BEYOND THE PARENT-CHILD DYAD: TESTING FAMILY SYSTEMS INFLUENCES ON CHILDREN'S EMOTION REGULATION

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A Dissertation submitted to the Faculty of the Graduate School,
Marquette University,
in Partial Fulfillment of the
Requirements for the Degree of Doctor of Philosophy

Milwaukee, Wisconsin

August, 2008

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ABSTRACT
BEYOND THE PARENT-CHILD DYAD: TESTING FAMILY SYSTEMS INFLUENCES ON CHILDREN'S EMOTION REGULATION

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Marquette University, 2008

Emotion regulation is a central process across the lifespan. It shapes our everyday experiences, modulating emotions such as happiness, joy, anger, sadness, and fear, and holds important clinical implications for psychological adjustment, social functioning, and academic achievement. This importance makes it valuable to understand the social processes that mold one's patterns of emotion regulation. For children, the primary context of emotional development is the family. Past research has highlighted the role of parenting influences on emotion regulation; however, less is known about the role broader family factors play. This study presents a family systems model of emotion regulation, including mother-child, father-child, interparental, and family-wide processes to better understand the context in which it develops. This study presents data from 150 families of children aged 8-12 and draws from mother, father, child, and observed measures of family, parent, and child functioning. Analyses were conducted comparing three theoretical models: a unique predictors model, an interparental indirect effects model, and a family as context for parenting model. Comparisons of these models provided support for the interparental indirect effects model as the best fit with the data. This model finds that interparental functioning is indirectly associated with children's emotion regulation through mother-child, father-child, and family-wide processes. This model also found that maternal warmth and emotionally supportive parenting, higher levels of family positive emotional climate, and lower levels of family negative emotional climate were associated with the most adaptive emotion regulation functioning.

Acknowledgement

Thanks to the support of mentors, colleagues, and friends, I have never been alone in my work on this dissertation project, or in my graduate studies in general. As I reflect on my graduate career, I am flooded with names of people to whom I am greatly indebted for their contributions, both personal and professional. I would like to offer them my sincerest of thanks.

Early on, I am especially grateful to Linda Acredolo and Yvonne Emmons, who instilled my appreciation for family dynamics and child development and who welcomed me into my graduate studies. Without them, I know that I would not have had the opportunity to pursue a Ph.D., and for that, I am deeply grateful. I also had the good fortune to meet Brent Donnellan while I was at UC Davis. His continued friendship over the years is treasured; and his intellectual curiosity and astute analytical and methodological mind also have inspired tremendous growth.

I also would like to thank faculty at Marquette University for their role in my studies in Clinical Psychology. My clinical training serves as a constant reminder of the importance of studying family dynamics. I am grateful to Alyson Gerdes, John Grych, Amy Heffelfinger, and Steven Saunders for their rich perspectives and influence in guiding my work with the individuals and families that grounded my interest in family systems theory. I would also like to thank my thesis, qualifying exam, and dissertation committee members, Ed de St. Aubin, Alyson Gerdes, John Grych, and Debra Oswald for their thoughtful comments, discussions, and feedback on my research projects. Their presence in my training facilitated continued passion for conducting research with children and their families.

I would like to give special thanks to John Grych, who has been an ideal mentor throughout my graduate studies at Marquette. His example set an exceptionally high bar to strive for, and his genuine interest, caring, and investment in my development provided amazing opportunities for me. Above all, he provided a constant reminder of how exciting it is to be a part of this field. There is simply no way I can repay John for everything he has taught me and made possible for my future.

I would also like to thank the members of my research lab for their work on this project, and for creating a fun, intellectually stimulating environment. Also, I am grateful to Jenny Kunz, Kara Lindstedt, Ann Baskerville, Sarah Dyer, Jenn Wierzbicki, Stacy Braun and Kara Lindstedt for their hard work coding observational tasks used in this study. In addition, I would like to acknowledge Jenny Kunz's friendship throughout graduate school, she was a great friend, collaborator, and source of support from within our lab. I would like to thank Sarah Raynor for being a great friend and coworker. She made me a better person and researcher. Finally, Mark Lynn, although he joined the lab late brought a wonderful energy to our project and was a pleasure to work with.

