RELATIONS AMONG INTERPARENTAL CONFLICT, PARENTING PRACTICES, AND EMOTION REGULATION DURING EMERGING ADULTHOOD

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DEDICATION

To my husband —
For his years of love, support and encouragement!

To my daughter —
For her presence and smile, she is so precious and wonderful!

To my parents —
For their love and inspiration!
ABSTRACT

DISSERTATION: Relations Among Interparental Conflict, Parenting Practices, and Emotion Regulation During Emerging Adulthood

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This study examined the influence of parenting-related factors to emerging adults’ emotion regulation, especially in the context of interparental conflict. Specifically, the purpose of the study was to examine how interparental conflict, parenting (defined as parental psychological control, autonomy support, and behavioral control), and parent-child relations (defined as parent-child attachment) are related to emerging adults’ emotion regulation. In addition, do parenting behaviors (psychological control, autonomy support, and behavioral control) and parent-child attachment mediate the relations between interparental conflict and emotion regulation? A total of 361 college students reported their perceptions of interparental conflict, their parents’ parenting practices, parent-child attachment, as well as their emotion regulation capabilities. The majority of the participants were females (n = 292), and Caucasians (n = 322) with an average age of 20.23 (SD = 1.39) years. In general, the participants reported moderate interparental conflict, relatively low psychological control and behavioral control, moderate levels of parental autonomy support, and high parent-child attachment, along with relatively high emotion regulation capabilities. With regression analyses, the results showed that emerging adults who reported higher levels of resolution of interparental conflict, moderate levels of parental behavioral control, greater attachment communication, and lower levels of alienation from
parents were associated with better emotion regulation. Path analyses were used to test the role of parenting and attachment in mediating the relations between interparental conflict and emotion regulation. Results demonstrated that parental behavioral control, autonomy support, and parent-child attachment partially mediated the role of resolution of interparental conflict on emotion regulation. In addition, parental behavioral control and autonomy support partially mediated the impact of resolution of interparental conflict on emerging adults’ alienation from parents. In particular, resolution of interparental conflict was the strongest predictor of emerging adults’ emotion regulation capability, even when parenting practices and parent-child attachment were controlled.
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CHAPTER I

Introduction

Statement of Purpose

Over the past two decades, there has been a renewed interest in emotion regulation, defined as “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), as a psychological construct worthy of further investigation (Cole, Martin, & Dennis, 2004). Almost ten years ago, a special section of a leading journal in psychological science was devoted to discussing and clarifying emotion regulation as an important psychological construct, particularly its importance to understanding children’s and adolescents’ development (Langlois, 2004; see Child Development, March/April 2004 for details). Research about the development of emotion regulation has continued to grow, particularly with regard to the contextual, specifically family, factors that influence its development. In addition, emotional development research historically has focused on young children, with studies about adolescents and emerging adults needed (Gullone, Hughes, King, & Tonge, 2010; Yap, Allen, & Ladouceur, 2008).

There is much consistency in how emotion regulation is defined in the literature, and its characteristics are well captured within the construct of emotional intelligence. First proposed by Salovey and Mayer (1990), emotional intelligence consisted of a set of four abilities that included perception, appraisal, and expression of emotion with self and others; accessing and/or generating feelings that foster thought; understanding of emotion and emotion-related knowledge; and regulation of emotions to facilitate personal emotional and intellectual growth (Mayer & Salovey, 1997; Salovey & Mayer). The four areas of emotion-related abilities represented a series of psychological processes with perception, appraisal, and expression of...
emotion considered the lowest level ability and regulation of emotion the highest. According to Salovey and Mayer’s theory, emotion regulation as an important part of emotional intelligence has two components: regulation of emotion in the self and regulation of emotion in others. Specifically, emotion regulation can be divided into individuals’ capabilities of staying open to both positive and negative feelings, engaging or detaching certain emotions based on their utility, monitoring emotions relating to self and others, and managing one’s own and others’ emotions adaptively (e.g., fostering pleasant ones and lessening unpleasant ones) without suppression or exaggeration. These abilities emerge at different times with openness to emotions developing first and conscious, reflective emotion regulation developing last (Mayer & Salovey, 1997). For the current study, emotion regulation is used only to refer to an individual’s conscious regulation of emotions in oneself (e.g., making efforts to maintain or dampen a good mood, changing or improving a bad mood, or simply leaving a certain mood unattended) to achieve personal adaptive functioning and growth (Mayer & Salovey, 1997).

Family as the main context where emotional socialization occurs has the most important influence on individuals’ emotional regulation development (Morris, Silk, Steinberg, Myers, & Robinson, 2007). In addition, an ecological systems approach would suggest that to understand a person’s emotional development, family contexts such as marital relations and parent-child interactions must be taken into account (Bronfenbrenner & Crouter, 1983). In a widely cited review and conceptual article, Morris et al. (2007) proposed a theoretical model to explain how family might influence children’s and adolescents’ emotion regulation. Specifically, the overall family emotional climate including interparental relations, parent-child attachment, and parenting style were highlighted as significant contributors to emotion regulation. Indeed, numerous empirical research studies have confirmed the role of parenting behaviors and parent-
child relations in the development of children’s emotion regulation (Chan, 2011; Cummings, Braungart-Rieker, & Du Rocher Schudlich, 2003; Gilliom, Shaw, Beck, Schonberg, & Lukon, 2002; McDowell, Kim, O’Neil, & Parke, 2002; Moilanen, 2007; Strayer & Roberts, 2004; Wolfradt, Hempel, & Miles, 2003). However, given the changes in family relationships and parenting practices that occur during adolescence and particularly changes in attachment and autonomy during emerging adulthood when children leave home (Arnett, 2007), an urgency to study family influences on emotional development among adolescents was expressed (Morris et al.). The purpose of the current study is to extend what is known about family influences on emotion regulation during childhood and to examine the relations of interparental conflict, parenting practices, and parent-child relations, particularly transitions in attachment, and emotion regulation during late adolescence/emerging adulthood.

**Rationale**

Parents as important socialization agents of emotion have a significant impact on fostering or undermining their children’s emotion regulation. Parents assume the responsibility of regulating their children’s emotions and behavior when they are young (Kopp, 1989). Early parenting is closely associated with and indicated by attachment between parents and children. Children with warm, responsive parents or caregivers are more likely to build positive expectations that their needs would be attended to when needed (Cassidy, 1994) thus they become more competent and ready to turn to parents for assistance when a need rises; whereas children who encountered cold, neglectful parents tend to form expectations that their parents might neglect or only selectively attend to their signals (Cassidy, 1994). In other words, emotion regulation is facilitated by the existence of beneficial (or subjective desired) outcomes, and if such outcomes are absent no matter what has been tried, emotion regulation is thus undermined
Thompson, 1994). Consequently, parent-child attachment would be indicative of whether parents were emotionally available to children, especially in times of distress.

Infants and children use different emotion regulation responses to their caregivers’ behaviors, which function as ways to maintain their relationships with caregivers (Cassidy, 1994). For example, in one observational study, Malatesta and colleagues (Malatesta, Culver, Tesman, & Shepard, 1989) found that insecurely attached toddlers showed more positive affect during reunion with mothers when emotional distress should have been expressed, indicating that they had exercised more constraints and compression over their emotions (through facial expressions). In addition, avoidance of mothers also was observed. The abnormal onset of positive affect together with avoidance of reunion was interpreted as insecurely attached children’s emotional regulation strategies to control their anger. Securely attached children, on the other hand, engaged in more communication with mothers (e.g., eye contact) and expressed more distress, demonstrating that they were openly expressing their frustration (Malatesta et al., 1989). Cassidy (1994) argued that children engaged in various emotion regulation behaviors with the aim to preserve and protect their relations with caregivers. Insecurely attached children’s adoption of emotion suppression reflected their understanding and expectation based on previous contact and experience with caregivers that their parents would rather not be bothered.

Attachment continues to serve as a strong foundation for adaptive emotional functioning during adolescence (Hill, 1983; Hill & Holmbeck, 1986; Morris et al., 2007). Attachment between adolescents and parents has been conceptualized and measured through trusting relations, open communication, as well as feelings of closeness between parent and child (Armsden & Greenberg, 1987; Gomez & McLaren, 2007), and has been associated with adolescents’ emotional autonomy and self-regulation (Gallarin & Alonso-Arbiol, 2012).
As children grow, parental emotional availability becomes demonstrated through the styles that parents use to interact with their children. The parenting literature has featured various typological approaches to the study of parenting style. Most commonly used is the typological approach proposed by Baumrind (1971) and transformed by Maccoby and Martin (1983). Baumrind originally identified three types of parenting: authoritarian, authoritative, and permissive. Using two-dimensions of parenting identified as demandingness (control) and responsiveness (warmth), Maccoby and Martin redefined the three types of parenting into four types: authoritarian, authoritative, indulgent, and neglectful, based on parents’ relative position on the demandingness and responsiveness dimensions. This approach was popular for about two decades, but gradually declined because of its fundamental flaws. With a typology approach, it was difficult to distinguish the impact of the individual dimensions used to define the types on children’s outcomes. In other words, although it has been widely accepted that authoritative parenting is the most adaptive to children and neglectful parenting the least functional (Lamborn, Mounts, Steinberg, & Dornbusch, 1991), it has not been understood how and why these outcomes occurred (Darling & Steinberg, 1993). Additionally, research studies about four parenting styles (authoritative, authoritarian, indulgent and neglectful) and their impact on children’s and adolescents’ educational, social, and emotional outcomes in ethnic groups other than European Americans have demonstrated some alternative findings. For example, authoritarian parenting that was generally believed to be detrimental was associated with high educational engagement among Hispanic adolescents; whereas among African-American students, authoritative parenting was not related to academic achievement (Steinberg, Lamborn, Dornbusch, & Darling, 1992). It is true that to understand parenting styles better, researchers
have come to consider different dimensions of parenting that could be examined separately in terms of their impact on children’s and adolescents’ functioning (Darling & Steinberg, 1993).

This second approach to parenting styles divided parenting into three distinct dimensions: parental psychological control, behavioral control, and autonomy support granting. These constructs were first proposed by Schaefer (1965) in his analysis of children’s reports of parental behaviors. Over the past two decades, several studies have assessed the distinction among the factors, particularly during adolescence, and provided a clearer understanding of their role in parenting and adolescents’ outcomes. Steinberg (1990) found distinct differences between psychological and behavioral control, and proposed that adolescents would be negatively impacted by psychological control, defined as the intrusion on the development of individuals’ emotional autonomy and personal self reliance, and positively influenced by the presence of behavioral control, defined as the provision of behavioral guidance or demandingness. Barber, Olsen, and Shagle (1994) continued to study the distinction between these two constructs and demonstrated with empirical studies that high psychological control was related to more internalized problems (e.g., depression), whereas moderate to high behavioral control was associated with fewer externalized problems (e.g., delinquency) when the other construct was controlled (Barber et al., 1994). Barber (1996) defined psychological control as parental “attempts to intrude into the psychological and emotional development of the child (e.g., thinking processes, self-expression, emotions, and attachment to parents)” (p. 3296) and developed a self-report measure to assess parental psychological control, thus establishing the conceptual and research foundation for the construct.

The literature has been inconsistent in terms of the nature of parental autonomy support granting. Although some early research studies suggested that autonomy granting was the
opposite of psychological control (e.g., Steinberg, 1990), more recent researchers have viewed it as a distinct construct (Silk, Morris, Kanaya, & Steinberg, 2003; Wang, Pomerantz, & Chen, 2007), defined as parents’ facilitation of adolescents’ independent thinking and expression, as well as behavioral decision-making (Silk et al., 2003). The work of Soenens and Vansteenkiste (2010) provided some insights into this conceptual dispute. They argued that autonomy granting was mainly defined in two distinct ways: the first viewed autonomy granting as the promotion of independence whereas the second conceptualized the construct as promotion of volitional functioning, and the choice of definition leads to different conclusions about the relations between autonomy granting and psychological control. For the current study, psychological control is viewed as distinctively different from autonomy granting (Silk et al., 2003; Wang et al., 2007). Such speculation also has been supported by other empirical studies. For example, Skinner, Johnson, and Snyder (2005) found that a two-factor model (psychological control and parental autonomy support) fit much better than a one-factor model with data collected from a large sample of adolescents. Moreover, psychological control and parental autonomy support were only weakly correlated with each other, and demonstrated different association patterns with adolescents’ internalized problems, problem behavior, and self-concept. In another study, Skinner and colleagues found that the unipolar (multiple) dimensions of parenting were significantly better than a bipolar model with self-reported data from parents and adolescents. To be specific, autonomy support and parental psychological control (coercion in their term) were found to be distinct constructs rather than opposite ends of one parental dimension (Skinner et al.).

Parental behavior control has been found to be positively associated with preschoolers’ emotion regulation whereas negative control like psychological control has been related to less
use of adaptive emotion regulation strategies and more dysfunctional means for regulation (Calkins, Smith, Gill, & Johnson, 1998). Children whose mothers were supportive had the capacities of generating more coping strategies (Hardy, Power, & Jaedicke, 1993). Parental psychological control has been found to be associated with emotion regulation problems among early adolescents as well (Manzeske & Stright, 2009; McEwen & Flouri, 2009), whereas maternal warmth was associated with adolescents’ emotion regulation (Walton & Flouri, 2010).

It is important to note that although parenting practices and parent-child relations are all part of the overall family domain, they are generally considered distinct contributors to children’s and adolescents’ developmental outcomes (Scott, Briskman, Woolgar, Humayun, & O’Connor, 2011). Whereas parenting practices generally designate concrete parenting behavior (e.g., what parents do to control children’s emotions and behavior), parent-child relations (e.g., parent-child attachment) reflect how children feel about their interpersonal relations with parents (Karavasilis, Doyle, & Markiewicz, 2003). In fact, research has shown that parenting behaviors influence adolescents’ affective attachment with parents, which in turn impacts their developmental outcomes (Scott et al., 2011). For example, in recent studies, negligent and unresponsive parenting predicted insecure attachment (Brenning, Soenens, Braet, & Bal, 2012; Karavasilis et al., 2003), whereas parental autonomy support was associated with higher levels of adolescents’ trust towards parents and feelings of being loved (Shpigel, Diamond, & Diamond, 2012). In addition, attachment dimensions (e.g., trust, communication, and alienation) were found to mediate the relations between parenting practices and late adolescents’ emotional dysfunction (e.g., aggression) (Gallarin & Alonso-Arbiol, 2012), and between parental warmth and self-esteem along with externalizing problems among adolescents (Doyle & Markiewicz, 2005).
In addition to dimensions of parenting that directly impact emotional development, negative relationships between parents (i.e., interparental conflict) can also influence children and adolescents’ emotion regulation (Morris et al., 2007). It has been hypothesized that interparental conflict is related to children’s emotion regulation both directly and indirectly by undermining parenting practices and parent-child relationships (i.e., parent-child attachment) (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). The first generation of research on interparental conflict focused on exploring its direct impact on children’s and adolescents’ maladjustment (Fincham, 1994). Emotion regulation could be learned through observation of parents as models. Parents’ emotional display and regulation provided children important information about what is accepted and encouraged in the family. The interactions among family members, especially between parents, implicitly conveyed messages to children about how they should manage their emotions, especially negative emotions in their current and future life (Morris et al., 2007). Indeed, interparental conflicts were found to be associated with children’s emotional regulation problems. Children from families characterized by hostile interaction and high conflicts exhibited more aggressive behaviors (Emery, 1982) and had problems in managing their negative emotions such as anger (Clark, 2004). Research studies have shown that overt interparental conflict and physical violence were the most relevant to children’s dysfunction (Fincham, 1994).

The second generation of interparental conflict research shifted attention from direct impact to examining the processes or mechanisms of interparental conflict’s impact on children’s and adolescents’ development (Cummings & Davies, 1994, 2010; Fincham, 1994). In particular, several hypotheses and models in the literature proposed parenting as an important mechanism. One commonly accepted hypothesis, the spill-over effect, explicitly proposed that the negative
emotions and behaviors resulting from interparental conflict would spill into the parent-child subsystem and undermine parenting practices and parent-child attachment (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). Parents drained by marital discord might become less responsive and emotionally available to their children. In addition, they might become less consistent in parenting practices (Erel & Burman, 1995). Empirical studies generally supported the spill-over effect with moderate effect sizes recorded (ranging from .49 to .62 between interparental conflict and negative parenting) (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). For example, a national study testing the spill-over effect indicated that interparental conflict was associated with parental use of harsh discipline as well as low involvement among preschoolers, children, and adolescents (Buehler & Gerard, 2002). In a recent study, responsive parenting was found to buffer the negative effects that interparental conflict had on children. In addition, secure attachment with parents was linked with less distress experienced by children in times of conflict (DeBoard-Lucas, Fosco, Raynor, & Grych, 2010).

Another well-known hypothesis, the emotional security hypothesis, articulated the relations between interparental conflict and their children’s emotion regulation. The hypothesis proposed that the primary goal for children exposed to conflicts between parents was to preserve their emotional security by regulating their emotions via various means: expressiveness of emotional reactivity or arousal (e.g., fear, distress, and vigilance), regulation of exposure to interparental conflict (avoidance or involvement), and internal representations of parental conflict (constructive or destructive) (Cummings & Davies, 1994, 2010). Originally proposed to be the mechanism between interparental conflict and children’s and adolescents’ maladjustment, most researchers have examined how three regulatory processes (emotional reactivity, regulation of exposure to interparental conflict, and internal representations of parental conflict) accounted
for variances between interparental conflict and their children’s development in both concurrent and longitudinal studies (see Cummings & Davies, 2010). For example, one’s emotional security system mediated the relationship between interparental conflict and children’s learning engagement and emotional problems at school (Grych, Wachsmuth-Schlaefer, & Klockow, 2002; Sturge-Apple, Davies, Winter, Cummings, & Schermerhorn, 2008), and between interparental conflict and children’s difficulties sleeping and academic performance even when attachment insecurity was considered (El-Sheikh, Buckhalt, Keller, Cummings, & Acebo, 2007).

