2010; McDowell et al., 2002). Therefore, it was hypothesized that for both mothers and fathers there would be significant associations found for the hypothesized

relations stated above, and the associations would be stronger for mothers compared to fathers.

CHAPTER 2

METHOD

Participants

One-hundred and sixty-four mothers (M_{age} = 36.84 years, *SD* = 6.27, range: 21.17 to 53.26 years) of children ages 4 to 12 (M_{age} = 8.19 years, *SD* = 1.90, range: 4.26 to 12.94 years, 56.1% female) participated in the present study. Most mothers reported their ethnicity to be White/Caucasian (87.20%). The average number of children in each family was 1.28 (range: 1 to 6 children). Additional demographic information can be found in Table 1. Participants from across Canada were recruited through the University of Windsor Psychology Participant Pool (*N* = 23, 14.0%), local community organizations serving children in this age group (e.g., community agencies, Windsor Parks and Recreation, *N* = 14, 8.5%), online classifieds and parenting blogs (*N* = 10, 6.1%), social media (e.g., Facebook, *N* = 93, 56.7%), and snowball sampling (e.g., friend or spouse referral; *N* = 24, 14.6%).

Twenty-nine fathers (M_{age} = 38.07 years, *SD* = 6.69, range: 26.34 to 53.17 years) of children ages 6 to 12 (M_{age} = 8.35 years, *SD* = 1.77, range: 6.06 to 11.71 years, 48.3% female) participated in the present study. Most fathers reported their ethnicity to be White/Caucasian (82.8%). The average number of children in each family was 0.93 (range: 1 to 5 children). Additional demographic information also can be found in Table 1. Participants form across Canada were recruited through the University of Windsor Participant Pool (*N* = 2, 6.9%), local community organizations serving children in this age group (e.g., community agencies, Windsor Parks and Recreation, *N* = 2, 6.9%), online classifieds and parenting blogs (*N* = 1, 6.9%), social media (e.g., Facebook, *N* = 4,

Table 1

Demographic Statistics for Mothers and Fathers

	Mothers		Fathers	
Variable	Frequency	Percentage of Sample	Frequency	Percentage of Sample
Ethnicity				
West Asian	0	0.0 %	0	0.0%
Asian (e.g., Japanese)	3	1.8 %	4	13.8%
Black	1	0.6%	0	0.0%
White/Caucasian	138	84.1%	24	82.8%
Latin American	4	2.4%	0	0.0%
Southeast Asian	4	2.4%	1	3.4%
Middle Eastern	6	3.7%	0	0.0%
First Nations/Aboriginal	1	0.6%	0	0.0%
Other	2	1.2%	0	0.0%
More than one ethnicity identified	5	3.0%	0	0.0%
Marital Status				
Single, Never Married	22	13.4%	4	13.8%
Married	108	65.9%	22	75.9%
Living with Partner	16	9.8%	3	10.3%
Separated	11	6.7%	0	0.0%
Divorced	6	3.7%	0	0.0%
Widowed	0	0.0%	0	0.0%
Other	1	0.6%	0	0.0%

Parent Income				
Less than $19 999	49	29.9%	1	3.4%
$20 000 to $49 999	50	30.5%	7	24.0%
$50 000 to $79 999	33	20.1%	12	41.3%
$80 000 or more	16	9.8%	7	24.0%
Prefer not to Answer	16	9.8%	2	6.9%
Education				
No Certificate, Diploma, or Degree	4	2.4 %	1	3.4%
High School Certificate or Equivalent	20	12.2 %	2	6.9%
Apprenticeship/Trades Certificate	7	4.3%	5	17.2%
College/CEGEP certificate/diploma	64	39.0%	6	20.7%
University certificate/diploma	5	3.0%	0	0.0%
University Degree	49	29.9%	11	37.9%
Post-Bachelor's Degree	12	7.3%	4	13.8%
Other or Not Specified	3	1.8%	0	0.0%
Primary Occupational Field				
Management	9	5.5%	4	13.8%
Business/Finance/Administration	23	14.0%	6	20.7%
Natural and Applied Sciences	4	2.4%	2	6.9%
Health	29	17.7%	3	10.3%
Social Science/Education/ Government /Religion	42	25.6%	4	13.8%
Art/Culture/Recreation/Sport	5	3.1%	1	3.4%
Sales and Service	18	11.0%	3	10.3%
Trades/Transport/Equipment Operator	2	1.2%	3	10.3%
Stay-At-Home Parent	18	11.0%	0	0.0%

Student	5	3.0%	0	0.0%
Not Working	5	3.0%	0	0.0%
Other	4	2.4%	2	6.9%
First Language Spoken in the Home				
English	155	94.5%	27	93.1%
French	3	1.8%	1	3.4%
Arabic	2	1.2%	0	0.0%
Other	4	2.4%	1	3.40%
Parent Relationship to Child				
Biological/Adoptive Parent	156	95.1%	26	89.7%
Step-Parent	5	3.0%	3	10.3%
Other or Not Specified	3	1.8%	0	0.0%
Parent Psychological Disorder				
Yes	17	10.4%	2	6.9%
No	147	89.6%	27	93.1%
Child Gender				
Male	71	43.3%	15	51.7%
Female	92	56.1%	14	48.3%
Not stated	1	0.6%	0	0.0%
Child Ethnicity				
Same as Parents	115	70.1%	23	79.3%
West Asian	0	0.0 %	2	6.9%

Asian (e.g., Japanese)	1	0.6%	0	0.0%
Black	1	0.6%	0	0.0%
White/Caucasian	42	25.6%	4	13.8%
Latin American	0	0.0%	0	0.0%
Southeast Asian	0	0.0%	0	0.0%
Middle Eastern	0	0.0%	0	0.0%
First Nations/Aboriginal	1	0.6%	0	0.0%
Other or Not Specified	4	2.4%	0	0.0%
Child Psychological or Developmental Disorder				
Yes	13	7.9%	3	10.3%
No	151	92.1%	26	89.7%
How Parent Heard about the Study				
Participant Pool	23	14.0%	2	6.9%
Community Organizations	14	8.5%	2	6.9%
Online Classifieds/Blogs	10	6.1%	1	3.4%
Social Media	93	56.7%	4	13.8%
Snowball Sampling	24	14.6%	20	70.0%

Note. Some percentages may add up to slightly less or slightly more than 100% due to rounding.

13.80%), and snowball sampling (e.g., friend or spouse referral; *N* = 20, 70.0%). Twenty-two of the fathers were partners of mothers included in the mothers' sample.

Measures

Cronbach's alpha for each measure for the mothers' and fathers' samples can be found in Table 2. All alpha values were acceptable, except for the scores for extraversion and empathy for fathers.

Demographics Questionnaire. All parents filled out a short demographics questionnaire (Appendix A), which included information about their marital status, their own and their partner's (if applicable) age, ethnicity, marital status, education, occupation, income, and presence of any psychological disorders. In addition, each parent was asked to provide information about how long they have known their children and much time per week they each spend with their children. They also were asked to provide information about their child, including age, gender, grade, ethnicity, and if the child has any clinical disorder (e.g., physical mobility or mental health challenges) or received special services of any kind (e.g., counseling or learning support services at school).

Big Five Inventory. The Big Five Inventory (BFI; John, Donahue, & Kentle, 1991; John, Naumann, & Soto, 2008) is a 44-item self-report measure of the Big Five personality dimensions. Using a five-point Likert-type scale from 1 (*disagree strongly*) to 5 (*agree strongly*), respondents rated how much each statement described themselves. The measure is divided into five scales, with each scale measuring each of the five personality dimensions, including *openness to experience* (10 items; e.g., "I am someone who has an active imagination"), *conscientiousness* (9 items; e.g., "I am someone who is a reliable worker"), *extraversion* (8 items; e.g., "I am someone who is

Table 2

Cronbach's Alpha for each Measure for Mothers and Fathers

Variable	Mothers (*N* = 163)	Fathers (*N* = 29)
BFI-Openness	.755	.545
BFI-Conscientiousness	.807	.770
BFI-Extraversion	.853	.685
BFI-Agreeableness	.784	.721
BFI-Neuroticism	.833	.682
TEQ-Empathy	.737	.305
SEFQ-Positive Expression	.917	.862
SEFQ-Negative Expression	.852	.769
ERQ-Reappraisal	.868	.900
DSQ-Mature Defense Mechanisms	.706	.773
ERPS-Emotion Coaching	.792	.719
CCNES-Supportive Reactions	.930	.911
ERC-Child Emotion Regulation	.699	.718
SCI-Child Prosocial Orientation	.893	.840
SDS-Social Desirability	.729	.818

Note. All values reported are pooled across all five imputations. BFI = Big Five Inventory; TEQ = Toronto Empathy Questionnaire, SEFQ = Self-Expressiveness in the Family Questionnaire; ERQ = Emotion Regulation Questionnaire; DSQ = Defensive Style Questionnaire; CCNES = Coping with Children's Negative Emotions Scale; ERC = Emotion Regulation Checklist; SCI = Social Competence Inventory; SDS = Social Desirability Scale-17.

outgoing, sociable"), *agreeableness* (9 items; e.g., "I am someone who is helpful and unselfish with others"), and *neuroticism* (8 items; e.g., "I am someone who gets nervous easily"). Responses for each scale were averaged, with higher scores indicating higher levels of that personality dimension. The BFI scales have shown good to excellent internal consistency (αs = .75 to .90) and test-retest reliability, (*r*s = .80 to .90; (John & Srivastava, 1999). Convergent validity also was demonstrated with positive correlations to the personality dimensions on the NEO Personality Inventory (Rammstedt & John, 2007).

Self-Expressiveness in the Family Questionnaire. The Self-Expressiveness in the Family Questionnaire (SEFQ; Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995) is a 40-item self-report questionnaire measuring how frequently a person expresses his or her emotions, verbally and non-verbally, within the family context. Respondents rated the frequency with which they respond to the described situations in the measure using a 9-point Likert-type scale, ranging from 1 (*never or rarely*) to 9 (*very frequently*). The measure is divided into two subscales, including *positive expressiveness* (e.g., "Thanking family members for something they have done") and *negative expressiveness* (e.g., "Expressing anger at someone else's carelessness"). A total expressiveness scale, consisting of the entire measure, is also provided. Responses for each subscale and the total scale were averaged, with higher scores indicating greater frequency of expression. In this study, positive and negative expression were considered two of five variables assessing parental emotional competence (Saarni, 1999). The SEFQ has shown excellent internal consistency for both the positive expression (α = .91-.94) and negative expression (α = .82-.92) scales across both mothers and fathers (Halberstadt et al., 1995).

Furthermore, convergent validity was demonstrated by positive correlations between positive, negative, and total expressiveness and measures of anger expression, and discriminant validity was demonstrated with a nonsignificant correlation between each positive, negative, and total expressiveness and both anger suppression and social desirability (Halberstadt et al., 1995).

Toronto Empathy Questionnaire. The Toronto Empathy Questionnaire (TEQ; Spreng, McKinnon, Mar, & Levine, 2009) is a 16-item self-report questionnaire measure of empathy. In this study, empathy was considered an element of parental emotional competence (Saarni, 1999). Using a 5-point Likert-type scale, ranging from 0 (*never*) to 4 (*always*), respondents rated the frequency with which they feel or act in the way described by the items (e.g., "When someone else is feeling excited, I tend to get excited too"). After reverse scoring the negatively worded items, responses were summed to provide a total empathy score, with higher scores indicating higher levels of empathy. This measure has shown good internal consistency ($\alpha = .85$) and convergent validity with other measures of empathy and observational measures of social sensitivity (Spreng et al., 2009).

Emotion Regulation Questionnaire. The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) is a 10-item, self-report measure of two types of emotion regulation skills: reappraisal and suppression. In this study, only the use of reappraisal, considered an adaptive emotion regulation strategy, was considered a part of parental emotional competence (Saarni, 1999). Respondents rated their level of agreement with each statement on a 7-point Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Items were summed to form two subscales: 6 items for the *reappraisal*

scale (e.g., “I control my emotions by *changing the way I think* about the situation I’m in”) and 4 items for the *suppression* scale (e.g., “I keep my emotions to myself”), with higher scores indicating greater use of that strategy. This measure has shown good internal consistency for reappraisal (α = .79) and suppression (α =.73), and adequate test-retest reliability over three months for both subscales, *r* = .69. Convergent validity was demonstrated by strong associations with similar scales of the COPE, a widely used measure of coping strategies. Discriminant validity was established by the finding of nonsignificant relations between ego-control and each of the subscales, indicating that these constructs were not just manifestations of the broader skill of impulse control (Gross & John, 2003).

Defense Style Questionnaire-40. The Defense Style Questionnaire-40 (DSQ-40; Andrews et al., 1993) is a self-report measure of one’s use of various defense mechanisms, and is a shortened version of the DSQ-78. In this study, use of mature defense mechanisms was part of the parental emotional competence variable. Respondents rated the extent to which they agree or disagree with each statement using a 9-point Likert-type scale, ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). Items were averaged to form three subscales: 8 items for the *mature* scale (e.g., “I work out my anxiety through doing something constructive and creative like painting or woodwork”), 8 items for the *neurotic* scale (e.g., “If I have an aggressive thought, I feel the need to do something to compensate for it”), and 24 items for the *immature* scale (e.g., “People say I tend to ignore unpleasant facts as if they didn’t exist”). This measure also provided scales for 20 different defense mechanisms, but these scales were not used in this study and thus were not reported. This measure has shown adequate internal consistency for the mature

scale (α = .68), very good internal consistency for the immature scale (α = .80), and poor internal consistency for the neurotic scale (α = .58). Convergent validity has been shown through positive correlations with the original DSQ-78 and has been used widely, showing similar results as the original DSQ-78 in relation to defense mechanism use in various psychological disorders (Bond, 2004).

Emotion-Related Parenting Styles-Short Form. The Emotion-Related Parenting Styles-Short Form (ERPS; Paterson et al., 2012) was a 20-item abbreviated version of the 81-item Emotion Related Parenting Styles Self-Test-Likert (Hakim-Larson, Parker, Lee, Goodwin, & Voelker, 2006). This questionnaire measured four types of emotion-related parenting styles. Parents answered each item according to what was true for them, on a 5-point Likert-type scale, ranging from 1 (*always false*) to 5 (*always true*). This measure yielded four scales of five items each for each emotion-related parenting style, including *emotion coaching* (e.g., "When my child is sad, I try to help the child explore what is making him or her sad"), *parental acceptance of negative emotion* (e.g., "I want my child to experience sadness"), *parental rejection of negative emotion* (e.g., "Children often act sad to get their way"), and *uncertainty/ineffectiveness* (e.g., "When my child is angry, I'm not quite sure what he or she wants me to do"). This measure has demonstrated good internal consistency (αs = .70 to .79) and positive correlations with similar scales on the original ERPSST-L. In addition, convergent validity was established through correlations in the predicted directions between the subscales of the ERPS and discussions of emotions and empathy during a storytelling task (Paterson et al., 2012).

Coping with Children's Negative Emotions Scale. The Coping with Children's Negative Emotions Scale (CCNES; Fabes, Eisenberg, & Bernzwieg, 1990; Fabes et al.,

2001) is a widely used self-report questionnaire of parents' reactions to their children's negative emotions and it was used in this study as a measure of parents' emotion-related parenting practices. Parents were provided with a series of 12 vignettes (e.g., "If my child loses some prized possession and reacts with tears, I would…"), and were asked to rate the likelihood that they would respond in six different ways using a 7-point Likert-type scale, ranging from 1 (*very unlikely*) to 7 (*very likely*). Each option for each vignette reflected a type of response to their child, including *personal distress* (e.g., "get upset with him/her for being so careless and then crying about it"), *minimizing reactions* (e.g., "tell my child that he/she is over-reacting"), *punitive reactions* (e.g., "tell him/her that's what happens when you're not careful"), *expressive encouragement* (e.g., tell him/her it's OK to cry when you feel unhappy"), *emotion-focused reactions* (e.g., distract my child by talking about happy things), and *problem-solving reactions* (e.g., "help my child think of places he/she hasn't looked yet). Items for each scale were averaged, with higher scores indicating greater use of that response. In addition, two general categories of responses were created from these six subscales: *supportive reactions* (i.e., expressive encouragement, emotion-focused reactions, and problem focused reactions) and *unsupportive reactions* (i.e., personal distress, minimizing reactions, and punitive reactions). The scores for these categories were calculated by averaging the scores of the component scales. This measure has shown adequate to good internal consistency (αs = .69 to .85) and adequate to good test-retest reliability (*r*s = .56 to .83). Convergent validity also was demonstrated, as the supportive reactions were positively associated with a measure of empathy, and the unsupportive reactions were negatively associated with empathy (Fabes et al., 2001).

Emotion Regulation Checklist. The Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997) is a 24-item other-report measure of children's emotion regulation skills. Parents rated how frequently each statement about emotion regulation was exhibited by their child, on a scale of 1 (*never*) to 4 (*always*). This measure yielded two subscales: *lability/negativity* (15 items; e.g., "Responds angrily to limit-setting by adults") and e*motion regulation* (8 items; e.g., "Can say when s/he is feeling sad, angry or mad, fearful and afraid"). In this study, the emotion regulation subscale was used to measure child emotion regulation skills from the parent's perspective. Items for each scale were summed, with higher scores indicating higher levels of that form of emotion regulation. This measure has shown excellent internal consistency for the lability/negativity scale ($\alpha = .96$) and very good internal consistency for the emotion regulation scale ($\alpha = .83$; Shields & Cicchetti, 1997).

Social Competence Inventory. The Social Competence Inventory (SCI; Rydell, Hagekull, & Bohlin, 1997) is a 25-item parent or teacher report measure of children's social competence. In the present study, data were collected only from parents. Parents rated each item for their child on a 5-point Likert-type scale of 1 (*doesn't apply at all*) to 5 (*applies very well to the child*). Results yielded two scales: *prosocial orientation*, which reflected children's behaviour that suggested good peer interactions, such as empathy, helpfulness, and social understanding (e.g., "Gives complements to peers"), and *social initiative*, which reflected children's behaviour that was indicative of initiative in social interactions (e.g., "Makes contact easily with unfamiliar children"). Items were averaged for each scale, and higher scores reflect better social competence. In this study, prosocial orientation was used to measure child social competence. The SCI has shown good one-

year test-retest reliability (*r*s = .77to .79), very good internal consistency for prosocial orientation (α = .88) and good internal consistency for social initiative (α = .75; Rydell et al., 1997). The SCI also has shown good convergent validity, as scores on both the prosocial orientation and social initiative scales were positively associated with classroom observations of peer related behaviour (Rydell et al., 1997).

Social Desirability Scale-17. The Social Desirability Scale-17 (SDS-17, Stöber, 2001) is a 17-item measure of socially desirable responding, a possible covariate to take into consideration when using self-report questionnaires. Respondents answered *true* or *false* to a series of statements that describe socially desirable responses, such as, "In traffic, I am always polite and considerate of others," and, "I always admit my mistakes openly and face the potential negative consequences." Items were summed and higher frequency of socially desirable responses indicates the respondent was answering in a way to make his or her behaviour appear more socially acceptable. One item that asks about trying illegal drugs was omitted at the recommendation of Stöber (2001), due to poor item-total correlation, leaving 16 items that respondents answered. The SDS-17 has shown adequate to good internal consistency in both German (α = .80, Stöber, 2001) and American (KR-20s = .64 to .70; Blake, Valdiserri, Neuendorf, & Nemeth, 2006) samples. The SDS-17 has shown good convergent validity with other measures of social desirability, including the Marlowe-Crowne Social Desirability Scale and the Balanced Inventory of Desirable Responding (Blake et al., 2006; Stöber, 2001). In addition, discriminant validity has been established, with low correlations with subscales on a personality questionnaire, such as neuroticism, extraversion, psychoticism, and openness to experience (Stöber, 2001). This questionnaire also has been shown to be reliable and

valid for adults ages 18 to 80 years of age (Stöber, 2001) and in print and online formats (Blake et al., 2006).

Statement of Copyright. All measures were obtained and used in accordance with copyright and terms of use. The TEQ, SEFQ, and SCI were obtained from the PSYCTests database, which provides measures for non-commercial research and educational purposes. The ERQ and BFI were obtained from the authors' websites and cited in accordance with their guidelines. The ERC and CCNES were obtained directly from the authors and used in accordance with their guidelines. The DSQ-40 was obtained from the original published article. Permission to use the ERPS was obtained from the publisher and the permission letter can be found in Appendix B.

Procedure

Ethics clearance was obtained from the University of Windsor Research Ethics Board. When parents saw a study advertisement or when students accessed the University of Windsor Participant Pool, they were directed to email the researcher to obtain a link to the online study. Then, each participant was emailed a unique link for the online study. This procedure helped to ensure that the person only completed the survey once and helped to prevent certain types of technology (e.g., a "survey bot") from completing the survey multiple times to take advantage of the remuneration. When parents accessed the survey, they were first presented with the consent form and encouraged to print a copy for their records (see Appendix C). Once parents indicated their consent, they were directed to the demographics questionnaire. Subsequently, parents completed the remainder of the study questionnaires in a randomized order, as determined by the survey program. Parents were directed to answer questions about their only child or for their

youngest child if they had more than one child in the age range. If parents did not want to complete all questionnaires at one time, they were provided the option of returning to their survey later. To do this, they clicked the “save and continue” button and a unique link was created for them to use to re-access their responses.

At the end of the survey, parents entered their name, email address, and gift card preference. Parents who accessed the study through the University of Windsor Participant Pool received bonus course credit instead of a gift card. Then they were directed to a page where they had the option of having the survey emailed to their spouse (if applicable). Finally, a debriefing form about the study and a list of parenting resources were provided (see Appendix D). Then, each participant was emailed at $5.00 e-gift card to their chosen retailer (e.g., Starbucks, Chapters, Best Buy or Amazon.ca) by the researcher.

CHAPTER 3

RESULTS

Analysis of Mothers' Data

Preliminary analyses, evaluation of assumptions, and correlations were conducted using IBM SPSS version 20 (IBM Corporation, 2011). The main analysis of structural equation modeling (SEM) was conducted using the Lavaan package in R (Rosseel, 2012). SEM was chosen as the most appropriate analysis because of the complexity of the relations proposed in the model (see Figure 1), allowing better control of Type 1 Error and analysis of multiple direct and indirect effects (Kline, 2011). Additionally, correlation analysis (see Table 3) revealed relations in the expected pattern of hypothesized directions, providing preliminary evidence of sufficient common variance and the hypothesized underlying structural relationships among the key variables. The data were analyzed using covariance matrices using maximum likelihood (ML) estimation.

A latent variable for maternal emotional competence was first defined by the manifest variables of mature defense mechanisms, positive emotion expression, negative emotion expression, empathy, and emotion regulation skills (i.e., reappraisal). All other variables in the model were observed variables. Model fit was evaluated according to the guidelines found in Kline (2011) and Hu and Bentler (1999), including an evaluation of model chi-squared, correlation residuals, and several approximate fit indices, including Root Mean Squared Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Standardized Room Mean Square Residual (SRMR). Thresholds for fit for each of the indices can be found in Table 4.