I also would like to thank Karen Zygowitcz, Nick Bowersox, and Trish Johnson for their help and support in completing my dissertation defense. Your friendship and support were a solidifying force that helped things go smoothly.

During graduate school, I was given the tremendous gift of forming incredible friends, all of whom weigh heavily on my heart and mind as I write this. Given space limitations, I will only mention Andy and Terri deRoon Cassini with whom I leaned on most throughout my dissertation process. You two are lifelong friends and family, and I cannot convey my gratitude for all that you have been for me during school.

Finally, I would like to thank my family, both Fosco and Welch for your love and support. Most of all, I would like to give my unending gratitude to Becky Welch. She has been my one constant throughout it all; she provided unending support and encouragement, fuel for the passion that carried me through, and love that made this endeavor possible and worthwhile. Becky is the constant reminder of what love is and how it should guide all that I do.

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Beyond the Parent-Child Dyad: Testing Family Systems Influences on Children's Emotion Regulation

Emotion regulation is a central process for nearly every aspect of human functioning. It is instrumental for attending to, interpreting, understanding, and assigning meaning to events, whether they are common occurrences, or once in a lifetime events. Emotion regulation is the process that modulates the emotions that are constantly in flux; it plays an equally critical role in the way people cope with distressing experiences and the way we experience the happiest, most shining moments of their lives. Because the regulation of emotions is central to such a breadth of human lives, it is easy to understand why emotion regulation has received considerable attention in the research literature as an important individual, developmental, and clinical process.

Emotion regulation has important clinical implications. The ways in which children learn to manage their emotions shapes their psychological functioning, such as externalizing problems (Eisenberg et al., 2003; 2005) and internalizing problems (Eisenberg et al., 2001a). Children's emotion regulation capacity also has important developmental and social implications, including the development of empathy and prosocial behavior (Valiente et al., 2004), peer relationships (Davidov & Grusec, 2006), and peer victimization (Hanish et al., 2004). Given the implications that emotion regulation has for our emotional and psychological well-being, there is good reason to devote considerable resources to understanding how adaptive emotion regulation functioning develops and what factors facilitate its' growth.

Early conceptualizations of emotion regulation emphasized individual characteristics such as temperament and personality as core factors in its development

(for a review, see Fox, 1994). Thus, a driving assumption was that emotion regulation was a trait-like construct and research frequently ignored other processes involved in its development. More recently, emotion regulation research has broadened to recognize a variety of environmental factors that are formative influences on children's emotion regulation capabilities. Of the environmental variables, parent-child processes have received the most attention. Consistent with much parenting research, father influences have been widely overlooked and when studied, fathers and mothers have been examined in separate statistical analyses. This approach reflects a critical limitation because it inaccurately compartmentalizes parenting processes in children's lives. In addition, the focus on dyadic analyses of parent-child processes ignores other family factors, family members, or the relative influences of these family variables on children's emotion regulation.

This study addresses these limitations by providing a broader conceptualization of family processes that shape children's emotion regulation. Specifically, mother-child, father-child, interparental, and family-wide emotional climate processes were tested as predictors of children's emotion regulation. This family conceptualization offered several advantages. First, mothers' and fathers' influences were examined together as predictors of emotion regulation to test the relative contributions of each parent, while evaluating the degree to which mothers' and fathers' emotion socializing behaviors covary. Second, these influences were examined within the broader context of the family. Guided by family systems theory, this study evaluated multiple family subsystems and employed a model-comparison approach to uncover mechanisms through which different family processes are associated with children's emotion regulation. By testing alternative