In particular, some studies found that emotional reactivity and internal representations were stronger mediators between interparental conflict and children’s outcomes (e.g., internalized problems), than were parenting behaviors (Davies & Cummings, 1998).

Similar to the emotional security hypothesis, Grych and Fincham (1990) provided a contextual-cognitive framework to illustrate how children’s cognitive appraisal and coping with interparental conflict thus offered an explanation for the detrimental impact of conflict on children’s adjustment. The model proposed that interparental conflict as a stressor imposed on children would lead to two cognitive processes. When exposed to interparental conflict, children would first encounter affective distress or arousal (primary processing), such arousal then would lead to children’s reflection on their attributions of the conflicts as well as how to cope with them (secondary processing). Emotional arousal in the first process would impact cognitive interpretation and coping in the second process, which in turn would ease or magnify the emotional distress generated. Both processes were influenced by contextual factors and the developmental stage of children. In particular, children’s perceived emotional climate within the parent-child domain was conceptualized as a significant contributor to the affect and cognition.
involved in the two cognitive processes. Good parent-child relationships could buffer the negative impact of interparental conflict (Emery, 1982; Grych & Fincham).

Both the emotional security hypothesis and the cognitive-contextual model articulated the idea that individuals’ emotion regulation might be influenced by interparental conflict. The objective of the current study, however, focused on examining the mechanisms between interparental conflict and their children’s emotion regulation. To be specific, it was anticipated that parenting (including parenting behaviors and parent-child relations) functioned as important mediators between interparental conflict and children’s emotion regulation. However, instead of measuring emotion regulation in the specific context of interparental conflict, general emotion regulation capabilities were assessed.

The Current Study

The accumulation of literature on emotion regulation among children including the model proposed by Morris and colleagues (2007) highlights the family processes through which emotion regulation develops, in particular, how interparental conflict, parent-child relations, and parenting practices are related to emotion regulation. The aim of the current study is to explore the relative contribution of parenting-related factors to emotion regulation, especially in the presence of interparental conflict. In addition, the spillover effect will be tested to examine whether or not parenting practices (psychological control, autonomy support, and behavior control) and parent-child relations (attachment) mediate the relations between interparental conflict and emotion regulation. In children and adolescents, the existing research would suggest that interparental conflict and negative aspects of parenting (psychological control) would have negative relations with emotion regulation whereas positive aspects of parenting (autonomy support, and moderate behavioral control) and parent-child attachment would foster emotion
regulation. It also might be expected that parenting and parent-child relations would mediate the
relations between interparental conflict and emotion regulation.

For the purposes of this study, emotion regulation is defined as individuals’ awareness
and conscious control over their emotions to achieve adaptive functioning. Interparental conflict
is defined as the overt conflicts between mother and father perceived by their emerging adult
kids. Parental psychological control includes the parental “attempts to intrude into the
psychological and emotional development of the child (e.g., thinking processes, self-expression,
emotions, and attachment to parents)” (Barber, 1996, p. 3296), whereas parental behavior
control refers to parental management and regulation of adolescents’ behaviors. Parental
autonomy support is viewed as parents’ facilitation of adolescents’ independent thinking and
expression, as well as decision-making (Silk et al., 2003). Parent-child attachment is defined as
the emotional bond between parents and their adolescent children reflected in three main
dimensions: trust, communication and feelings of alienation (Armsden & Greenberg, 1987).

The studies about emotion regulation mostly have focused on infants and young children,
and little is known about late adolescents and emerging adults’ emotion regulation (Galambos &
Costigan, 2003; Morris et al., 2007). The onset of adolescence usually is accompanied by mild
conflicts and decreased closeness between parents and their adolescent children (Larson &
Richards, 1991), which often lead to a more egalitarian, autonomous parent-adolescent
relationship (Steinberg, 1990). However, research on early adolescents, although scarce, has
shown that the processes through which parent-child relations influence emotion regulation are
similar to those found in younger children. In contrast, in late adolescents, now more commonly
referred to as emerging adults (Arnett, 2000), socialization influences from parents become more
voluntary as most have moved out of their parents’ house for either educational or independent
purposes. They are granted greater autonomy though parents still exert assistance/influence on their emotion-regulation development in more flexible ways (Arnett, 2007). For example, parents exert less psychological control and behavior control on their emerging adult children, while maintaining autonomy support. In response, the attachment relationship remains secure. Healthy development of emotion regulation depends on these transitions to occur without disruption. Despite the potential increased physical distance between parents and their emerging adult children, disturbances in the parental relationship and subsequent influences on parenting and the parent-child relationship may still have an impact on emotional well-being. The current study will explore how emotion regulation is shaped in the context of family, particularly among emerging adults and within the context of varying degrees of perceived interparental conflict. To the researcher’s knowledge, no study has explored the relations among interparental conflict, parenting practices, emerging adults’ attachment relations, and emotion regulation in one frame. In addition, almost all studies in the interparental conflict literature use emotional constructs as mediators, thus ignoring the possibility that emerging adults’ abilities of emotional regulation could be negatively impacted and associated with the conflict-ridden environment within the family, and various parenting-related behaviors.

*Question 1*

How are interparental conflict, parenting (defined as parental psychological control, autonomy support, and behavioral control), and parent-child relations (defined as parent-child attachment) related to emerging adults’ emotion regulation?

*Question 2*
Do parenting behaviors (psychological control, autonomy support, and behavioral control) and parent-child attachment mediate the relations between interparental conflict and emotion regulation?

**Hypothesis 1**

Interparental conflict, parental psychological control will be negatively associated emerging adults’ emotion regulation whereas behavior control, autonomy support, and parental attachment will be positively related to emotion regulation.

**Hypothesis 2**

Parental psychological control, autonomy support, behavioral control, and parent-child attachment will mediate the relations between interparental conflict and emerging adults’ emotional regulation.
CHAPTER II
Review of Literature

Emotional development has long been neglected in the study of psychological concepts. Two factors could account for this: one is the conviction that emotions are epiphenomenal in nature and another is the difficulty with the measurement of the construct (Saarni, Mumme, & Campos, 1998). However, in the past 25 years, a revival has taken place and a large amount of evidence has accumulated to support the scientific validity of emotions as a construct (Sarrni et al., 1998; Cole et al., 2004) and advances have been made in measurement.

Emotional Development in Infancy and Toddlerhood

Like many areas of study during infancy, the study of emotions is quite challenging because infants cannot verbally describe or express their own feelings. Emotional development during the early years of life was recognized mainly through observing the interactions between infants and their primary caregivers or parents, and emotions at this time can be viewed as “a sensitive barometer of early developmental functioning in the child-parent system” (Emde & Easterbrooks, 1985, p. 80). Research findings have provided evidence that people from various cultures and backgrounds understand and appreciate photographs of emotional expression similarly (Ekman, Friesen, & Ellsworth, 1972). The social context where emotional exchange takes place during infancy is within families where parents or caregivers engage in face-to-face interactions with their young children (Thompson, Easterbrooks, & Padilla-Walker, 2003). These affective interactions provide infants important information about emotion-related knowledge such as rules of communication, accustomed interactive pace and intensity, and ways of dealing with negative emotions. Other developmental skills such as self-regulation and adjusting mismatched interactions could be learned through such social exchanges (Gianino & Tronick, 1988; Thompson et al., 2003).
Starting from the first several months, infants also learn how to express their emotions and what emotions and expressions are encouraged and viewed as appropriate. Socially and culturally approved ways of expression are reinforced through parents’ imitating their infants’ positive feelings such as happiness and surprise, whereas some negative emotions are discouraged by parents’ conscious unresponsiveness to such emotional expressions. Gender and cultural differences start to show with infant boys receiving more emotion-related training than girls (Weinberg, Tronick, Cohn, & Olson, 1999) and babies from some Asian countries such as Japan and China being less likely to express feelings (whether it is smiling or crying) due to the cultural expectations (Camras et al., 1998).

Infants are not just passive recipients during their interactions with parents. Instead, they actively participate in eliciting parental response and contributing to the shaping of the environment (Thompson et al., 2003). Infants’ emotional expressions are evident in interactions with adult partners through the imitation of emotional expression of adults, gazing, and approaching things they are interested in. Adults take the lead by scaffolding their initiatives to match with infants’ readiness to respond. Infants also detect and change their feelings through emotional contagion (i.e., becoming happy or sad by noticing others’ emotions as such) (Thompson et al., 2003). They also could gradually form social expectations about others’ responses contingent on their own behavior. For example, by four months, infants anticipate their social partners to respond likewise when they smile or vocalize (Rochat, Striano, & Blatt, 2002). They respond positively to partners who are responsive yet turn away from those who do not respond to their initiatives (Murray & Trevarthen, 1985). By the end of the sixth month, they have learned some basic rules of social interaction and become aware about how they could induce responses from others (Thompson et al., 2003).
As they grow physically, infants start to crawl and walk later in the first year. Many parents have noted that such changes bring new challenges into the parent-child interaction, which have an impact on young children’s socio-emotional development (Biringen, Emde, Campos, & Appelbaum, 1995). This period is accompanied by parents’ report of an increased parental emotional expression towards their children, including anger and frustration (Campos et al., 2000). The self-motivated and produced locomotion make it compelling that parents monitor the movement of their children, and increase the use of limitations or prohibitions when necessary. Such changes provide some catalyst to infants’ early understanding of others’ emotional states, as well as the fact that others’ emotions might be distinct from their own (Thompson et al., 2003).

Research studies have provided a lot of evidence about how infants use parental emotional cues as ways to regulate their own emotions (Mumme, Fernald, & Herrera, 1996; Murray et al., 2008; Walden, 1991). Social referencing as another important way of understanding others’ emotion emerges gradually during this time as well. In events that are novel and ambiguous, infants will turn to adults, usually their caregivers, to seek emotionally related information (Saarni et al., 1998). For example, how infants respond to strangers largely depends on caregiver’s emotional expression in that setting (Repacholi, 1998). Social referencing is important for infants’ emotional development, for it allows them to incorporate others’ emotional information into their own responses and events, and facilitates their awareness and understanding of other people’s subjective mental states (Thompson et al., 2003). It also lets children compare their emotional responses with those of others so that they can understand that others may have different emotional reactions from their own.
Human beings have primary and secondary emotions. Four basic emotions including happiness, anger, sadness, and fear have been widely studied. Self-conscious feelings such as guilt, shame, embarrassment, envy and pride appear in the later part of the second year with the onset of self-awareness and social information provided by adults (Lewis, 1995; Izard, Ackerman, & Schultz, 1999). Cultural differences exist in how certain emotional expressions are encouraged or disapproved. For example, it is common that children are taught to be proud of their achievement in western cultures whereas such practices are generally discouraged in some eastern cultures such as China and Japan, based on the belief that it is embarrassing to draw others’ attention to one’s personal success (Akimoto & Sanbonmatsu, 1999).

Infants’ capabilities of regulating their emotions gradually develop during the first years of life, although in the first several months parents take major responsibility in managing their infants’ emotion by intervening directly to pacify or soothe crying irritable babies, or by altering the physical environment of home to suit their infants’ needs (Thompson et al., 2003). Emotion regulation requires effortful control and management of emotions, and improves slowly as the young brains mature biologically since the capabilities to inhibit impulsivity are constrained within certain regions of the brain (Diamond, Werker, & Lalonde, 1994). As young children grow cognitively, effective ways of regulating emotions can be taught through verbal instruction. Young children realize that emotions can be managed through conscious efforts such as shifting attention from emotionally arousing situations, or self-assurance talk (Calkins & Johnson, 1998; Grolnick, Bridges, & Connell, 1996).

The ways parents respond to their infants have a significant impact on their emotional development. Infants whose parents sensitively respond to their emotional needs tend to be easily soothed whereas the slow intervention and neglecting parents tend to promote intense distress of
infants. Maternal sensitivity at 10 months significantly predicted their infants’ future social and emotional development (Page, Wilhelm, Gamble, & Card, 2010). Maternal negative control, however, was related to less effective emotion regulation among toddlers (Calkins et al., 1998). Caregivers’ neglectful regulation of stressful situations for their babies could result in a failure of development in the brain areas that manage stress, leading to permanent regulation problems for children (Crockenberg & Leerkes, 2000). Eisenberg and colleagues (Eisenberg et al., 2001, Eisenberg, Morris, & Spinrad, 2005) proposed that children whose parents were warm and supportive were more likely to comply with parental demands and socialization including appropriate self-regulation requirements; whereas, when parents displayed heightened levels of negative emotions, especially when such emotions targeted children, children tended to believe that they were not concerned therefore less likely to comply with their parents’ requirements.

**Emotional Development during Childhood and Adolescence**

Preschool and school-aged children’s emotion expression becomes more complex and context-based. For example, in the second year of life, with the onset of self-mobility as well as young children’s increasing demand for autonomy, negative emotions such as anger and frustration could be observed more (Gilliom et al., 2002). At this time, positive socialization practices used by parents such as warmth and verbal guidance help to facilitate the normative development of emotion regulation (Kopp, 1989; Gilliom et al., 2002). Secure attachment also works as a facilitator in developing adaptive emotion-regulation strategies among toddlers (Gilliom et al., 2002). During interactions with peers, anger and happiness are expressed more than other feelings and could be observed in one setting (Denham, 1986; Cole, 1985). In addition, with the development of cognitive and language abilities, children’s understanding of emotions and self-regulation improves so that expressions of negative feelings decline with age.
(Cole, Mischel, & Teti, 1994). They become more adept at understanding and evaluating both their own and others’ feelings (Cummings et al., 2003). Preschool-aged children still focus on external rather than internal factors when appreciating others’ feelings (Levine, 1995), and are capable of discussing the causes, outcomes, and behavioral signs of emotion (Stein & Levine, 1999). Children become more aware of emotional display rules, with parents as their major sources of influence. Concurrent and longitudinal studies indicated that children whose parents frequently engaged in emotion-related discussion were more advanced in understanding and judging others’ emotions (Denham & Kochanoff, 2002; Dunn & Brown, 1993).

Language becomes an important tool for young children to regulate their own impulses, behaviors, and emotions. Parents usually encourage their children to speak about their feelings instead of bursting into tears or acting aggressively to express their anger or frustration (Cole et al., 1994). Several strategies that are usually used include talking to themselves, shifting attention, changing goals, problem-solving, support-seeking, and distancing-avoiding (Thompson, 2000; Saarni, 2000).

With family as the primary context where emotion socialization occurs, it is reasonable to believe that parents contribute significantly to emotion-regulation abilities of their children and parental emotion expression becomes very important. The modeling hypothesis has argued that by observing how parents handle their feelings, children can learn strategies about how to regulate their own emotions. The hypothesis has been supported by numerous research findings. For example, toddlers’ emotion regulation has been closely related to maternal emotional expressiveness (Garner, 1995). In addition, maternal reports of expressed positive emotions predicted toddlers’ self-regulated behavior such as self-soothing, whereas maternal reports of negative emotions (i.e., sadness) in the family were negatively related to their young children’s
emotion self-regulation (Garner, 1995). Moreover, when mothers expressed heightened levels of negative emotions such as sadness, they tended to become less responsive to young children’s emotional expression (Biringen & Robinson, 1991) thus making children lose opportunities to learn about how to regulate their negative emotions (Garner, 1995). Mothers who used a lot of negative emotion-socialization had children with problems in regulating their emotions during interactions with peers (Denham, 1989).

In another line of research, children whose mothers were depressed created a negative emotional environment for their children as well as provided some negative models of emotion regulation. Young children of depressed mothers were more likely to regulate their emotions passively (wait passively instead of actively distract themselves) (Silk, Shaw, Skuban, Oland, & Kovacs, 2006). Similarly, in middle and late childhood, children of depressed mothers had poor emotion regulation abilities compared with non-depressed mothers’ children (Garber, Braafladt, & Zeman, 1991). When expressing frequent heightened levels of negative emotion, parents set models for their children to imitate such dysfunctional behavior (Cole et al., 1994).

School-age children’s interpretation of emotion shifts from external to internal states (Flavell, Flavell, & Green, 2001). They gradually realize they could experience multiple emotions or even conflicting ones at times. Such awareness might appear at five to six years of age (Stein & Trabasso, 1989) or not until later childhood (Harter & Whitesell, 1989). Young adolescents could even integrate two seemingly conflicting emotions in one setting (Saarni, Campos, Camras, & Witherington, 2006). Such increasing awareness about one’s complicated feelings helps to gain insights about others’ emotional states and how they feel. Children realize that people may not express their true feelings and that in some situations masking how one feels might be desired. In a classic study in which children received a present they disliked, children’s
responses indicated that, as children grow older, they become better at hiding their true feelings for they realize how others might be influenced by their expression (Saarni, 1984). Such age and individual differences are indicators of social competence. In another study with elementary students, children’s use of appropriate display rules was associated with social competence reported by teachers and peers (McDowell, O’Neil, & Parke, 2000).

School-age children’s abilities to regulate emotion develop significantly as well. They can actively use various forms of coping alternatives to engage in emotion regulation to achieve their goals. As they grow, they become better at adopting cognitive oriented strategies to deal with situations that are difficult to control (Compas, Malcarne, & Fondacaro, 1988). Lazarus and Folkman (1984; Lazarus, 1999) proposed a dichotomy structure of coping: problem-focused and emotion-focused coping. Some researchers have argued that whether a coping strategy is adaptive or not depends largely on the specific context (Hardy et al., 1993). When situations are appraised as changeable, it is adaptive for children to engage in problem-focused coping; whereas when little could be done to improve the overall situation, employing emotion-focused or avoidant strategies could be effective as well to control and manage internal distress.