Table 3

Correlations Among Maternal Emotional Competence Variables, Personality, Emotion Coaching, Supportive Reactions to Children's Negative Emotions and Children's Emotion Regulation and Prosocial Orientation (N = 163)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. O	--														
2. C	.129	--													
3. E	.431***	.165*	--												
4. A	.283***	.441***	.252**	--											
5. N	-.189*	-.370***	-.391***	-.456***	--										
6. Empathy	.239**	.258**	.164*	.414***	-.065	--									
7. RA	.255**	.326***	.135$^{\wedge}$	.267**	-.249**	.339***	--								
8. PE (T)	.158*	.237**	.263**	.549***	-.211**	.444***	.316***	--							
9. NE	-.138$^{\wedge}$	-.211**	-.058	-.317***	.469***	-.122	-.153$^{\wedge}$	-.007	--						
10. MDMs	.360***	.199*	.204**	.377***	-.340***	.304***	.514***	.300***	-.205**	--					
11. EC	.193*	.214**	-.004	.395***	-.073	.465***	.325***	.419***	-.130$^{\wedge}$	.253**	--				
12. SR	.252**	.266**	.048	.383***	-.164*	.413***	.352***	.487***	-.234**	.303***	.564***	--			
13. CER	.189*	.321***	.155*	.454***	-.310***	.365***	.306***	.366***	-.281***	.250**	.415***	.422***	--		
14. PO	.233**	.194*	.061	.300***	-.161*	.337***	.166*	.295***	-.188*	.207**	.363**	.381***	.619***	--	
15. SDS	.086	.233**	.063	.456***	-.235**	.291***	.189*	.200*	-.216**	.161*	.302***	.153$^{\wedge}$	.233**	.254**	--

Note. All values reported are pooled across imputations. O = Openness; C = Conscientiousness; E = Extraversion; A = Agreeableness; N = Neuroticism; RA = Reappraisal; PE (T) = Positive Expression (with reflected square root transformation); NE = Negative Expression; MDMs = Mature Defense Mechanisms; EC = Emotion Coaching; SR = Supportive Reactions; CER = Child Emotion Regulation; PO = Prosocial Orientation; SDS = Social Desirability Scale.
$^{\wedge}$ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Goodness of Fit Criteria for Approximate Fit Indices and Statistics, according to Kline (2011) and Hu and Bentler (1999)

Index	Criteria for Good Fit
χ^2 (Minimum Function Test Statistic)	$p > .05$
Root Mean Squared Error of Approximation (RMSEA)	$\leq .06$
Close Fit Hypothesis	lower bound CI $\leq .05$
Poor Fit Hypothesis	upper bound CI $\leq .10$
Comparative Fit Index (CFI)	$\geq .95$
Standardized Root Mean Squared Residual (SRMR)	$\leq .08$
χ^2_D (Chi-Squared Difference)	$p < .05$
Akaike Information Criteria (AIC)	Smaller value indicative of more parsimonious fit

Note. CI = Confidence Interval.

Alternative Models. Alternative models were tested by comparing the goodness of fit with the hypothesized model. A common procedure when conducting SEM analyses, examining alternative models is important in comparing the proposed theory to other considered theories of the subject in question (Kline, 2011). In the case of each of the alternative, non-hierarchical models (i.e., non-nested), the Akaike Information Criteria (AIC) value was used to compare models, with lower AIC values indicative of a more parsimonious model (Kline, 2011). Three alternative models were examined. Alternative Model A (Figure 2) is based on Eisenberg, Spinrad, and colleagues' (1998) theoretical framework for emotion socialization; Eisenberg, Gershoff, and colleagues' (2001) study examining maternal emotion expression, child emotion regulation, internalizing and externalizing behaviour, and social competence; and Morris and colleagues' (2007) tripartite model of the development of emotion regulation. In these frameworks, several conjectures were made regarding child-driven processes in emotion socialization. Overall, when children have better social competence, they have more opportunities to learn about and use emotions, as well as sending and receiving emotional communication from their peers. These honed skills can influence the parents' beliefs, attitudes, and behaviours towards their children. For example, if a child gets along well with peers, his or her parents may be more likely to have positive and supportive interactions with their child because is it less likely that the parent must engage in disciplinary or teaching moments that are negative in tone (Katz & Windecker-Nelson, 2004). On the other hand, if a child who often is aggressive towards his or her peers, his or her parents may be more likely to have more negative or unsupportive interactions

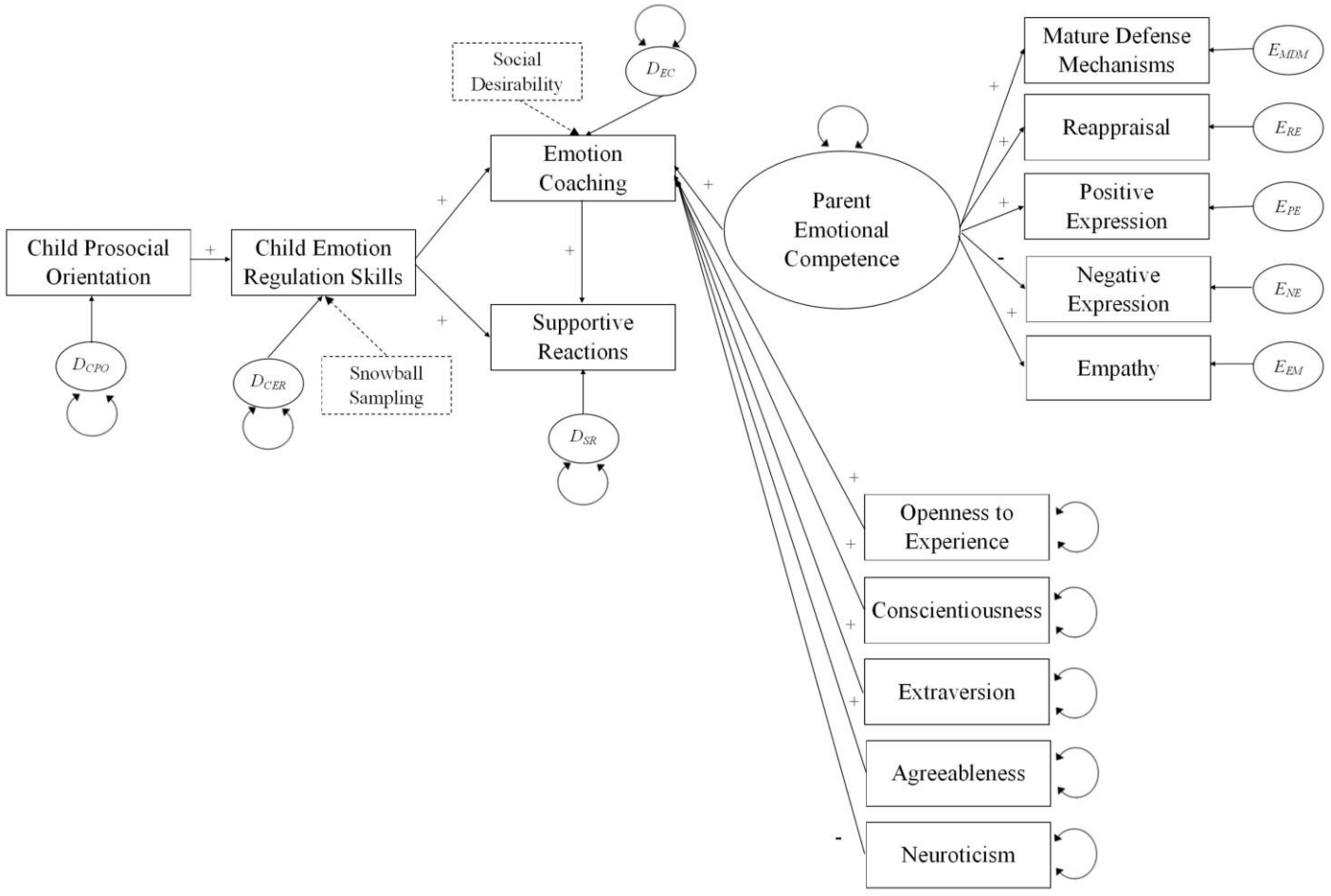

Figure 2. Proposed structural equation model for Alternative Model A, depicting a child-driven process in emotion socialization. Plus and minus signs denote the expected direction of effects. Variables in a box with dashed lines denote covariates.

with their child due to an increased frequency of discipline. Thus, these authors hypothesized that child characteristics (e.g., temperament and emotion regulation skills) and behaviours (e.g., prosocial or aggressive behaviour) may influence parent emotion socialization attitudes and practices. Alternative Model A is a *child-driven model*, in which child prosocial orientation is associated with better mother-reported child emotion regulation skills. Then, better mother-reported child emotion regulation would be associated with mothers' higher levels of emotion coaching and supportive reactions to children's negative emotions. Mother-reported emotional competence and maternal personality would still be hypothesized to influence their own emotion-related parenting styles and practices.

Alternative Model B (see Figure 3) examined the specific effects of mature defense mechanisms on parent emotional competence. While it is recognized in the research literature that there is an unconscious element to emotion regulation (e.g., defense mechanisms), this element is not consciously enacted like other emotion regulation and coping strategies (Cramer, 1998, 2006). Additionally, defense mechanisms develop over time based on an individual's past experiences (e.g., early childhood attachment; Cramer, 2008, 2015; Cramer & Kelly, 2010). Thus, defense mechanisms could have a direct effect on other emotional competence skills, such as overt emotion regulation skills, and provide the basis for emotional competence (Erickson et al., 1997; Pellitteri, 2002). Thus, Alternative Model B postulated a similar direction of effects as the hypothesized model, but with mature defense mechanisms as a predictor (exogenous variable) of the maternal emotional competence latent variable.

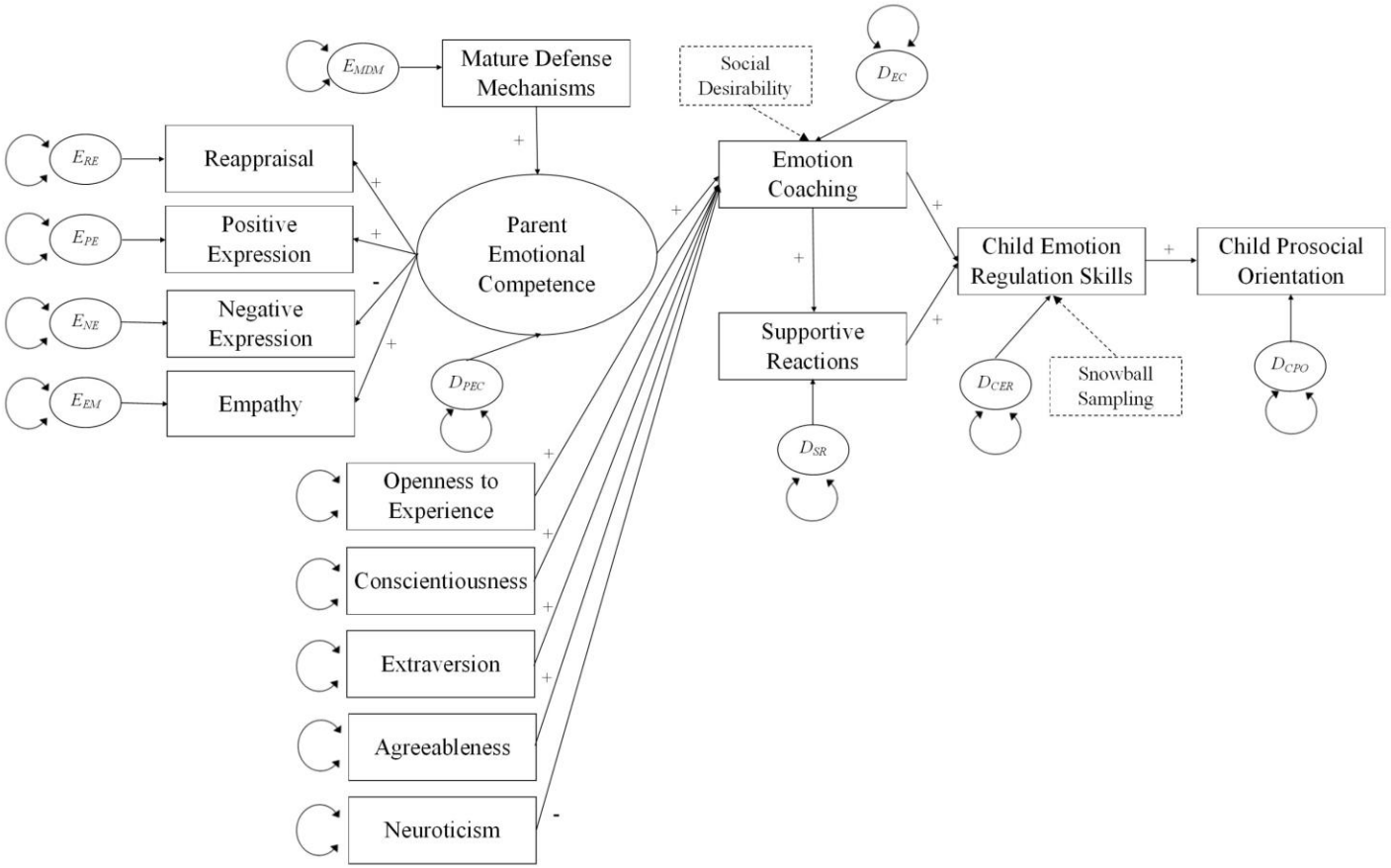

Figure 3. Proposed structural equation model for Alternative Model B, proposing mature defense mechanisms as a predictor for parent emotional competence. Plus and minus signs denote the expected direction of effects. Variables in a box with dashed lines denote covariates.

Alternative Model C (see Figure 4) examined a two-factor solution for the emotional competence latent variable. Emotional competence is a multi-faceted variable with many components (Saarni, 1999). In considering the research on emotional competence and the variables considered in this study, the research literature falls into two general domains, including emotion expression and emotion regulation. Although similar child outcomes (e.g., better social skills) have been found for children of parents who exhibit more positive and adaptive emotion expression and regulation (Denham et al., 2000; Valiente et al., 2007), it could be possible that different facets of emotional competence relate to other emotion-related parenting variables in differing ways, such as indirect effects (Duncombe et al., 2012; Eisenberg, Losoya, et al., 2001). Additionally, most research studies often do not examine both domains; rather, most studies examine one domain or the other and have not investigated a more integrative approach to emotional competence. As this study is one of the first to look at multiple aspects of parent emotional competence, this third alternative model examined a two-factor solution for the emotional competence latent variable, focusing on emotion regulation skills (i.e., mature defense mechanisms and reappraisal) and emotion expression skills (i.e., positive expression, negative expression, and empathy).

Model respecifications. Also a common procedure in SEM analyses, models are often respecified (e.g., adding additional paths between variables) to improve fit if poor fit statistics are obtained. For this study, models were only respecified according to the a priori, empirically-based respecifications found in Table 5. While there was some evidence of those relations, these specifications were not added to the original model because these relations were more recently established in the literature and only had

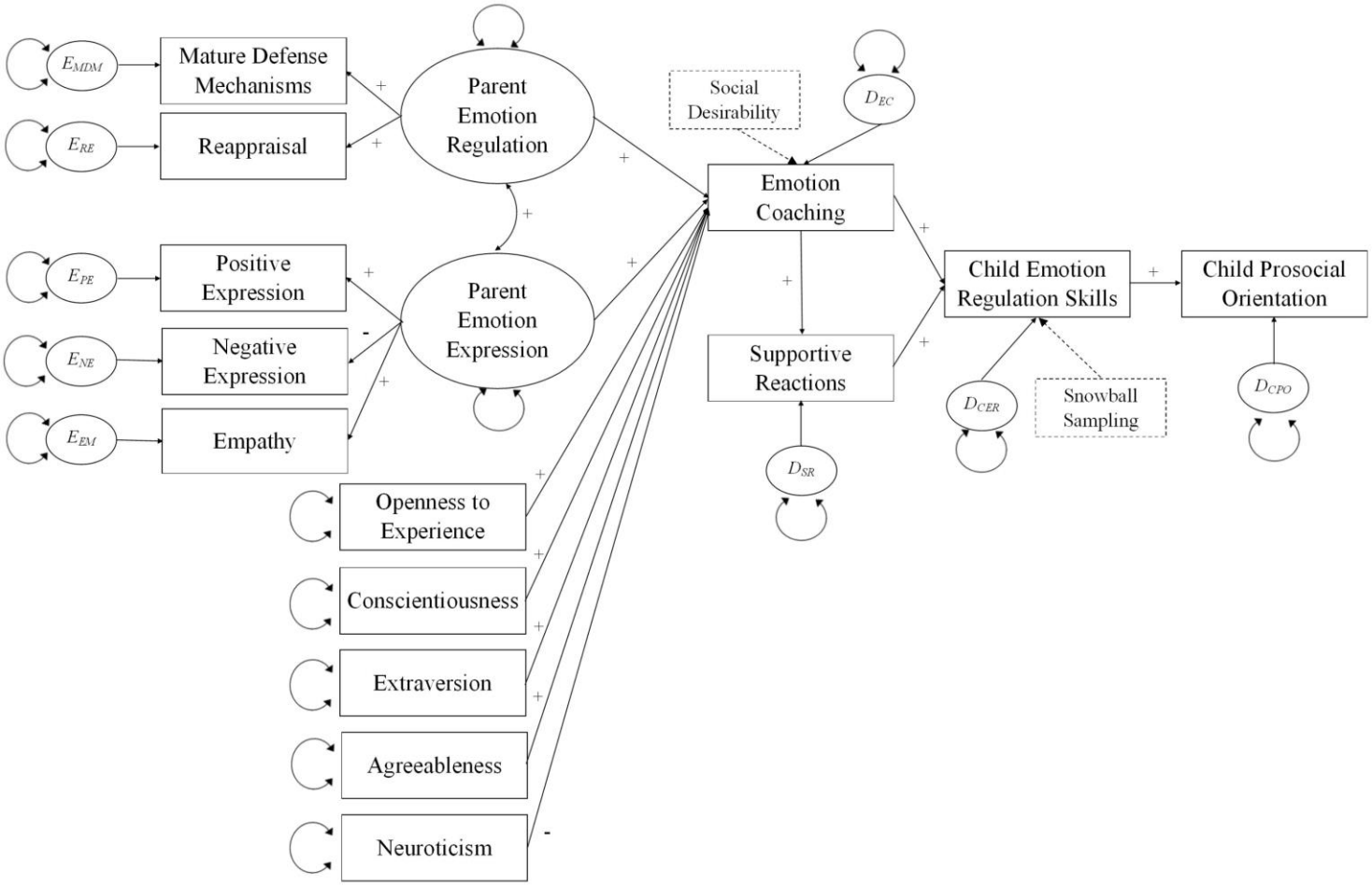

Figure 4. Proposed structural equation model for Alternative Model C, which included a two-factor model for parent emotional competence. Plus and minus signs denote the expected direction of effects. Variables in a box with dashed lines denote covariates.

Table 5

A Priori Model Respecifications

Respecification	Empirical Source
Parent personality →Parent Emotional Competence path	• McCabe (2014) discussed how personality and psychopathology, which often involves emotion dysregulation, are on the same spectrum.
Parent Emotional Competence → Supportive Reactions path	• Han et al. (2015) found that parent supportive and unsupportive reactions mediated between parent emotion dysregulation and child emotion regulation • Morelen et al. (2016) found relations between parent regulation and dysregulation and unsupportive reactions
Parent Emotional Competence → Parent-reported Child Emotion Regulation path	• Morelen et al. (2016) found a negative correlation between mother's emotion dysregulation and child emotion regulation • Gunzenhauser et al. (2016) found direct relations between parent emotion regulation self-efficacy and child use of reappraisal • Mirabile (2014) found that as parent expressivity increased, there were stronger relations among unsupportive reactions and several child outcomes (i.e., child emotion regulation, emotion dysregulation, and internalizing behaviour) • However, Choe et al. (2013) did not find direct effects between maternal distress and child effortful control (i.e., full mediation by parenting)

preliminary or mixed support of the research literature. Respecifications were warranted when the fit indices for the tested model were poor. Then, the modification indices and residuals (i.e., the difference between the observed variance-covariance matrix and the estimated variance-covariance matrix) were evaluated to support adding the respecified paths to the model in accordance with the theoretical considerations noted above. To determine if differences between these hierarchical (i.e., nested), respecified models were significant, the chi-squared difference test (χ^2_D) was used. Chi-squared difference tests the difference between the chi-squared values of each model.

Power Analysis

Prior to analysis, the guidelines provided in Kline (2011), MacCallum, Browne, and Sugawara (1996), and Preacher, Cai, and MacCallum (2007) were used to determine the ideal sample size to have adequate power, using the close fit and not close fit hypotheses tested with the RMSEA index. The calculation was carried out in R using the analysis provided by Preacher and Coffman (2006). For this analysis, two values for RMSEA were chosen. First, the main approximation of fit was set at .06, in accordance for determining good fit for this study (see Table 4). Next, the approximation of good enough fit was set at .08. According to the analysis, the ideal sample size would be approximately 271 participants to test the hypothesized SEM model with a power of 0.80. However, considering the difficulty of recruiting parents because family life is likely to be busy and may prevent interest or ability to participate in such a study, a smaller sample size was considered.

Jackson, Voth, and Frey (2013) have noted that minimum sample size is less determined by the number of parameters estimated by a model than by the ratio of

observed variables to latent variables. Jackson and colleagues (2013) also demonstrated the efficacy of the Swain correction (Herzog & Boomsma, 2009; Herzog, Boomsma, & Reinecke, 2007) for reducing bias among model fit statistics in small samples. Thus a lower sample size of 200 participants was determined to be suitable for the present analysis with the use of the Swain correction, reflecting the typical requirements of publishable SEM studies (Kline, 2011), even though the power would be approximately 0.65.

Preliminary Analyses and Assumptions

Missing Data. IBM SPSS was used to examine all study variables with respect to missing data and assumptions of analyses. First, the data were screened for missing values. Approximately 0.651% (i.e., less than 1%) of values were missing overall. A missing completely at random analysis (MCAR) was conducted, and it was determined that the missing data were completely at random, $\chi^2(23699) = 13587.457$, $p = 1.000$.