models, it was possible to determine how each of these processes was associated with emotion regulation and with each other. The inclusion of interparental functioning is a new dimension for models of children's emotion regulation. It is well established that interparental conflict has important implications for children's socio-emotional functioning (e.g., Cummings & Davies, 1994; Emery, 1999; Fincham, 1994; Grych & Fincham, 2001), but it has been relatively ignored in relation to children's emotion regulation. This study also examined the family-wide emotional climate. Past research highlights emotional expressiveness as important for children's emotion regulation. However, previous research is limited because measures of the emotional climate typically has not incorporated measures of mothers and fathers together, nor other family-wide processes that may contribute to the emotional climate (e.g., family cohesiveness). The present study was designed to examine family influences on children's emotion regulation that extend beyond dyadic relationships. However, before discussing family processes, it is important to conceptualize children's emotion regulation.

Defining Emotion Regulation

Researchers have struggled with the challenge of defining emotion regulation since it's inception as a construct of study (Thompson, 1994). Even now, theorists continue to strive for a consensus in defining emotion regulation, but debate continues with no foreseeable conclusion (see Cole, Martin, & Dennis, 2004 and commentaries). Broadly stated, emotion regulation refers to processes that control emotional states (Campos et al., 2004). Drawing from a functionalist perspective, emotions are regarded as the assimilation of an event into one's goals (Barrett & Campos, 1987; Campos et al., 2004). For example, children experience anger when they perceive obstruction to goal

attainment, or sadness at the loss of a goal (Campos et al., 2004; Stein & Levine, 1989). Functionalist views indicate that emotions are regulated in the context of one's situational goals, even though the goals driving one's emotions are not always apparent or in one's immediate awareness (Thompson, 1994; Campos et al., 2004; Cole et al., 2004).Thus, emotions are regulated through the enactment of one's emotions, which is a product of the event, one's goals, and the emotions elicited (Campos et al., 2004). For example, anger is often enacted as an attempt to reinstate one's goal, while fear is enacted as an attempt to preserve one's safety.

How Emotions are Regulated

Emotion regulation is the process of controlling emotion states by modulating the intensity and duration of emotional experiences (Cassidy, 1994; Davidov & Grusec, 2006). Regulation may involve suppressing, heightening, or maintaining emotion (Cassidy, 1994; Thompson, 1994). For example, it may be particularly valuable to suppress feelings of anxiety when giving taking a test or giving a presentation in front of one's class. Similarly, emotional maintenance might be valued if one seeks to extend the duration of an emotional experience, such as continuing discussions about a great game with one's teammates. When goals are not accomplished quickly, maintenance is necessary to sustain the motivation to continue striving for that goal (Campos et al., 2004). Also, heightening can be adaptive if it elicits desired caregiving responses during times of need (Cassidy, 1994). However, when persistent patterns of heightening (exaggerating), suppressing (minimizing), or maintaining (ruminating) emotions emerge, they are viewed as dysregulated because they can lead to negative social and emotional outcomes (Davidov & Grusec, 2006).

Defining Emotion Regulation for this Study

Also debated is the question of whether definitions of emotion regulation should include internal and external factors (Eisenberg & Spinrad, 2004; Thompson, 1994). Some argue that external sources of regulation are important dimensions of emotion regulation, especially when considering infants' dependence on caregivers to soothe and help regulate their affect (Campos et al., 2004; Kopp, 1982). Throughout the lifespan, people often turn to others for help dissipating intense or difficult emotions. However, as the scope of regulation processes expands, it becomes difficult to distinguish emotion regulation from other processes, such as parenting practices, social support and coping strategies, which threatens its utility as a construct of study (Cole et al., 2004). This concern has led some to argue that regulation should be defined as an individuals' ability to regulate their own emotions (Eisenberg & Spinrad, 2004).