Emotional self-efficacy, a collective feeling of having control over one’s emotional experience, also appears among school age children along with their cognitive and emotional development (Saarni, 2000), and could further foster children’s abilities to face emotional-laden situations.

Adolescents’ understanding of basic emotions develops further (Smrtnik Vitulic, 2009). Adolescence is a time when individuals experience dramatic physical, cognitive, and social changes. G. Stanley Hall (1905) hypothesized that adolescence was filled with emotional turmoil induced by hormone changes, but the hypothesis has not been supported by research findings (Galambos & Costigan, 2003). In one study, for example, both adolescents and preadolescents
were asked to report their moods on an hourly basis for a week, but there was no sign of rapidly changing moods among adolescents compared with preadolescents though there were more reports about experiencing mildly negative feelings and fewer extreme positive ones among adolescents (Larson & Lampman-Petraitis, 1989). Similarly, in a recent study, researchers examined whether the onset of puberty was followed by more complex mixed feelings, no differences were found between late childhood and adolescent groups (Stephanie, Stephanie, Geoffrey, & Sarah-Jayne, 2011). However, emotion-regulation during adolescence does show some interesting changes. Of the few studies comparing the normative development of emotion regulation in children and adolescents, Gullone et al. (2010) found age differences between the uses of two emotion-regulation strategies: cognitive reappraisal and expressive suppression. Adolescents used less expressive suppression compared with their young peers, indicating the general trend of a healthier emotion regulation development as individuals grow (John & Gross, 2004). Unexpectedly, adolescents also reported less use of cognitive reappraisal than children.

During this time, family continues to play an important role in adolescents’ emotion regulation development (Sheeber, Allen, Davis, & Sorensen, 2000). Adolescents whose mothers responded negatively to their positive emotion expression used more maladaptive emotion regulation strategies and reported more depressive symptoms (Yap et al., 2008) and adolescents whose mothers exhibited more emotion-related coping had better negative emotion (such as anger) regulation (Shortt, Stoolmiller, Smith-Shine, Eddy, & Sheeber, 2010). Warm, supportive parenting was associated with active coping among adolescent children whereas harsh, authoritarian parenting was related to heightened levels of maladaptive forms of coping strategies (Chan, 2011; Wolfradt et al., 2003). Maternal warmth was associated with better emotion regulation among adolescents, which negatively predicted conduct problems.
Contextual risks measured as adverse life events such as “parents separated” also were significant predictors of difficulties in emotion regulation and externalizing problem behaviors (Walton & Flouri, 2010). Parenting such as maternal warmth and mother-child attachment could contribute to individual differences in emotion regulation (Brody & Ge, 2001; Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000; Walton & Flouri, 2010). Parental control predicted poor emotion regulation among school age children and adolescents (McDowell et al., 2002; Moilanen, 2007; Strayer & Roberts, 2004). Maternal use of psychological control was related to lower levels of emotion regulation among young adults (Manzeske & Stright, 2009). In particular, during adolescence and young adulthood, when young adults are striving for independence and emotional autonomy, psychological control was found to be detrimental (Manzeske & Stright, 2009).

However, research about emotional development mainly focuses on young children, and studies about emotion regulation of adolescents and beyond are scarce (Gullone et al., 2010; Yap et al., 2008). Some theorists have proposed indicators of adaptive emotion regulation such as self-esteem and psychosocial maturity, arguing that adaptive emotional functioning could be inferred from sound development of these constructs (Galambos & Costigan, 2003). Although such statements could be taken as legitimate, it indicates some urgency to study emotion regulation with older participants.

**Emotion Regulation**

Researchers and theorists have made many attempts to define the construct of emotion regulation (ER) (see Eisenberg, Fabes, & Guthrie, 1997; Eisenberg & Morris, 2002; Eisenberg & Spinrad, 2004; Grolnick et al., 1996; Kopp, 1989; Thompson, 1994). It is generally accepted that emotion regulation consists of “internal and external processes involved in initiating,
maintaining, and modulating the occurrence, intensity, and expression of emotions” to achieve one’s goals (Morris et al., 2007, p. 363) and it includes several characteristics. First, emotion regulation involves efforts to maintain and/or enhance certain emotional arousal, and inhibit and/or suppress others based on the cultural values. Secondly, emotion regulation encompasses both self-regulated and other-regulated elements. In other words, ER is not just self-regulated behavior that comes from the self. It also involves regulation from external sources. Parental active monitoring and regulating young children’s emotions to promote their well being could be viewed as a good example of extrinsic emotion regulation (Zerman, Cassano, Perry-Parrish, & Stegall, 2006). Thirdly, emotion regulation in most cases refers to changing the intensity of certain affect, instead of altering and/or inhibiting the discrete emotions experienced by individuals. Lastly, emotion regulation has functional purposes and the ultimate goal of regulation is to enhance individuals’ adaptive development and accomplish personal goals in specific situations (Thompson, 1994). Emotion regulation could be best accomplished when individuals have the freedom or feel no pressure to express negative, and sometimes even positive affects, and when there exists a wide range of choices for expressing affects (Thompson, 1994).

Eisenberg and her colleagues (Eisenberg & Spinrad, 2004; Eisenberg et al., 2005) pointed out that it was important to differentiate emotion-regulation that was extrinsic from intrinsic and that was other-regulated from self-regulated; and emotion regulation should include both external regulation and self-regulation. They defined emotion self-regulation as individuals’ consciously “initiating, avoiding, inhibiting, maintaining, or modulating the occurrence, form, intensity, or duration of internal feeling states, emotion-related physiological states, attentional processes, and motivational states of emotion” to accomplish personal goals (Eisenberg et al.,
2005, p. 424). Recent research has suggested that it is more useful to focus on the process of emotion regulation than the amount of emotion experienced or regulated (Eisenberg & Sulik, 2012).

John and Gross (2004) proposed a framework for researchers to study emotion regulation. According to the framework, there are two strategies that individuals often use during emotion regulation: cognitive reappraisal and expressive suppression. Cognitive reappraisal as an antecedent-focused strategy focuses on changing one’s way of thinking about certain emotional stimuli. Expressive suppression is response-focused emotion regulation that targets suppressing or changing one’s way of responding to emotionally-laden situations. Reappraisal occurs in the early stage before the full generation of emotional response, so it takes fewer cognitive resources. Suppression comes later when negative emotions have been induced, therefore requiring more psychological and cognitive resources. In addition, suppression often introduces a sense of discrepancy between internal feelings and external expression, which might result in more negative feelings and cause further problems in social interactions.

Research studies have demonstrated that the consequences of reappraisal and suppression are distinctly different (Hofmann, Heering, Sawyer, & Asnaani, 2009; Memedovic, Grisham, Denson, Moulds, 2010; Ortner & Koning, 2013). Reappraisal decreased negative feelings and behavioral expression whereas suppression did not alter the amount of negative emotions felt by subjects, though behavior expression was reduced. In addition, greater physiological activation was observed among individuals who used suppression (Gross, 1998). Suppression also resulted in memory impairment during social interaction because of its use of enhanced effortful control (Richards & Gross, 1999, 2000). Reappraisal and suppression also were different in social consequences. Because suppression took up a lot of cognitive resources, individuals who adopted
the strategy usually were unable to absorb information from social partners, thus failed to respond properly in social situations, leading to communication problems and disruption in social interactions (John & Gross, 2004). Therefore, in general, individuals who used reappraisal to regulate their emotions experienced more positive and less negative feelings, tended to function better in social settings, and had better well-beings than those who adopted suppression (Gross & John, 2003).

The characteristics of emotion regulation, particularly those proposed by Eisenberg and colleagues, have been well captured in the research on emotional intelligence. A group of theorists and researchers represented by Salovey and Mayer (1990) viewed emotions as one of the three fundamental mental subsystems (the other two are motivation and cognition) and differentiated them from moods, as emotions were shorter and more intense. Salovey and Mayer proposed the theoretical framework of emotional intelligence as a subset of social intelligence, composed of three aspects: to appraise and express self and others’ emotions through verbal and non-verbal ways; to regulate emotions in self and others, and to utilize emotions in adaptive ways to achieve personal goals (e.g., flexible planning, creative thinking). Understanding what emotions the self is experiencing is the first step to express one’s own emotions effectively to others, and understanding what emotions others are feeling ensures appropriate affective responses to other people. Then individuals have the abilities to regulate their own emotions through various means. One can create or enter into situations that might bring positive affect, and avoid those associated with negative affect. One also can regulate emotions by choosing whom to associate with. Another way to alter moods is through cognitive reevaluation of negative affect. If situations that introduce negative affect are evaluated as under control and changeable, individuals could be more persevering in time of distress, and more ready to enter
into new situations that might bring positive affect. Emotion regulation also includes changing and modifying emotions of others to meet certain goals. A third aspect of emotional intelligence is individuals’ abilities to use emotions to solve problems, including flexible planning, creative thinking, mood redirected attention, and motivation (Salovey & Mayer).

In their later work, Mayer and Salovey (1997) revised and updated the definition of emotional intelligence. They kept the first two aspects of emotional intelligence and took out the utilization of emotions. Instead, another two aspects were introduced into the framework: accessing and generating feelings that facilitate thinking, and employing emotional knowledge. The four areas of emotional intelligence were then proposed to range from basic to higher or more complicated psychological process. The first level; perception, appraisal, and expression of emotion; concerned individuals’ accurately identifying emotions in self and others and making distinctions between various emotional states. It involved abilities to identify specific emotions in self, other people, artwork and designs, through different means (e.g., language, sound, appearance, behavior etc.). It also involved abilities to express emotions accurately, and express needs that might relate to specific emotions. This aspect of emotional intelligence also includes abilities to make distinctions between honest and dishonest feeling expressions. The second level, emotion’s facilitation of thinking, dealt with emotion’s function on intellectual processing and everyday tasks. It directs one’s attention to important things. For example, a student stressed about a coming examination might start to study for it. Similarly, a husband overwhelmed by tense marital relations might seek external counseling to provide constructive suggestions to improve it. Emotion’s facilitation of thinking also demonstrated as generation of emotions needed to better understand how others feel and assisting individuals to make personal decisions, and/or considering multiple options. In addition, certain emotions might facilitate thinking
directly (e.g., happiness enhances reasoning and creativity; negative feelings such as anger sometimes motivate people to excel in certain fields). A third level of emotional intelligence concerned understanding and analyzing emotions and using emotional knowledge. This involved abilities to understand the complex relations among different emotions, and to understand that a person could simultaneously have two or more seemingly opposite feelings (e.g., feelings of hate and love towards the same object/person), and to be able to recognize transitions between emotions. The final level, which is viewed as the most advanced in emotional intelligence, relates to individuals’ reflective regulation of emotions to promote personal growth. Early stages of the level involve openness to internal feelings, either pleasant or unpleasant, and abilities to engage in or detach from certain feelings based on utility. As individuals become mature, they are able to mentally monitor emotions as to how influential and reasonable they are, and to consciously regulate emotions such as moderating or altering negative feelings and maintaining and enhancing positive ones, or sometimes to detach from certain feelings (Mayer & Salovey).

To sum up, emotional intelligence could be defined as a set of capabilities “to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth” (Mayer & Salovey, p.5).

Measurement of EI has followed two main approaches: standardized maximum performance tests and self-reported scales. Among all the available measures, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (Mayer, Salovey, & Caruso, 2002), the Emotional Quotient Inventory (EQ-i) (Bar-On, 1997), and the self-report EI test (SREIT) (Schutte et al., 1998) are probably the most-widely used (Brackett & Mayer, 2003). Whereas the MSCEIT followed a rigid standardized procedure of testing individuals’ intelligence, the SREIT
has drawn more and more attention and has tended to be used as a measure of emotional intelligence by numerous researchers. It was developed by Schutte et al. (1998) based on the model proposed by Mayer and Salovey (1990). A total of 62 self-report items were created and 33 items were retained after a factor analysis. The 33 items loaded onto one factor that was consistent with Mayer and Salovey’s conceptualization of EI. Petrides and Furnham (2000), however, found that the scale could be divided into four factors (optimism and mood regulation, appraisal of emotions, social skills, and utilization of emotion) and recommended that researchers conduct their own exploratory factor analysis of the SREIT (see Appendix A for SREIT items).

Researchers have generally agreed that there exist two types of emotional intelligence: trait EI and ability EI, based on the measurement method used (Petrides & Furnham, 2003). Trait EI (or trait emotional self-efficacy) assesses self-perceived and reported emotion-related capabilities and is measured through self-report measures. Ability EI, on the other hand, tackles emotional informational processing abilities that are measured through standardized tests (Mavroveli, Petrides, Rieffe, & Bakker, 2007). Trait EI was strongly correlated with traditional personality measures and therefore was viewed as a dimension of personality. Ability EI, in contrast, differentiated from personality and well-being constructs, and shared moderate association with general intelligence (Brackett & Mayer, 2003; Alberto, 2011). It is noteworthy that trait EI and ability EI were only weakly correlated with each other (Brackett & Mayer, 2003; O’Connor & Little, 2003).

Since its introduction, numerous studies have examined the relations of emotional intelligence to various other developmental factors. Emotional intelligence has been found to be associated with peer relations among children (Petrides, Sangareau, Furnham, & Frederickson,
Family Influences on Emotion Regulation

Morris and colleagues (2007) proposed a theoretical model to explain the impact of family on children’s emotion regulation. Based on the model, there are mainly three ways that family influences children’s emotion regulation. First, emotion regulation could be learned through observation, including parental modeling, social referencing, and emotion contagion. Second, emotion regulation could be influenced by parenting behaviors associated with emotion socialization such as parental emotion coaching and parental reactions to emotions. Third, the overall emotional climate of the family could affect children’s emotion regulation with the emotional climate including such factors as parent-child attachment, parenting style, and marital relations, all of which may project parents’ own expression of emotions. Morris et al. suggested that when examining the family factors that influence children’s emotion regulation, it is important that researchers explore particularly the impact of interparental conflict, parenting behaviors, and parent-child relations.

**Parent-child relations: attachment.** Parents play important roles in socializing and fostering children’s emotion regulation. When children are young, parents take major responsibility in regulating children’s emotions by soothing them or changing the physical environment to suit their young children’s needs (Kopp, 1989). Responsive caregivers appropriately read infants’ signals, directly intervene to minimize the distress, or pacify irritating children and elicit positive feelings (Calkins & Hill, 2007). Moreover, a secure relationship with
caregivers provides children strong emotional backup to explore new environments and regulate their own emotions.

The attachment theory proposed by Bowlby (1982) hypothesized that caregiving practices impact young children’s emotion regulation through the attachment relationship between caregivers and children. Through the daily experience of interacting with caregivers, children develop an expectation or “internal working model” that serves as a guide about what to expect about caregivers responses and behaviors and whether they can be relied on as secure sources of comfort and assistance. The relationship between young children and caregivers is very important for their emotional development, because secure attachment provides young children information that caregivers give the support necessary to reduce their fear and anxiety in unfamiliar or challenging settings. Consequently, children become confident enough to explore the new environment. In addition, young children become more competent and more ready to seek assistance when caregivers sensitively respond to their needs (Thompson et al., 2003).

Attachment could be viewed as whether parents are emotionally available and responsive enough to young children’s various needs. Securely attached children understand that their needs will be responded to whereas insecure children expect that parents might neglect or only selectively attend to their signals (Cassidy, 1994). In one study, secure attachment with parents at age three and a half years together with warm supportive parenting was associated with more use of effective emotion regulatory strategies (Gilliom et al., 2002). Insecurely attached children showed more positive affect when they should not and suppressed their emotions more (through face expressions) (Malatesta et al., 1989).

Relational influences on emotional development become more salient during middle childhood with family as the most important source of such influences (Cummings, Davies, &
Campbell, 2000). A functional perspective places particular emphasis on relationships in social contexts as they relate to emotion development (Cummings et al., 2003). For example, parent-child relationships become a foundation for emotional functioning in social settings. Parents are highly influential for children’s regulation of affect. As with infants, a less secure relationship with parents in middle childhood is associated with more fluctuating and unpredictable feelings, posing threats to emotion regulation (Cummings et al., 2003). Parent-child attachment continues to provide the foundation for emotional functioning during adolescence (Hill, 1983; Hill & Holmbeck, 1986; Morris et al., 2007). Adolescents’ perceptions of their relationships with their parents are characterized by acceptance, trust, and communication (Armsden & Greenberg, 1987; Gomez & McLaren, 2007) and are related to the development of emotional autonomy and self-regulation (Gallarin, & Alonso-Arbiol, 2012). In other research, a secure attachment with parents has been associated with adolescents’ emotion regulation and less aggressiveness (Gomez & McLaren, 2007; Morris et al., 2007).

**Parenting behaviors: parental control and autonomy support.** Specific parenting behaviors have received much attention for their relations with emotional development. One area of parenting believed to impact children’s emotions is parental control, namely psychological control and behavior control (Barber & Harmon, 2002). Concepts of parental control were first introduced in the pioneering work of Schaefer (1965) in an analysis of children’s reports of parental behaviors. Three dimensions of parenting were found in the analysis: acceptance versus rejection, psychological autonomy versus psychological control, and firm control versus lax control. The psychological autonomy versus psychological control dimension was defined through subscales of intrusiveness and parental control through guilt. In particular, this dimension was given the name for its suggested parental use of covert psychological methods to
manipulate children and inhibit them from developing their individual selves. In contrast, the
dimension of firm vs. lax control represented aspects of physical and behavioral control of
children’s behaviors. The concepts of parental control (both psychological and behavioral) could
also be found in Becker’s work (1964) in which he pointed out that there existed two general
ways of parental discipline: love-oriented and power-assertive. Love-oriented techniques
included positive methods (e.g., praise and reasoning) and negative methods (e.g., withdrawal of
love, showing disappointment); whereas, power-assertive techniques included physical
punishment and forceful commands. Using the parallel terminology, psychological control could
be viewed as parental use of love-oriented techniques to discipline children whereas behavior
control was the use of power-assertive techniques.