Several methods exist to manage missing data. The two most common and suggested methods are full information maximization likelihood (FIML) techniques and multiple imputation (MI) and both are suitable for this study (Schlomer, Bauman, & Card, 2010; Tabachnick & Fidell, 2013). Therefore, MI with five imputations was carried out for most analyses (e.g., correlations, *t*-tests) and where relevant, all values obtained in analyses are presented as pooled values and ranges over the five imputations of the data. For the SEM analyses, FIML was used, as it produces similar estimates as MI, but is

better supported by SEM computer programs and allows parameter estimates and fit indices to be obtained. [1]

Assumptions. Assumptions included univariate and multivariate normality, multicollinearity, independence of observations and errors, normal distribution of residuals, homoscedasticity, linear relationships between variables, and outliers and influential cases. Overall, all the above assumptions were met. With regards to normality, skewness and kurtosis values were inspected for each variable, using a conservative cutoff of ± 2 to determine non-normality (Tabachnick & Fidell, 2013). Skewness and kurtosis values, in addition to descriptive statistics for mothers for each variable can be found in Table 6. Only positive expression was found to be kurtotic beyond the cutoff. To improve normality, a reflected square root transformation was applied (Tabachnick & Fidell, 2013). The new descriptive information also can be found in Table 5. For analysis, the transformed variable was re-reflected in order to facilitate ease of interpretation (i.e., re-reflecting ensures that higher scores on the transformed positive expression variable mean higher levels of positive expression; Tabachnick & Fidell, 2013). One case was found to be a univariate outlier on positive expression, even after transformation, and had significant Mahalanobis Distance and Leverage values, indicative of being an influential

[1] Whereas multiple imputation (MI) is often seen as providing better, unbiased estimates than FIML techniques overall (Tabachnick & Fidell, 2013), most SEM programs do not provide support for pooling fit indices and parameter estimates with MI data sets (Enders & Mansolf, 2016; Schlomer, Bauman, & Card, 2010). But, FIML is supported in most SEM computer programs and these programs calculate appropriate standard errors as part of the analysis, reducing bias (Tabachnick & Fidell, 2013). Thus, any bias produced by FIML in SEM computer programs is reduced, with the resulting estimates similar to those obtained by MI (Graham, 2009, 2012; Narayanan, 2012; Schlomer et al., 2010). Furthermore, missing data in this sample were missing completely at random, and the situations for which MI is preferable (e.g., non-multivariate normality, analysis of categorical variables, and use of auxiliary variables; Enders & Mansolf, 2016) do not apply to this study.

Table 6

Descriptive Statistics for Main Study Variables for Mothers

Variable	*M* (*SD*)	Skewness	Kurtosis
Openness	3.461 (0.605)	-0.445	0.641
Conscientiousness	3.771 (0.654)	-0.385	-0.372
Extraversion	3.375 (0.810)	-0.304	-0.124
Agreeableness	3.955 (0.598)	-0.811	1.578
Neuroticism	2.976 (0.790)	0.070	-0.054
Empathy	40.403 (4.249)	-0.075	0.379
Positive Expression	6.958 (1.128)	-1.661	4.292
Positive Expression (transformed)	1.682 (0.305)	0.947	1.732
Negative Expression	4.544 (1.118)	0.169	-0.095
Reappraisal	30.113 (6.709)	-0.444	0.159
Mature Defense Mechanisms	5.548 (1.250)	-0.207	-0.249
Emotion Coaching	20.957 (3.065)	-0.694	0.081
Supportive Reactions	16.475 (2.289)	-0.666	-0.006
Child Emotion Regulation	25.883 (3.343)	-0.799	0.926
Child Prosocial Orientation	3.871 (0.564)	-0.294	0.094
Social Desirability	8.081 (3.282)	-0.322	-0.353

Note. All values reported are pooled across all five imputations. Positive expression was transformed using a reflected square-root transformation.

case. Thus, this case was excluded, leaving 163 cases for analysis. With regards to other basic assumptions, residual plots, histograms, and scatterplots were visually inspected. There were no concerns regarding non-normal distribution of residuals, non-linear relations between variables, and heteroscedasticity. Regression was used to examine independence of errors and multicollinearity, according to the guidelines in Tabachnick and Fidell (2013), and all assumptions were met.

Finally, as SEM requires variance values to be within a 10:1 ratio, social desirability, empathy, reappraisal, emotion coaching, supportive reactions, and mother-reported child emotion regulation were re-scaled by multiplying each case value by a constant before conducting the SEM analysis (Kline, 2011). If the variances between the manifest variables are too discrepant from one another, model fit is compromised. Thus, the re-scaling procedure ensures that the range of variances are of the same or similar magnitude. While mean, variance, and standard deviation values may differ from the original variables, the linear relations would not differ (e.g., a correlation will remain the same between two variables when using the rescaled variables). This procedure ensured the covariance matrix was not ill-scaled (Kline, 2011).

Covariates. Possible covariates also were investigated for the mothers' sample. Correlations between the main study variables and social desirability can be found in Table 3. It was noted that most variables, except openness to experience and emotion coaching, had small to moderate correlations. No significant results were found for any of the study variables regarding possible covariates of participant age, child age, or child gender. To investigate the impact of parent and child psychological and developmental diagnoses, subsequent analyses described below were conducted with and without those

populations and the results did not differ. Thus, these cases were retained. *T*-tests and one-way ANOVAs indicated no differences when considering child gender and mothers' education.

One-way ANOVAs also were conducted to examine if there were any differences in main variable scores among the different types of recruitment methods (i.e., participant pool, community organizations, online classifieds and blogs, social media, and sampling strategy). A significant relation was found among the different types of recruitment methods for emotion coaching (Welch's $F(4, 158) = 3.304$, $p < .010$), child emotion regulation ($F(4, 158) = 3.135$, $p = .014$), and prosocial orientation, Welch's $F(4, 158) = 4.201$, $p = .002$. Because Levine's Test indicated unequal variances among groups for emotion coaching and prosocial orientation, the Games-Howell pairwise test procedure was used for post-hoc comparisons due to unequal variances and group sizes (Field, 2009). Although the overall ANOVA was significant, there were no significant differences among the different recruitment methods for emotion coaching. For prosocial orientation, a significant relation between the scores for those recruited by community organizations and the participant pool was noted, with the community organization participants scoring lower than the participant pool participants. As there were only 14 participants in the community organization group, analyses were conducted with and without this group, with no change to the study results. For child emotion regulation, Levene's Test indicated equal variances among the different groups, so Gabriel's pairwise test procedure was used to examine group comparisons among unequal group sizes (Field, 2009). Significant relations were found among the snowball sampling and social media groups and among snowball sampling and the participant pool groups.

Thus, a dummy-coded variable for snowball sampling was included as a covariate in all analyses that included the mother-reported child emotion regulation skills variable.

Correlations

Correlations were conducted among all the main study variables and can be found in Table 3. Of note, significant correlations were found among most of the main hypothesized paths. Higher levels of emotion coaching were associated with higher levels of agreeableness, conscientiousness, openness, empathy, reappraisal, positive expression, mature defense mechanisms, supportive reactions, and mother-reported child emotion regulation. The relation between emotion coaching and negative expression was not significant. Higher levels of supportive reactions also were associated with higher levels of mother-reported child emotion regulation. Higher levels of mother-reported child emotion regulation were associated with higher levels of prosocial orientation. To examine the effect of covariates, partial correlations were conducted controlling for social desirability and an identical pattern of results were found.

Structural Equation Modeling Analysis

First, the factor structure of the maternal emotional competence latent variable was analyzed using a confirmatory factor analysis (CFA). The original, proposed model for emotional competence can be found in Figure 1. The latent factor was standardized to allow all parameters to be freely estimated. The model statistics indicated poor fit, Swain corrected $\chi^2(5, N = 163) = 12.632$, $p = .025$, Swain corrected RMSEA = .097 (90% Confidence Interval [CI] = .032 - .166), Swain corrected CFI = .933, SRMR = .046.

Modification indices and residual correlations indicated significant underprediction between mature defense mechanisms and both empathy and reappraisal.

Thus, it appeared that there may be a different type of relation between mature defense mechanisms and some other aspects of emotional competence. As Alternative Model B postulated that mature defense mechanisms may be a predictor of emotional competence (see Figure 3), the variable for mature defense mechanisms was removed from the CFA model. The latent factor was standardized to allow all parameters to be freely estimated. The respecified model demonstrated adequate fit, Swain corrected $\chi^2(2, N = 163) = 4.330$, $p = .111$, Swain corrected RMSEA = .085 (90% CI = .000 – .197), Swain corrected CFI = .960, SRMR = .03. Akaike Information Criterion (AIC) values indicated that the respecified model (AIC = 1246.293) was a more parsimonious, better fitting model than the original model (AIC = 1728.052). Although the RMSEA value for this model was above the proposed cut-off and the upper bound of the confidence interval is above 0.1, Hu and Bentler (1999) indicated that RMSEA does tend to over-reject models when sample size is small (i.e., $N \leq 250$). Furthermore, the model passes the close-fit hypothesis with the lower bound of the confidence interval as less than .05. Kline (2011) does not recommend strict adherence to specific cut-off values, but recommends examining all appropriate fit indices, residual correlations, modification indices in evaluating model fit. Because all the other fit indicators were within the cut-off values, this model was deemed to have adequate fit.

As recommended by Kline (2011), any single latent variable model should be tested against an alternative model with more than one factor. Thus, the two-factor model proposed in alternative model C (see Figure 4) was tested by grouping the emotional competence variables into two factors, including one factor focused on emotion regulation (i.e., defense mechanisms and reappraisal), and one factor focused on

emotional expression (i.e., positive expression, negative expression, and empathy). The latent factors were standardized to allow all parameters to be freely estimated. The model statistics also indicated adequate fit, Swain corrected $\chi^2(4, N = 163) = 6.604$, $p = .15$, Swain corrected RMSEA = .063 (90% CI = .000 - .147), Swain corrected CFI = .977, SRMR = .037. Although the RMSEA value for this model also was above the proposed cut-off and the upper bound of the confidence interval is above 0.1, indicating a possible problem with the model, this model was deemed adequate for the same reasons as the previous model (Kline, 2011). Although AIC indicated that this model (AIC = 1723.936) is a less parsimonious model than the previous respecification, this result was likely because this model had more degrees of freedom than the previous model (Kline, 2011). Overall, this two-factor model demonstrated better fit across all indices than the previous model. Unstandardized and standardized parameter estimates and standard errors are provided in Figure 5 and Table 7. Therefore, this alternative two-factor measurement model for the maternal emotional competence variable, consistent with Alternative Model C, was retained and was used in testing the full SEM model. The subsequent SEM testing the primary hypotheses used the two-factor measurement model rather than the one-factor measurement model.

Next, the main overall model with the respecified two-factor measurement model, found in Figure 4, was examined. The model statistics indicated poor fit, Swain corrected $\chi^2(80, N = 163) = 272.791$, $p < .001$, Swain corrected RMSEA = .122 (90% CI = .110 - .141), Swain corrected CFI = .652, SRMR = .163.

One a priori respecification was the relations between personality factors and maternal emotional competence. Personality could be a predictive factor of maternal

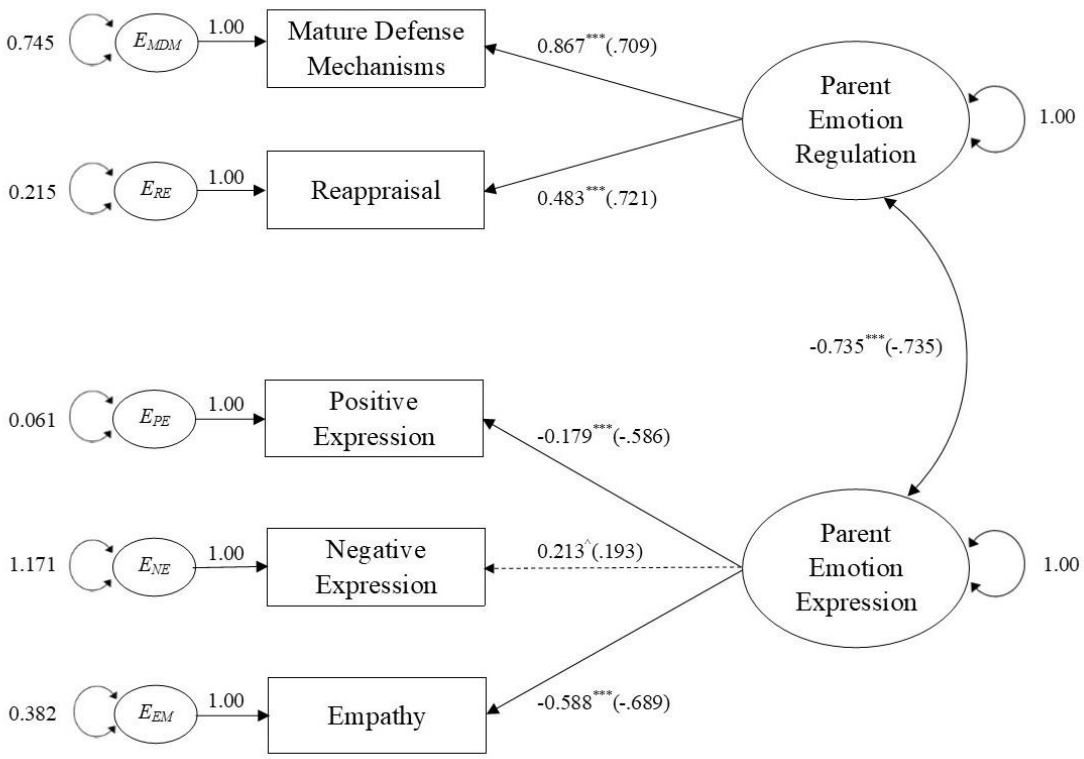

Figure 5. Respecified latent variable representing a two-factor solution for parent emotional competence based on Alternative Model C. Values represent unstandardized estimates and standardized estimates (in brackets). A dashed line represents a non-significant path. $^{***}p < .001$, $^{\wedge}p < .10$

Table 7

Maximum Likelihood Estimates for the Two-Factor Solution for the Maternal Emotional Competence Latent Variable

Parameter	Unstandardized	SE	*p*-value	95% Confidence Interval Lower	95% Confidence Interval Upper	Standardized	R^2
Factor Loadings							
Parent Emotion Regulation							
Reappraisal	0.483	.062	< **.001**	0.361	0.604	.721	.520
Mature Defence Mechanisms	0.867	.113	< **.001**	0.646	1.088	.709	.502
Parent Emotion Expressiveness							
Positive Expression	-0.179	.029	< **.001**	-0.236	-0.122	-.586	.343
Negative Expression	0.213	.109	.051	-0.001	0.427	.193	.037
Empathy	-0.588	.088	< **.001**	-0.761	-0.415	-.689	.475
Measurement Error Variances							
Reappraisal	0.215	.048	< .001	0.122	0.309	.480	
Mature Defense Mechanisms	0.745	.157	< .001	0.438	1.052	.498	
Positive Expression	0.061	.010	< .001	0.042	0.080	.657	
Negative Expression	1.171	.133	< .001	0.910	1.431	.963	
Empathy	0.382	.087	< .001	0.212	0.552	.525	
Factor Variances and Covariances							
Parent Emotion Regulation	1.000	-	-	-	-	1.000	
Parent Emotion Expressiveness	1.000	-	-	-	-	1.000	

Emotion Regulation ~~ Emotion Expressiveness	-0.735	.102	< **.001**	-0.935	-.0536	-.735

Note. ~~ means "correlated with" in Lavaan syntax. Bolded *p* values reflect significant results for the model parameters.

emotional competence skills. As personality encompasses enduring traits (Belsky, 1984; Belsky & Barends, 2002; McCabe, 2014), and some emotional competence skills are more learned and changeable, personality could be an influence on maternal emotional competence skills. Examination of modification indices and residual correlations revealed that adding these paths may improve model fit. Therefore, paths were added between the five personality factors and maternal emotional competence. While the new, respecified model with each personality factor as a predictor of each of the two maternal emotional competence variables had improved fit from the previous model (χ^2_D [10, N = 163] = 104.911, $p < .001$), the model statistics still indicated poor fit, Swain corrected χ^2(70, N = 163) = 167.880, $p < .001$, Swain corrected RMSEA = .093 (90% CI = .078 - .114), Swain corrected CFI = .823, SRMR = .089.

Another additional a priori respecification was the addition of a path from maternal emotional competence to maternal supportive reactions to children's negative emotions. Some recent studies have found that parents' emotional competence skills are directly related to this variable (Han et al., 2015; Morelen et al., 2016). Examination of modification indices and residual correlations again revealed that adding these paths may improve model fit. While the new model had improved fit from the previous model (χ^2_D [2, N = 163] = 15.929, $p < .001$), the model statistics still indicated poor fit, Swain corrected χ^2(68, N = 163) = 151.951, $p < .001$, Swain corrected RMSEA = .087 (90% CI = .072 - .109), Swain corrected CFI = .849, SRMR = .077.

Another a priori respecification was the addition of a path from maternal emotional competence to mother-reported child emotion regulation skills. Several studies have found direct links between these variables (Gunzenhauser et al., 2014; Mirabile,

2014; Morelen et al., 2016). Furthermore, socialization processes are known to happen indirectly (e.g., modeling; Denham, 2007). Examination of modification indices and residual correlations again revealed that adding these paths may improve model fit. While the new, respecified model with the relations between parent emotional expression, emotion regulation, and mother-reported child emotion regulation had improved fit from the previous model (χ^2_D [2, N = 163] = 15.289, p < .001), the model statistics still indicated poor fit, Swain corrected χ^2(66, N = 163) = 136.661, p < .001, Swain corrected RMSEA = .081 (90% CI = .066 - .104), Swain corrected CFI = .873, SRMR = .058. Inspection of modification indices and residual correlations indicated that no further fit improvement within the a priori specifications would result in further improvement of the model. Because no respecified model fit the data, no model was retained in the current line of investigation and alternate models were tested.

Alternative Model A (Figure 2) theorizing child-driven effects was tested. The model statistics indicated poor fit, Swain corrected χ^2(73, N = 163) = 273.074, p < .001, Swain corrected RMSEA = .130 (90% CI = .177-.150), Swain corrected CFI = .627, SRMR = .168. AIC values for this model (AIC = 5167.184) indicated that this model was less parsimonious than the previous, respecified model (AIC = 5038.770). As the fit indices indicated significantly poorer fit than the previous models, this model was rejected.

Exploratory Path Analysis

One point that was noted about the modification indices and the residual correlations across each respecification was that model fit could be improved by adding relations among the individual aspects of maternal emotional competence and the other

variables in the model. Furthermore, Alternative Model C with a two-factor latent variable solution showed better fit also indicated that to lump each aspect of emotional competence together under one overall emotional competence variable may not reflect the impact of emotional competence variables on emotion-related parenting styles and practices. Thus, in the interests of exploring the relations between specific maternal emotional competence variables and emotion-related parenting, and in light of not retaining any model in the previous line of analysis, a path model was created that included the five emotional competence variables (i.e., positive expression, negative expression, mature defense mechanisms, reappraisal, and empathy), emotion coaching, supportive reactions, mother-reported child emotion regulation, and child prosocial orientation (see Figure 6). Thus, each aspect of emotional competence was examined separately to gain a better understanding of how each variable was related to emotion socialization. Although these variables have common conceptual links, as demonstrated by the significant two-factor model, there are still some distinctions among each of the variables. To account for these conceptual links, the emotional competence variables also often were significantly correlated with one another, so these variables were allowed to covary in the model. The model statistics indicated poor fit, Swain corrected $\chi^2(23, N = 163) = 63.707$, $p < .001$, Swain corrected RMSEA = .104 (90% CI = .077 - .138), Swain corrected CFI = .850, SRMR = .078. The a priori respecifications used in the previous structural equation modeling analysis were applied to the new path model. Modification indices and residual correlations indicated that these respecifications could be added to improve model fit. Thus, the same procedure of adding paths was used as in the original line of inquiry.

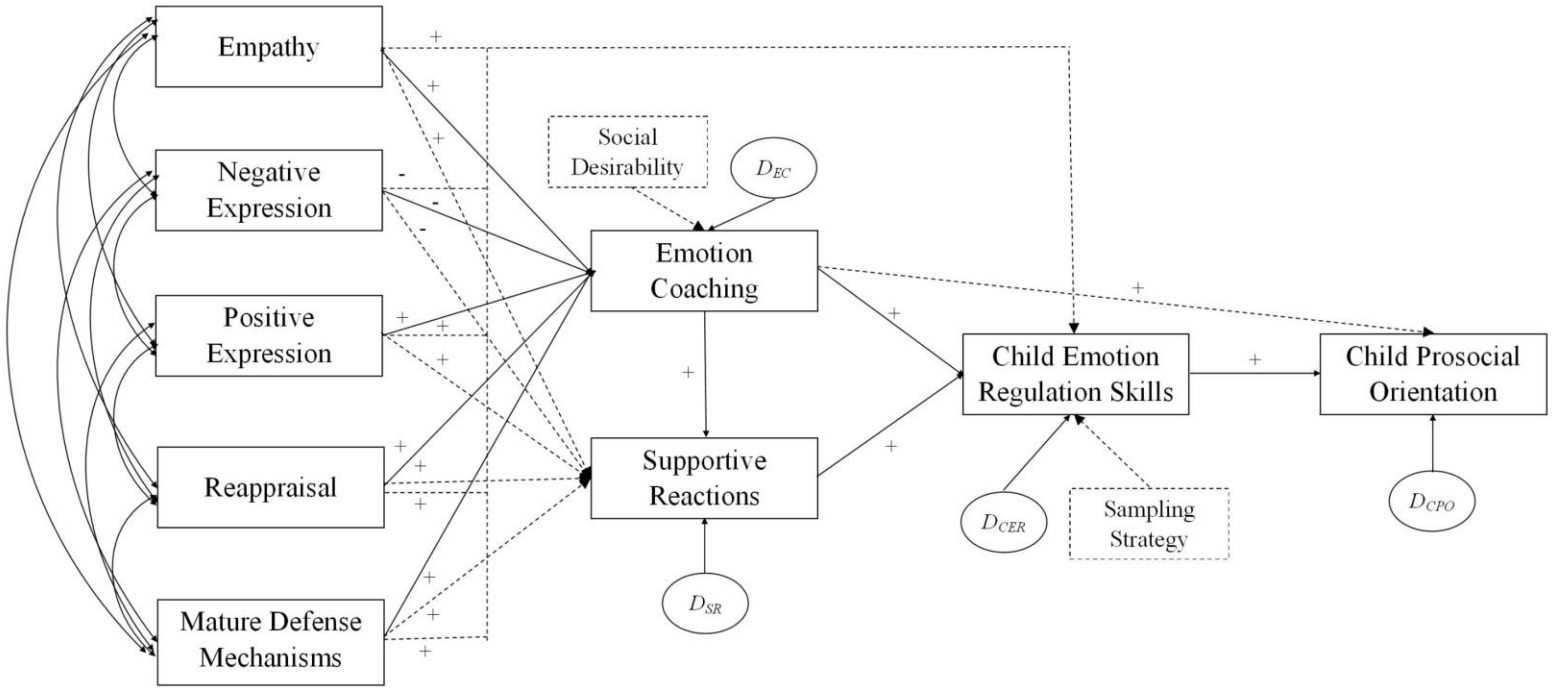

Figure 6. Proposed path model of the relations among parental emotional competence variables, emotion coaching, supportive reactions to children's negative emotions, and children's emotion regulation skills and prosocial orientation. Arrows with dotted lines indicate additional paths that were added in subsequent respecifications of the model and plus and minus signs are indicative of the proposed direction of effects. Variables in a box with dashed lines denote covariates.