These important questions make it no small task to delineate what emotion regulation is and is not. For this study, emotion regulation is conceptualized through a functionalist perspective in which one's goals are at the focus of regulatory processes. So that regulation may be distinct from other family processes, this study focuses on children's self-regulation capacities but conceptualizes them as embedded within an interpersonal and systems framework. This conceptualization suggests that children's emotions are regulated within, but external processes may act in the service of emotion regulation.

Children's emotion regulation was measured in a manner that captures children's ability to regulate positive and negative affect and was assessed from mothers', fathers', and children's perspectives. Regulation of positive and negative affect is considered

adaptive when children do not engage in consistent patterns of suppression or heightening of emotions. Thus, it is important that they are able to appropriately express their emotions, but also modulate excessive emotions such that they do not persistently heighten or maintain affect beyond what is helpful in attaining their goals. This was captured by measuring children's ability to be flexible and adapt to changing circumstances and to inhibit excessive or inappropriate affect.

Family Factors in Emotion Regulation Development

Empirical support and recognition of the role of the family in children's emotional development is accruing (e.g., Denham, 1998; Halberstadt, 1991; Halberstadt & Eaton, 2002; Saarni, 1999). Research examining family dynamics has focused mostly on parental contributions to children's emotional development. However, a family systems theory perspective argues that studying children's development within parent-child dynamics is incomplete without incorporating other family processes that contribute to the children's emotion regulation. A growing body of literature is recognizing the value of family systems theory in understanding different aspects of children's development (Davies & Cicchetti, 2004).

Family systems theory offers insight into different levels of relationships and functioning in the family. First, family systems theory identifies several subsystems that are important units of influence on children's emotional functioning. A subsystem can be any group of family members that have a relationship apart from other family members (Minuchin, 1974). While families differ in the subsystems that comprise them, there are typical subsystems (e.g., parent-child, interparental, etc.) found in most families that can guide explorations of family influences. Second, systems theorists argue that these

subsystems are not adequately understood in isolation, but that they are *interdependent* (Cox & Paley, 1997; Minuchin, 1985). The functioning of one subsystem affects the functioning of the entire family. Therefore, even family subsystems that children are not members of may have important implications for their emotional development. Third, systems theory also calls for a *wholistic* view of the family, based on the principle that the "whole is greater than the sum of its parts" (Cox & Paley, 1997). Accordingly, it is important to consider how family processes work in concert with one another and that the functioning of the family unit as a whole is also an important influence on children's functioning (Minuchin, 1974).

This study examined the impact of different family subsystems and the broader family systems principles of interdependency and wholism on children's emotion regulation. In what follows, research investigating parent-child and interparental subsystems is reviewed. Then, a discussion of family systems principles that extend beyond a dyadic view of family influences on children's emotion regulation is provided and used as the theoretical framework for this study.

Family Subsystems

Family systems theory identifies several subsystems that shape children's emotional functioning. Drawing on previous research, it is particularly useful to discuss parent-child and interparental family subsystems.

The Parent-Child Subsystem

There are several ways in which parents shape children's emotion regulation (Halberstadt, 1991). Within the parent-child subsystem, past research has provided the

most support for examining the ways in which parents respond to children's emotions and the quality of the parent-child relationship.

Parental Responses to Children's Emotions. The manner in which parents respond to children's affect is theorized to teach children to inhibit or express particular emotions (Eisenberg, Spinrad, & Smith, 2004), convey comfort (or discomfort) with different emotions, teach children strategies for emotional management (Gottman, Katz, & Hooven, 1996), and teach children how to cope with and problem-solve during distressing situations (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002; Gottman et al., 1996). It seems that there are core attributes that characterize parents who foster adaptive emotional development in children. Parents who have greater awareness, attunement, and acceptance of their children's affect tend to have children with more adaptive emotion regulation (Gottman et al., 1996; Ramsden & Hubbard, 2002). In turn, these attributes guide parenting responses. For example, Gottman and colleagues (1996) found that when parents are more aware of their children's emotions, they are more likely to use supportive and scaffolding techniques when their child is frustrated. Parental techniques of validation, supportiveness, and guidance were associated with children's effective self-soothing abilities (Gottman et al., 1996). Also, when parents are more attuned to their children's emotions, they are less likely to punish, derogate, or belittle their children's distress (Gottman et al, 1996), techniques that have been demonstrated to undermine children's skill at regulating their emotions (e.g., Eisenberg, Fabes, & Murphy, 1996; Jones, Eisenberg, Fabes & MacKinnon, 2002, Fabes, Leonard, Kupanoff, & Martin, 2001). Thus, parents who are attuned to their children's emotions and who