The constructs of psychological control and behavioral control were then neglected for
over two decades because another line of parenting research became the focus. Proposed by
Baumrind (1971) and revised by Maccoby & Martin (1983), the typological approach divided
parenting into four distinctive types according to two factors, responsiveness and
demandingness. Originally, Baumrind proposed three types of parenting: authoritative,
authoritarian, and permissive parenting. Authoritative parenting encouraged verbal give and take,
and respected children as autonomous individuals. In addition, clear expectations and behavioral
rules were expressed with reason and firmness. The basic emotional tone between parents and
their children was love and responsiveness. Authoritarian parents exerted overt control over their
children. With various methods such as physical punishment, yelling, shouting, parents required
complete obedience from their children without any reasoning. At the same time, authoritarian
parents provided little emotional and psychological support to their children. Permissive
parenting was characterized by parental high emotional involvement with children, but without
providing clear behavior rules and regulations that were adaptive for children’s development. Based on Baumrind’s typological model, Maccoby and Martin made transformations and developed a two-dimensional framework and added another type of parenting: neglectful parenting. According to Maccoby and Martin, parenting could be distinguished into four different styles according to two dimensions: responsiveness, the presence of love, warmth, and child-centered practices, and demandingness, the presence of behavior expectations and consequences. Parenting that was high in both responsiveness and demandingness could be viewed as authoritative whereas high demandingness coupled with low responsiveness characterized authoritarian parenting. Permissive/indulgent parenting was high in responsiveness but low in demandingness whereas neglectful parenting was low in both dimensions. By typing parenting using two dimensions, parental styles were transformed from qualitative differences to quantitative distinctions (Darling & Steinberg, 1993).

Despite the popularity and strength of Baumrind’s typological parenting approach, the model had some inherent problems. One problem was that although ample evidence was accumulated that authoritative parenting was the most adaptive to children’s and adolescents’ emotional development, it was not clear how and why (Darling & Steinberg, 1993). The fact that a typological approach included a constellation of parenting qualities made it really difficult to tell which aspect of parenting produced positive outcomes (Darling & Steinberg, 1993). By the early 1990s, researchers had started to look for another way to measure parenting, particularly among adolescents, whose emotional outcomes seemed to be particularly susceptible to distinctions between behavioral and psychological parenting.

The concepts of psychological and behavioral control were revived in the 1990s when Steinberg made distinctions between psychological and behavioral control and Barber’s (1994,
1996) contributions of both conceptual and empirical studies related these two constructs. Steinberg (1990) posited that adolescents would be negatively impacted by psychological control, the opposite of psychological autonomy, yet positively affected by behavioral control, the presence of demandingness. He argued that adolescents need supervision and guidance, without which they may be exposed to danger and temptation, yet must be granted psychological autonomy, the absence of which would lead to psychological dependency and hinder their psychological and emotional development. Barber (1996) redefined psychological control as parental “attempts to intrude into the psychological and emotional development of the child (e.g., thinking processes, self-expression, emotions, and attachment to parents)” (p. 3296). In particular, his research demonstrated that psychological control was mostly associated with internalized problems whereas behavioral control was related to externalizing behaviors (Barber et al., 1994, Barber, 1996).

Barber and Harmon (2002) well summarized the features characterizing psychological control. According to their description, parents who are psychologically controlling use methods that are psychological to manipulate and control their children’s behavior. Psychological control is intrusive as it steps into the “child’s person” (Crockenberg & Litman, 1990), and denies their “self-discovery opportunities” (Barber & Harmon; Constanzo & Woody, 1985). According to this research, psychological control is manipulative in that parents use tactics such as guilt induction, withdrawal of love, and introduction of anxiety to influence and mold children’s behavior to be in line with the parents’ wishes. Psychological control is possessive in that parents treat children as their own property, and infantilize children, encouraging children to depend on parents’ to make decisions and using parental agreement as criteria of choice-making. Psychological control is dominating in that it puts children in a subordinate role so that they will
conform to parental wishes (Barber & Harmon; Shoben, 1949). Barber and Harmon also found that psychological control is enmeshing, or “blurring individual psychological boundaries in favor of a family identity” (p. 24), in that there are no clear boundaries between parents and children psychologically, and dependency is greatly encouraged. Finally, psychological control involves constraining children’s verbal expression. It deals with parents’ denial or discouragement of the child’s talking about “anxieties, conflicts, hostilities, and disagreements with parental policies” (Schaefer & Bell, 1958; p. 347).

Characterized by non-responsive socialization of children’s psychological and emotional needs, psychologically controlling parenting restrains children’s self-expression as well as autonomy (Barber & Harmon, 2002), and psychological control has been associated with individuals’ feelings of guilty and non-expressive aggression (Becker, 1964), and baffled self-regulation (Baumrind, 1991). The research findings about psychological control have been very consistent in showing that it is a significant predictor of youth problem behavior and low self-esteem (Litovsky & Dusek, 1985), internalized behaviors such as depression and isolation (Barber et al., 1994; Barber, 1996; Bean, Barber, & Crane, 2006), difficulties in making committed choices (Luyckx, Soenens, Vansteenkiste, Goossens, & Berzonsky, 2007), and antisocial behavior such as delinquency (Barber et al., 1994; Barber, 1996). Many researchers have pointed out that psychological control is a pattern of ineffective parenting that undermines children’s competency and self-value, and parents’ responsiveness to children’s needs (Cummings & Davies, 2010; Doyle & Markiewicz, 2005; Pettit & Laird, 2002). In particular, psychological control was related to less use of adaptive emotion regulation strategies and more dysfunctional means for regulation (Calkins et al., 1998). In contrast, children with more supportive mothers were able to generate more coping strategies (Hardy et al., 1993).
Parental behavior control, on the other hand, refers to parents’ regulation and guidance of children’s behavior and rule setting in the physical world (Barber, 1996; Barber & Harmon, 2002; Pomerantz & Wang, 2009). It provides structure and guidance necessary to children’s behavior and higher levels of behavioral control are associated with adaptive outcomes among adolescents (Bean, Barber, & Crane, 2006). Although termed traditionally as a form of parental control, behavioral control is not intrusive or dominant in nature and has actually been associated with positive psychological outcomes among children and adolescents (Bean et al., 2006; Pomerantz & Wang, 2009). Adolescents need moderate regulation and guidance to ensure their appropriate growth and development and lower levels of behavior control might contribute to maladaptive outcomes such as externalized problems (Barber, 1996). Moreover, behavior control has been found to be positively associated with children’s and adolescents’ emotion regulation (Calkins et al., 1998).

The distinctions between psychological control and behavioral control could be made as such. Psychological control is intrusive with the aim to promote dependency, and manipulate the child’s behavior and psychological world as parents wish. It impedes individualization and identity formation, the outcomes of which are incompetent individuals with detrimental self-worth and confidence who are more likely to turn inward and withdraw when confronted with setbacks in social interactions. Behavioral control, on the other hand, deals with parental provision of sufficient regulation to ensure that the child learns rules and structures guiding the functional interpersonal interactions in social settings (Barber et al., 1994). Simply put, psychological control hurts children as it impedes the development of children’s self whereas behavioral control is beneficial for it provides guidance necessary for development without intruding into children’s psychological world (Wang et al., 2007). Research findings have
supported the distinctions between the two types of parental control. Barber and colleagues (1994) demonstrated that psychological control and behavioral control were independent family constructs as evidenced by their contrasting effects on youth outcomes.

Another aspect of parenting of particular interest during adolescence is autonomy support. Historically, parental autonomy support has been viewed as the opposite of psychological control. Schaefer (1965) labeled the two constructs as representing the opposite ends of a parenting continuum. Similarly, Steinberg (1990) in his widely referenced conceptual work viewed psychological control as the absence of autonomy support. However, both of these assertions were based purely on conceptual guessing. Recent researchers, however, have questioned such conceptualization and proposed that the absence of psychological control is not equal to the presence of autonomy support. Although psychological control refers to parental intrusion into children’s emotional and psychological self, the essence of autonomy granting is to enhance individual expression and self-determination (Wang et al., 2007). Parents who do not use psychological methods of control may also be low on autonomy granting. On the other hand, parents encouraging independence and choice-making may also adopt psychological control to manipulate their children (Silk et al., 2003).

The notion that psychological control and autonomy support are discrete dimensions of parenting has been supported with empirical studies. For example, Silk and colleagues (2003) explored the relations between psychological control and autonomy support with a large sample of middle to late adolescents. With confirmatory factor analysis, the results revealed that parental psychological control and autonomy support were distinct constructs instead of the opposite ends on one dimension of parenting. In addition, these two constructs were found to be only weakly associated and related differently to adolescents’ internalized problems (Silk et al.). Likewise, in
another study with parental report data, autonomy support and psychological control were reported as two unipolar dimensions rather than one bipolar dimension. In other words, they were found to be distinct from each other (Skinner et al., 2005). Further evidence also has been found in a cross-cultural longitudinal study, in which psychological control predicted less adaptive emotional functioning, whereas autonomy support predicted improved emotional and academic functioning (Wang et al., 2007). Parental autonomy support is more than the absence of psychological control and refers to parenting that is demographic, allowing free self-expression and making decisions, encouraging exploring for identity, and articulating of ideas or preferences. As such, optimal parenting could be defined as the combination of behavioral control/regulation, autonomy support, and the absence of psychological control (Skinner et al., 2005).

In summary, empirical research findings have suggested that parental psychological control and behavioral control are related to children’s and adolescents’ emotion regulation. Maternal control, especially higher psychological control, has been found to be associated with lower levels of emotion regulation among college students (Manzeske & Stright, 2009). In another study examining father’s parenting and adolescents emotional regulation, paternal psychological control, but not behavioral control was related to difficulties in emotion regulation among a group of early- to late-adolescents (McEwen & Flouri, 2009). Maternal warmth also was related to adolescents’ emotion regulation, which in turn was predictive of lower levels of conduct problems (Walton & Flouri, 2010).

Family expressivity is another way of socializing emotions to children. Parental expression of positive emotions has been related to positive socio-emotional development among children whereas expression of negative emotions have been associated with dysfunctional
development outcomes, though there have been inconsistent findings (Morris et al., 2007). Parents who experience and express a lot of positive emotions are more likely to be warm and, responsive to their children whereas parents with too much negative emotion tend to be less responsive, or even harsh or hostile towards their children (Morris et al., 2007). According to Gottman, Fainsilber-Katz, & Hooven (1996), parents have different philosophies or ideas towards their own as well as children’s expression of emotion. Parents who are emotion-coaching encourage children to express and discuss emotions with them for they view it as excellent opportunities to help their young children and promote parent-child intimacy. They would encourage their children to speak out the specific emotions, and then teach them how to use adaptive emotion regulation strategies to deal with negative emotions (e.g., problem solving). Emotion-dismissing parents, however, view negative emotions as inappropriate and harmful, and try to get rid of expression of negative emotion for children by ignoring or dismissing it (Gottman et al.). They avoid openly discussing negative feelings, and do not instruct their child how to deal with it.

**Distinguishing parent-child relations and parenting behaviors.** An important yet emerging research direction is to distinguish parent-child attachment and parenting practices and to examine their separate roles in children’s adjustment (Scott et al., 2011). Conceptually speaking, parenting practices generally reflect concrete parenting behavior (e.g., what parents do to control children’s emotional and psychological self, or to regulate their behavior) whereas parenting parent-child relations (e.g., parent-child attachment) describe how children feel about their interpersonal relations with parents (Karavasilis et al., 2003). Individuals’ development of attachment style was based on their interparental experiences with parents (Bowlby, 1982; 1988; Brenning et al., 2012). When children enter into adolescence, different forms of parenting
behaviors might impact their felt security in the parent-child realm, which in turn influence their developmental outcomes (Scott et al., 2011). In one study, parental warmth, autonomy granting, and behavioral control were predictive of a better and secure parent-child attachment whereas negligent parenting predicted insecure attachment (Karavasilis et al., 2003). In other research, maternal provision of autonomy granting also was associated with adolescents’ reports of closer parent-child relations including higher levels of trust and feelings of being loved (Shpigel et al., 2012). Further, parental unresponsiveness and low autonomy support were associated with adolescents’ insecure attachment styles (Brenning et al., 2012). Parent-child attachment has been linked with behavioral maladjustment (e.g., antisocial behavior) over and above parenting behaviors such as behavioral control (Scott et al., 2011), and the dimensions of attachment (e.g., trust, communication, and alienation) functioned as full mediators between the relations of parenting practices and late adolescents’ aggression (Gallarin & Alonso-Arbiol, 2012). Attachment also has been found to mediate the relations between parental warmth and self-esteem as well as externalized problems among adolescents (Doyle & Markiewicz, 2005). Therefore, it is important for researchers to examine various dimensions of parental control (e.g., psychological control and behavioral control) and to explore their relations with parent-child attachment (Karavasilis et al., 2003).

**Interparental Conflict**

Interparental conflict as a multidimensional construct is composed of various dimensions of properties including frequency, intensity and resolution characteristics that are important to the children’s outcomes (Krishnakumar & Buehler, 2000; Grych, Seid, & Fincham, 1992). Marital conflict was a better predictor of maladjustment than marital status (Amato, 1986) and conflicts that were hostile and aggressive endangered children in great developmental problems (Grych & Fincham, 1990). Interparental conflict could be both overt and covert in style, and
overt conflict has been demonstrated as the most detrimental to children adaptive functioning (Grych & Fincham, 1990) and has been the focus of most studies in the field (Krishnakumar & Buehler, 2000).

Grych and Fincham (1990) proposed that to study interparental conflicts several dimensions needed to be considered, such as frequency, intensity, and resolution, which were most related to children’s outcomes when interparental conflicts became a stressor. Frequency refers to how frequent parents disagree with each other regarding various family issues (Buehler, Krishnakumar, Anthony, Tittsworth, & Stone, 1994). It designates children’s increased exposure to interparental conflict (e.g. I often see my parents arguing) (Grych & Fincham; Grych et al., 1992) and frequent conflicts between parents would make children become more sensitized to future conflicts (Cummings & Davies, 2010). However, frequency when examining alone served only as a weak predictor of negative parenting (Krishnakumar & Buehler, 2000). Interparental conflict also varies by the degree of its intensity, from quiet disagreement to violent physical aggression. Children reacted more negatively to conflicts with physical aggression than to other levels of conflicts in laboratory studies (Laumakis, Margolin, & John, 1998; O’Brien, Margolin, John, & Krueger, 1991). Resolution referred to how parents resolved their disagreements or conflicts and their post-conflict behaviors and expressions (Cummings & Davies, 2010; Grych & Fincham) and was concerned with whether parents could handle their conflicts effectively. Constructive resolution greatly reduced children’s distress and could even be beneficial for their later development as children perceived conflicts as unavoidable yet manageable, whereas failure of resolution often led to maladaptive outcomes among children (Cummings & Davies, 2010).

The relationship between interparental conflict and child maladjustment has been well documented (Cummings & Davies, 2010) with decades of research showing that interparental
conflict is associated with externalizing and internalizing problems, dysfunctional social skills and relationships, and lower academic performance (see Cummings & Davies, 2010 for details). Research in this field at first targeted the direct impact of interparental conflict on various outcomes of children, but the focus has gradually shifted to examine the underlying mechanisms and processes (Fincham, 1994). In particular, both theory and empirical studies have focused on how marital conflicts might relate to or undermine children’s outcomes through the parent-child relationship (Cox, Paley, & Harter, 2001). Notably, several main hypotheses in the area discussed or directly dealt with such mechanisms. For example, the cognitive and contextual model proposed that the family emotional environment, defined as the parent-child relationship, would impact how children develop and feel in marital conflict contexts. Warm, supportive parent-child interactions would lessen the detrimental effects of a conflicting background whereas cold, unresponsive relations between parent and child would exacerbate the problems (Grych & Fincham, 1990).

A commonly accepted hypothesis, the spill-over effect, directly theorized that the negative emotions and behaviors sparked in conflicts between spouses would spill into the parent-child relationship (Erel & Burman, 1995; Katz & Gottman, 1996). Drained by high emotional arousal and energy consumption resulting from marital conflicts, parents were less likely to spend enough time with their children, and notice their developing children’s various needs. In addition, the negative emotions generated in the conflicts would easily be brought into parent-child interactions, leading to harsh or inconsistent parenting. Some parents might involve their children in the conflicts, for example, making them take sides. In two of most cited meta-analytic review studies, Erel and Burman (1995) recorded an effect size of .49 between overt interparental conflict and ineffective parenting, whereas Krishnakumar and Buehler (2000)
documented an overall effect size of .62 of the association. In other words, a moderate positive relation between interparental conflict and ineffective parenting existed. In particular, the association was stronger in intact families than in divorced ones, stronger for European-American families than for mixed- or other-ethnic samples, stronger for parenting dimensions such as harsh punishment and acceptance, and stronger during middle childhood and adolescence. In addition, child-perceptions of interparental conflict provided the most reliable evidence compared with other- or multiple-reporters (Krishnakumar & Buehler).