First, paths were added between each of the five maternal emotional competence variables and supportive reactions to children's negative emotions. The model statistics indicated poor fit, Swain corrected $\chi^2(18, N = 163) = 36.531$, $p = .004$, Swain corrected RMSEA = .079 (90% CI = .045 - .119), Swain corrected CFI = .931, SRMR = .058. While the fit indices were much improved, and the fit was improved over the previous model ($\chi^2_D [5, N = 163] = 27.177$, $p < .001$), the model chi-square value was still significant, indicative of a possible misspecification of the model (Kline, 2011). Therefore, an additional respecification was pursued to determine if model fit could be improved further. Additional paths between each of the five maternal emotional competence variables and mother-reported child emotion regulation skills were added to the respecified model. Additionally, the path from emotion coaching to child prosocial orientation was added to fully investigate indirect effects between maternal emotion coaching and child prosocial orientation through mother-reported child emotion regulation skills. The respecified model showed improved fit from the previous model ($\chi^2_D [6, N = 163] = 20.805$, $p = .002$) and the model statistics indicated good fit, Swain corrected $\chi^2(12, N = 163) = 11.970$, $p = .179$, Swain corrected RMSEA = .044 (90% CI = .000 - .099), Swain corrected CFI = .986, SRMR = .024. This model was retained, and parameter estimates can be found in Figure 7 and Table 8.

One potential alternative model, based on the original alternative SEM models tested previously, postulated that mature defense mechanisms could be a possible predictor variable for maternal emotional competence skills. Thus, an alternative path model (see Figure 8) was tested and compared with the retained path model. The model statistics indicated poor fit, Swain corrected $\chi^2(37, N = 163) = 120.038$, $p < .001$, Swain

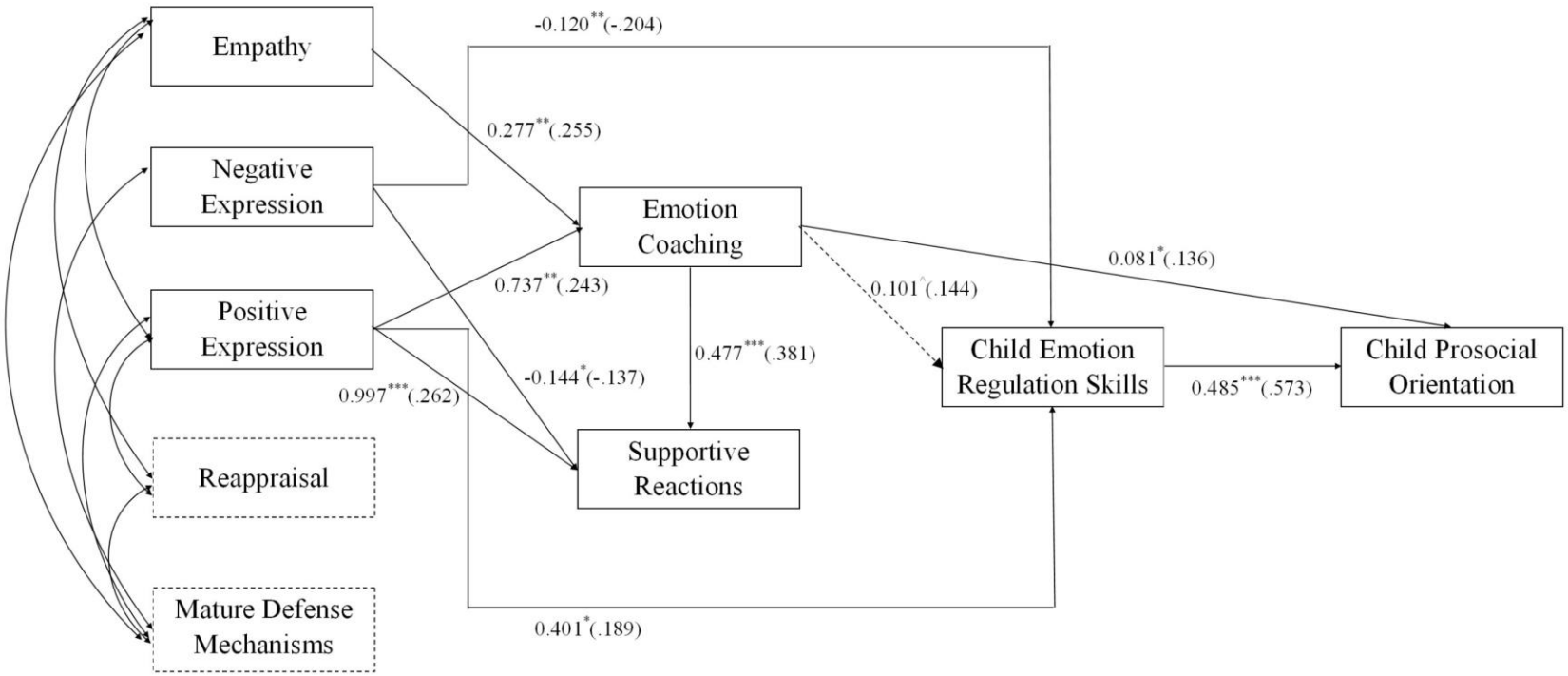

Figure 7. The resulting fitted path model of the relations among parental emotional competence variables, emotion coaching, supportive reactions to children's negative emotions, and children's emotion regulation skills and social competence. Social Desirability was included as a covariate for emotion coaching and sampling strategy was included as a covariate for mother-reported child emotion regulation. Reappraisal and Mature Defense Mechanisms are only shown for conceptual clarity. Correlations,

disturbances, and covariates are not shown for figure clarity. Only significant paths are shown (see Table 8 for all estimated parameters). $^{***}p < .001$. $^{**}p < .01$. $^{*}p < .05$. $^{\wedge}p < .10$.

Table 8

Maximum Likelihood Estimates for the Fitted Path Model

Parameter	Unstandardized	*SE*	*p*-value	95% Confidence Interval Lower	95% Confidence Interval Upper	Standardized	R^2
Direct Effects (by Endogenous Variable)							
Emotion Coaching							.319
Reappraisal	0.176	.109	.107	-0.038	0.391	.128	
Mature DMs	0.003	.060	.961	-0.114	0.120	.004	
PE	0.737	.231	**.001**	0.285	1.189	.243	
NE	-0.040	.057	.482	-0.153	0.072	-.048	
Empathy	0.277	.086	**.001**	0.108	0.445	.255	
Social Desirability (covariate)	0.144	.067	.031	0.013	0.275	.153	
Supportive Reactions							.438
Reappraisal	0.120	.125	.337	-0.125	0.364	.069	
Mature DMs	0.047	.068	.489	-0.086	0.180	.049	
PE	0.997	.266	< **.001**	0.476	1.518	.262	
NE	-0.144	.064	**.025**	-0.270	-0.018	-.137	
Empathy	0.080	.101	.428	-0.118	0.278	.059	
Emotion Coaching	0.477	.089	< **.001**	0.303	0.652	.381	
Mother-Reported Child Emotion Regulation							.296
Reappraisal	0.092	.079	.244	-0.063	0.247	.095	
Mature DMs	-0.012	.043	.771	-0.097	0.072	-.024	
PE	0.401	.178	**.024**	0.053	0.750	.189	
NE	-0.120	.041	**.004**	-0.201	-0.038	-.204	

Empathy	0.062	.063	.323	-0.061	0.186	.082	
Emotion Coaching	0.101	.062	.103	-0.020	0.222	.144	
Supportive Reactions	0.055	.050	.268	-0.042	0.152	.099	
Sampling Strategy (covariate)	-0.213	.131	.103	-0.469	0.043	-.115	
Child Prosocial Orientation							.407
Emotion Coaching	0.081	.040	**.043**	0.003	0.158	.136	
Child Emotion Regulation	0.485	.056	**< .001**	0.375	0.595	.573	
Covariances							
Reappraisal ~~ Mature DMs	0.421	.072	**< .001**	0.279	0.563	.513	
Reappraisal ~~ PE	0.066	.017	**< .001**	0.033	0.100	.322	
Reappraisal ~~ NE	-0.105	.060	.083	-0.233	0.014	-.142	
Reappraisal ~~ Empathy	0.200	.048	**< .001**	0.105	0.295	.348	
Mature DMs ~~ PE	0.115	.031	**< .001**	0.055	0.175	.306	
Mature DMs ~~NE	-0.274	.108	**.011**	-0.486	-0.063	-.203	
Mature DMs ~~ Empathy	0.356	.089	**< .001**	0.182	0.530	.341	
PE ~~ NE	0.002	.026	.945	-0.054	0.050	.005	
PE ~~ Empathy	0.111	.023	**< .001**	0.066	0.155	.440	
NE ~~ Empathy	-0.146	.077	.059	-0.298	0.005	-.155	
Variances							
Reappraisal	0.450	.050	< .001	0.352	0.548	1.000	
Mature DMs	1.497	.166	< .001	1.172	1.822	1.000	
PE	0.094	.010	< .001	0.073	0.114	1.000	
NE	1.216	.135	< .001	0.952	1.480	1.000	
Empathy	0.729	.083	< .001	0.565	0.894	1.000	
Social Desirability (covariate)	0.970	.108	< .001	0.759	1.181	1.000	
Sampling Strategy (covariate)	0.121	.013	< .001	0.095	0.148	1.000	

Disturbance Variances

Emotion Coaching	0.585	.066	< .001	0.456	0.715	.681
Supportive Reactions	0.759	.085	< .001	0.594	0.925	.562
Child Emotion Regulation	0.295	.033	< .001	0.230	0.360	.704
Child Prosocial Orientation	0.179	.020	< .001	0.140	0.218	.593

Note. PE = Positive Expression (with square root transformation); NE = Negative Expression; Mature DMs = Mature Defense Mechanisms; ~~ = "correlated with". Bolded *p* values reflect significant results for the model parameters.

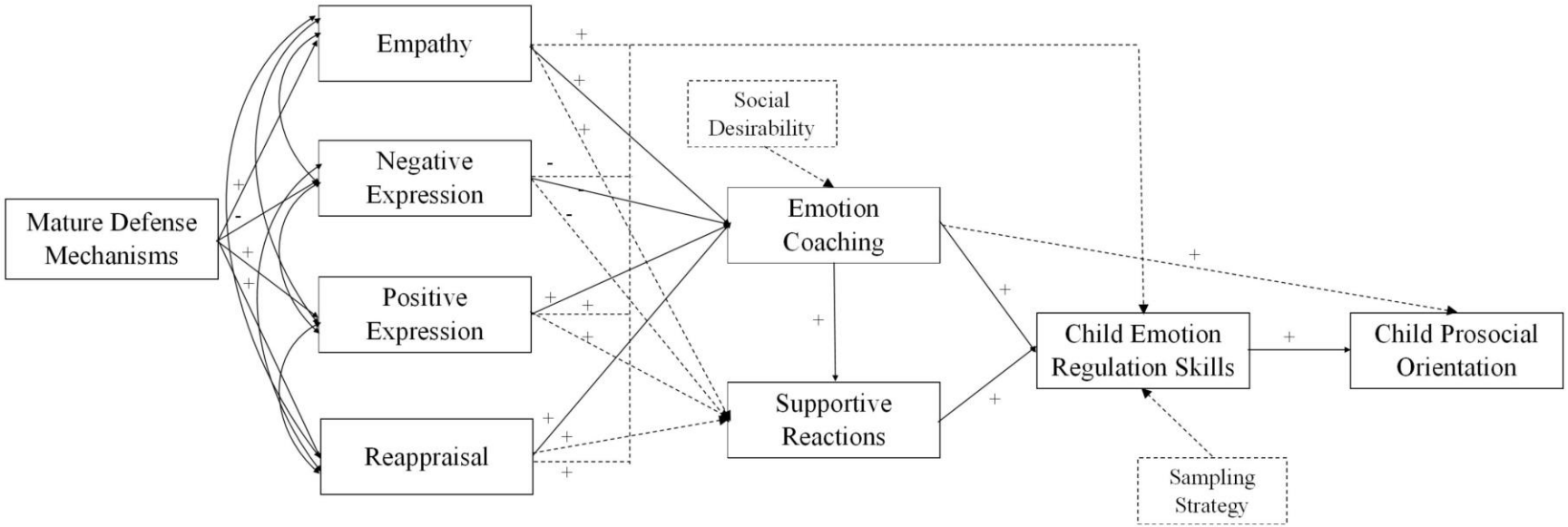

Figure 8. An alternative path model of the relations among maternal emotional competence variables, emotion coaching, supportive reactions to children's negative emotions, and children's emotion regulation skills and social competence, with mature defense mechanisms as a predictor of the other maternal emotional competence variables. Arrows with dotted lines indicate additional paths that were added in subsequent respecifications of the model and variables in a box with dashed lines denote covariates. Disturbances and errors not shown for model clarity.

corrected RMSEA = .117 (90% CI = .097 - .144), CFI = .795, SRMR = .121. A statistical comparison of these models indicated that the retained path model in Figure 7 showed better fit indices and was a better fit and more parsimonious (AIC = 3574.744) than this alternative model (AIC = 3632.174). Thus, this alternative model was rejected and the previous model retained.

To further explore the impact of personality factors (Hypotheses 2 and 4) on parent emotion socialization, a separate path model was developed based on the original SEM model in Figure 1. This path model can be found in Figure 9. The model statistics indicated poor fit, Swain corrected $\chi^2(23, N = 163) = 51.063$, $p = .001$, Swain corrected RMSEA = .084 (90% CI = .054 - .119), Swain corrected CFI = .891, SRMR = .075. Following a similar procedure to the original structural equation model, and as indicated by a priori respecifications, modification indices, and residual correlations, paths were added between each personality factor and supportive reactions to children's negative emotions. The respecified model did not show improvement over the previous model ($\chi^2_D [5, N = 163] = 8.100$, $p = .151$) and the model statistics still indicated poor fit, Swain corrected $\chi^2(18, N = 163) = 41.336$, $p = .001$, Swain Corrected RMSEA = .089 (90% CI = .056 - .128), Swain Corrected CFI = .904, SRMR = .065. As no other a priori specifications related to personality were made, no further analysis followed this line of inquiry and no model was retained.

Direct Effects

The following is a summary of the direct effects for each hypothesis found in the retained path model.

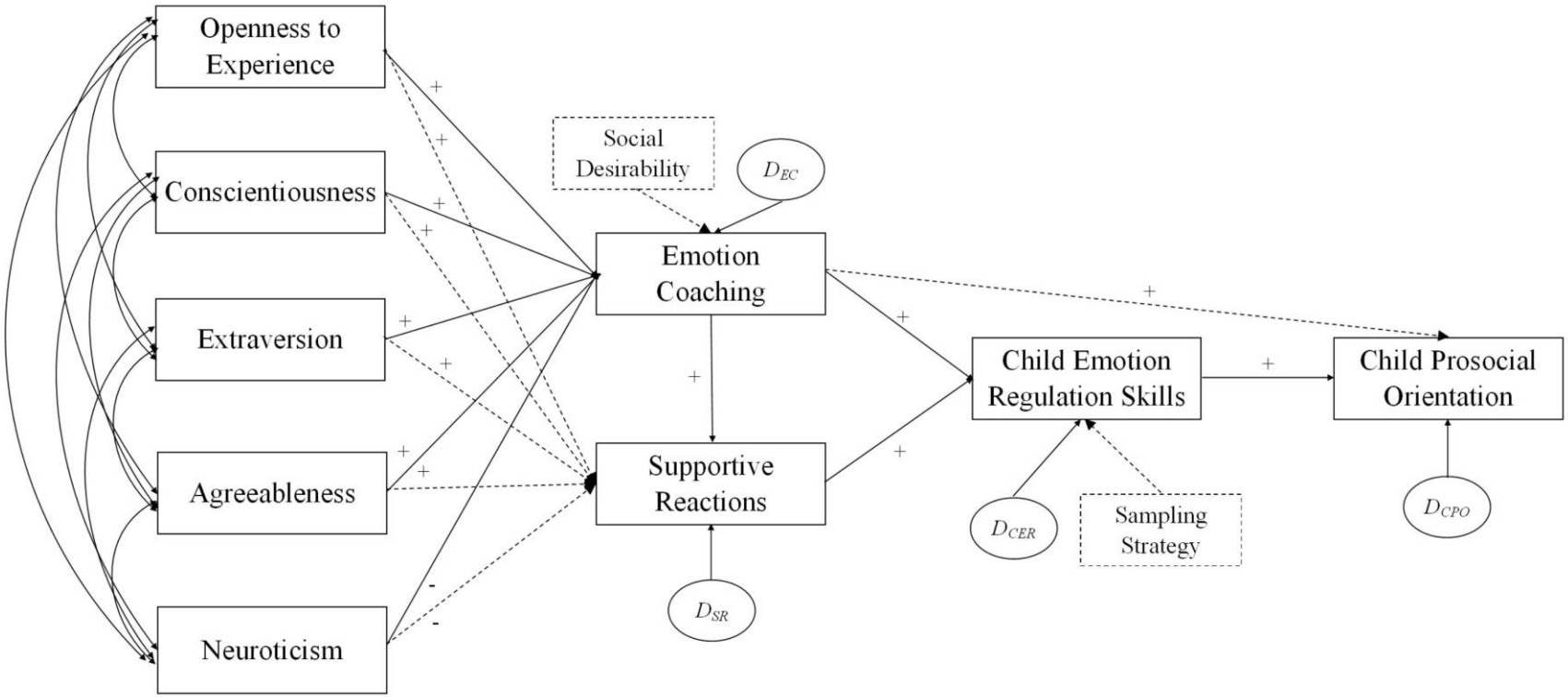

Figure 9. Proposed path model of the relations among parental personality variables, emotion coaching, supportive reactions to children's negative emotions, and children's emotion regulation skills and social competence. Arrows with dotted lines indicate additional paths that were added in subsequent respecifications of the model and variables in a box with dashed lines denote covariates. Some error terms not shown for figure clarity.

Hypothesis 1. Positive expressiveness and empathy were positively related to mothers' emotion coaching. Negative expressiveness was negatively related to mothers' emotion coaching. There were no significant relations for the relations between emotion coaching and both reappraisal and mature defense mechanisms.

Hypotheses 2 and 4. No path model examining personality variables and mothers' emotion coaching was retained.

Hypothesis 3. To examine the indirect effects between maternal emotional competence variables and supportive reactions, the direct relation between mothers' emotion coaching and supportive reactions was investigated. Maternal emotion coaching was positively associated with supportive reactions to children's negative emotions.

Hypothesis 5. There was a marginally significant, positive relation between higher levels of maternal emotion coaching and better mother-reported child emotion regulation.

Hypothesis 7. There was no significant relation between maternal supportive reactions and children's emotion regulation skills.

Hypothesis 8 and 9. To examine the indirect effects between both maternal emotion coaching and supportive reactions and children's prosocial orientation, the direct relation between mother-reported child emotion regulation and prosocial orientation was investigated. The retained path model showed a marginally significant, positive relation between better mother-reported child emotion regulation skills and better prosocial orientation.

Indirect Effects

Analysis of indirect effects was conducted in SEM to determine the magnitude and significance of any indirect effects according to the specified hypotheses. Hypothesis 4 was not tested because no model was retained for personality. Hypotheses 9 also was not tested because there was no significant direct relation found between supportive reactions to children's negative emotions and mother-reported child emotion regulation. Therefore, indirect effects for hypotheses 3, 6 and 8 were investigated. All analyses of indirect effects are found in Table 9.

Hypothesis 3. To test the third hypothesis regarding indirect effects of maternal emotional competence on supportive reactions to children's negative emotions through emotion coaching, analysis of indirect effects examining empathy, positive expressiveness, and negative expressiveness were conducted. Overall, there was a significant indirect effect between higher levels of parent empathy and higher levels of parent supportive reactions to children's negative emotions through higher levels of emotion coaching. There also was a significant indirect effect between higher levels of positive expressiveness and higher levels of supportive reactions through higher levels of emotion coaching. There was no significant indirect effect for negative expressiveness. All results can be found in Table 9.

Hypothesis 6. To test the sixth hypothesis regarding indirect effects of maternal emotional competence on higher levels of mother-reported child emotion regulation through higher levels of emotion coaching, analysis of indirect effects examining empathy and positive expressiveness also were conducted. The results are reported in Table 9. No significant indirect effects were found.

Table 9

Indirect Effects for Mothers' Analyses

Parameter	Unstandardized	*SE*	*p*-value	Standardized	Lower CI	Upper CI
Hypothesis 3						
Empathy→Emotion Coaching→Supportive Reactions						
Indirect Effect	0.132	.048	**.006**	.097	0.038	0.226
Direct Effect	0.080	.101	.428	.059	-0.118	0.278
Total Effect	0.212	.106	**.045**	.156	-0.005	0.419
Positive Expressiveness→Emotion Coaching→Supportive Reactions						
Indirect Effect	0.352	.128	**.006**	.092	0.100	0.603
Direct Effect	0.997	.226	< **.001**	.262	0.476	1.518
Total Effect	1.348	.279	< **.001**	.355	0.802	1.895
Negative Expressiveness→Emotion Coaching→Supportive Reactions						
Indirect Effect	-0.019	.028	.486	-.018	-0.073	0.035
Direct Effect	-0.144	.064	**.025**	-.137	-0.270	-0.018
Total Effect	0.163	.070	**.019**	-.155	-0.300	-0.027
Hypothesis 6						
Empathy→Emotion Coaching→Child Emotion Regulation						
Indirect Effect	0.028	.019	.147	.037	-0.010	0.066
Direct Effect	0.062	.063	.323	.082	-0.061	0.186
Total Effect	0.090	.063	.149	.119	-0.032	0.213
Positive Expressiveness→Emotion Coaching→Child Emotion Regulation						
Indirect Effect	0.074	.052	.151	.035	-0.027	0.176
Direct Effect	0.401	.178	**.024**	.189	0.053	0.750
Total Effect	0.476	.180	**.008**	.225	0.123	0.828
Negative Expressiveness→Emotion Coaching→Child Emotion Regulation						
Indirect Effect	-0.004	.006	.518	-.007	-0.016	0.008
Direct Effect	-0.120	.041	**.004**	-.204	-0.201	-0.038
Total Effect	-0.124	.042	**.003**	-.210	-0.206	-0.041

Hypothesis 8

Emotion Coaching→ Child Emotion Regulation →Child Prosocial Orientation

Indirect Effect	0.049	.031	.109	.083	-0.011	0.109
Direct Effect	0.081	.040	**.043**	.136	0.003	0.158
Total Effect	0.129	.047	**.006**	.219	0.036	0.222

Note. CI = 95% Bootstrap confidence interval. Bolded *p* values reflect significant results for the model parameters.

Hypothesis 8. Analysis of the indirect effect regarding the effect of emotion coaching on child prosocial orientation though mother-reported child emotion regulation was conducted. The results also are reported in Table 9. There was no indirect effect between higher levels of emotion coaching and higher levels of children's prosocial orientation through higher levels of children's emotion regulation skills.