offer support and warmth during emotional experiences set their children up for positive emotional development.

Parent-child relationship security. Parental behaviors are not the only characteristic that is important for children's emotional development. In fact, the quality of the parent-child relationship also plays a formative role in children's emotion regulation development beginning with the inception of the attachment bond (Cassidy, 1994). Securely attached children are better able to manage their own negative affect (Ainsworth et al., 1978) and are more likely to seek guidance in coping with their emotional experiences (Dunn & Brown, 1994). Moreover, the value children place on the parent-child relationship may foster an investment in developing means of regulating emotions in a way that pleases their caregiver (Eisenberg, Spinrad, & Cumberland, 1998). The importance of the parent-child relationship remains salient throughout childhood as children face adverse events, they draw from that relationship as a source of reassurance that they can cope with the situation and subsequent affect.

Later in life, secure relationships continue to play a role in emotional functioning. Cooper, Shaver and Collins (1998) found differences in adolescent's coping with negative affect to be a function of security of their relationship with their parents. Closer, more secure relationships were consistently associated with lower levels of emotion dysregulation. These findings were further supported with a group of young adults, in which attachment anxiety was negatively associated with adaptive emotion regulation (Diamond & Hicks, 2005). Thus, it seems that children who form close, secure relationships with their caregivers may be better able to develop adaptive emotion

regulation skills, and relationships that are perceived as less secure may undermine their ability to manage their emotions.

Summary and Critique of Parent-Child Factors

Given the importance of parental attunement, warmth, and sensitivity to children's affect (Ramsden & Hubbard, 2002) and the salience of the parent-child relationship for children's adaptive regulation, it is important to evaluate the limitations to this body of research. Past research has examined parenting behaviors (warmth, responses to affect) outside of the context of the parent-child relationship. To address this limitation, the present study incorporated multiple dimensions of the parent-child subsystem, including parental warmth and sensitivity, attunement and responsiveness to children's affect, and parent-child relationship security.

Perhaps the most substantial limitation to research investigating parent-child factors in children's emotion regulation is the relative absence of research investigating the role of fathers for children's emotion regulation. Although it is generally assumed that maternal influences can be generalized to fathers, without more data, this remains a relatively untested assumption. The few studies that include fathers in their analyses suggest that they have similar patterns of influencing children's emotion regulation (Davidov & Grusec, 2006; Eisenberg et al., 1999), but these studies are limited because mothers and fathers were evaluated separately for their contributions to children's emotion regulation. This study takes the important next step by testing both mother- and father-child subsystems in the same model to examine the relationship between these dimensions and to test whether there are unique associations with children's emotion regulation.

The Interparental Subsystem

Parent influences on children's emotional development are not limited to direct parent-child interactions. Family systems theory asserts that children also are affected by subsystems they are not members of (Minuchin, 1974). Therefore, the interparental subsystem's influence may reach beyond its boundaries. Disturbances to the interparental subsystem may affect other (e.g., parent-child) subsystems or have a direct impact on children's functioning (Harold et al., 1997).