The spill-over hypothesis has been widely supported by empirical studies. In a study testing the spill-over hypothesis in a group of European- and African-American families (pre-, early-, and late-adolescents), parental monitoring, maternal acceptance, and parent-youth conflict were found to mediate the relations between interparental conflicts and externalized problems, and maternal psychological control and parent-child conflict mediated the relations between interparental conflicts and internalizing problems in European-Americans (Krishnakumar, Buehler, & Barber, 2003). However, the spill-over effect was not found in African-American families. The findings were consistent with the Krishnakumar and Buehler (2000) meta-analysis in that the spill-over effect was generally supported in European-American families, but not in other ethnic groups. In another study based on national surveys on families, the relations between marital conflict, ineffective parenting (defined as harsh discipline, low parental involvement), and children’s and adolescents’ maladjustment were examined. Spill-over effects were found among preschoolers, middle childhood children, and adolescents. In other words, marital conflict was associated with negative parenting, which in turn led to children’s and adolescents’ maladjustment (Buehler & Gerard, 2002). Hostility between spouses was associated with paternal harsh, negative parenting and maternal and paternal rejection towards children (Katz &
Gottman, 1996; Shelton & Harold, 2008). Disrupted marital quality was associated with more use of intrusive control among fathers (Belsky, Youngblade, Rovine, & Volling, 1991). In another longitudinal study with adolescence, researchers found that parenting fully mediated the relations between marital conflict at time one and internalized and externalized problems, and self-esteem at time two (Doyle & Markiewicz, 2005). Parenting warmth/rejection also functioned as a mediator between interparental conflict and children’s depression in a diverse, urban, low-income population (O’Donnell, Moreau, Cardemil, & Pollastri, 2010). In addition, parenting and attachment also influenced children’s appraisal of interparental conflicts. Negative parenting was associated with higher-levels of distress such as self-blame whereas supportive, responsive parenting could buffer the negative effects of that interparental conflict had on children. In addition, secure attachment with father was reported to be linked with less distress experienced by children in time of conflicts (DeBoard-Lucas et al., 2010).

Another less noticed effect, the “compensatory” hypothesis, offered a seemingly different perspective. Based on the hypothesis, some parents in the face of high marital conflict might consciously offset children’s vulnerability to the distress by becoming highly involved in the parent-child relationship (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). Although such expressions might be viewed as parental warmth at first sight, researchers reminded us that this actually functioned as a compensatory process where parents who felt rejected by the spouse, dissatisfied with a lack of affectionate and supportive relationship in the marriage, shifted their attention to their responsibilities as parents. More specifically, such parental warmth might actually represent an enmeshed, intrusive parenting pattern (parental psychological control) that characterizes many high-conflict families and become a potential risk that mediates the relationship between marital conflict and children’s development (Cummings & Davies, 2010).
In addition, compensatory mechanisms might introduce triangulation and cross-generational coalitions into the family, thus causing further problems between parents and children (Erel & Burman, 1995). Erel and Burman (1995) pointed out that “it is questionable whether a close relationship fueled by a parent’s negative relationship with his or her spouse is truly positive” (p. 110).

Despite the different parental responses to children, the “compensatory” (over-involved, intrusive parenting) and “spillover” hypotheses (negligent or unresponsive parenting) both documented forms of ineffective parenting. However, research studies generally supported the spillover effect over the compensatory hypothesis (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). The study conducted by Krishnakumar and Buehler (2000) did not support the compensatory hypothesis because they concluded that the compensatory behaviors should be positively related to effective parenting. In contrast, Cummings and Davies (2010) concluded that parents who try to compensate for the high-conflicts are in fact likely to engage in ineffective parenting and become psychological controlling parents who attempt to intrude into their children’s subjective world. In other words, both the spillover effect and compensatory hypothesis should direct towards the same direction that interparental conflicts lead to ineffective parenting. In one of the few studies examining the compensatory hypothesis, Belsky et al (1991) found that maternal supportive behavior towards their young children during play was associated with marital problems with spouses, and intrusive paternal behavior towards children. However, the researchers cautioned a full illustration of the compensation hypothesis evidenced by the findings. They proposed the possibility that fathers’ intrusive behavior might be caused by mothers’ involvement with children. Moreover, such maternal supportive parenting might introduce more problem into father-child relationship (e.g., alliance with mothers) therefore
endanger instead of buffer children’s well-being (Belsky et al). In particular, chronic interparental conflict was associated with insensitive parenting, which in turn predicted an insecure parent-child attachment, even for young infants (Owen & Cox, 1997).

Parent-child attachment may serve as an important mechanism between interparental conflict and individuals’ emotion regulation (Owen & Cox, 1997). Strong interparental conflict might be perceived as frightening by children thus making them less likely to approach parents for comfort and solutions (Owen & Cox, 1997). The consequence of a high conflict presents children “a paradoxical problem-namely, an attachment figure who is at once the source of and the solution to its alarm” (Main & Hesse, 1990, p. 163). Maternal reports of the quality of marriage (e.g., high satisfaction, good communication, and low conflict) predicted children’s security of attachment (Howes & Markman, 1989). In a longitudinal study, parenting behaviors (e.g., parental warmth) and attachment were found to be mediators between marital conflict and various maladjustment outcomes among adolescents (Doyle & Markiewicz, 2005). Marital conflict was a predictor of parent-child relations among adolescents and children (Amato, 1986). According to the results from Erel and Burman’s (1995) meta-analytic review, good parent-child relations were difficult to achieve with poor marital relations between father and mother. Indeed, parents low in conflict and high satisfaction with their marriage were more likely to have children with secure attachment styles (Grych, 2002).

Cummings and Davies (1994) proposed the emotional security hypothesis (EST), which offered another important process mediating the link between marital conflict and child adjustment. The theory was based on a functionalist perspective of emotion regulation in which emotions guide individuals’ appraisal of events, and provide motivation for behaviors (Davies & Cummings, 1998). It posited that in the context of parental conflicts, a primary and salient goal
for children is to preserve their emotional security, which motivates and explains children’s various behaviors and responses towards the conflict. Davies and Cummings (1998) suggested that the emotion security theory could be viewed as an extension of attachment theory. Attachment theory emphasizes achieving emotional security as a prominent goal for children in their relationships with parents in the family context. The emotion security theory expanded the ways emotion security might be enhanced or undermined, proposing that children’s emotional security could be impacted by parent-child relationships, specifically attachment, as well as the family emotional environment manifested in interparental relationships. In the theory, the interparental relationship does not just serve as a context that influences parent-child attachment. Rather, the security from interparental relationship is distinct from what is obtained in parent-child context. In other words, a child might feel insecure emotionally about the interparental relations but secure in their relations with parents or vice versa (Davies, Forman, Rasi, & Stevens, 2002).

Emotion security is conceptualized to be a multi-dimensional latent construct that is composed of three distinct components or processes: emotional reactivity, regulation of exposure to parental conflict, and internal representations. These three processes serve as mechanisms to assist in the attainment of a felt security (Davies et al., 2002). First, emotional reactivity demonstrated as heightened fear, distress, and vigilance among children reflects emotional insecurity. Although such arousal might energize children’s physiological and psychological resources to cope with distress, high levels of negative emotionality might become precursors of later internalized and externalized problems (Davies & Cummings, 1998; Saarni et al., 1998). Second, guided by the goal of preserving emotional security, children become motivated to regulate their exposure to parental negative affect and conflicts. They might choose to avoid the
parental disputes or fights, or become overregulated by actively intervening into parental conflicts, making efforts to cease the disputes or conflicts. Over-involvement into interparental conflicts might reflect children’s emotion insecurity in that children, based on their past experience, conclude that such conflicts would not be constructively resolved. A third component or process of emotional security involves children’s internal representations of parental conflicts, as to what conflicts might mean for themselves and their families. Children from high-conflict homes are at greater risk of developing insecure internal representations. Such representations might lead to fear of escalation of fight or violence, a concern for self-security, family future (divorce or not), and parental negative affect spilling into the parent-child relationship (Davies & Cummings, 1998).

The emotional security hypothesis could be viewed as a framework regarding how emotion regulation might be influenced by interparental conflict. Based on its original conceptualization, the three aspects of emotion regulation engaged by children were mostly examined as the mechanisms between the relations of interparental conflict and children’s and adolescents’ maladjustment. For example, marital conflict has been found to have a negative impact on children’s functioning in school, including emotional problems and learning engagement in classroom, through children’s emotional security system (Grych et al., 2002; Sturge-Apple et al., 2008). In another study, marital conflict was associated with children’s difficulties sleeping and academic performance through children’s insecurity about parental relations, but not through the attachment insecurity (El-Sheikh et al., 2007). Lower levels of constructive representations and avoidance among adolescents mediated the relations between marital hostility at time one and internalized problems at time two (Buehler, Lange, & Franck, 2007). Emotional security also mediated the link between interparental conflict and security
about parenting, which in turn, predicted children’s psychological problems (Harold, Shelton, Goeke-Morey, & Cummings, 2004). In a study with multiple methods and contexts that aimed to test emotional security hypothesis as mediators between marital discord and children’s internalized and externalized problem, it was found that emotional reactivity mediated the relations between marital discord and internalized and externalized problems. Hostile internal representations also mediated relations between marital discord and internalized problems. Children’s regulation of exposure, on the other hand, was found to be unrelated to both marital discord and children’s dysfunction. The two aspects of emotion security accounted for a little less than 50% of the total variance (Davies & Cummings, 1998).

Another important explanatory model accounting for the relations between marital conflict and children’s and adolescents’ adjustment was the cognitive-contextual framework proposed by Grych and Fincham (1990). The model conceptualized interparental conflict as a source of stress and highlighted the role of children’s cognitive appraisal that might influence their overall functioning. To deal with the stressor, children made various attempts to first of all understand the meaning of conflict and then cope with it. Children’s coping behavior was proposed to be influenced by characteristics of interparental conflict (intensity, content, duration, and resolution) and context factors. Both cognition and affect were involved in the process and provided guidance to children’s coping behavior.

Two types of cognitive processing were involved: primary processing referred to children’s emotional reactions when exposed to interparental conflict and lead to secondary processing when children engaged in cognitive thinking about the reasons of the conflicts as well as what they should do in response. Two processes interacted with each other: secondary processing was influenced by the emotional arousal level that occurred in primary processing,
and modified the affect through interpretation and efficacy of coping generated from this stage. Both processes were influenced by distal and proximal factors. Distal factors referred to stable factors including previous experience with conflict, children’s perceptions of family emotional climate, and temperament, whereas proximal context included children’s expectations of the course of conflict and their current mood (Grych & Fincham, 1990).

Based on the cognitive-contextual model, Grych and his colleagues developed a measure of assessing interparental conflicts from the children’s perspective. The Children’s Perception of Interparental Conflict Scale (CPICS) (see Grych et al., 1992 for details) measured the conflict properties of interparental conflict, as well as providing assessment of interpretation of the conflict (perceived threat, self-blame attributions) as well as their coping behavior and appraisal (triangulation and coping efficacy). The cognitive-contextual model has been widely tested and supported by the accumulative efforts of researchers (DeBoard-Lucas et al., 2010; Grych, Harold, & Miles, 2003; Grych, Raynor, & Fosco, 2004). In particular, most studies have focused on examining how the cognitive appraisal (attributions such as self-blame, perceived threat) and coping strategies provided another important research direction for the field. Interparental conflict was found to be associated with heightened level of children’s psychological distress, through their use of maladaptive but not adaptive coping behaviors one year later (Shelton & Harold, 2007). Adolescents, who perceived interparental conflicts as threatening and made self-blame attributions, indicated different coping behaviors one year later. Those with high perceived threats tended to display avoidance whereas those who blamed themselves engaged into over-involvement of the conflict, and both of these two coping strategies led to heightened level of internalized and externalized problems (Shelton & Harold, 2008). Children’s (6th graders) self-blame and perceived threat also mediated the relations between their perceptions of
interparental conflict and both externalized and internalized problems (Gerard, Buehler, Franck, & Anderson, 2005). In another longitudinal study with early adolescents from U.K., children’s appraisals of self-blame fully mediated interparental conflict and academic achievement (indicated by standardized test scores), even when negative parenting behavior was considered (Haro, Aitken, & Shelton, 2007).

Although proposed by different groups of researchers with seemingly distinct terms, the emotional security hypothesis (EST) and the cognitive-contextual model essentially dealt with similar processes experienced by children exposed to interparental conflicts. The immediate or first stage of reaction to interparental conflicts has been identified as emotional reaction in both models, which lead to the following or second stage of processes including higher levels of cognitive appraisal as well as generated coping strategies (in EST, this has been referred to as internal representations of conflict and regulation of exposure). In particular, both models could be viewed as dealing with children’s and adolescents’ emotion regulation in the specific context of interparental conflict. The current study, however, focuses on general emotion regulation as an outcome, and explores how parenting practices might impact the relations between interparental conflict and emotion regulation.

Accumulated findings from research studies have evidenced that emotion regulation has been influenced by parental factors inside families, including parenting practices, parental-child relations, and emotional climate of the family, especially interparental conflict. Most interparental literature as well as emotion regulation studies focus on children and adolescents as targeted population, thus ignore older participants such as late adolescents/emerging adults. The resultant consequence is that we know rather little about how emotion regulation has been
impacted in the family context (interparental conflict, parent-child relations and practices, etc.) among this age group.

**Emerging Adulthood**

Arnett (2000, 2004) proposed a theory of emerging adulthood to refer to young people between the ages of 18 to 25. According to Arnett, emerging adults are distinctly different from adolescents and young adults. As a special developmental period characterized by identity explorations, instability, and various possibilities, emerging adulthood is entitled with more autonomy and freedom than adolescence, and the lack of constraints imposed by commitments and responsibilities common in the adult years (Arnett, 2007; Tanner & Arnett, 2009). Emerging adulthood is distinct “demographically, subjectively and in terms of identity explorations” (Arnett, 2000, p. 469). There are huge variations in demographic features for emerging adults, and most of them have left their parents’ homes either for school attendance or independent living. Young people of this age also have various opinions of when they reach adulthood with age serving as only a rough estimation. The top three criteria for youth’s self-perceptions of becoming adults were *accepting responsibilities for selves, making independent decisions, and establishing equal relationships with parents* (Arnett, 1997). A lot of identity explorations take place in this period, much more than that of adolescence, targeting three main outcomes: love, work, and worldviews (Arnett, 2000), and it is not unusual that such explorations will lead to disappointment and emotional fluctuation.

Given that emerging adulthood might provide a lot of possible setbacks and struggles, it is reasonable to believe that emotion regulation might be especially important during this time. Emerging adulthood is characterized by numerous cognitive, emotional, and behavioral characteristics (Tanner & Arnett, 2009). Emerging adults are more sensitive than adults when
dealing with socio-emotional stimuli, especially negative ones. Research studies have shown that emotional stability improved with age, with the period of emerging adulthood still linking with high sensitivity to negative stimuli (Williams et al., 2006). Emerging adulthood also is a time when personality is most likely to change (Roberts, Walton, & Viechtbauer, 2006).

Emerging adults engage in more risky behaviors than do adolescents. Research studies have shown that the highest rate of several risky behaviors (e.g., unprotected sex, substance use, risky driving) occurred not during adolescent years, but in emerging adulthood (Arnett, 1992; Bachman, Johnston, O’Malley, & Schulenberg, 1996). Two factors might account for such phenomena. First, a great deal of identity exploration might lead to a greater onset of risky behaviors; second, emerging adults are more autonomous than adolescents, and less constrained by responsibilities, making risky behaviors be more likely to happen (Arnett, 2000). Whatever the reasons, self-regulated emotion abilities might become more prominent in buffering risky behaviors for this age period.

Mental health is another problem that endangers emerging adults. The prevalence of psychiatric disorder peaks among people of this age period (Tanner et al., 2007). Mental health and psychopathology increased tremendously in emerging adulthood (Schulenberg & Zarrett, 2006). Undoubtedly, this is a time of “high sensitivity” as well as one with great potential for individuals to change and develop (Tanner & Arnett, 2009). In addition, transformations in family relations have not been completed by the end of adolescence and continue to develop during emerging adulthood, despite a greater physical distance between parents and their emerging adult children (Arnett, 2007). Parents continue to exert their influences on emerging adults’ socialization outcomes. In terms of emotional self-regulation, parents continue to provide emotional and psychological support to their children, though in most cases, such assistance is
based on greater autonomy support, with the aim to increase emerging adults' capabilities of regulating their own emotions and behaviors (Arnett, 2007). Emerging adults’ abilities of self-regulation improve as they move out of their parents’ homes since they are allowed more autonomy to regulate their own behaviors, with continued support and guidance from parents (Arnett, 2007). In addition, the nature of the attachment relationship continues to be an important indicator of young adults’ behavioral and emotional health.