Exploratory Analysis of Fathers' Data

Due to a very small sample size (N = 29), fathers' data were unable to be analyzed using SEM. Therefore, exploratory analyses of the fathers' data were first conducted using correlations, then regression for the study hypotheses. To reduce the number of analyses, the paternal emotional competence variables were grouped, including expression (i.e., positive and negative expression), regulation (i.e., reappraisal and mature defense mechanisms) and empathy. This grouping was determined in a similar manner to the two-factor confirmatory factor analysis for the mothers' data, based on the research findings that there could be differential effects of these aspects of emotional competence on emotion-related parenting styles and practices and child outcomes (Duncombe et al., 2012; Eisenberg, Losoya, et al., 2001). As all analyses are based on a priori hypotheses, a significance level of .05 was retained. Additionally, it was noted that the total value for empathy, measured by the Toronto Empathy Questionnaire (TEQ), for fathers was very unreliable (α = .305) and analyses with this variable were considered separately and should be interpreted with caution. Finally, as this sample was small, the following analyses are significantly underpowered and only considered exploratory. Thus, any analyses should be interpreted with caution.

Preliminary Analyses and Assumptions

Missing Data. As with the mothers' data, IBM SPSS (IBM Corporation, 2011) was used to examine all study variables with respect to missing data and assumptions of analyses. First, the data were screened for missing values. Approximately 0.472% (i.e., less than 1%) of values were missing, overall. A missing completely at random analysis (MCAR) was conducted, and it was determined that any missing data were completely at random, $\chi^2(5216) = .000$, $p = 1.000$. Multiple imputation (MI), with five imputations, were conducted. The following results are presented as pooled estimates.

Assumptions. Assumptions also included univariate and multivariate normality, multicollinearity, independence of observations and errors, normal distribution of residuals, homoscedasticity, linear relationships between variables, and outliers and influential cases. Overall, all the above assumptions were met. With regards to normality, skewness and kurtosis values were inspected for each variable, using a conservative cutoff of ± 2 to determine non-normality (Tabachnick & Fidell, 2013). Skewness and kurtosis values, in addition to descriptive statistics, for each variable can be found in Table 10. No cases were found to be univariate or multivariate outliers, according to Mahalanobis Distance or Leverage values, leaving all 29 cases for analysis.

With regards to other basic assumptions, residual plots, histograms, and scatterplots were visually inspected. No concerns were noted regarding normal distribution of residuals, linear relations between variables, and homoscedasticity. Regression was used to examine independence of errors and multicollinearity, according to the guidelines in Tabachnick and Fidell (2013), and all assumptions were met.

Table 10

Descriptive Statistics for Main Study Variables for Fathers

Variable	Mean (*SD*)	Skewness	Kurtosis
Openness	3.247 (0.435)	0.305	-0.878
Conscientiousness	3.715 (0.562)	0.693	-0.274
Extraversion	2.971 (0.548)	0.203	0.143
Agreeableness	3.609 (0.521)	0.718	0.392
Neuroticism	2.547 (0.558)	0.292	0.590
Empathy	35.401 (3.926)	0.531	0.073
Positive Expression	6.043 (0.998)	-0.235	0.130
Negative Expression	3.777 (0.845)	0.517	-1.056
Reappraisal	29.172 (6.547)	0.135	-0.664
Mature Defence Mechanisms	6.035 (1.242)	0.147	-1.477
Emotion Coaching	18.587 (3.899)	-0.181	-1.234
Supportive Reactions	15.938 (2.164)	-0.147	-0.338
Child Emotion Regulation	23.530 (3.425)	0.132	-0.961
Child Prosocial Orientation	3.584 (0.489)	0.281	1.247
Social Desirability	6.833 (3.871)	0.248	-0.464

Note. All values reported are pooled across all five imputations.

Covariates. Several variables were considered for possible covariates, including social desirability, child age, participant age, child gender, and fathers' education. Variables were determined to be covariates if they correlated with the variable at $p < .05$. Social desirability was correlated with agreeableness ($r[27] = .438$, $p = .017$), conscientiousness ($r[27] = .597$, $p = .001$), and neuroticism ($r[27] = .363$, $p = .002$). Participant age was negatively correlated with empathy ($r[27] = -.408$, $p = .03$). Child age was correlated with agreeableness ($r[27] = .391$, $p = .035$) and conscientiousness ($r[27] = .447$, $p = .014$). *T*-tests and one-way ANOVAs indicated no differences when considering child gender and level of fathers' education.

Correlations

Correlations were conducted between each of the main study variables and can be found in Table 11. Results should be interpreted with caution due to the small sample size. Of note, significant correlations were found between most of the main hypothesized paths. Higher levels of emotion coaching were associated with higher levels of agreeableness, conscientiousness, empathy, reappraisal, positive expression, mature defense mechanisms, supportive reactions, father-reported child emotion regulation, and child prosocial orientation. The relation between emotion coaching and negative expression was not significant, nor was the relation between supportive reactions and father-reported child emotion regulation. Higher levels of father-reported child emotion regulation were associated with higher levels of prosocial orientation. To examine the effect of covariates, partial correlations were conducted controlling for the covariates found above and an identical pattern of results were found.

Table 11

Correlations Among Paternal Emotional Competence Variables, Personality, Emotion Coaching, Supportive Reactions to Children's Negative Emotions and Children's Emotion Regulation and Prosocial Orientation (N = 29)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. O	--														
2. C	.335$^{\wedge}$	--													
3. E	-.038	-.015	--												
4. A	.293	.638***	-.032	--											
5. N	-.100	-.384*	-.391*	-.326$^{\wedge}$	--										
6. Empathy	.027	.418*	-.008	.498**	.054	--									
7. Reappraisal	.104	.449*	.068	.116	-.121	.143	--								
8. PE	.356$^{\wedge}$	.352$^{\wedge}$	.447*	.541**	-.243	.399*	.255	--							
9. NE	.232	.027	-.028	-.198	.140	.125	.525**	.082	--						
10. Mat. DMs	.249	.643***	.080	.408*	-.608***	.205	.540**	.340$^{\wedge}$	.306	--					
11. EC	.212	.594**	.218	.578**	-.165	.507**	.501**	.431*	.206	.502**	--				
12. SR	.004	.321$^{\wedge}$	.146	.434*	-.176	.149	.131	.410*	-.061	.183	.396*	--			
13. Child ER	.207	.285	.230	.176	-.248	.145	.568**	.323$^{\wedge}$	.372*	.539**	.656***	.007	--		
14. PO	.187	.468*	.152	.427*	-.321$^{\wedge}$	.447*	.160	.385*	-.057	.432*	.588**	.283	.574**	--	
15. SDS	.183	.597**	.208	.438*	-.547**	.177	.094	.077	-.138	.363$^{\wedge}$	.313	.095	.194	.289	--

Note. All values reported are pooled across imputations. O = Openness; C = Conscientiousness; E = Extraversion; A = Agreeableness; N = Neuroticism; PE = Positive Expression; NE = Negative Expression; Mat DMs = Mature Defense Mechanisms; EC = Emotion Coaching; SR = Supportive Reactions; ER = Emotion Regulation; PO = Prosocial Orientation; SDS = Social Desirability Scale.
$^{\wedge}$ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Regression Analysis

Regression analyses for each of the specified hypotheses were conducted. Additionally, due to the significant negative correlation between empathy and participant age, participant age was entered first as a covariate in analyses involving empathy. As multiple imputation was conducted, all results reflect pooled values. All regression analyses results can be found in Tables 12 to 15.

Hypothesis 1. To examine the effects between the emotion competence variables and fathers' emotion coaching, multiple regression was used. Table 12 shows the results for the regressions, including the unstandardized coefficient, standard error, standardized coefficient, variance accounted for, change in variance accounted for (if applicable), and results of significance tests. For the relations between paternal emotion regulation variables (i.e., reappraisal and mature defense mechanisms), results showed that while the entire model was significant (F[2, 27] = 6.281, p = .002), and accounted for 32.7% of the variance (27.5% adjusted), the individual results were only marginally significant for both higher levels of reappraisal and higher levels of mature defense mechanisms.

The model examining the effects between the emotion expression variables and fathers' emotion coaching also was significant (F[2, 27] = 3.553, p = .029) and accounted for 21.5% of the variance (15.5% adjusted). Only increased levels of positive expression significantly predicted greater emotion coaching. The model examining the effect between empathy and fathers' emotion coaching was significant (F[2, 26] = 3.528, p = .029) and accounted for 22.4% of the variance (16.2% adjusted). Greater levels of empathy significantly predicted higher levels of fathers' emotion coaching, over and above the effect for child age.

Table 12

Summary of Regression Analyses for Paternal Emotion Competence Variables Predicting Fathers' Emotion Coaching (Hypothesis 1)

Variable	*B*	*SE B*	β	*t*	*p*-value
Emotion Regulation Variables					
Constant	6.761	3.398		1.990	.047
Reappraisal	0.193	0.117	.324	1.693	.090
Mature DMs	1.026	0.601	.327	1.706	.088
R^2 (adjusted R^2)	.327(.275)				
F	6.281				.002
Emotion Expression Variables					
Constant	5.755	4.958		1.161	.246
Positive Expression	1.629	0.681	.417	2.391	.017
Negative Expression	0.791	0.806	.172	0.982	.326
R^2 (adjusted R^2)	.215(.155)				
F	3.553				.029
Empathy					
Step 1					
Constant	24.603	4.158		5.918	< .001
Father Age	-0.163	0.108	-.285	-1.515	.130
R^2 (adjusted R^2)	.081(.045)				
F	2.290				.130

Step 2					
Constant	6.195	9.437		0.656	.512
Father Age	-0.066	0.111	-.116	-0.600	.548
Empathy	0.419	0.195	.414	2.142	.032
R^2 (adjusted R^2)	.224(.162)				
ΔR^2	.143				
F	3.528				.029
ΔF	4.574				.032

Note. All values reported are pooled across all five imputations.

Hypothesis 3. In order to examine the indirect effects between paternal emotional competence variables and supportive reactions, the direct relation between fathers' emotion coaching and supportive reactions was investigated. Table 13 shows the results for the regression analysis for the effect of fathers' emotion coaching on their supportive reactions, including the unstandardized coefficient, standard error, standardized coefficient, variance accounted for, and results of significance tests. The regression model examining the effects between fathers' emotion coaching and supportive reactions to children's negative emotions was significant ($F[1, 27] = 5.023$, $p = .025$) and accounted for 15.7% of the variance (12.6% adjusted). Higher levels of emotion coaching was a significant predictor of higher levels of supportive reactions.

Hypotheses 5 and 7. Table 14 shows the results for the regression analysis for the effect of fathers' emotion coaching on children's emotion regulation, including the unstandardized coefficient, standard error, standardized coefficient, variance accounted for, and results of significance tests. The model examining the effects of fathers' emotion coaching on children's emotion regulation was significant ($F[1, 27] = 20.317$, $p < .001$) and accounted for 43.1% of the variance (41.0% adjusted). Higher levels of emotion coaching were a significant predictor of higher levels of children's emotion regulation, as rated by fathers. The model examining the effects of fathers' supportive reactions on children's emotion regulation was not significant, $F(1, 27) = .001$, $p = 1.00$.

Hypotheses 8 and 9. In order to examine the indirect effects between both paternal emotion coaching and supportive reactions and children's prosocial orientation, the direct relations between children's emotion regulation was investigated in relation to children's prosocial orientation. Table 15 shows the results for the regression analysis for

Table 13

Summary of Regression Analyses for Fathers' Emotion Coaching and Emotion Competence Variables Predicting Supportive Reactions (Hypothesis 3 and Additional Analyses)

Variable	*B*	*SE B*	β	*t*	*p*-value
Emotion Coaching					
Constant	11.849	1.862		6.365	< .001
Emotion Coaching	0.220	0.098	.396	2.243	.025
R^2 (adjusted R^2)	.157(.126)				
F	5.023				.025
Emotion Regulation Variables					
Constant	13.837	2.257		6.130	< .001
Reappraisal	0.015	0.076	.045	0.196	.845
Mature DMs	0.276	0.399	.159	0.693	.488
R^2 (adjusted R^2)	.035(.000)				
F	0.469				.625
Emotion Expression Variables					
Constant	11.386	2.816		4.044	< .001
Positive Expression	0.906	0.387	.418	2.343	.019
Negative Expression	-0.245	0.457	-.096	-0.536	.592
R^2 (adjusted R^2)	.177(.114)				
F	2.804				.061

Empathy

Step 1					
Constant	18.677	2.355		7.931	< .001
Father Age	-0.075	0.061	-.233	-1.222	.222
R^2 (adjusted R^2)	.054(.018)				
F	1.494				.222
Step 2					
Constant	19.211	5.843		3.288	.001
Father Age	-0.077	0.068	-.242	-1.135	.256
Empathy	-0.012	0.121	-.027	-0.100	.920
R^2 (adjusted R^2)	.055(.000)				
ΔR^2	.000				
F	0.729				.482
ΔF	0.003				.958

Note. All values reported are pooled across all five imputations.

Table 14

Summary of Regression Analyses for Fathers' Emotion Coaching, Supportive Reactions and Emotion Competence Variables Predicting Children's Emotion Regulation Skills (Hypotheses 5, 7, and Additional Analyses)

Variable	*B*	*SE B*	β	*t*	*p*-value
Emotion Coaching					
Constant	12.815	2.426		5.283	< .001
Emotion Coaching	0.576	0.128	.656	4.505	< .001
R^2 (adjusted R^2)	.431 (.410)				
F	20.317				< .001
Supportive Reactions					
Constant	23.352	4.905		4.761	< .001
Supportive Reactions	0.011	0.305	.007	0.037	.971
R^2 (adjusted R^2)	.000 (.000)				
F	0.001				1.000
Emotion Regulation Variables					
Constant	12.107	2.833		4.273	< .001
Reappraisal	0.205	0.095	.391	2.157	.031
Mature DMs	0.904	0.498	.328	1.813	.070
R^2 (adjusted R^2)	.399(.353)				
F	8.481				< .001

Emotion Expression Variables					
Constant	12.103	4.330		2.795	.005
Positive Expression	1.010	0.595	.295	1.699	.089
Negative Expression	1.409	0.705	.348	1.999	.046
R^2 (adjusted R^2)	.224(.176)				
F	3.753				.023
Empathy					
Step 1					
Constant	24.225	3.677		6.598	< .001
Father Age	-0.024	0.095	-.050	-0.256	.798
R^2 (adjusted R^2)	.002(.000)				
F	0.065				.800
Step 2					
Constant	23.728	9.107		2.605	.009
Father Age	-0.022	0.106	-.038	-0.204	.839
Empathy	0.011	0.189	.099	0.060	.952
R^2 (adjusted R^2)	.003(.000)				
ΔR^2	.000				
F	0.032				.970
ΔF	0.000				.999

Note. All values reported are pooled across all five imputations.

Table 15

Summary of Regression Analysis for Children's Emotion Regulation Predicting Children's Prosocial Orientation

Variable	*B*	*SE B*	β	*t*	*p*-value
Constant	1.654	0.539		3.071	.002
Emotion Regulation	0.082	0.023	.574	3.617	< .001
R^2 (adjusted)	.329(.305)				
F	13.077				< .001

Note. All values reported are pooled across all five imputations.

the effect of children's emotion regulation on prosocial orientation, including the unstandardized coefficient, standard error, standardized coefficient, variance accounted for, and results of significance tests. The model examining the effect of children's emotion regulation on child prosocial orientation, as rated by fathers, was significant (F[1, 27] = 13.077, p < .001) and accounted for 32.9% of the variance (30.5% adjusted). Higher levels of children's emotion regulation significantly predicted higher levels of child prosocial orientation.

Additional Analyses. Two sets of additional analyses were undertaken to examine the relations between emotional competence variables, supportive reactions, and children's emotion regulation skills. Table 13 shows the results for the regression analysis for the effects of fathers' emotional competence on supportive reactions, including the unstandardized coefficient, standard error, standardized coefficient, variance accounted for, change in variance accounted for (if applicable), and results of significance tests. The model examining the effect of fathers' expressiveness on their supportive reactions was marginally significant (F[2, 27] = 2.804, p = .061) and accounted for 17.7% of the variance (11.4% adjusted). Higher levels of positive expression were found to significantly predict higher levels of supportive reactions, but negative expression was not significant. The model examining the effect of fathers' emotion regulation on their supportive reactions also was not significant, F(2, 27) = 0.469, p = .625. The model examining the effect of fathers' empathy on their supportive reactions also was not significant, F(2, 26) = 0.729, p = .482.

Table 14 also shows the results for the regression analysis for the effect of fathers' emotional competence on children's emotion regulation skills, including the

unstandardized coefficient, standard error, standardized coefficient, variance accounted for, change in variance accounted for (if applicable), and results of significance tests. The model examining the effect of fathers' emotion regulation on their children's emotion regulation was significant (F[2, 27] = 8.481, p < .001) and accounted for 39.9% of the variance (35.3% adjusted). Higher levels of reappraisal significantly predicted higher levels of children's emotion regulation. Higher levels of mature defense mechanisms marginally predicted higher levels of children's emotion regulation.

The model examining the effect of fathers' expressiveness on children's emotion regulation was significant (F[2, 27] = 3.753, p = .023) and accounted for 22.4% of the variance (17.6% adjusted). Higher levels of negative expression predicted higher levels of children's emotion regulation. Higher levels of positive expression marginally predicted higher levels of children's emotion regulation. The model examining the effect of empathy on children's emotion regulation was not significant, F(2, 26) = 0.032, p = .970.

Indirect Effects

Several methods exist to analyze indirect effects among variables (Hayes, Montoya, & Rockwood, 2017). For this study, Lavaan (Rosseel, 2012) was used to analyze indirect effects. Although other methods exist to test indirect effects (e.g., regression-based methods, such as those used in the PROCESS macro for SPSS; Hayes et al., 2017), and produce similar results as SEM, these methods are limited in their ability to handle missing data. That is, most mediation analysis tools, such as PROCESS, require a complete data set and are not able to conduct FIML or handle multiply imputed data sets (Hayes et al., 2017). Therefore, structural equation modeling, using Lavaan, was

employed for the analysis of indirect effects to be able to conduct the analysis using FIML, similar to the previous SEM analysis. As with the analysis of correlations and direct effects, caution should be used in interpreting these results due to the small sample size.

Hypothesis 3. To test the third hypothesis regarding indirect effects of paternal emotional competence on supportive reactions to children's negative emotions through emotion coaching, analysis of indirect effects examining empathy and positive expressiveness were conducted. Other variables, including reappraisal, mature defense mechanisms and negative expressiveness were not conducted because there were no significant direct relations between these variables and emotion coaching. The results are reported in Table 16. No significant indirect effects were found.

Hypothesis 6. To test the sixth hypothesis regarding indirect effects of paternal emotional competence on father-reported child emotion regulation through of emotion coaching, analysis of indirect effects examining empathy and positive expressiveness also were conducted. The results are reported in Table 16. Significant indirect effects for higher levels of empathy and higher levels of positive expressiveness were found. Higher levels of emotion coaching mediated the relation between higher levels of empathy and higher levels of father-reported child emotion regulation. Higher levels of emotion coaching also mediated the relation between higher levels of positive expressiveness and higher levels of father-reported child emotion regulation.

Hypothesis 8. To test Hypothesis 8, analysis of indirect effects regarding the indirect effect of emotion coaching on child prosocial orientation through father-reported

Table 16

Indirect Effects for Fathers Analysis

Parameter	Unstandardized	SE	*p*-value	Standardized	Lower CI	Upper CI
Hypothesis 3						
Empathy[a]→Emotion Coaching→Supportive Reactions						
Indirect Effect	0.097	0.065	.136	.179	-0.031	0.225
Direct Effect	0.005	0.126	.969	.009	-0.241	0.251
Total Effect	0.102	0.110	.353	.188	-0.113	0.317
Positive Expressiveness→Emotion Coaching→Supportive Reactions						
Indirect Effect	0.220	0.196	.262	.101	-0.165	0.605
Direct Effect	0.678	0.339	.089	.312	-0.104	1.459
Total Effect	0.898	0.367	.014	.414	0.179	1.617
Hypothesis 6						
Empathy[a]→Emotion Coaching→Child Emotion Regulation						
Indirect Effect	0.318	0.129	.013	.374	0.066	0.570
Direct Effect	-0.206	0.134	.123	-.243	-0.468	0.056
Total Effect	0.112	0.161	.488	.132	-0.204	0.428
Positive Expressiveness→Emotion Coaching→Child Emotion Regulation						
Indirect Effect	0.966	0.433	.026	.286	0.117	1.814
Direct Effect	0.121	0.522	.816	.036	-0.901	1.144
Total Effect	1.807	0.594	.067	.322	-0.078	2.252
Hypothesis 8						
Emotion Coaching→ Child Emotion Regulation →Child Prosocial Orientation						
Indirect Effect	0.033	0.018	.059	.262	-0.001	0.068
Direct Effect	0.040	0.024	.101	.314	-0.008	0.088
Total Effect	0.073	0.019	< .001	.577	0.035	0.112

Note. CI = 95% Bootstrap confidence interval.
[a] Child age entered as a covariate

child emotion regulation was conducted. The results are reported in Table 16. Results showed no significant indirect effect.

Comparing Mothers and Fathers

Because of the disparate sample size numbers for mothers and fathers, direct interactional comparisons were not able to be made between groups. Thus, in order to examine Hypothesis 10, *t*-tests and Fisher's *r* to *z* were used to conduct an exploratory comparison of mothers and fathers among the study variables. As noted previously, due to the small sample size for fathers and the large discrepancy of sample sizes, these results should be interpreted cautiously.

***t*-Tests**. Independent samples *t*-tests were used to examine differences in levels of parental emotional competence, personality factors, emotion coaching, and supportive reactions. Results of all *t*-tests are reported in Table 17. Results showed that mothers and fathers differed in levels of several emotional competence variables. Mothers had higher levels of positive expression, negative expression, and empathy than fathers. Mothers also had higher levels of several personality factors including extraversion, agreeableness, and neuroticism. Mothers also had higher levels of emotion coaching. No significant differences were found for conscientiousness, openness, reappraisal, mature defense mechanisms, or supportive reactions.

Comparing Correlations. Fisher's *r* to *z* calculations according to the procedure explained in Kenny (1987) was used to determine differences in the correlations between variables between mothers and fathers. *Z*-scores can be found in Table 18. Significant differences were determined with an α of .05 (i.e., a *z*-score of greater than 1.96). There was a significant difference between mothers and fathers in their correlation between

Table 17

Summary of Independent t*-test Analyses Comparing Mothers' and Fathers' Emotional Competence, Personality, Emotion Coaching and Supportive Reactions (Hypothesis 10)*

	Mothers		Fathers			
Variable	*M*	*SD*	*M*	*SD*	*t*	*p*
Openness	3.461	.605	3.247	0.435	1.884	.060
Conscientiousness	3.771	.654	3.715	0.562	0.501	.616
Extraversion	3.375	0.810	2.971	0.548	3.426[a]	.001
Agreeableness	3.955	0.598	3.609	0.521	2.897	.004
Neuroticism	2.976	0.790	2.547	0.558	2.759	.006
Empathy	40.403	4.249	35.401	3.926	5.909	< .001
Positive Expression	6.958	1.128	6.043	0.998	4.033	< .001
Negative Expression	4.544	1.118	3.777	0.845	3.473	.001
Reappraisal	30.113	6.709	29.172	6.547	0.662	.508
Mature DMs	5.548	1.250	6.035	1.242	-1.884	.060
Emotion Coaching	20.957	3.065	18.587	3.899	3.100[a]	.002
Supportive Reactions	16.475	2.289	15.938	2.164	1.143	.253

Note. All values reported are pooled across all five imputations. DMs = Defense Mechanisms.
[a] Equal variances not assumed.