Interparental conflict is a particularly salient aspect of the interparental subsystem. Every relationship must cope with disagreements, and nearly all children will be exposed to interparental conflict at some point in their lives (Cummings & Davies, 1994; Emery, 1999). Frequent, intense, and poorly resolved conflicts between parents can be very distressing for children (Crockenberg & Forgays, 1996; Crockenberg and Langrock, 2001; Davies & Cummings, 1998) and are linked with children's adjustment problems (Fincham, 1994). Despite multiple theoretical models describing mechanisms through which parental conflict shapes children's adjustment problems, the role of children's emotion regulation in this association is relatively untested. As a result, little is known about this potentially important factor for children's emotion regulation.

Repeated exposure to interparental conflict may lead to heightened distress that may result in patterns of emotional dysregulation and maladaptive regulatory strategies. This perspective is most consistent with research investigating children's emotional security processes in relation to interparental conflict. There is substantial evidence that children develop emotional reactions to parental conflict, including sadness, fear, and anger (Crockenberg & Forgays, 1996; Crockenberg & Langrock, 2001). Emotional

security theory builds on this perspective by identifying the role of emotional reactivity and behavioral regulation that are linked with levels of emotional distress associated with parental conflict. (Davies & Cummings, 1994; Davies et al., 2002). Emotional security theory posits that children's distress reactions to parental conflict play a guiding role in their coping responses and attempts to preserve their sense of harmony within the family. Emotional security has been described as a latent construct identified through three dimensions: emotional reactivity, children's regulation of exposure to conflict (avoidance or intervention) and beliefs about the impact of conflict on the interparental relationship (Davies & Cummings, 1998). Davies and Cummings (1998) tested these three components as mediators of parental conflict and children's adjustment using a sample of 56 six- to nine-year-olds and found that children's emotional reactivity mediated parental discord and both internalizing and externalizing problems. In this study, emotional reactivity was defined as children's behavioral and subjective responses reflecting children's distress (anger, sadness, fear) and concern about parental conflict. Thus, Davies and Cummings (1998) did not measure emotion regulation directly, but their findings lend support to the hypothesis that parental discord and emotion regulation may be linked. However, Katz and Gottman (1997) did document correlations between parents' reports of marital dissolution and children's problems with self-soothing and regulating their affect. Thus, theory and preliminary evidence support the hypothesis that exposure to frequent and distressing conflicts may be associated with children's emotion regulation problems.

A second perspective highlights the possibility that exposure to interparental conflict may model ineffective emotional expression and regulation. In particular, Jenkins

and Oatley (1997) theorize that children's observations of hostility between parents may lead them to develop an "emotion organization" in which anger pervades children's patterns of responding to emotionally arousing events, even when such events typically evoke other emotions. Jenkins (2000) found that children who are exposed to greater anger expressions between parents were more likely to experience "deviant anger," characterized by angry responses to situations that typically elicit other emotions. This study suggests that exposure to parental discord may undermine children's ability regulate their emotions in accordance with the situational demands. Children who observe anger or aggression as effective in "winning" an argument between parents may adopt these strategies to cope with stressors in their own lives. Anger regulation has been found to mediate the link between children's exposure to interparental conflict and their use of aggressive tactics in dating relationships (Kinsfogel & Grych, 2004). Overall, the research investigating interparental conflict and children's emotion regulation is scarce. More research is needed to better understand how parental conflict and relationship functioning is associated with children's regulation of negative and positive affect.

Family Systems Principles: Understanding the Whole with More than Just Pieces

Taken separately, mother-child, father-child and interparental subsystems each hold promise as predictors of children's emotion regulation. However, family systems theory argues that children's lives are not compartmentalized; rather, they are comprised of a constant flux of activity across each of the family subsystems. Systems theorists contend that the study of individual processes separately are, at best, an incomplete conceptualization of the family environment and overlook the "bigger" picture for children's emotion regulation development. This study is designed to answer the

question: do family systems principles offer additional insight into children's emotion regulation?