Given the characteristics of emerging adulthood and the importance of self-emotional regulation for this period, the current study targeted this population. Some researchers have pointed out that attending college provides some crucial context for the development of young emerging adults (Tanner, 2006), and research should further explore these developmental processes. The role of various dimensions of parenting (psychological and behavior control and autonomy support) as well as the attachment relationship, in the maintenance of emerging adults’ emotion-regulation abilities needs more attention. Therefore, the purpose of the current study is to examine how college students’ self emotion-regulation ability may be influenced by the family context, including interparental conflict and parenting behaviors and parent-child attachment.
Participants were 361 undergraduate students recruited from the Educational Psychology research pool at Ball State University, the procedure for which is described in the procedures. There were 292 female and 69 male participants with an average age of 20.23 (SD = 1.39) years. The racial makeup was as follows: Caucasian ($n = 322, 89.2\%$), African American ($n = 24, 6.6\%$), Asian American ($n = 4, 1.1\%$), Hispanic ($n = 5, 1.4\%$), and Other ($n = 6, 1.7\%$). Ninety-one participants were freshmen (25.2\%), 95 were sophomores (26.3\%), 106 were juniors (29.4\%), and 69 were seniors (19.1\%). Of all the participants, 237 reported living at their primary residence with both parents (65.7\%), 100 lived with one parent (27.7\%), 14 lived with another relative (e.g., grandparents, aunt; 3.9\%), and 10 of them did not report their living status (2.8\%). Participants also reported their frequency of visiting with parents. The majority of them met with parents at least once a month ($n = 163, 45.2\%$) or more than once a semester ($n = 105, 29.1\%$), 51 of them met with parents at least once a week (14.1\%), 30 of them every day (8.3\%), and 12 of them less than once a semester (3.3\%). Participants came from a wide range of majors, including elementary education, secondary education, nursing, health sciences, criminal justice, sociology, and speech pathology (see Table 1).
Table 1

*Demographic Information of Participants*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>69</td>
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<tr>
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<tr>
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<tr>
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<td>1.4</td>
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<tr>
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<td>1.7</td>
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<tr>
<td><strong>Year in School</strong></td>
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<tr>
<td>Junior</td>
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<td>29.4</td>
</tr>
<tr>
<td>Senior</td>
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<td>19.1</td>
</tr>
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<tr>
<td>Both Parents</td>
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<td>65.7</td>
</tr>
<tr>
<td>One Parent</td>
<td>100</td>
<td>27.7</td>
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<tr>
<td>Relative</td>
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<tr>
<td><strong>Frequency Visit Parents</strong></td>
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<tr>
<td>Less than once a semester</td>
<td>12</td>
<td>3.3</td>
</tr>
<tr>
<td>More than once a semester</td>
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<td>29.1</td>
</tr>
<tr>
<td>Once a month</td>
<td>163</td>
<td>45.2</td>
</tr>
<tr>
<td>Once a week</td>
<td>51</td>
<td>14.1</td>
</tr>
<tr>
<td>Every day</td>
<td>30</td>
<td>8.3</td>
</tr>
</tbody>
</table>

\(N = 361\)
Measures

**Demographics.** The survey included items that asked participants to self-report their gender (male, female), age (in years), racial identification (Caucasian, African American, Asian American, Hispanic, Other), and year in school (freshman, sophomore, junior, senior). Participants also were asked whether they lived at their primary residence with both parents, one parent, or a relative/other; and how often they visited their parents (less than once a semester, more than once a semester, once a month, once a week, or every day).

**Emotion regulation.** The Self-Report Emotional Intelligence Test (SREIT) (Schutte et al., 1998) was used to measure emotion regulation. The scale has thirty-three items that measure the conceptual model of emotional intelligence proposed by Salovey and Mayer (1990) (see Appendix A). Although there are three categories in Salovey and Mayer (1990)’s model, namely appraisal and expression of emotion, regulation of emotion, and utilization of emotions, Schutte et al. (1998) extracted four factors out of the initial 62 items, but retained only the first factor because of its strong eigenvalue (10.79) and conceptual parsimony (Ng et al., 2010). The SREIT scale was developed using participants from an urban area in the southeastern part of United States including college students and people from local communities. About two-thirds of the participants were females and one-third were males with an average age of 29.27 years ($SD = 10.23$). No racial information was provided.

Validity was established through positive correlations between EI and attention to feelings and emotions, clarity of feelings, mood repair, optimism and negative correlations with pessimism, depression, impulsivity and alexithymia. In addition, between-group differences were found in which psychotherapists scored higher than prisoners and substance abusers, and female participants scored higher than males. As an indicator of predictive validity, SREIT was found to
be predictive of college students’ first-year GPA. Divergent validity was demonstrated by finding no correlations between SAT scores as indicators of cognitive abilities and SREIT scores (Schutte et al., 1998). In addition, SREIT was significantly related to only one of the big five personality dimensions, openness to experience, but not to neuroticism, extraversion, agreeableness, and conscientiousness. The internal consistency of SREIT was good, with a Cronbach’s alpha of above .90 (Schutte et al., 1998; Brackett & Mayer, 2003). A cross-check of internal consistency indicated a value of .87 for Cronbach’s alpha and a test-retest reliability of .78 (Schutte et al., 1998).

Although Schutte et al. (1998) proposed a one-factor model for the 33 items, later empirical studies failed to support a general EI factor. For example, Petrides and Furnham (2000) tested the structure model via confirmatory and exploratory factor analyses and found that the scale was not unifactorial, but had a four-factor structure identified as optimism/mood regulation, appraisal of emotions, social skills, and utilization of emotions. They suggested future researchers pursue their own factor structure analysis because of the instability of the model. Other researchers tested the factor structure of the scale via confirmatory factor analysis. Gignac, Pamler, Manocha and Stough (2005) conducted a qualitative analysis of all 33 items, and decided that five of the items were not loaded on any factor. They then conducted a confirmatory factor analysis on a proposed model but failed to obtain a good model fit. The proposed model was modified, and items measuring the emotion expression and emotion regulation of others factors were deleted, and another confirmatory factor analysis was conducted with the remaining 21 items, which had a reasonable model fit. Ng and colleagues (2010) conducted a series of confirmatory factor analyses based on previous studies, and found that the model proposed by Gignac et al. (2005) fit their data (see Figure 1), but was not parsimonious; and they proposed a
new model that fit the data well (see Figure 2). For the current study, four models were tested with confirmatory factor analysis: the one factor model by Schutte et al. (1998); the four factor model proposed by Petrides and Furnham (2000) based on their results from exploratory factor analysis; Gignac et al.’s final model (2005) (see Figure 1), and the model proposed by Ng et al. (2010). The Ng et al. (2010) model fit the data best (see Table 2). According to the model, eight items loaded onto the emotion regulation factor (see Figure 1). Students responded to the scale items using a 5-point Likert-type scale from 1 “not at all true” to 5 “very true.” Scores were then averaged across these items with higher scores indicative of greater emotion regulation. The reliability of the emotion regulation subscale indicated by Cronbach’s α was .77.

Table 2

**Fit Indices for Four Confirmatory Factor Analysis Models of SREIT Scale**

<table>
<thead>
<tr>
<th>Models</th>
<th>χ²</th>
<th>df</th>
<th>χ²/df</th>
<th>NNFI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>AIC</th>
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</thead>
<tbody>
<tr>
<td>Schutte et al. (1998)</td>
<td>1581.38</td>
<td>495</td>
<td>3.20</td>
<td>0.68</td>
<td>0.72</td>
<td>0.08</td>
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<td>Petrides &amp; Furnham (2000)</td>
<td>1376.91</td>
<td>490</td>
<td>2.81</td>
<td>0.73</td>
<td>0.77</td>
<td>0.07</td>
<td>1584.91</td>
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<td>Gignac et al. (2005)</td>
<td>672.55</td>
<td>304</td>
<td>2.21</td>
<td>0.84</td>
<td>0.88</td>
<td>0.06</td>
<td>932.55</td>
</tr>
<tr>
<td>Ng et al. (2010)</td>
<td>362.89</td>
<td>181</td>
<td>2.01</td>
<td>0.89</td>
<td>0.92</td>
<td>0.05</td>
<td>560.82</td>
</tr>
</tbody>
</table>

*Note. df = degrees of freedom; NNFI = non-normed fit index; CFI = comparative fit index; RMSEA = root of mean square error of approximation; AIC = Akaike information criterion.*
Figure 1. Confirmatory Factor Analysis of SREIT Model One

Figure 2. Confirmatory Factor Analysis of SREIT Model Two

Note. Ng et al. 2010 two-level factor model. ER: emotion regulation of self, AEO: appraisal of emotions of others, AES: Appraisal of emotions of the self, UEPS: using emotions for problem solving, Reverse: a unique factor for reverse coding. Figure adapted from Ng et al. 2010.
Interparental conflict (IPC). The Conflict Properties subscale of the Children’s Perceptions of Interparental Conflict scale (CPIC) (Grych et al., 1992) was used to measure interparental conflict. The Conflict Properties scale has 19 items measuring the frequency, intensity, and resolution of interparental conflict (see Appendix B). Students responded to the scale questions using a 3-point Likert-type scale with 1 = “true,” 2 = “sort of true,” and 3 = “false.” Scores were averaged across items with higher scores indicative of greater perceived conflict, that is, higher frequency of conflict, higher intensity of conflict, and lower level of resolution.

The CPIC was originally developed among two samples of predominantly Caucasian early adolescents (fourth- and fifth-grade children with mean age of 131 months) with roughly equal numbers of males and females (124 boys and 98 girls in sample 1, 52 boys and 62 girls in sample 2) with the second sampling aiming to replicate initial findings. Reliability of the Conflict Properties scale was reported by internal consistency (.90 for sample 1 and .89 for sample 2) and a two-week test-retest reliability (.70 for the Conflict Properties subscale). Validity was assessed through correlating the CPIC subscale scores with established measures of marital conflict (OPS by Porter & O’Leary, 1980; and the Conflict Tactics Scale by Straus, 1979). The CPIC subscale, especially the Conflict Properties subscale was significantly correlated with OPS ($r = .30$), and the Conflict Tactics Scale ($r = .39$). The validity of CPIC also was examined by assessing whether children’s perceptions of interparental conflict were associated with their internalized and externalized problems, and results showed that the Conflict Properties subscale was significantly related to child report internalizing problems for boys ($r = .49$) and teacher/peer report of internalizing behavior for both boys ($r = .18$), and girls ($r = -.23$), child report aggression for boys ($r = .30$) and girls ($r = .26$), and teacher/peer report of
externalized problems for boys ($r = .20$) and girls ($r = .27$). Several studies have been conducted using the CPIC, and all showed a satisfying reliability of around .85 (e.g., DeBoard-Lucas et al., 2010; O’Donnell et al., 2010). Although the original sample used was different from the target population in our study, research has demonstrated that the CPIC could be used among late adolescents (college students) with good internal consistency and 2-week internal test-retest reliability (both were .95 for the Conflict Properties subscale) (Bickham & Fiese, 1997). For the current dataset, the reliability as indicated by Cronbach’s $\alpha$ was .87 for Frequency, .87 for Intensity, and .90 for Resolution of interparental conflict.

**Parental psychological control.** Psychological control was measured with the Psychological Control Scale-Youth Self-Report (PCS-YSR) developed by Barber (1996; see Appendix C). Eleven items were created to measure various aspects of psychological control including constraining verbal expression, invalidating feelings, and personal attack, and used with five items from the revised Children’s Report of Parent Behavior (CRPBI; Schaefer, 1965; Schludermann & Schludermann, 1988) that measured guilt induction and love withdrawal. A total of 933 families with adolescents from fifth and eighth grades recruited through a stratified random sampling responded to the survey. There were an equal number of males and females, and 71% of participants were White (16% Hispanic), 84% from middle income families, and 46% were Mormon. Factor analysis indicated that eight items loaded onto one single factor and should be retained based on the standard that items must have a coefficient of at least .50 for primary loading and at least .20 discrepancy between primary and secondary loading to be retained. Reported alphas ranged from .72 to .86 (different subsamples, e.g., Hispanic females, or eighth-grade males). These eight items measured various aspects of parental psychological control including invalidating feelings, constraining verbal expressions, personal attack, and love
withdrawal. Parental psychological control also was found to be significantly related to depression and delinquency behaviors among adolescents (Barber, 1996). Participants respond to these items on a 5-point Likert-type scale from “not at all true” to “very true.” Scores are averaged across items with higher scores indicative of greater psychological control. For the current dataset, the Cronbach’s $\alpha$ was .84, indicating good reliability.

**Parental autonomy support.** Parental autonomy support was measured using an 8-item psychological autonomy granting scale (see Appendix D). These items were selected by Silk and colleagues (2003) from a parenting questionnaire developed by Steinberg, Lamborn, Dornbusch, and Darling (1992) and used as part of a large study with 9,564 adolescents from grades 9 to 12. Nineteen items that were conceptually related to autonomy granting and psychological control were selected and four graduate students rated the relevance of items based on the definition of the constructs with an internal rater reliability of .88 (kappa). A confirmatory factor analysis indicated that eight items loaded onto one latent factor -- parental autonomy granting. The eight items in the scale measured parental encouragement of adolescents’ independent decision-making and thinking (e.g., “My parents emphasize that every member of the family should have some say in family decisions”). Reported internal consistency reliability was .69. Validity of the scale was shown through examining the relations between autonomy granting and various outcomes. Consistent with the literature, parental autonomy granting measured with the scale was positively associated with adolescents’ self-concept, and negatively related to internalized problems and problem behaviors. Participants responded to the items on a 5-point Likert-type scale from “not at all true” to “very true.” Scales scores are computed by averaging responses across items, with higher scores indicative of greater autonomy granting. The reliability as indicated by the Cronbach’s $\alpha$ was .69 for the current dataset.
**Parental behavioral control.** Parents’ behavior control was measured with a sixteen-item parent monitoring scale used by Wang et al. (2007; see Appendix E) based on the measures developed by Stattin and Kerr (2000; Kerr & Stattin, 2000). Participants responded to these questions on a 5-point Likert-type scale from “never” to “very often.” Scales scores were computed by averaging responses across items, with higher scores indicative of greater behavior control. Reported internal consistency reliability ranged from .85 to .92 (different waves). The original Stattin and Kerr scale (2000) was developed with 763 eighth-graders in Sweden with seventy-six percent of them from intact families. A pilot study was conducted among 36 eighth-graders from a different cohort in which participants responded to the study at two occasions that were two months apart. The test-retest reliability was .83 and the internal consistency reliability for the whole sample was .86 (Stattin & Kerr, 2000). Behavior control measured with this scale was found to link with increased academic functioning among adolescents (Wang et al., 2007). For the current dataset, Cronbach’s α was .90.

**Parent-child attachment.** The Inventory for Parent and Peer Attachment (IPPA, Armsden & Greenberg, 1987) was used for assessing parent-child attachment (see Appendix F). The IPPA was originally developed with an overwhelmingly Caucasian college sample (75%) to assess their attachment with parents and peers with about two-thirds of them were females and one-third males. Ten items assess emerging adults’ trust towards parents (e.g., “My parents trust my judgment”), ten items measure communication with parents (e.g., “I tell my parents about my problems and troubles”), and eight items assess alienation from parents (e.g., “My parents don’t understand what I am going through these days). Cronbach’s alpha was reported as internal consistency reliability for the three subscales, with a .91 value for Trust, .91 for Communication, and .86 for Alienation. The validity of IPPA was assessed by examining its association to
psychological well-being, family climate, and support-seeking from others. Attachment with parents was significantly correlated with family climate (more cohesion, expressiveness, organization, less conflict and control), and moderately associated with seeking parents when needed. Better attachment with parents also was correlated with higher self-esteem and life satisfaction, and lower levels of depression/anxiety, resentment/alienation (Armsden & Greenberg, 1987).

Participants responded to the items on a 5-point Likert-type scale from “almost never or never true” to “almost always or always true.” Scales scores were computed by averaging responses across items, with higher scores indicative of higher trust, more communication, and higher level of alienation, respectively. For the current dataset, the reliabilities for the three subscales as indicated by the Cronbach’s α were .91 for Trust, .90 for Communication, and .89 for Alienation.

Procedure

Participants were recruited through the Educational Psychology research pool. Students in many of the classes that participated in the research pool were required to complete professional development activities of which research is one option. Instructors of other classes in the department also offered research participation to students as a way to provide students an understanding of the research process. Some instructors offered extra credit for participation in the study. The researcher first sent an email to instructors requesting that they forward the link of the study to their students and requesting an opportunity to visit each individual classroom. Some instructors responded back and invited the researcher to visit their classrooms. Student participants obtained a “receipt” at the end of the online survey that they sent to their instructor to earn the respective credit.
The survey was posted online. Students volunteered their participation, and before they moved on to the actual survey questions, an explanation of the nature of the study was provided and students were informed that, in order to proceed to the survey, they needed to indicate that they were willing to be a participant. The complete on-line survey took about 45 minutes, although some students chose to finish it in couple of time periods. Over the course of a one-month period, email reminders were sent to students through instructors every Monday. One-month later, data were downloaded into an SPSS data file for analysis.

**Data Analysis**

**Preliminary analysis.** Means, standard deviations, and intercorrelations among all predictors and the outcome (frequency, intensity, resolution of IPC, psychological control, autonomy support, behavioral control, trust, communication, alienation, emotion regulation) were calculated to provide some preliminary analysis for the data. Less than 5% of data were missing and demonstrated a completely random pattern, therefore, the listwise method was used to remove missing data in subsequent analyses.

**Regression analysis.** A simultaneous multiple regression analysis was used to answer the first research question: How are interparental conflict (frequency, intensity, and resolution), parenting (parental psychological control, autonomy support, and behavioral control), and parent-child relations (parent-child attachment: trust, communication, alienation) related to emerging adults’ emotion regulation? All predictors were entered in one layer simultaneously to predict emotion regulation (see Figure 3).

Regression is a statistical technique that allows users to access the relationship between dependent and independent variables (Tabachnick & Fidell, 2007). The method of least squares
is used in regression to find the “line of best fit” between the model and the observed data. The selected line fits best because it has the lowest sum of squared differences (Field, 2005).

Several assumptions were checked to ensure the appropriate use of regression. First, the variance of residuals (difference between the model predicted and actual values of the dependent variable) should remain the same across all predicted values of the dependent variable (homoscedasticity), and all residuals in the model should be normally distributed with a mean of zero (normally distributed errors). Finally, all of the residuals should be independent of each other. In addition, the analysis that is utilized should model a linear relationship between the dependent variable and residuals.