Table 18

Z-scores for Fisher's r to z Transformation Examining Differences among Study Variables for Mothers (N = 163) and Fathers (N = 29)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. O	-													
2. C	-1.030	-												
3. E	2.355*	0.883	-											
4. A	0.067	-1.336	1.359	-										
5. N	-0.435	0.077	0.006	-0.812	-									
6. Empathy	1.030	-0.847	0.801	-0.525	-0.587	-								
7. Reappraisal	0.765	-0.665	0.296	0.758	-0.633	0.994	-							
8. PE	-1.094	-0.632	-1.016	0.607	0.165	0.354	0.283	-						
9. NE	-1.784	-1.136	-0.152	-0.620	1.746	-1.165	-3.473*	-0.436	-					
10. Mat. DMs	0.580	-2.651*	0.580	-0.157	1.663	0.480	-0.196	-0.211	-2.503*	-				
11. EC	-0.108	-2.226*	-1.048	-1.115	0.456	-0.230	-0.983	0.053	-1.607	-1.403	-			
12. SR	1.189	-0.264	-0.459	-0.306	0.078	1.350	1.105	0.475	-0.819	0.588	1.012	-		
13. Child ER	-0.084	0.182	-0.344	1.451	-0.318	1.146	-1.532	0.198	-3.208*	-1.643	-1.599	2.084*	-	
14. PO	0.213	-1.491	-0.440	-0.694	0.810	-0.600	0.049	-0.404	-0.640	-1.178	-1.408	0.516	0.338	-

Note. O = Openness; C = Conscientiousness; E = Extraversion; A = Agreeableness; N = Neuroticism; PE = Positive Expression; NE = Negative Expression; Mat DMs = Mature Defense Mechanisms; EC = Emotion Coaching; SR = Supportive Reactions; ER = Emotion Regulation; PO = Prosocial Orientation.

* $p < .05$.

negative expression and reappraisal. For fathers, there was a significant, positive correlation between negative expression and reappraisal, whereas for mothers, the correlation was negative and only had marginal significance. There also was a significant difference between mothers and fathers for the correlation between mature defense mechanisms and negative expression. For fathers, there was a non-significant, positive correlation between the variables, whereas for mothers, there was a significant, moderate, negative correlation.

Regarding personality variables, there was a significant difference between the correlations for the relation between openness and extraversion. For mothers, this correlation was a significant, moderate, and positive correlation, whereas for fathers, this correlation was not significant. Significant differences also were noted in the relations between conscientiousness and both mature defense mechanisms and emotion coaching. For mothers, there was small to moderate significant positive correlations between these variables. For fathers, there was a large significant positive correlation between these variables.

Regarding child outcome variables, results showed a significant difference between the correlations for parent-reported child emotion regulation, and both negative expression and supportive reactions. For the correlation between negative expression and parent-reported child emotion regulation, there was a moderate, negative significant correlation for mothers, but a moderate, positive correlation for fathers. For the correlation between supportive reactions and parent-reported child emotion regulation, there was a significant moderate and positive correlation for mothers, but no significant correlation for fathers.

An overall summary of all results, organized by hypothesis, is presented in Table 19.

Table 19

Summary of Results

Hypothesis	Sample	Support	Results
1: Direct relations between each aspect of parent emotional competence and emotion coaching	Mothers	Partial Support	• Higher levels of positive expression predicted higher levels of emotion coaching • Higher levels of empathy predicted higher levels of emotion coaching • No significant relations between either defense mechanisms or reappraisal and emotion coaching
	Fathers	Partial Support	• Higher levels of positive expression predicted higher levels of emotion coaching • Higher levels of empathy predicted higher levels of emotion coaching • No significant relations between either defense mechanisms, reappraisal, or negative expression and emotion coaching
2: Direct relations between each aspect of parent personality and emotion coaching	Mothers	Partial Support	• No path model retained • Positive, significant correlations between emotion coaching and each openness, agreeableness and conscientiousness
	Fathers	Partial Support	• Positive, significant correlations between emotion coaching and both agreeableness and conscientiousness

3: Indirect relations between each parent emotional competence variable and supportive reactions to children's negative emotions, through emotion coaching	Mothers	Partial Support	• Higher levels of empathy indirectly predicted higher levels of supportive reactions through higher levels of emotion coaching • Higher levels of positive expression indirectly predicted higher levels of supportive reactions through higher levels of emotion coaching • Higher levels of positive expression directly predicted supportive reactions • Lower levels of negative expression directly predicted supportive reactions • No other significant indirect effects found
	Fathers	Partial Support	• No indirect effects found for emotional competence variables on supportive reactions through emotion coaching
4: Indirect relations between each parent personality variable and supportive reactions to children's negative emotions, through emotion coaching	Mothers	Not Supported	• No path model retained
	Fathers	Not Supported	• Analysis not conducted
5: Direct relations between emotion coaching and children's emotion regulation skills	Mothers	Partial Support	• Higher levels of emotion coaching marginally predicted better mother-reported child emotion regulation skills
	Fathers	Supported	• Higher levels of emotion coaching predicted better father-reported child emotion regulation skills

6: Indirect relations between each parent emotional competence variable and children's emotion regulation skills, through emotion coaching	Mothers	Not Supported	• No significant indirect relations found for emotional competence variables on mother-reported child emotion regulation skills through emotion coaching
	Fathers	Partial Support	• Higher levels of empathy indirectly predicted higher levels of children's emotion regulation skills through higher levels of emotion coaching • Higher levels of positive expression indirectly predicted higher levels of children's emotion regulation skills through higher levels of emotion coaching • No other significant indirect relations found for the other emotional competence variables on father-reported child emotion regulation skills though emotion coaching
7: Direct relations between supportive reactions and children's emotion regulation skills	Mothers	Not Supported	• No significant direct effect
	Fathers	Not Supported	• No significant direct effect
8: Indirect relation between emotion coaching and children's prosocial orientation, through child emotion regulation skills	Mothers	Partially Support	• Higher levels of emotion coaching directly predicted higher levels of prosocial orientation • No significant indirect relation
	Fathers	Partial Support	• Higher levels of emotion coaching indirectly predicted higher levels of children's prosocial orientation through higher levels of children's emotion regulation skills (marginally significant)

9: Indirect relation between supportive reaction and children's prosocial orientation, through child emotion regulation skills	Mothers	Not Supported	• Not tested due to no significant relations between supportive reactions and children's emotion regulation skills
	Fathers	Not Supported	• Not tested due to no significant relations between supportive reactions and children's emotion regulation skills
Additional Analysis: Emotional competence variables and supportive reactions	Mothers		• Higher levels of positive expression predicted higher levels of supportive reactions • Higher levels of negative expression predicted lower levels of supportive reactions • No other significant relations
	Fathers		• Higher levels of positive expression predicted higher levels of supportive reactions • No other significant relations
Additional Analysis: Emotional competence variables and child emotion regulation skills	Mothers		• Higher levels of positive expression predicted better mother-reported child emotion regulation • Higher levels of negative expression predicted poorer mother-reported child emotion regulation • No other significant relations

	Fathers		• Higher levels of reappraisal predicted better father-reported child emotion regulation skills • Higher levels of negative expression predicted better father-reported child emotion regulation skills • No other significant relations
10: Mothers would have stronger relations between variables than fathers	Both	Partially Supported	• Mothers had significantly greater levels of extraversion, agreeableness, neuroticism, positive expression, negative expression, empathy, and emotion coaching than fathers. • No significant differences for openness, conscientiousness, mature defense mechanisms, reappraisal, or supportive reactions

	Both	Partially Supported	• Negative expression and Reappraisal:
			  o Fathers: significant, positive correlation
			  o Mothers: negative correlation, marginal significance
			• Mature defense mechanisms and negative expression:
			  o Fathers: non-significant, positive correlation
			  o Mothers: significant, moderate, negative correlation.
			• Negative expression and parent-reported child emotion regulation:
			  o Mothers: moderate, negative significant
			  o Fathers: moderate, positive significant correlation
			• Supportive reactions and parent-reported child emotion regulation:
			  o Mothers: significant moderate and positive correlation
			  o Fathers: no significant correlation
			• Openness and extraversion:
			  o Mothers: significant, moderate, and positive correlation
			  o Fathers: not significant
			• Conscientiousness and mature defense mechanisms:
			  o Mothers: Small positive correlation

- Fathers: large positive correlation
- Conscientiousness and emotion coaching:
  - Mothers: Small positive correlation
  - Fathers: large positive correlation

CHAPTER 4

DISCUSSION

The purpose of this study was to explore a more integrative model of how parent characteristics, namely specific aspects of parent emotional competence (i.e., mature defence mechanisms, reappraisal, positive expression, negative expression, and empathy) and personality (i.e., openness to experiences, conscientiousness, agreeableness, extraversion, and neuroticism) impact parent emotion-related parenting styles and practices and children's emotional and social competence. Although this study aimed to examine differences between mothers and fathers, comparisons are very limited due to limited power and small sample size in the analysis of the fathers' data. Therefore, this discussion will focus predominantly on the results of the SEM analyses of the mothers' data. Overall, partial support was found for many of the hypotheses studied, with specific support for aspects of parent emotion expression being particularly important for parent emotion-related parenting style and practices, in addition to parent-reported child emotion regulation. A summary of the results can be found in Table 19.

Impact of Maternal Emotional Expression on Emotion Socialization

Overall, of all the maternal emotional competence variables examined, the most support was found for the importance of emotional expression variables on emotion-related parenting styles and practices and children's emotional and social competencies. When considering the emotional expression variables, support was found for the first hypothesis. First, higher levels of maternal empathy significantly predicted higher levels of maternal emotion coaching. These results for empathy are consistent with prior research, as empathy is considered a key component of emotion coaching (Gottman,

1997; Gottman et al., 1996, 1997). Empathy also has been found to be positively associated with parenting behaviours that are linked to emotion coaching, including parental warmth, sensitivity, and responsiveness (de Oliveira & Jackson, 2017; Stern et al., 2015). Parents who show empathy towards their children show understanding of their children's emotions and needs. Therefore, they are better able to provide more appropriate responses and support for their children when they experience negative emotions (de Oliveira & Jackson, 2017; Stern et al., 2015).

Next, higher levels of maternal positive expression predicted higher levels of maternal emotion coaching. The results for emotional expression in prediction of emotion coaching also was consistent with past research. Parents who show more frequent positive expression tend to show more supportive parenting behaviours, such as being emotionally supportive, showing affection towards a child, and providing instrumental support (Rueger et al., 2011). Furthermore, Martin and colleagues (2002) and Halberstadt and colleagues (1999) noted that positive expressiveness is important for facilitating the parent-child relationship because it sets the stage for a safer emotional environment for children to express both their positive and negative emotions.

These results regarding maternal emotion expression also were consistent with an emotion coaching style, as communication and expression of positive affect and empathy indicates to children that a parent is approachable and willing to support them (Gottman et al., 1996, 1997; Katz, Gottman, & Hooven, 1996). Thus, while this study found significant relations among aspects of maternal emotional competence variables and emotion coaching, the present study also found that greater levels of emotion coaching predicted greater levels of supportive reactions to children's negative emotions,

consistent with prior research (Denham et al., 1997; Scammell, 2011). Emotion coaching reflects a parenting style, encompassing parents' beliefs and attitudes towards emotions, which then sets the stage for parenting practices to occur (Darling & Steinberg, 1993; Meyer, Abigail, Virmani, Waters, & Thompson, 2014). For instance, if a mother has favourable beliefs and attitudes towards emotions (e.g., emotion coaching beliefs such as seeing emotions as an opportunity for learning), they are probably more likely to act in more supportive ways towards their children (Meyer et al., 2014). These results support the importance of parenting style to interactions between mothers and their children.

Support was found for the third hypothesis predicting indirect relations among maternal emotional expression variables, emotion coaching, and supportive reactions. First, as predicted, there was a significant indirect relation between empathy and supportive reactions through emotion coaching. Empathy is considered a key component of emotion coaching and emotion coaching has a positive impact on mothers' supportive reactions to children's negative emotions (Darling & Steinberg, 1993; Gottman et al., 1996, 1997). Therefore, empathy likely impacts mothers' parenting practices indirectly through their emotion-related beliefs and practices by setting up interactions between mothers and their children to be more warm, sensitive, and attuned with their children. Thus, it is more likely for mothers to use more supportive reactions with their children when they experience negative emotions (Denham et al., 2000; Egeli & Rinaldi, 2016; Leerkes et al., 2004; Rueger et al., 2011; Soenens et al., 2007; Stern et al., 2015).

Second, maternal positive expression was found to both directly predict maternal supportive reactions, as well as indirectly predict supportive reactions through emotion coaching. However, in contrast to predictions, maternal negative expression only was

found to be directly related to fewer maternal supportive reactions, rather than indirectly. Indirectly, positive emotional expression is likely to impact mothers' emotion-related beliefs and practices by helping to create a more positive emotional climate in the family (Halberstadt et al., 1999; Martin et al., 2002). That said, the ability to express positive emotions is a behavioural indicator of emotions (e.g., facial expressions or actions a mother uses to express emotions), and thus could directly influence the specific parenting practices mothers use. Therefore, when mothers express more positive emotion towards their children, this positive expression may prime them to react to their children's negative emotions more positively (Rueger et al., 2011). On the other hand, the results for negative expression suggest that mothers who express more negative emotions may be expressing them more often to their children, which may manifest in fewer supportive reactions to their children's negative emotions. The results reflecting both direct and indirect relations is consistent with Belsky's (1984) parenting process model that suggest the importance of both the direct and indirect impacts of emotional expression and empathy on emotion socialization.

Contrary to the sixth hypothesis, *direct* relations were found between aspects of maternal emotional expression and children's emotion regulation. No indirect relations were found to support the sixth hypothesis predicting indirect relations between either maternal positive expression, negative expression, or empathy and children's emotion regulation skills through maternal emotion coaching. These results are in contrast to other studies that have found indirect relations between aspects of parent emotional competence and children's emotion regulation skills (Han et al., 2015; Morelen et al., 2016; Morris et al., 2007). This study found that higher levels of maternal positive

expression directly predicted better mother-reported child emotion regulation skills, whereas higher levels of maternal negative expression predicted poorer mother-reported child emotion regulation skills. These results follow a similar pattern to the findings of past research (Duncombe et al., 2012; Mills et al., 2012; Nelson et al., 2012). Given that direct, but not indirect findings were supported, the results of this study suggest that the outward, visible aspects of parent emotional competence (e.g., emotional expression) are an important factor in how children learn emotion regulation skills.

When considering the results of this study with regards to maternal emotional expression as a whole, the results point to the importance of direct (i.e., directly teaching children to understand, label, and regulate their emotions, either in the moment of their children's experience of a specific emotion or direct teaching at other times and includes supportive reactions; Denham, 2007; Eisenberg, Cumberland, et al., 1998) and indirect (i.e., practices not specifically directed towards a goal of helping children label, understand, and regulate their emotions, but still influence the development of children's emotion and coping skills, including modelling and regulating opportunities to use emotional skills; Denham, 2007) emotion socialization efforts in creating a safe family emotional climate. First, maternal emotional expression is an important component of emotion coaching, which then impacts the specific parenting practices mothers use when their children express negative emotions, a direct emotion socialization practice. Additionally, the direct relations between maternal emotional expression and children's emotion regulation skills point to the importance of modelling emotional skills to children, an indirect emotion socialization practice. Therefore, both results point to the importance of overall family emotional climate to emotion socialization and the

development of children's emotion regulation skills. As noted by Martin and colleagues (2002) and Halberstadt and colleagues (1999), positive emotion expression is especially important to facilitating the parent-child relationship by setting the stage in which children can have a safe environment to express their emotions. Thus, according to the findings of the present study, higher levels of positive expression and empathy, and lower levels of negative expression appear to be the most important factors for creating this safe environment. Additionally, Martin and colleagues (2002) also found that mothers with moderate to high levels of negative expression often showed less sensitivity to their children's emotions. Therefore, the results of this study support the elevated importance of parent emotional competence, especially emotional expression, to the importance of family emotional environment.

Impact of Maternal Emotion Regulation Skills on Emotion Socialization

In contrast to the study hypotheses, aspects of maternal emotion regulation (i.e., mature defense mechanisms and reappraisal), surprisingly, were not direct or indirect predictors of maternal emotion coaching, maternal supportive reactions, or children's emotion regulation skills. These results stand in contrast to prior research indicating that parent emotion regulation variables are often associated with positive parenting practices, such as supportive reactions to children's negative emotions, and better child emotion regulation skills (Bariola et al., 2012; Morelen et al., 2016; Perlman et al., 2008; Valiente et al., 2007) and the lack of significant results is surprising. The relations among the emotion regulation variables, emotion-related parenting style, and emotion-related parenting practices may have been impacted when considering other emotion-related variables within a comprehensive model and warrant further consideration.

In considering the nature of emotion regulation, the variables chosen for this study reflect more cognitive aspects of emotion regulation, which may not be seen overtly. For example, defense mechanisms reflect implicit, unconscious cognitive processes (Cramer, 2006), and reappraisal is a cognitive change strategy in Gross and colleagues (Gross, 1998, 2015a; Sheppes et al., 2015) process model of emotion regulation. Thus, these aspects of emotion regulation may not directly translate into specific behaviours children can emulate. Furthermore, these cognitions may impact how mothers think about their own emotions and how they regulate their own emotions in the moment, but not necessarily how they specifically think about their children's emotions and how to react to them, possibly leading to non-findings. Therefore, the results of this study suggest that cognitive aspects of emotion regulation may be less important for maternal emotion-related parenting styles and practices than expressive variables because emotion regulation skills may not be visible or are only visible as emotion expression, and thus having less impact on family emotional climate.

However, it was noted that the past research that did find associations between emotion regulation and emotion-related child or parenting outcomes usually focused on parent *dysregulation* of emotions, rather than adaptive parent emotion regulation. (Bariola et al., 2011). Various aspects of emotion dysregulation have been examined, including parent psychopathology (e.g., anxiety and depression), parent distress, and general parent dysregulation (Choe et al., 2013; Hautmann et al., 2015; Jones et al., 2014; Kliewer et al., 1996; Silk et al., 2006; West & Newman, 2003). In general, these studies have found that parent emotion dysregulation was associated with negative parenting and child outcomes. When examining the few studies on parent adaptive emotion regulation,

the results were mixed. While some studies found positive relations between adaptive emotion regulation skills (e.g., reappraisal) and parenting (Cumberland-Li et al., 2003; Monti et al., 2014), other studies found few results overall (Hughes & Gullone, 2010; Silk et al., 2006; Whiddon, 2009). For example, Hughes and Gullone (2010) found no associations between reappraisal and supportive reactions, but found a positive association between suppression and unsupportive reactions to children's negative emotions.

The discrepancy between the present findings and those of past research suggest the importance of differentiating adaptive emotion regulation from emotion dysregulation in future studies using parent emotion regulation as a variable. Indeed, some authors have proposed examining emotion regulation and dysregulation as separate constructs (Morelen et al., 2016). Furthermore, some authors have proposed an alternate meta-emotion philosophy that focuses on emotion dysregulation to describe parents who feel out of control or uncertain and ineffective when encountering their children's negative emotions (Katz et al., 1996; Paterson et al., 2012). Thus, more research is needed to clarify the nature of emotion regulation, emotion dysregulation, and their relation to emotion-related parenting styles and practices.

The nonsignificant results for the adaptive emotion regulation variables in the study also lend some support to the relative importance of maternal positive expression and empathy when considering parenting and child outcomes. Parents may only need sufficient skills necessary to contribute to a positive emotional climate (Morelen et al., 2016) for these parenting and child outcomes to be positive. The presence of maladaptive skills (e.g., dysregulation) is likely to lead to poorer parenting and child outcomes,

probably in part to the likely increase in negative expression in the home (Cumberland-Li et al., 2003; Denham et al., 1997; Tan & Smith, 2018). However, the presence of high levels of adaptive parental emotion regulation skills may not be associated with better outcomes beyond what a positive family emotional climate can facilitate, often determined by the positive expression in a family (Morris et al., 2007). Therefore, maternal emotion regulation may not directly impact emotion socialization and child emotion regulation; rather, the relation may be indirect through maternal emotion expression (Tan & Smith, 2018). Overall, considering the results of this study and some of the limitations of past research, more research is needed to clarify the relations between maternal emotion regulation and emotion-related parenting styles and practices.

Impact of Maternal Emotion-Related Parenting Styles and Practices on Children's Emotion Regulation and Social Competence

When examining the relations among emotion-related parenting styles and practices and mother-reported child emotion regulation and prosocial orientation, mixed results were found. The results of this study partially supported the fifth hypothesis that predicted direct, positive relations between parents' emotion coaching and children's emotion regulation skills, with a marginally significant, positive relation between maternal emotion coaching and mother-reported child emotion regulation. However, the eighth hypothesis predicting an indirect relation between emotion coaching and prosocial orientation through mother-reported child emotion regulation was not found, but the direct relation was significant. These results partially support previous research. Parents who use emotion coaching are more likely to directly teach their children about emotions (e.g., labelling, understanding, and different strategies for managing emotions), which is

likely to have a direct impact on children's emotion regulation skills through direct means of emotion socialization (Denham, 2007; Eisenberg, Cumberland, et al., 1998; Eisenberg, Spinrad, et al., 1998; Gottman et al., 1996, 1997; Lunkenheimer et al., 2007; Ramsden & Hubbard, 2002; Shipman et al., 2007). This result supports past research linking better child emotion regulation skills to parent use of emotion coaching (Garner et al., 2008; Gottman et al., 1996, 1997; Loop & Roskam, 2016). These findings also lend some support to the models of Eisenberg and colleagues (1998), Halbertstadt and colleagues (2001), and Katz and colleagues (2012), which describe the necessity of emotional competence in social interactions. These models propose that when children have good emotion regulation skills, because of their mothers' emotion socialization efforts, they develop better social competence skills. Additionally, the results of this study also suggest direct influences of maternal emotion socialization on children's social competence. Direct influences may further suggest the importance of emotion coaching to the family emotional climate, as a child is more likely to feel safe expressing his or her positive and negative emotions in such climate, learning to better express their own emotions with their peers. This result underscores that the direct influences of emotion socialization also may impact children's social competence.