To answer this question, it was necessary to place the different influences within a family context. This study accomplished this in two ways. First, it examined the association between each of these subsystems and children's emotion regulation together in the same model. In doing so, it was possible to examine whether the associations between each family process and children's emotion regulation found in previous research remained significant when tested in relation to one another. This made it possible to evaluate the relative impact of each subsystem. Also, it was possible to determine whether particular subsystems were directly or indirectly associated with children's emotion regulation. Second, this study examined broader family processes beyond dyadic influences on children's emotion regulation and that also may exert influence. Specifically, the family emotional climate was tested as an additional predictor of children's emotion regulation. Family systems theory was employed as a theoretical framework to guide empirical tests of these processes.

Interdependency of Subsystems

Interdependency between subsystems has been identified as a core principle of family systems theory (Minuchin, 1985). This argues that subsystems are only accurately understood within the context of the other subsystems; subsystems do not function in isolation from the others. In reality, each subsystem affects and is affected by the others in the family (Minuchin, 1974). It is only through testing these associations that it becomes possible to understand how these processes work in concert with one another

around the child's emotion regulation functioning. Specifically, this perspective calls for tests of indirect and direct effects on children's emotion regulation.

One example of indirect influences is found in research investigating the impact interparental functioning has on children's well being through disruptions to the parent-child subsystem. This theory is consistently supported in the relationship between interparental conflict and parenting practices (e.g., Erel & Burman, 1995; Harold et al., 1997). In a meta-analysis of 68 studies, Erel and Burman (1995) concluded that problems in the interparental dyad (e.g., conflict) are consistently associated with greater problems in the parent-child relationships (e.g., less effective parenting, parent-child conflict, diminished parent-child relationships). This has been referred to as a "spill-over" effect, a mechanism that helps explain the association between interparental conflict and children's adjustment problems. Further, evidence supports a temporal association between problematic functioning in the interparental subsystem and later parenting practices (Gottman & Katz, 1996; Sturge-Apple et al., 2006). Although there is a good deal of research examining the spill over interparental conflict into parenting in relation to children's internalizing and externalizing problems, this mechanism is virtually untested in relation to children's emotion regulation.

Although indirect effects represent an important aspect of the interdependent nature of subsystem functioning, interdependency also may be apparent in ways. The interconnected nature of family functioning could function cumulatively, in which maladaptive functioning in one subsystem (e.g., parent-child) spreads to other subsystems (e.g., interparental) leading to multiple factors impacting children's emotion regulation. This possibility would be reflected in an additive effects model, but would be better

understood by the interconnected nature of the "effects" on children's emotion regulation. However, it is also possible that different subsystems may compensate for others. For example, negativity and unsupportive responses in one parent-child subsystem may lead the other parent to respond with increased warmth and support in an effort to ameliorate the impact of the other subsystem.

Wholism

Family systems theorists argue that family functioning is not reducible to its parts, that the family is only accurately understood as a whole (Cox & Paley, 1997; Minuchin, 1985). Moving beyond a view of the family as a "sum of its parts", growing attention is being placed on broader family processes (Cicchetti & Davies, 2004). Broader levels of family functioning may serve as a context from which children cope with stressors and manage their emotions (Grych & Fincham, 1990; Thompson & Meyers, 2007). In particular, the family emotional climate holds great promise as a socializing domain for children's emotion regulation. Families that are warm and positive create a supportive environment that helps children cope with stressors more constructively (Thompson & Meyers, 2007). Also, drawing from an emotion socialization perspective, the patterns of emotional expression in the family may model ways of regulating emotions and teach children about the meaning different emotions have (Halberstadt, Crisp, & Eaton, 2002). Drawing from these two perspectives, this study includes emotional expressiveness and family cohesion as core components of the emotional climate.

Emotional expressiveness. Expressiveness refers to the patterns of emotional expression, characterized by the frequency and occurrence of positive and negative affect (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995). Emotion socialization theory suggests