The possibility of multicollinearity was checked. Multicollinearity refers to strong correlations between the predictors, high levels of which can lead to biased estimates of regression coefficients and standard errors, and inflated Type II error. Multicollinearity could be detected through very low tolerance (1-\(\text{SMC}\), SMC: squared multiple correlation among independent variables) and high variance inflation factor (VIF) predictors. A tolerance lower than .1, and/or a VIF value over 10 were used as indicators of multicollinearity (Field, 2005).

**Path analysis.** A path analysis was conducted (see Figure 4) to answer the second research question: Do parenting (parental psychological control, behavioral control, and autonomy support), and parent-child relations (parent-child attachment: trust, communication, alienation) mediate the relations between interparental conflict and emotion regulation? Path analysis is widely used for analyzing causal relations among observed variables. It could be viewed as an extension of multiple regression for it can estimate the casual relations between various variables and test the assumed theory with empirical data (Kline, 2005). Maximum likelihood was used to estimate the parameter coefficients.
Figure 3. Proposed Model for Research Question One

- Frequency of Conflict
- Intensity of Conflict
- Resolution of Conflict
- Psychological Control
- Autonomy Support
- Behavioral Control
- Trust
- Communication
- Alienation

Emotion Regulation
Figure 4. Proposed Model for Research Question Two

Frequency of Conflict

Intensity of Conflict

Resolution of Conflict

Psychological Control

Autonomy Support

Behavioral Control

Trust

Communication

Alienation

Emotion Regulation
CHAPTER IV

Results

Preliminary Analysis

Means, standard deviations (see Table 3), as well as intercorrelations (see Table 4) among all observed variables (frequency, intensity, resolution of IPC; parental psychological control, behavioral control, and autonomy support; trust, communication, and alienation of parent-child attachment; and emotion regulation) were calculated to provide some preliminary analysis for the data. The results showed positive parental relations among participants as they reported moderate interparental conflicts, relatively low psychological control and behavioral control, moderate autonomy support, high trust and communication, and low alienation (see Table 3).

As expected, emotion regulation was significantly correlated with intensity and resolution of interparental conflict, parental psychological control, autonomy support, behavioral control, and parent-child attachment. To be more specific, lower levels of resolution of conflict, parental psychological control, and alienation from parents were negatively correlated with emotion regulation, whereas parental autonomy support, behavioral control, trust, and communication were positively correlated with emotion regulation. In addition, frequency of interparental conflict was positively correlated with parental psychological control and alienation, and negatively correlated with trust and communication. Intensity and resolution of interparental conflict were both positively correlated with psychological control and alienation, and negatively correlated with autonomy support, behavioral control, trust, and communication. Psychological control was negatively correlated with autonomy support, trust, and communication, and positively correlated with behavior control and alienation.
Table 3

*Mean, Standard Deviations, and Reliability of Variables*  

<table>
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<tr>
<th></th>
<th>Mean (SD)</th>
<th>Possible Range</th>
<th>α</th>
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<tbody>
<tr>
<td>IPC Frequency</td>
<td>1.88 (.62)</td>
<td>1.00 - 3.00</td>
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<tr>
<td>IPC Intensity</td>
<td>1.78 (.58)</td>
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<td>IPC Resolution</td>
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<td>Psychological Control</td>
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<tr>
<td>Att Trust</td>
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<tr>
<td>Att Communication</td>
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<td>Att Alienation</td>
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<td>Emotion Regulation</td>
<td>4.11 (.55)</td>
<td>1.00 - 5.00</td>
<td>0.77</td>
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</table>

Note. Frequency, intensity and resolution are three subscales of interparental conflict (IPC); trust, communication, and alienation are three subscales of parent-child attachment (Att).
<table>
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<th></th>
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</table>

Table 4: Inter-Correlations Among Variables

Note. *p < 0.05; **p < 0.01.
Research Question One

Before running the regression analysis, several assumptions were checked. The assumption of homoscedasticity was examined through the residuals scatterplot (Figure 5), which indicated that the variance of the residuals was the same across all independent variables. In addition, the residuals were normally distributed as indicated by the histogram, and P-P Plot of residuals (Figure 6 and 7), and there were no linear relationships between the residuals and the dependent variable, as indicated by a series of scatterplots (Figure 8 to 16).

In addition, although strong correlations were observed between some independent variables (IPC frequency with IPC intensity: $r = .77$; IPC frequency with IPC resolution: $r = .77$; IPC intensity with IPC resolution: $r = .72$; psychological control and attachment alienation: $r = .71$; attachment trust and communication: $r = .83$; attachment alienation and trust: $r = -.70$; attachment alienation and communication: $r = -.70$), none of the tolerances approached .1, and the VIF values were lower than 10 (Field, 2005). Therefore, no multicollinearity problems were detected in the dataset.
Figure 5. Scatterplot for Checking Homoscedasticity Assumption

Figure 6. P-P Plot for Checking Normality Assumption
Figure 7. Histogram for Checking Normality Assumption

Figure 8. Linearity Relationship Checking: Frequency of IPC with ER
Figure 9. Linearity Relationship Checking: Intensity of IPC with ER

Figure 10. Linearity Relationship Checking: Resolution of IPC with ER
Figure 11. Linearity Relationship Checking: Psychological Control with ER

Figure 12. Linearity Relationship Checking: Autonomy Support with ER
Figure 13. Linearity Relationship Checking: Behavioral Control with ER

Figure 14. Linearity Relationship Checking: Attachment Trust with ER
Figure 15. Linearity Relationship Checking: Attachment Communication with ER

Figure 16. Linearity Relationship Checking: Attachment Alienation with ER
To answer the first research question, a simultaneous regression (see Figure 17) was conducted with all predictors entered in one step including frequency, intensity, and resolution of interparental conflict; parental psychological control, behavioral control, autonomy support; and trust, communication and alienation of parent-child attachment; emotion regulation was used as the outcome. A total of 21 percent of the variances in emotion regulation could be explained by the model, $R^2 = .21$. Examination of standardized beta coefficients (see Figure 17 and Table 5) showed that resolution of interparental conflict, $b = -.29, p = .002$, and attachment alienation from parents, $b = -.20, p = .049$, were negatively related to emotion regulation; and behavioral control, $b = .12, p = .045$, and attachment communication, $b = .25, p = .019$, were positively related to emotion regulation. That is, lower levels of interparental conflict resolution and higher levels of alienation from parents predicted lower levels of emotion regulation, whereas higher levels of behavior control and communication with parents predicted higher levels of emotion regulation.
Table 5
Simultaneous Regression Analysis Predicting Emotion Regulation From Interparental Conflict, Parenting Practices, and Parent-Child Attachment

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$\beta$</th>
<th>SD</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC Frequency</td>
<td>.14</td>
<td>.09</td>
<td>1.40</td>
<td>.164</td>
</tr>
<tr>
<td>IPC Intensity</td>
<td>.10</td>
<td>.09</td>
<td>1.12</td>
<td>.263</td>
</tr>
<tr>
<td>IPC Resolution</td>
<td>-.29</td>
<td>.08</td>
<td>-3.11</td>
<td>.002</td>
</tr>
<tr>
<td>Psychological Control</td>
<td>.05</td>
<td>.05</td>
<td>0.56</td>
<td>.576</td>
</tr>
<tr>
<td>Autonomy Support</td>
<td>.12</td>
<td>.06</td>
<td>1.69</td>
<td>.092</td>
</tr>
<tr>
<td>Behavioral Control</td>
<td>.12</td>
<td>.05</td>
<td>2.01</td>
<td>.045</td>
</tr>
<tr>
<td>Att Trust</td>
<td>-.15</td>
<td>.08</td>
<td>-1.35</td>
<td>.180</td>
</tr>
<tr>
<td>Att Communication</td>
<td>.25</td>
<td>.07</td>
<td>2.35</td>
<td>.019</td>
</tr>
<tr>
<td>Att Alienation</td>
<td>-.20</td>
<td>.06</td>
<td>-1.98</td>
<td>.049</td>
</tr>
</tbody>
</table>

Note. Frequency, Intensity and Resolution: three subscales of interparental conflict (IPC); Trust, Communication and Alienation: three subscales of parent-child attachment (Att); All regression coefficients were standardized; SD=unstandardized standard deviation.
Figure 17. Results of Multiple Regression Analysis

\[ R^2 = .21 \]

Note. Only significant paths were drawn. * \( p < .05 \) ** \( p < .01 \)
Research Question Two

To address the second research question, a path analysis was conducted using the AMOS 17. The path analysis (see Figure 18) revealed that twenty percent of the variation in emotion regulation was explained by the model, $R^2 = .20$. Although in the simultaneous regression only interparental conflict resolution made a unique contribution to the variation in emotion regulation, the path model revealed indirect paths for both frequency and intensity of conflict through the parenting and attachment factors. Specifically, frequency of conflict, $b = .30, p = .001$, in conjunction with higher resolution of conflict, $b = -.39, p < .001$, significantly predicted parental behavioral control, $R^2 = .08$, and in turn greater parental behavioral control was significantly related to participants’ emotion regulation, $b = .11, p = .036$. In addition, lower intensity of conflict in conjunction with higher levels of conflict resolution was significantly related to higher levels of attachment trust, $R^2 = .17$, and communication, $R^2 = .15$, and lower levels of attachment alienation, $R^2 = .21$. In turn, higher levels of attachment communication, $b = .30, p < .001$, and lower levels of alienation, $b = -.16, p = .006$, were significantly related to higher emotion regulation. Surprisingly, lower levels of trust, $b = -.17, p = .002$, were related to higher emotion regulation. However, given that trust did not directly predict a unique proportion of variance in emotion regulation in the simultaneous regression (see Figure 18 and Table 6) and given its high correlations with both communication, $r = .83, p < .001$, and alienation, $r = -.70, p < .001$, a suppression effect may have caused an unusual reversal of signs. Cohen and Cohen (1983) explained that an inconsistent mediation effect could occur through the suppression of error variance in communication and alienation created by their significant correlations with trust. Greater intensity of IPC also significantly predicted psychological control, $b = .23, p = .007; R^2 = .11$, however, that path was not complete in predicting emotion regulation.
Higher levels of interparental conflict resolution significantly predicted attachment trust, communication, and alienation, which in turn predicted emotion regulation. In addition, greater parental autonomy support was significantly related to higher levels of IPC resolution, $R^2 = .03$, $b = -.19$, $p = .035$, which in turn significantly predicted participants’ emotion regulation, $b = .10$, $p = .041$. However, higher resolution of conflict continued to significantly predict greater emotion regulation even after controlling for all parenting and attachment factors, $b = -.26$, $p = .003$ (see Figure 18).

The significance of the indirect effects of frequency, intensity, and resolution of interparental conflict on emotion regulation through parenting related factors were calculated using bootstrap methods in SPSS (Preacher & Hayes, 2008) (see Table 7). Intensity and resolution of interparental conflict, but not frequency of conflict, had significant indirect effects on emotion regulation. Specifically, the effect of intensity of conflict on emotion regulation was significantly mediated by attachment communication and alienation. In addition behavioral control, communication, and alienation functioned as significant mediators between resolution of conflict and emotion regulation (see Table 7).
Table 6

Results of Path Analyses: Parenting Practices and Parent-Child Attachment as Mediators Between Interparental Conflict and Emotion Regulation

<table>
<thead>
<tr>
<th>Paths (Predictor – Outcome)</th>
<th>β</th>
<th>SE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predicting Psychological Control</td>
<td></td>
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</tr>
<tr>
<td>IPC Frequency–Psychological Control</td>
<td>.12</td>
<td>.13</td>
<td>1.32</td>
</tr>
<tr>
<td>IPC Intensity–Psychological Control</td>
<td>.23**</td>
<td>.13</td>
<td>2.69</td>
</tr>
<tr>
<td>IPC Resolution–Psychological Control</td>
<td>.01</td>
<td>.12</td>
<td>0.09</td>
</tr>
<tr>
<td>Predicting Behavioral Control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPC Frequency–Behavioral Control</td>
<td>.30**</td>
<td>.12</td>
<td>3.26</td>
</tr>
<tr>
<td>IPC Intensity–Behavioral Control</td>
<td>-.09</td>
<td>.12</td>
<td>-1.00</td>
</tr>
<tr>
<td>IPC Resolution–Behavioral Control</td>
<td>-.39***</td>
<td>.11</td>
<td>-4.54</td>
</tr>
<tr>
<td>Predicting Autonomy Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPC Frequency–Autonomy Support</td>
<td>.17</td>
<td>.11</td>
<td>1.73</td>
</tr>
<tr>
<td>IPC Intensity–Autonomy Support</td>
<td>-.12</td>
<td>.11</td>
<td>-1.31</td>
</tr>
<tr>
<td>IPC Resolution–Autonomy Support</td>
<td>-.19*</td>
<td>.10</td>
<td>-2.10</td>
</tr>
<tr>
<td>Predicting Attachment Trust</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>IPC Frequency–Att Trust</td>
<td>-.04</td>
<td>.12</td>
<td>-0.45</td>
</tr>
<tr>
<td>IPC Intensity–Att Trust</td>
<td>-.19*</td>
<td>.12</td>
<td>-2.31</td>
</tr>
<tr>
<td>IPC Resolution–Att Trust</td>
<td>-.22**</td>
<td>.11</td>
<td>-2.68</td>
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### Table 6 continued

<table>
<thead>
<tr>
<th>Predicting Attachment Communication</th>
<th>$R^2 = .15$</th>
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<tbody>
<tr>
<td>IPC Frequency– Att Comm</td>
<td>−.02</td>
</tr>
<tr>
<td>IPC Intensity– Att Comm</td>
<td>−.19*</td>
</tr>
<tr>
<td>IPC Resolution– Att Comm</td>
<td>−.22*</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Predicting Attachment Alienation</th>
<th>$R^2 = .21$</th>
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<tbody>
<tr>
<td>IPC Frequency– Att Alienation</td>
<td>.09</td>
</tr>
<tr>
<td>IPC Intensity– Att Alienation</td>
<td>.19*</td>
</tr>
<tr>
<td>IPC Resolution– Att Alienation</td>
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<th>Predicting Emotion Regulation</th>
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<tr>
<td>Psy Control– Emotion Regulation</td>
<td>−.00</td>
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<tr>
<td>Autonomy Support– Emotion Reg</td>
<td>.10*</td>
</tr>
<tr>
<td>Behavioral Control– Emotion Reg</td>
<td>.11*</td>
</tr>
<tr>
<td>Att Trust– Emotion Regulation</td>
<td>−.17**</td>
</tr>
<tr>
<td>Att Communication– Emotion Reg</td>
<td>.30***</td>
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<td>Att Alienation– Emotion Reg</td>
<td>−.15**</td>
</tr>
<tr>
<td>IPC Frequency– Emotion Regulation</td>
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<tr>
<td>IPC Intensity– Emotion Regulation</td>
<td>.15</td>
</tr>
<tr>
<td>IPC Resolution– Emotion Regulation</td>
<td>−.26**</td>
</tr>
</tbody>
</table>

*Note.* Frequency, intensity, and resolution: three subscales of interparental conflict (IPC); Trust, Communication (Comm), and Alienation: three subscales of parent-child Attachment (Att); Psy Control: Psychological Control; Emotion Reg: Emotion Regulation. All beta coefficients are standardized. SE: standard error of regression weight; CR: critical ratio for regression weight. *$p < .05$, **$p < .01$, ***$p < .001$
Table 7

*Total and Specific Indirect Effects of Frequency, Intensity, and Resolution of Interparental Conflict on Emotion Regulation*

<table>
<thead>
<tr>
<th></th>
<th>IPC Frequency</th>
<th>IPC Intensity</th>
<th>IPC Resolution</th>
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<tr>
<td>Total Indirect Effect</td>
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<td>-.11*</td>
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<tr>
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<td>.00</td>
</tr>
<tr>
<td>Autonomy Support</td>
<td>.02</td>
<td>-.02</td>
<td>-.02</td>
</tr>
<tr>
<td>Behavioral Control</td>
<td>.03</td>
<td>-.01</td>
<td>-.04*</td>
</tr>
<tr>
<td>Att Trust</td>
<td>.00</td>
<td>.03</td>
<td>.03</td>
</tr>
<tr>
<td>Att Communication</td>
<td>.00</td>
<td>-.06*</td>
<td>-.05*</td>
</tr>
<tr>
<td>Att Alienation</td>
<td>-.01</td>
<td>-.05*</td>
<td>-.04*</td>
</tr>
</tbody>
</table>

*Note.* Frequency, intensity and resolution: three subscales of interparental conflict (IPC); Trust, Communication (Comm) and Alienation: three subscales of parent-child Attachment (Att); * $p<.05$. 


Figure 18. Path Analysis Model with Parenting Practices and Parent-Child Attachment as One Level of Mediation

- **Frequency of Conflict**
  - $R^2 = .11$
  - $R^2 = .08$
  - $R^2 = .03$
  - $R^2 = .17$
  - $R^2 = .15$
  - $R^2 = .21$

- **Intensity of Conflict**
  - $R^2 = .22**$
  - $R^2 = .19**$
  - $R^2 = .19**$
  - $R^2 = .26***$
  - $R^2 = .23$

- **Resolution of Conflict**
  - $R^2 = .21**$

- **Psychological Control**
  - $R^2 = .11$

- **Behavioral Control**
  - $R^2 = .08$
  - $R^2 = .03$

- **Autonomy Support**
  - $R^2 = .17$

- **Trust**
  - $R^2 = .15$

- **Communication**
  - $R^2 = .21$

- **Alienation**
  - $R^2 = .20$

Note: Only significant paths were drawn. *p* < .05, **p** < .01, ***p** < .001.
Post-hoc Analysis

In noting the significant role of the attachment factors in the path model and the literature that would suggest that attachment may in fact mediate the relations of parenting on adolescent outcomes (Brenning et al., 2012; Karavasilis et al., 2003; Scott et al., 2011; Shpigel et al., 2012), a new model was proposed in which the parent-child attachment factors served as mediators between parenting practices and emotion regulation. The new model was tested in AMOS 17 (see Figure 19), and the results indicated that the attachment factors of communication and alienation indeed mediated the relations of behavior control, psychological control, and autonomy support with emotion regulation. Specifically, all three parenting factors significantly predicted all three attachment factors and their relations with emotion regulation were fully mediated by higher parent-child communication and lower alienation. However, given its strong relations with communication and alienation, trust was not related to emotion regulation in this model (the suppression effect in the original model disappeared).