However, some of the lack of significant direct and indirect relations were surprising results. However, some recent research may shed light on this lack of relations. For example, Garrett-Peters, Castro, and Halberstadt (2017) examined the direct and indirect relations among maternal beliefs about emotions (i.e., emotions as valuable versus emotions as dangerous), child emotion understanding, and a latent variable that included social, emotional, and behavioural indicators of classroom

adjustment in a group of American children in grade 3. Also contrary to their hypotheses, these researchers did not find significant direct or indirect relations among seeing emotions as valuable, better child understanding of emotions, and better child classroom adjustment. However, they did find significant relations among seeing emotions as dangerous, lower child emotion understanding, and lower levels of classroom adjustment. When explaining these results, the authors noted that in middle childhood, peers often receive emotion expression negatively and children are becoming more sensitive to social and peer pressures in emotion expression and understanding, so the impact and influence of parenting style and practices may be lessened for this age group. Furthermore, a majority of research in this field focuses on preschool-age children, for whom parenting style and practices may be more influential, setting the stage for better emotional competence skills later on. Other studies have found that how emotion coaching is enacted changes as a child grows older and develops their emotional competence skills (Stettler & Katz, 2014). Thus, future research should clarify the relations among emotion-related parenting styles and practices and children's outcomes, focusing on adaptive versus maladaptive variables across early and middle childhood.

Also contrary to the seventh hypothesis, no direct relations were found between mothers' supportive reactions to children's negative emotions and children's emotion regulation. Additionally, in contrast to the ninth hypothesis, no indirect relations were found between supportive reactions and children's social competence through mother-reported child emotion regulation. This result was in direct contrast to prior research, which has found significant relations between supportive reactions and children's emotion regulation skills (Blair et al., 2014; Eisenberg et al., 1996; Fabes et al., 2001;

Gunzenhauser et al., 2014; Han et al., 2015; Miller-Slough et al., 2016; Perlman et al., 2008; Swanson et al., 2014). However, none of these research studies has examined the relations among parental supportive reactions, children's emotion regulation, and social competence skills, in conjunction with examining emotion coaching and various aspects of parent emotional competence. Considering the association found in the present study between emotion coaching and supportive reactions, emotional outcomes typically associated with supportive reactions (e.g., better child emotion regulation skills) could be accounted for by emotion-related parenting style (in this case, emotion coaching).

Overall, the results for this study reveal mixed support for past findings among emotion-related parenting styles and practices and child outcomes. However, in considering all the results of this study as a whole, past research has often not considered maternal emotional competence variables in conjunction with both emotion socialization variables and child outcome variables in an integrated model. Thus, the overall results of this study point to the importance of overall family emotional climate, informed by emotion expression and emotion-related parenting style to children's outcomes.

Impact of Maternal Personality on Emotion Socialization

Contrary to the second and fourth hypotheses, no SEM or path model was retained for the relations among maternal personality, emotion socialization, children's emotion regulation, and social competence. This result stands in contrast to previous research indicating significant positive relations among several personality dimensions (i.e., openness, conscientiousness, extraversion, and agreeableness) and various positive parenting outcomes, including positive parenting attitudes and beliefs, warmth, sensitivity, behavioural control, emotion-related parenting styles and attitudes (e.g.,

emotion coaching), and perceived parenting competence and knowledge (Achtergarde et al., 2015; Bornstein et al., 2007; McCabe, 2014; Oliver et al., 2009; Prinzie et al., 2009; Scammell, 2011; Smith et al., 2007). However, no studies to date have examined personality dimensions alongside various aspects of parents' emotional competence skills, as did the present study.

Although the predicted associations with personality were not supported by the SEM or path models, there was some evidence from additional analyses that revealed associations among personality dimensions and maternal emotion-related parenting style and practice that were consistent with prior research. Both conscientiousness and agreeableness showed significant moderate correlations with emotion coaching and supportive reactions, consistent with past research (Scammell, 2011; Scammell & Babb, 2012). These results lend preliminary support to the idea that these two personality dimensions reflect key aspects of emotion coaching. For example, a person high in agreeableness would be more likely to show higher levels of kindness and compassion. These traits may lead a parent to show more warmth, sensitivity, and empathy toward their children, key aspects of emotion coaching (Prinzie et al., 2009; Scammell, 2011). A similar pattern of a parent higher in conscientiousness might be expected. For example, a person high in conscientiousness would be more likely to show higher levels of organizational skills and expectations. Thus, a parent high in conscientiousness may set behavioural limits more consistently, another key component of emotion coaching.

Maternal openness to experience also showed a small correlation with emotion coaching and supportive reactions. In considering aspects of openness (e.g., creative, imagination), these traits may impact the quality of the parent-child relationship and

impact parents' ability to express their emotions and engage with their children. Past research found openness to be associated with aspects of autonomy support, which reflects aspects of scaffolding-praise, an important aspect of emotion coaching (Gottman et al., 1996, 1997; Neitzel & Stright, 2004; Prinzie et al., 2009).

Regarding other personality dimensions, extraversion showed no significant correlations with emotion coaching or supportive reactions, contrary to the study hypotheses. Neuroticism, however, showed a small, negative correlation with supportive reactions. This result supported the study hypotheses, as neuroticism is often associated with lower levels of consistency, nurturance, warmth, and sensitivity in parenting (Belsky & Barends, 2002; Metsäpelto & Pulkkinen, 2003; Prinzie et al., 2009).

It also was noted that all the personality dimensions showed small to moderate significant correlations with most aspects of maternal emotional competence. For instance, with regards to emotional expression, both positive expression and empathy show large, positive associations with agreeableness and small to moderate positive correlations with openness, conscientiousness, and extraversion. Additionally, positive expression had a small negative correlation with neuroticism. The opposite pattern was noted for negative expression, with small to moderate negative correlations with conscientiousness, agreeableness, extraversion, and openness, and a large positive correlation with neuroticism. With regards to maternal emotion regulation, both reappraisal and mature defence mechanisms showed small to moderate correlations with openness, conscientiousness and agreeableness, in addition to small to moderate negative correlations with neuroticism. The correlations among personality variables and emotional competence were especially interesting as the pattern of correlations highlight

the possible impacts of personality on the key variables in this study and how it could impact family emotional climate. For instance, mothers high in agreeableness may be more likely to show positive emotional expression and empathy, leading to a family emotional climate that is more positive and safer for children to express their emotions. Therefore, future research should further clarify the nature of the relations among maternal personality and emotional competence variables.

These results are also indicative of the possibility of shared variance among these variables. Therefore, the proposed model may not have fully appreciated the complex nature of the relations among these variables. For example, some previous research has pointed to aspects of emotion regulation that may be part of, or heavily influenced by, one's personality (Hughes & Gullone, 2010; McCabe, 2014). Furthermore, Big 5 personality characteristics are broad and contain both positive and negative components, possibly leading to non-significant findings (Achtergarde et al., 2015; McCabe, 2014). For example, conscientious people are often organized, but perfectionism can also be considered a part of conscientiousness, and this more extreme form of organization is not necessarily positive. Overall, although SEM and path analyses did not reveal any significant relations, the pattern of correlations among maternal personality, emotional competence, and emotion-related parenting styles and practices is revealing of more complex relations among these variables not considered in this study.

Comparing Mothers' and Fathers' Emotional Competence, and Emotion Socialization Styles and Practices

Because of the extremely small sample size and underpowered analysis for fathers' data, direct comparisons with mothers' data could not be made. However, some

preliminary comparisons in the patterns of results for mothers and fathers can be made to inform future research comparing mothers' and fathers' emotional competence and emotion-related parenting styles and practices. Overall, many of the results were similar for both mothers and fathers (see Table 19), indicative of possible patterns of relations that could be examined in the future. When examining the relations among paternal expressiveness variables and emotion coaching, greater levels of positive expression and empathy were associated with higher levels of emotion coaching. Comparable results to mothers also were found for the relations among expressiveness variables and paternal supportive reactions, with higher levels of positive expressiveness predicting higher levels of supportive reactions. Paternal emotion regulation variables also showed no significant relations to both emotion coaching and supportive reactions. When examining the relations among paternal emotion coaching, supportive reactions, and children's outcomes, higher levels of paternal emotion coaching also predicted higher levels of supportive reactions and children's emotion regulation skills. Similar non-findings to mothers among paternal supportive reactions and children's emotion regulation skills and prosocial orientation also were found. Finally, similar to the mothers' results, marginally significant indirect effects were found for higher levels of paternal emotion coaching predicting higher levels of child prosocial orientation through higher levels of children's emotion regulation skills. Overall, many of the relations observed for fathers were similar to mothers, indicative of some possible shared emotion socialization processes that would be good avenues for future research.

However, some differences were noted in the pattern of relations. One notable result for fathers was the relation between higher levels of both reappraisal and negative

expression and better father-reported child emotion regulation. Whereas one would expect reappraisal to predict better child emotion regulation because previous studies have found similar associations (Choe et al., 2013; Gunzenhauser et al., 2014), the result regarding negative expression was a surprise because higher levels of negative expression have usually been associated with poorer child emotion regulation (Halberstadt et al., 1999; Liew et al., 2011; Nelson et al., 2012). One explanation for this unexpected finding is gender differences in emotion expression. Traditionally, women tend to be more emotionally expressive than men (Bariola et al., 2011; Brody, 1997). So, when fathers need to cope with negative emotions, they may express their emotions in the way they regulate their emotions. Thus, they may have more observable, adaptive emotion regulation skills that may include forms of negative expression. Children may learn these regulation strategies through modeling, an indirect method of emotion socialization. On the other hand, mothers are more likely to show more emotion expression in the form of positive expression, rather than specifically display their emotion regulation skills and strategies. Future research should examine these relations in more depth.

Contrary to the third hypothesis, no significant indirect relations were found for fathers among emotional competence variables and supportive reactions, contrary to the pattern of indirect relations among these variables found for the mothers' sample. Fathers' negative expression was not associated with emotion coaching or supportive reactions, nor was fathers' positive expression associated with children's emotion regulation skills, as was the case with mothers. However, higher levels of paternal empathy and positive expression indirectly predicted better father-reported child emotion regulation skills through higher levels of emotion coaching, whereas direct relations were

found for mothers. These results provide preliminary support for the tenth hypothesis that there would be stronger relations among the hypothesized relations for mothers than fathers. Although social custom is changing and society is seeing a seeming increase in father involvement in parenting, fathers may still not be the primary socializers and mothers may still be more responsible for parenting tasks and set the overall emotional tone for the family environment (Breaux et al., 2016; McDowell et al., 2002). Indeed, mothers have been found to have higher scores on awareness, acceptance, and coaching of emotions, in addition to having longer conversations with their children and using more specific emotion terms in conversations with their children, when compared to fathers (Fivush, Brotman, Buckner, & Goodman, 2000; Stettler & Katz, 2014). Additionally, mothers in this study had higher levels of several variables, including positive expression, negative expression, empathy, extraversion, agreeableness, neuroticism, and emotion coaching. This pattern may lead children to express more negative emotions with their mother than with their father. With mothers usually being the primary socializers, and considering the impact of positive expression on family emotional climate, children may feel more free to express these feelings with their mothers and children have more opportunities to interact with their mothers emotionally (Breaux et al., 2016; Valiente et al., 2004).

Conclusions

The current study was one of the first studies to examine a more integrated model of the impact of several parent emotional competence and personality variables on emotion-related parenting styles and practices and parent-reported child emotion regulation and social competence. Overall, the results of this study point to the

importance of parents', especially mothers', positive emotional expression and empathy on emotion-related parenting style and practices and children's emotion regulation skills, over and above parent emotion regulation skills. These results also highlight the value of positive emotional expression within the family emotional climate (Halberstadt et al., 1999; Martin et al., 2002). When children express negative emotions, parents who show greater levels of positive emotions and empathy create a safe environment for children to express their feelings, and these parents will be more likely to show positive emotion socialization, such as emotion coaching (Gottman et al., 1996, 1997; Halberstadt et al., 1999; Martin et al., 2002; Morelen et al., 2016). Therefore, positive emotional expression is an important aspect of parent emotional competence that sets the stage for positive family emotional climate, allowing more positive interactions and emotion socialization to occur.

Limitations

Although this study addressed several shortcomings within the current body of literature on parental socialization of emotion, this study still had some limitations. First, all the measures used in this study were only parent self-report measures. Self-report is a common and valid methodology in psychological research for ascertaining a person's internal experience and can be helpful to assess several domains of functioning easily. However, these types of measures also are more prone to several biases, such as social desirability, type and wording of the questions, and other respondent biases (Kazdin, 2002). Additionally, self-report measures report participants' perceived view of the variable of interest and may not reflect what actually occurs. For example, this study examined emotion coaching and supportive reactions perceived by the parent themselves,

which may not necessarily reflect what happens in the parent-child interaction. Although this study did control for some of these types of biases (e.g., social desirability), future research should aim to examine these variables using multiple methods (e.g., questionnaires and observation) and using a variety of responders (e.g., parents, teachers, and/or children) in order to replicate the findings of this study and further explore the relations among emotional competence and emotion socialization variables.

Similarly, the parent emotion regulation variable in this study likely was too narrowly defined because reappraisal was the only type of conscious emotion regulation that was examined. Although it is common to use reappraisal as an index of emotion regulation (Cumberland-Li et al., 2003; Hughes & Gullone, 2010; Monti et al., 2014), one overall limitation was that most research does not account for the fact that emotion regulation strategy choice effectiveness is based on situation and context, not necessarily the specific strategy. Thus, while reappraisal is often seen as a positive and adaptive cognitive change strategy, it is likely only going to be effective if it is used appropriately in the type of situation in which it is adaptive. Gross and colleagues (Gross, 2015a, 2015b; Sheppes et al., 2015) recently revised their process model of emotion regulation and expanded their model with the idea of valuation systems—how we make decisions based on the value one has assigned to both an emotional event and associated behavioural outcomes. Thus, future research should further consider the complex ways emotion regulation is enacted in relation to parent emotion socialization.

Next, the sample for this study was a convenience sample collected through an online survey and, therefore, may not be representative of the general population. Most participants were Caucasian, married, had at least some post-secondary education, spoke

English as a first language, and most families only had one to two children. Although the results showed few concerns related to possible sources of bias (e.g., social desirability), it is unknown whether other sources of bias are present because those who participate in online surveys may differ from those who do not participate and it also was unknown how this sample differs from the general population (Kazdin, 2002). Therefore, future research can benefit by examining larger, more representative samples of mothers and fathers.

One particular challenge related to this limitation of sample characteristics was the challenge of recruiting fathers for this study. Only 29 fathers participated in the study, most often at the referral of their spouse or partner, leading to an underpowered and limited analysis. Although this study could examine initial exploratory patterns between mothers and fathers, no direct statistical comparisons to the mothers' data could be done. With a larger sample of fathers, additional analyses could be undertaken (e.g., multi-group SEM) to more directly compare mothers' and fathers' emotion socialization processes. More recent studies have included fathers (Egeli & Rinaldi, 2016; Stettler & Katz, 2014), and future research should continue to examine larger samples of both mothers and fathers in order to clarify the nature of emotion socialization in both parents. Although the current study attempted to directly recruit fathers (e.g., posting on a father-specific blog), future research should also consider alternative methods of recruiting fathers for research, such as more face-to-face recruitment methods (Doyle et al., 2016) or technological advances using online crowdsourcing (Parent et al., 2017) and addressing possible other barriers that prevent fathers from participating in research studies (e.g., recruiting single fathers). These methods may be better for addressing and

minimizing father-specific barriers to participating in research (e.g., flexibility in how studies are completed and helping fathers feel a sense of importance in completing research; Parent et al., 2017).

Furthermore, the lack of results in this study for adaptive aspects of parent emotional competence was notable and indicative of the complex relations among aspects of emotional competence and parent emotion socialization. Studies have shown that most parents exhibit some level of each of the different parenting styles and practices, both adaptive and maladaptive (Egeli & Rinaldi, 2016; McCabe, 2014). Additionally, many significant findings in the research literature have been shown for aspects of parent *maladaptive* emotional competence (e.g., emotion dysregulation), rather than adaptive aspects of emotional competence. Thus, some of the nonsignificant findings in this study could be due to not taking into consideration the less adaptive types of emotion-related parenting styles and practices. Indeed, some studies have found that rather than emotional competence skills being on a spectrum, (e.g., parents regulation skills falling somewhere between adaptive emotion regulation and emotion dysregulation), adaptive and maladaptive styles and practices may be distinct variables (Egeli & Rinaldi, 2016). Thus, future research should challenge the assumption that adaptive emotional competence skills are a prerequisite to adaptive emotion socialization and examine both adaptive and maladaptive aspects of emotional competence, in addition to taking overall family emotional climate into consideration.

Suggestions for Future Research

First, the importance of examining longitudinal and cross-sectional relations will be key to studying emotional competence and socialization variables and how these

variables may impact child outcomes. The type of support parents provide to their children will change as their children gain skills in emotional competence (Castro et al., 2015; Stettler & Katz, 2014). For example, Stettler and Katz (2014) examined longitudinal change in components of parent meta-emotion philosophy (i.e., awareness, acceptance, and coaching of emotions) when their children were 5, 9, and 11 years old. They found that awareness and acceptance of emotions decreased as children aged but coaching of emotions increased. This study illustrated the importance of examining aspects of parent meta-emotion philosophy over time as children develop.

Related to change in the parent-child relationships, other relationship dynamics also should be investigated. These dynamics include dyadic, transactional relationships between parents and between parent and child. As parenting is a specific relationship and social interaction, and emotion socialization is inherently dyadic, as all individuals must send, receive, and experience emotions in social interaction (Eisenberg, Cumberland, et al., 1998; Eisenberg, Gershoff, et al., 2001; Halberstadt et al., 2001; Hastings, 2018; Katz & Windecker-Nelson, 2004; Saarni, 1999). Some research has explored how these relationships impact parenting, with results indicating that child characteristics may impact parenting outcomes and how the mother-father relationship may adjust if one parent experiences psychopathology symptoms (Achtergarde et al., 2015; Belsky, 1984; Breaux et al., 2016; Eisenberg, Cumberland, et al., 1998; Eisenberg, Spinrad, et al., 1998; Martin et al., 2002). As one's emotional competence skills are embedded in a social context, there is a need for research specifically on the transactional nature of emotion socialization and how child and parent relationship factors impact family emotional climate and parent emotion socialization (Saarni, 1999).

Next, whereas past research literature on emotion socialization refers to an overarching construct called *emotional competence* (Saarni, 1999), both the two-factor model for emotional competence and the path model with each of the separate emotional competence constructs fit the data better than a single factor solution. These results illustrate the need to consider different emotional competence variables in relation to different aspects of emotion socialization. Although this study examined an integrated model that included five different facets of parent emotional competence—more than most studies—future research will need to continue to address the multiple aspects of emotion competence in relation to one another (Egeli & Rinaldi, 2016).

Additionally, many studies have begun to understand the role temperamental self-regulation in adults and children (Crandall et al., 2015; Liew et al., 2011; Swanson et al., 2014; Valiente et al., 2004, 2007). Specifically, many studies have examined *effortful control*, which is "…the ability to voluntarily inhibit a dominant (physiological, attentional, or behavioural) response to activate a subdominant response" (Liew et al., 2011, p. 550). For instance, in the study by Valiente and colleagues (2007), higher levels of parental effortful control were associated with parents showing more supportive reactions to negative emotions. Furthermore, when parents had higher levels of effortful control and supportive reactions, children had higher levels of effortful control and fewer behavioural concerns. This study illustrated the importance of general self-regulation across different domains of functioning. Therefore, future research should continue to examine broader conceptualizations of self-regulation in the context of parenting and emotion socialization.

Finally, it was noted while reviewing the literature that one possible antecedent to emotion regulation skills in both parents and children is attachment style. Both child and adult attachment have been recognized as a key aspect in the development of emotion regulation skills (Zimmer-Gembeck et al., 2017). When considering child attachment, especially for infants and toddlers, secure attachment is associated with higher levels of adaptive, developmentally appropriate coping skills (Zimmer-Gembeck et al., 2017). When considering adult attachment, preliminary research found support for the impact of adult attachment style on how parents react to their children. For example, Adam, Gunnar, and Tanaka (2004) examined mothers' attachment style, self-reported emotional well-being, and their observed parenting behaviour with their two-year-old children. They found that mothers with a preoccupied attachment style had higher levels of anger/intrusiveness towards their children and greater emotionality (e.g., higher levels of negative affectivity, positive affectivity, and anxiety). Mothers with a dismissing attachment style showed lower levels of positive affectivity. This study showed how one's emotional well-being is related to one's attachment style, which can then influence the family's emotional climate and possible emotion-related parenting styles and practices. Adam and colleagues (2004) noted that few studies have examined relations between adult attachment and parenting; therefore, future work should explore the role that attachment plays in the emotion socialization process and its impact on the family emotional climate.

Practical Implications

The increase in the focus on emotion socialization and impact of parents' own emotional skills has changed the outlook of research in child development and parenting

over the last 30 years (Hastings, 2018; Southam-Gerow, 2013). The current study has focused on the importance of parent emotional expression to the development of children's emotional and social skills and has illustrated the importance of family emotional climate to children's emotional development (Crandall et al., 2015; Hastings, 2018; Saarni, 1999). This research could be applied to various aspects of parenting, especially since recent social media trends in parenting have focused more on child self-regulation rather than previous emphases that focused more on child cognitive development (Courage & Howe, 2010; Pearce, 2013; Southam-Gerow, 2013).

The current study first highlights applications to clinical training for working with parents and families. Use of evidence-based practices are often disseminated to clinicians during graduate training or by continuing education (Bell, Seager, Shader, & Fristad, 2018). Often, work with parents focuses on the behavioural aspects of the home, training parents to manage their children's behaviour using specific strategies (e.g., Barkley, 2013). While these approaches are effective in addressing child behavioural difficulties, the results of this study and other research points to the importance of also addressing emotional and social difficulties that children may have and may underlie their behavioural difficulties (Denham, 2007; Denham et al., 2000; Johnson, Hawes, Eisenberg, Kohlhoff, & Dudeney, 2017; Katz & Windecker-Nelson, 2004). However, many parenting programs often are not focused on the social and emotional aspects of parenting and child development, and clinicians may lack the training needed to address these aspects of emotion socialization directly. Therefore, clinicians working with parents might find it beneficial to consider the broader emotional context of parenting

and children's behavioural difficulties in addressing child behaviour problems (Johnson et al., 2017).

With the greater emphasis on children's emotional development, research on parenting programs has now begun to investigate adding emotional components to traditional behavioural-based parenting programs or creating programs to focus on emotion socialization to address child behaviour concerns. This research includes general group parenting programs (e.g., Triple-P; Salmon, Dittman, Sanders, Burson, & Hammington, 2014), addressing unique circumstances (e.g., emotion socialization in families with a member on a military deployment; Zhang, Zhang, Gewirtz, & Piehler, 2018), and specific parenting programs focused on emotion coaching (e.g., Havighurst, Wilson, Harley, & Prior, 2009). Thus, family emotional climate could be a point of intervention within these group programs for families presenting with concerns related to parenting and child self-regulation. For example, Havighurst and colleagues (Havighurst et al., 2013, 2009; Havighurst, Wilson, Harley, Prior, & Kehoe, 2010) have developed a group parenting program targeting parent emotion socialization. This six-week parenting program called *Tuning Into Kids* focuses on parents developing a more emotionally responsive style with their preschool-aged children using emotion coaching principles outlined by Gottman and colleagues (1996, 1997). Initial studies examining this program have shown decreases in emotion dismissing behaviour, improved parent awareness and regulation of emotions, improved empathy, and increased emotion coaching, even at six-month follow-up (Havighurst et al., 2009, 2010; Wilson, Havighurst, & Harley, 2012). These results show that parents can improve their emotion socialization skills with intervention. Thus, the results of this study show the importance of emotion-related

beliefs and attitudes to the parent-child relationship, supporting the current practical work being conducted on parenting programs, such as *Tuning into Kids*.

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APPENDICES

Appendix A: Demographics Questionnaire

Please answer the following questions about yourself by selecting the appropriate choice and/or using the space provided. When answer questions about your child, and you have more than one child between the ages of 6 and 12, choose the youngest child in that age range.

Birthdate (month/year): _____ Initials: _____

Current Date (month/day/year): _____

Gender: ☐Male ☐Female ☐Other

Marital Status (Select one):
☐Single ☐Common-law ☐Married ☐Separated ☐Divorced ☐ Widowed

Relationship to Child (Select one):
☐Mother ☐Father ☐Step-Mother ☐Step-Father ☐Other: _____

Income (select one):
☐less than $5 000
☐$5 000 to $9 999
☐$10 000 to $19 999
☐$20 000 to $29 999
☐$30 000 to $39 999
☐$40 000 to $49 000
☐$50 000 to $59 999
☐$60 000 to $69 999
☐$70 000 to $79 999
☐$80 000 to $89 999
☐$90 000 to $99 999
☐$100 000 or more
☐Prefer not to answer

Occupational Field (select one):
☐Management
☐Business, finance and administration
☐Natural and applied science or related occupations
☐Health
☐Social Science, Education, Government, or Religion
☐Art, culture, recreation and sport
☐Sales and Service
☐Trades, transport and equipment operator or related occupation
☐Occupation unique to primary industry
☐Occupation unique to processing, manufacturing and utilities
☐Other

Culture/Ethnicity (select all that apply):
☐ West Asian

Education Level (select one):
☐ No certificate, diploma or degree

☐ Asian (e.g., Chinese, Japanese)
☐ Black
☐ White/Caucasian
☐ Latin American
☐ Southeast Asian
☐ Middle-Eastern
☐ Other (please specify):

_____

☐ High School certificate or equivalent
☐ Apprenticeship/Trades certificate
☐ College/CEGEP certificate or diploma
☐ University certificate or diploma
☐ University Degree
☐ Post-Bachelor's degree (e.g. Master's, Ph.D)
☐ Other (please specify):

_____

1st Language Spoken in home:
☐ English ☐ French ☐ Other (please specify):

Other languages spoken in home (please specify):

_____

How often do you interact with your child?
☐ Daily ☐ 4-6 days per week ☐ 3-5 days per week ☐ 1 to 2 days per week
☐ 1-2 times every two weeks ☐ once per month ☐ less than once per month

How many hours per day do you interact with your child each day?
☐ less than 1 hour ☐ 1-3 hours ☐ 4-6 hours ☐ more than 7 hours

Have you been formally diagnosed by a psychologist or psychiatrist with any of the following psychological disorders? Please check all that apply:
☐ Bipolar Disorder
☐ Schizophrenia
☐ Major Depression or Depression
☐ Generalized Anxiety Disorder (GAD)
☐ Obsessive Compulsive Disorder (OCD)
☐ Social Anxiety/Social Phobia
☐ Specific Phobia
☐ Other (please list)_____
☐ None

Please answer the following questions about your partner (if applicable) by selecting the appropriate choice and/or using the space provided:

☐ Check here if this section is not applicable

Age: _____

Gender: ☐ Male ☐ Female ☐ Other, please specify: _____

Relationship of this person to you:
☐ spouse (wife/husband) ☐ common-law partner ☐ former spouse/partner

Relationship to Child (Select one):
☐Mother ☐Father ☐Step-Mother ☐Step-Father ☐Other: _____

Income (select one):
☐less than $5 000
☐$5 000 to $9 999
☐$10 000 to $19 999
☐$20 000 to $29 999
☐$30 000 to $39 999
☐$40 000 to $49 000
☐$50 000 to $59 999
☐$60 000 to $69 999
☐$70 000 to $79 999
☐$80 000 to $89 999
☐$90 000 to $99 999
☐$100 000 or more
☐Prefer not to answer

Occupational Field (select one):
☐Management
☐Business, finance and administration
☐Natural and applied science or related occupations
☐Health
☐Social Science, Education, Government, or Religion
☐Art, culture, recreation and sport
☐Sales and Service
☐Trades, transport and equipment operator or related occupation
☐Occupation unique to primary industry
☐Occupation unique to processing, manufacturing and utilities
☐Other

Culture/Ethnicity (select all that apply):
☐ West Asian
☐ Asian (e.g., Chinese, Japanese)
☐ Black
☐White/Caucasian
☐ Latin American
☐ Southeast Asian
☐ Middle-Eastern
☐ Other (please specify):
_____

Education Level (select one):
☐ No certificate, diploma or degree
☐ High School certificate or equivalent
☐ Apprenticeship/Trades certificate
☐ College/CEGEP certificate or diploma
☐ University certificate or diploma
☐ University Degree
☐ Post-Bachelor's degree (e.g. Master's, Ph.D)
☐ Other (please specify):
_____

How often does your partner see your child?
☐Daily ☐4-6 days per week ☐3-5 days per week ☐1 to 2 days per week
☐1-2 times every two weeks ☐ once per month ☐ less than once per month

How many hours per day does this person interact with your child each day?
☐less than 1 hour ☐1-3 hours ☐4-6 hours ☐more than 7 hours

Please answer the following questions about your child (who is between the ages of 6 and 12), by selecting the appropriate choice and/or using the space provided.

Age: _____ Gender: ☐Boy ☐Girl ☐Other

Birthdate: Year: _____ Month: _____ Day: _____

Initial of Child's First Name: _____ Initial of Child's Last Name: _____

Current Grade Level: _____

Ethnicity (check all that apply):

☐ Same as Parent(s) ☐ Aboriginal ☐ Arab/ West Asian
☐ Black ☐ White/Caucasian ☐ Latin American
☐ Asian ☐ Other (please specify): _____

Has your child ever been diagnosed with a psychological or physical disorder?

☐ Yes ☐ No

If you answered yes, please indicate which diagnoses (check all that apply):

☐ Autism
☐ Asperger's Disorder
☐ Pervasive Developmental Disorder-Not Otherwise Specified
☐ Learning Disorder
☐ Motor Skills Disorder
☐ Anxiety)
☐ Other (please specify):
☐ Intellectual Disability
☐ Global Developmental Delay
☐ Communication Disorder
☐ ADHD
☐ Mood Disorder (e.g., Depression)
☐ Disruptive Behaviour Disorder (e.g., Oppositional Defiant Disorder)

_____

Has your child ever received services meant to assist or treat them for a disorder?

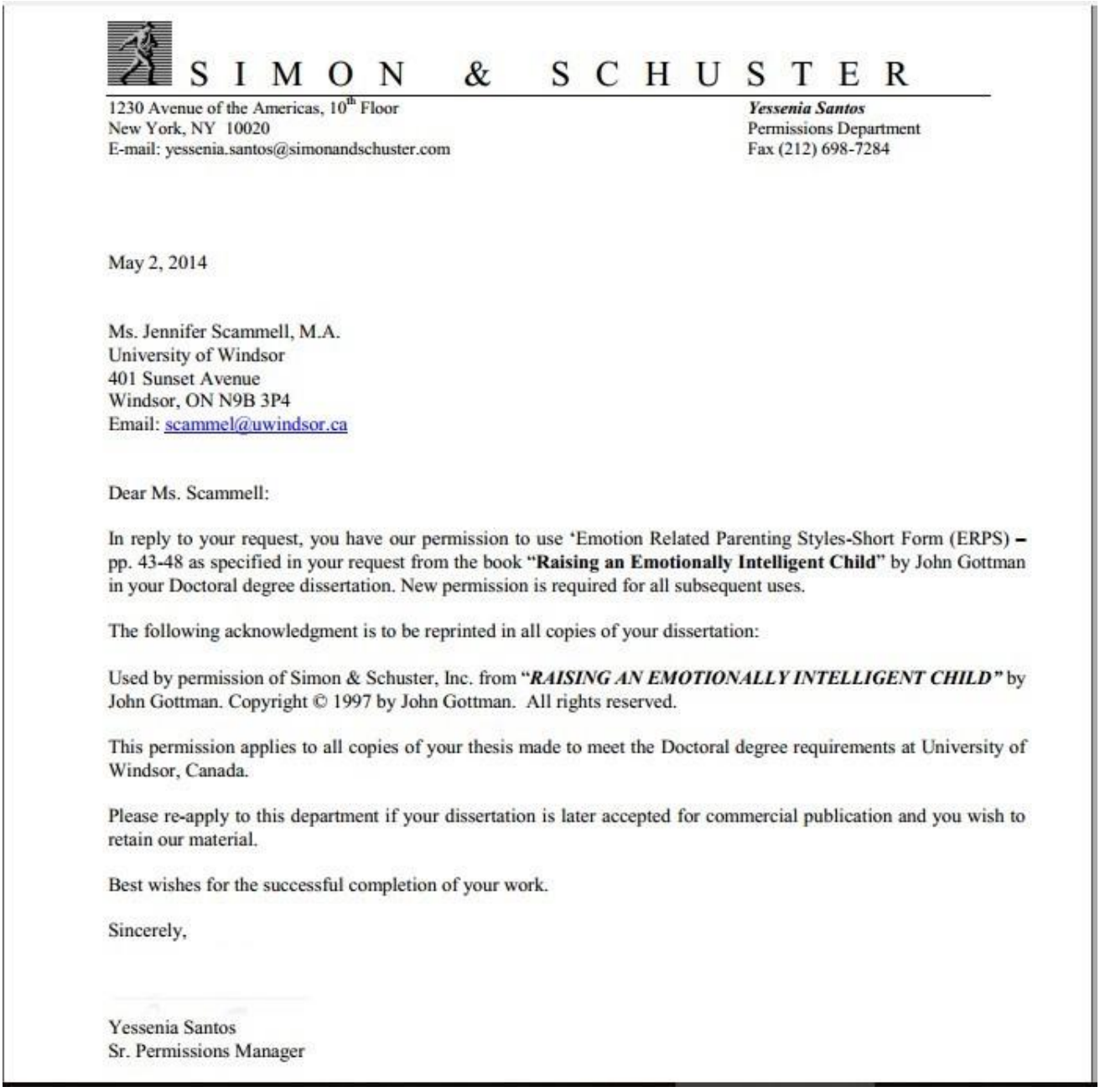
☐ Yes ☐ No

If you answered yes, please indicate which services they received (check all that apply):

☐ Occupational Therapy
☐ Physiotherapy
☐ Resource Worker
☐ Other (please specify):
☐ Speech Therapy
☐ Intensive Behavioural Intervention (IBI)
☐ Counselling
☐ Special education services

_____

Appendix B: Copyright Information for the Emotion-Related Parenting Styles Self-Test



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Yessenia Santos
Permissions Department
Fax (212) 698-7284

May 2, 2014

Ms. Jennifer Scammell, M.A.
University of Windsor
401 Sunset Avenue
Windsor, ON N9B 3P4
Email: scammel@uwindsor.ca

Dear Ms. Scammell:

In reply to your request, you have our permission to use 'Emotion Related Parenting Styles-Short Form (ERPS) – pp. 43-48 as specified in your request from the book **"Raising an Emotionally Intelligent Child"** by John Gottman in your Doctoral degree dissertation. New permission is required for all subsequent uses.

The following acknowledgment is to be reprinted in all copies of your dissertation:

Used by permission of Simon & Schuster, Inc. from ***"RAISING AN EMOTIONALLY INTELLIGENT CHILD"*** by John Gottman. Copyright © 1997 by John Gottman. All rights reserved.

This permission applies to all copies of your thesis made to meet the Doctoral degree requirements at University of Windsor, Canada.

Please re-apply to this department if your dissertation is later accepted for commercial publication and you wish to retain our material.

Best wishes for the successful completion of your work.

Sincerely,

Yessenia Santos
Sr. Permissions Manager

Appendix C: Consent Form for Online Study

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: **Parental Emotional, Personality, and Socialization Factors: Relations with Children's Emotion Regulation and Social Competence Skills**

You are asked to participate in a research study conducted by Jennifer Scammell for her Doctoral Dissertation, under the supervision of Dr. Kimberley Babb, from the Department of Psychology at the University of Windsor.

If you have any questions or concerns about the research, please feel to contact **Jennifer Scammell at scammel@uwindsor.ca or Kimberley Babb at kbabb@uwindsor.ca.**

PURPOSE OF THE STUDY

The purpose of this study is to examine how parents deal with emotions and parents' personality traits are associated with beliefs and attitudes towards emotions, parenting practices, how children manage their emotions, and children's social skills.

PROCEDURES

If you volunteer to participate in this study, you will be asked to complete questionnaires related to:

- Emotional expressivity
- Managing your own emotions
- Your personality
- Your emotional attitudes
- What you would do if your child was experiencing negative emotions,
- How your child manages his or her emotions
- Your child's social skills.

The questionnaires would take approximately 45 to 60 minutes to complete and would be competed through an online survey.

POTENTIAL RISKS AND DISCOMFORTS

There are no expected risks from participating in this study, but some people may feel uncomfortable answering some questions about negative feelings they may have felt in the past. If you do feel uncomfortable answering any question, you can choose not to answer that question. If you feel uncomfortable after participating in the study, you will be provided with information on the letter of information at the end of the study where you can find someone to talk with.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Participating in this research may lead to a greater understanding of your own beliefs and attitudes about emotions and your own parenting style. The results of this research will be used to inform best practices with regards to the role of parents' attitudes, beliefs, and practices in the emotional development in children.

COMPENSATION FOR PARTICIPATION

For your participation in this research study, you will be given the opportunity to enter a draw for one of four $25 gift certificate to an electronics store. However, to have your name and e-mail entered into the draw, you must complete at least 90% of the online questions. If you do not complete at least 90% of the questions and you do not formally withdraw from the study by clicking the "withdraw from this study" link located on each webpage, you will not be able to be entered into the draw.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. The information collected will be stored in an electronic database on a secure server. When downloaded for analysis, your data will be stored electronically in a password-protected (encrypted) computer file, which only the researchers involved in this study can access. In accordance with the guidelines of the American Psychological Association, your data will be kept for five years following the last publication of the data.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time before you submit your questionnaire responses without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. In order to be eligible to put your name and e-mail into the draw for the gift certificate, you must formally withdraw using the 'withdraw from this study' button located at the bottom of each page of the survey and complete at least 90% of the survey. After the draw is done, the responses provided before withdrawing from the study will be deleted. Once your responses are submitted, it will not be possible to withdraw your responses.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

Research findings will be available to participants at the completion of the project at www.uwindsor.ca/reb under 'Study Results'. Findings will be available by July 31st, 2016.

SUBSEQUENT USE OF DATA

Data may be used for subsequent studies, but no personally identifying information will be included in any work coming from your participation in this study.

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I understand the information provided for the study Parental Emotional, Personality, and Socialization Factors: Relations with Children's Emotion Regulation and Social Competence Skills as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given an opportunity to print this form for my records.

PRINT THIS DOCUMENT FOR YOUR RECORDS

Please select one:

I AGREE TO PARTICIPATE

I DO NOT AGREE TO PARTICIPATE

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

_____ _____

Signature of Investigator Date

Appendix D: Debriefing Form for Online Study

LETTER OF INFORMATION

Title of Study: **Parental Emotional, Personality, and Socialization Factors: Relations with Children's Emotion Regulation and Social Competence Skills**

You participated in a research study conducted by Jennifer Scammell for her Doctoral Dissertation, under the supervision of Dr. Kimberley Babb, from the Department of Psychology at the University of Windsor.

If you have any questions or concerns about the research, please feel to contact **Jennifer Scammell at scammel@uwindsor.ca or Kimberley Babb at kbabb@uwindsor.ca.**

PURPOSE OF THE STUDY

The purpose of this study is to examine how parents deal with emotions and parents' personality traits are associated with beliefs and attitudes towards emotions, parenting practices, how children manage their emotions, and children's social skills.

POTENTIAL RISKS AND DISCOMFORTS

There were no expected risks from participating in this study, but some people may feel uncomfortable answering some questions. A list of mental health and family resources are provided at the end of this document for your reference.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Participating in this research may lead to a greater understanding of your own beliefs and attitudes about emotions and your own parenting style. The results of this research will be used to inform best practices with regards to the role of parents' attitudes, beliefs, and practices in the emotional development in children

COMPENSATION FOR PARTICIPATION

For your participation in this research study, you were given the opportunity to enter a draw for one of four $25 gift certificate to a book store.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. The

information collected will be stored in an electronic database. This data will be stored in a password-protected file, which only the researchers involved in this study can access. When downloaded for analysis, the data will be stored electronically on password-protected computers. In accordance with the guidelines of the American Psychological Association, your data will be kept for five years following the last publication of the data.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time before you submit your questionnaire responses without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. In order to be eligible to put your name and e-mail into the draw for the gift certificate, you must formally withdraw using the 'withdraw from this study' button located at the bottom of each page of the survey and complete at least 90% of the survey. After the draw is done, the responses provided before withdrawing from the study will be deleted. Once your responses are submitted, it will not be possible to withdraw your responses.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

Research findings will be available to participants at the completion of the project at www.uwindsor.ca/reb under 'Study Results'. Findings will be available by July 31st, 2016. Those interested in the results can also contact Jennifer Scammell at scammel@uwindsor.ca.

SUBSEQUENT USE OF DATA

Data may be used for subsequent studies, but no personally identifying information will be included in any work coming from your participation in this study.

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

_____ _____

Signature of Investigator Date

Mental Health and Family Resources in Windsor-Essex County:

Windsor Regional Children's Centre 3900 Connaught St. http://www.hdgh.org/regionalchildrenscentre 519-257-5288 Assessment and treatment services for families with children 6 and up experiencing behavioural, emotional, social or developmental problems	**Essex Community Services-Community Information Essex** Victoria Place, 35 Victoria Ave Unit 7, Essex, ON www.essexcs.on.ca, ecs@essexcs.on.ca 519-776-4231 Community information centre providing referrals and community information about services in Essex
Canadian Mental Health Association 1400 Windsor Ave www.cmha-wecb.on.ca, infor@cmha-wecb.onc.a (519) 255-7440 Mental health services for people 16 years and up	**Windsor Essex Community Health Centre** **Teen Health Centre** **http://wechc.org/teenhealth_home** 1585 Ouellette Ave **519-253-8481** Medical and mental health services for people ages 12 to 24 years of age.
Windsor Essex Community Health Centre Sandwich Community Health Centre 749 Felix Ave (basement of Forster Secondary School) 519-258-6002 Medical services and counseling services for ages 5 and up.	**For other general information about community services and resources in communities across Ontario, dial '211' or go to www.211ontario.ca.**

Internet Security Measures

Here are Internet security steps that can be taken if you wish to prevent others who have access to your computer from seeing that you viewed this study's website. These instructions were taken directly from The Broken Spirits Network, which can be accessed at: http://www.brokenspirits.com/security/web_security.asp

Clearing the Internet cache

Risk: Low

Possible Repercussions: Any other user shouldn't notice a difference. However if they check the temporary internet files folder it will be empty, which might seem unusual. The probability that anyone would look in this folder is very small. Less than 1% of internet users even know where this folder is.

The Internet cache is designed to help pages load faster by storing images and web pages locally on your machine. This can result in a security risk if an unwanted viewer decides to poke through the cache folder. To prevent unwanted security risks please follow the following directions to clear your internet cache.

PC USERS:

1. From the menu bar select "Tools"
2. Select the option "Internet Options"
3. Under the "General" Tab look for "Temporary Internet Files"
4. Click on the "Delete Files" button
5. Select the "Delete All Offline Content" checkbox and click "Ok"

6. Click “Ok” once more to return to your browser.

MAC USERS:
1. From the menu bar select "Edit"
2. Select the option "Preferences..."
3. Select the "Advanced" item in the left menu
4. Under "Cache" Click "Empty Now"
5. Click "Ok" to return to your browser.

Removing sites from your browser history

Risk: Moderate

Possible Repercussions: If this is done properly there will be no obvious sign that anything has been changed. However if you delete the entire history there is a large possibility that other users may notice that their history has been cleared.
The browser history is designed to store previous visits in an area that is easily accessible at the click of a button. This is useful when you forget to bookmark a site and remember visiting it last week and wish to return. Unfortunately, in the case that you are researching sensitive material that you do not wish others to see, this can be a security risk. To prevent unwanted security risks please follow the following directions to remove particular sites from your browsers history.

PC USERS:
1. From the menu bar select "View"
2. Highlight "Explorer Bar"
3. Select "History"
4. A bar will show up on the left of your browser. Select the item you wish to delete.
5. Right Click on the selected Folder and select "Delete".

MAC USERS:
1. From the menu bar select "Window"
2. Select "History"
3. Select the item you wish to delete.
4. Press the "Delete" key.
5. Click "Ok"

Removing cookies from your hard drive
Risk: High

Possible Repercussions: If this is done properly there will be no sign that anything has been changed. However if you delete ALL of the cookie files there is a very large possibility that other users may notice the change.

Cookies are small pieces of code left behind by web pages to store information frequently requested. For example if I clicked on a checkbox to say "save my login information" it would then write a cookie onto my hard drive that I can call next time you visit the site, preventing you from having to login again. This is why it can be very dangerous to delete all of the cookie files. If you delete all of them, all of the stored passwords, user information, and preferences from various sites will be forgotten and you will have to re-enter this information. This will be an obvious change. However, if

you follow the directions below, we will instruct you how to delete only the cookies from sites which are high risk. In addition not all browsers will allow you to delete a single item.

PC USERS:

1. From the menu bar select "Tools"
2. Select the option "Internet Options"
3. Under the "General" Tab look for "Temporary Internet Files"
4. Click on the "Settings" button
5. Click on the "View Files" button
6. A list of cookies will appear. Most of the filenames will be in this format:
   username@domain [i.e., user@cnet]
7. Select the cookie you wish to delete
8. Right mouse click & Select "Delete"

MAC USERS:

1. From the menu bar select "Edit"
2. Select the option "Preferences..."
3. Select the "Advanced" item in the left menu
4. Under "Cache" Click "Empty Now"
5. Click "Ok" to return to your browser.

Please print this page for your records.

VITA AUCTORIS

NAME:	Jennifer L. Scammell
PLACE OF BIRTH:	Campbell River, BC
YEAR OF BIRTH:	1984
EDUCATION:	Mackenzie Secondary School, Mackenzie, BC, 2002
	University of Northern British Columbia, B.Sc. (Hons), Prince George, BC, 2007
	University of Windsor, M.A., Windsor, ON, 2011