Moreover, relations of both frequency and intensity of interparental conflict with attachment were fully mediated by parenting. Specifically, frequency of conflict was mediated by behavioral control and intensity of conflict by psychological control. Resolution of conflict was partially mediated by its significant relations with behavioral control and autonomy support; however, higher conflict resolution continued to predict less alienation, which in turn was significantly related to higher emotion regulation. In addition, conflict resolution continued to have a direct relationship with emotion regulation beyond both parenting and attachment.

The total variance in emotion regulation explained by the model was similar to that in the previous model ($R^2 = .19$). However, in the first mediation model, AIC=1099.87 whereas the value of AIC in the second mediation model was 381.68, indicating that the second model fits
the data better than does the first. Because this new model was exploratory in nature, more future work needs to be done to validate the model with other samples.
Figure 19. Path Analysis Model with Parenting Practices and Parent-Child Attachment as Two Levels of Mediators
Chapter V
Discussion

The purpose of the current study was twofold: first, to examine how the overall emotional environment of a family (defined as interparental conflict between parents), parenting practices, (psychological control, autonomy support and behavioral control) and parent-child relations (attachment) impact emerging adults’ emotion regulation capabilities; and second, to examine how parenting practices and parent-child relations functioned as mechanisms in the relations between interparental conflict and emerging adults’ emotion regulation. The first hypothesis was that interparental conflict and parental psychological control would be negatively associated with emerging adults’ emotion regulation whereas autonomy support, behavioral control, and parent-child attachment be positively related to emotion regulation. The hypothesis was partially supported by the results. Of all the predictors, resolution of interparental conflict, behavioral control, and two aspects of parental-child attachment (communication and alienation) were significantly correlated with emotion regulation. Higher conflict resolution, more behavioral control, better parent-child communication, and lower levels of alienation were associated with better emotion regulation. The second hypothesis regarding whether parenting practices and parent-child relations mediated the relations between interparental conflict and emotion regulation also was partially supported. Parental autonomy support, behavioral control, and parent-child attachment partially mediated the relations between resolution of interparental conflict and emerging adults’ emotion regulation. The direct relation between resolution of conflict and emotion regulation remained significant even when autonomy support, behavioral control, and parent-child attachment were controlled. In addition, the analysis testing the role of attachment in mediating parenting and emotion regulation showed that communication and alienation fully mediated the influence of psychological control, behavioral control, and
autonomy support on emotion regulation. Specific patterns of direct and mediated effects are discussed in turn.

**Direct Relations Between Family Factors and Emotion Regulation**

When considering all of the family factors together, an interesting pattern of direct effects emerged. First, lower resolution of interparental conflict was associated with lower levels of emotion regulation, however, frequency and intensity of interparental conflict were not related to emotion regulation. Previous research has suggested that resolution of interparental conflict would be particularly associated with children’s feelings of emotional security. In Cummings and Davies’ (1994) review of 11 studies, they found that resolution after interparental conflict significantly reduced children’s negative reactions to the conflict, as children were very sensitive to resolution and were able to sense how much a conflict had been resolved. Although the frequency of interparental conflict has been associated with children’s maladjustment, such results might be due to its high covariance with other dimensions of interparental conflict (Cummings & Davies). In addition, one meta-analysis showed that, when examined alone, frequency of interparental conflict was only weakly related to children’s maladjustment (Krishnakumar & Buehler, 2000). Although the frequency of interparental conflict has been found to be related to a sense of insecurity and distress among children (Kerig, 1996) and both frequency and intensity of interparental conflict have been related to late adolescents’ sensitivity to conflicts and emotional negativity (David & Murphy, 2004); hostile conflict has been shown to be a stronger predictor of adolescents’ problem behaviors than the frequency of conflict (Buehler et al., 1998). However, Buehler et al. (1998) found that parental use of covert conflict, but not overt conflict, predicted adolescents’ internalized problems. It is possible that because the measure of intensity of conflict in this study assesses only overt conflict (e.g., argue, yell, break
things, push or shove each other), but not covert conflict, it failed to present an association with emotion regulation. Ultimately, the resolution of the conflict appeared to be the best predictor of emotional regulation, especially among these emerging adults who might not have a fully accurate perception of either the frequency or intensity of conflict when not living at home. There appears to be something about the ability of parents to resolve their conflicts that enhances their adult children’s ability to regulate their own emotions.

The fact that only resolution of conflict was related to emerging adults’ emotion regulation might echo the social learning model. Parents who acted verbally and physically aggressive towards each other, and were unable to find effective ways to resolve their disputes, might fail to provide positive modeling to their children about effective ways of problem solving and how to regulate emotions in time of distress. It is reasonable to believe that every family has disagreements now and then, but what really differentiates one family from another, and impacts their emerging adult children’s emotion regulation abilities, is how well disagreement and conflicts are resolved afterwards (Cummings & Davies, 2010; Kerig, 1996). When parents failed in their endeavors to negotiate and settle disputes and conflicts, they allowed a negative emotional atmosphere to impact the family, making them less likely to engage in effective parenting, and ultimately dampened their children’s emotion regulation capabilities.

Next, most of the parenting and attachment factors were either directly or indirectly related to emotion regulation. Behavioral control as a dimension of parenting involves parents’ provision of structure and guidance about children’s behavior and has been associated with adaptive outcomes among children and adolescents (Bean et al., 2006; Pomerantz & Wang, 2009). Psychological control, however, involves parents’ intrusion into children’s emotional and psychological development and has been related to a number of measures of maladjustment
(Manzeske & Stright, 2009; McEwen & Flouri, 2009). It has been found that parental psychological control, but not behavioral control, is related to difficulties in emotion regulation among adolescents (McEwen & Flouri, 2009). In the current study, behavioral control was positively associated with emotion regulation, but psychological control showed no influence on emotion regulation. These findings imply that although most young emerging adults have left their parents’ house and live independently, they still benefit from parental supervision and guidance, especially during times of struggle. Parents still play an important role in assisting emerging adults in regulating their behavior, mostly through the provision of psychological and emotional support and encouragement (Arnett, 2007). Psychological control on the other hand is greatly diminished during emerging adulthood even if it had been present during adolescence (Arnett, 2000, 2007; Hill & Holmbeck, 1986). In the current sample, relatively low levels of psychological control and limited variability (as would be expected within the normal population) make it difficult to detect any impact it might have on emotion regulation.

In addition, two dimensions of attachment (better communication and less alienation) were associated with more positive emotion regulation demonstrating that secure parent-child attachment predicted better emotion regulation among these emerging adults. Many researchers believed that an important characteristic of secure attachment was open discussions about negative emotions between parents and children through verbal and non-verbal means (Bowlby, 1980; Etzion-Carasso & Oppenheim, 2000; Laible & Panfile, 2009). According to the spillover hypothesis, parents occupied with the negative emotions brought by interparental conflict with spouses might transfer these emotions to their relations with children, arousing feelings of alienation between parent and child (Erel, & Burman, 1995; Krishnakumar & Buehler, 2000). These findings that more behavioral control, better communication, and less alienation were
associated with better emotion regulation among emerging adults demonstrated that, although socialization of affective regulation is mostly completed at this stage, young emerging adults’ capabilities of emotion regulation could still be fostered through a positive parent-child emotional bonding; and parental knowledge about their college children’s whereabouts, associations, and activities with peers provided a basis for a functional parent-child relations.

**Indirect Effects of Interparental Conflict with Emotion Regulation**

Although only resolution of conflict had a direct impact on emotion regulation, all three aspects of interparental conflict demonstrated different patterns of relations with parenting practices, which in turn were related to emotion regulation. Taken together, the current study indicated that interparental conflict explained a significant proportion of variance in parenting practices, similar to what was reported by Krishnakumar and Buehler (2000). Overall, interparental conflict was positively associated with negative parenting practices, supporting the spillover hypothesis.

Higher frequency of interparental conflict was related to more behavioral control and greater intensity of conflict was associated with higher psychological control. It appears that parents who engage in more conflict are more likely to attend to the needed supervision of their children’s behavior; and parents who engage in more intense conflict are more likely to impose psychological control over their children, demonstrating the unique roles of the frequency vs. intensity of parents’ conflict in how they parent. Although the positive association between frequency of interparental conflict and emotion regulation was somewhat surprising, it provided empirical support for Grych’s (2002) articulation that research studies tended to oversimplify the complicated relations between interparental conflict and parenting, which indicated that “good things go together,” in other words, interparental conflict should always predict ineffective
parenting. The findings of the current study, however, demonstrated that different dimensions of interparental conflict were associated with both effective and ineffective parenting practices. It is likely for parents of emerging adults, frequent conflicts with spouse might prompt them to inquire about their young adult children’s whereabouts and activities. In turn, more behavioral control prompts emerging adults’ emotion regulation. These findings support a previous study that found that more destructive interparental conflicts were associated with emotion-related parenting practices, but not others (Katz & Windecker-Nelson, 2006). In fact, these findings are consistent with a type of compensatory hypothesis, when parents tend to become overly dedicated to the parent-child relations to compensate for the loss of intimacy in the marital relationship (Cummings & Davies, 2010; Erel & Burman, 1995). As such, parents who frequently yell, break, or throw things, or act physically violent and aggressive during marital conflict, may feel more guilty and blame themselves for not being able to provide an emotionally and physically secure environment for their children, thus become overly involved and over-protective to children afterwards to compensate. The results of one study found that interparental conflict became associated with higher levels of maternal psychological control and lower level of parental monitoring and maternal acceptance among early to late adolescents (Krishnakumar et al., 2003). Likewise, Cummings and Davies (2010) found that in families stressed by higher interparental conflict, parents were more likely to become psychologically controlling in an attempt to compensate for the unhappy family environment. Unfortunately, this enmeshed and intrusive type of parenting served to jeopardize a secure parent-child attachment (Cummmings & Davies, 2010), as likewise demonstrated in the current study. Although not directly related to emotion regulation, psychological control was associated with an insecure parent-child
attachment (less communication and greater alienation), which in turn was related to less emotion regulation among these emerging adults.

Less resolution of conflict, on the other hand, was associated with less parental autonomy support and less behavior control, demonstrating that children from high conflict families with low resolution were exposed to two levels of stressors: one directly from the interparental conflict, and the other from less parental promotion of autonomy because of a dissonant family emotional environment (Michael, Torres, & Seemann, 2007). These findings also provided more evidence for the spillover hypothesis, which argued that the negative effect induced from a disturbed marital realm spilled into parent-child interaction, making parents less likely to engage in adaptive parenting practices (Krishnakumar & Buehler, 2000). According to the findings, parents who had problems settling their own disputes and conflicts with spouses were less likely to support and encourage their children to be autonomous and develop individuality, and less likely to provide adequate behavior regulation. This might reflect some consistent personal characteristics within a parent. For example, husbands and wives who find it difficult to reach an agreement or resolve a dispute with their spouses may have less tolerance of different opinions, or they are very rigid with their own point of view. If that is the case, how could one expect such parents to be “generous” in granting autonomy to their children? In addition, drained by the frequent disputes and conflicts, emotionally distracted parents were less likely to have time to regulate their children’s behaviors (Erel & Burman, 1995). In turn, the current study showed the negative impact of less effective behavioral control and autonomy support on the emotion regulation of these emerging adults.

It was the two aspects of parent-child attachment (high communication and low alienation), however, that appeared to serve as the most significant predictors of better emotion
regulation. Communication between parents and children was related to better emotion regulation whereas a feeling of alienation was associated with lower levels of emotion regulation among emerging adults. Previous studies have demonstrated that in the face of emotional stress imposed by interparental conflict, parents’ availability and support could buffer the negative influence and serve as protectors (Bowlby, 1973; Grych & Fincham, 1990), whereas parental insensitivity might produce an even more challenging environment for children and deteriorate their abilities to regulate emotions (Cummings & Davies, 1994). Parent-child attachment has been shown to provide a source of security in time of distress and promote better emotion regulation (Cummings & Davies, 1994; Kobak, Cole, Fleming, Ferenz-Gillies, & Gamble, 1993). Parents who were sensitive and emotionally available were found to be more able to discern if children were emotionally disturbed (e.g., in the face of interparental conflict) (DeBoard-Lucas et al., 2010), and were engaged in open discussion with children thus actually buffered the negative impact of interparental conflict. Children were more likely to turn to parents with whom they felt securely attached for clarification and comfort, and parents could guide them through the misrepresentations of the unclear family future, and provided reassurance (Davies, Harold, Goeke-Morey, & Cummings, 2002). When children perceived their parents to be responsive and emotionally available, they were more likely to turn to them for affective guidance after family discord, or in other times of distress (Davies et al., 2002). In addition, middle to late adolescents who were more securely attached to their mothers perceived interparental conflict as less threatening, as reported by Grych et al. (2004).

Most interesting was that parent-child attachment served to mediate the effects of parenting on emotion regulation. To be more specific, parental psychological control was negatively associated with parent-child attachment, whereas parental autonomy support and
behavioral control were positively associated with parent-child attachment. Previous research studies showed that interparental conflict was negatively associated with parent-child relations (Cummings & Davies, 1994), our findings demonstrated that the relations were actually realized through parenting practices such as psychological control, autonomy support, and behavioral control. Research studies demonstrated that ineffective parenting practice could exacerbate the negative effects of interparental conflict (Krishnakumar & Buehler, 2000) and the current study indicated that such aggravation is fulfilled through a worsened parent-child attachment. In previous research, children’s feelings of attachment were significantly predicted by their parents’ parenting practices (Brenning et al., 2012; Karavasilis et al., 2003), and attachment styles influenced children’s developmental outcomes (Scott et al., 2003). More specifically, parental warmth, autonomy support, and behavioral control were found to be associated with children’s and adolescents’ secure attachment (Karavasilis et al., 2003; Shpigel et al., 2012) whereas negligent, unresponsive parenting together with low autonomy support were related to insecure attachment among children and adolescents (Brenning et al., 2012; Karavasilis et al., 2003). In one study, late adolescents’ attachment with parents measured by trust, communication and alienation fully mediated the relations between parenting practices and aggression (Gallarin & Alonso-Arbiol, 2012). The current study showed that when parents’ do not inquire about their college children’s whereabouts, activities, and associations with friends; do not support their autonomy, and are psychologically controlling the emotional bonds between parent and children were diminished; and in turn emotion regulation was negatively affected.

Indeed, higher levels of communication and lower levels of alienation were associated with positive emotion regulation. When children have secure affective relations with parents, they may feel less threatened by the presence of interparental conflict, and might be less
distressed. Even in the presence of disagreements and fights between parents, children who perceive the family bonding as strong, due to the feelings of security in the parent-child subsystem, can learn to deal with emotions positively. Although the security obtained from the parent-child relations could not entirely offset the insecurity in the interparental realm, it at least served as buffer to protect emerging adults’ overall adjustment to some degree.

Even after controlling for parenting, poor resolution of interparental conflict continued to have a direct impact on emerging adult children’s perceptions of alienation from parents. Moreover, resolution of conflict had a direct impact on emotion regulation above and beyond all other family factors. Perhaps children can learn how to regulate their emotions by modeling parents’ constructive ways of handling conflict (Thompson & Meyer, 2007), or perhaps parents who possess the temperament required to readily resolve conflicts have children who possess a similar ability to regulate their emotions in times of distress. These findings suggest that there are numerous aspects of the family system not explained simply with parenting practices, or even with the security of the parent-child relationship. Certainly the ability of emerging adults to regulate their emotions is a complex developmental process worthy of further study.

**Importance of the Current Study**

The association between interparental conflict and emotional dysfunction among children has been well documented (Rhoades, 2008). In exploration of how several family subsystems influenced emerging adults’ emotion regulation, the current study examined the role of three dimensions of interparental conflict on emerging adults’ emotion regulation. Most research studies focused on the impact of frequency of conflict on youth development, and ignored other aspects such as intensity and resolution, thus were unable to provide an accurate picture of which aspects of interparental conflict were more detrimental on youth various outcomes (Grych &
Fincham, 1990). Although it was clear that marital conflict predicted ineffective parenting, the majority of studies used a general measure (or composite score) for marital conflict thus provided little information about which dimension of IPC impacted which aspect of parenting (Grych, 2002). The current study demonstrated that different dimensions of interparental conflict made various contributions to parenting practices, parent-child relations, and emotion regulation among emerging adults. In particular, resolution of conflict demonstrated the strongest effect on parenting and emotion regulation, which could be viewed as the most significant finding of the current study. Indeed, the observation of conflict between parents impacts and changes children’s emotion regulation capabilities (Fincham et al., 1994), and such impact can extend into emerging adulthood. In fact, previous research has shown that the effect of exposure to interparental conflict from divorced families posed risks that primarily emerged in late adolescents and the early adult years (Amato & Keith, 1991). The current study was the first to examine how interparental conflict, parenting practices and parent-child attachment impacted emotion regulation among emerging adults. The findings indicated that interparental conflict, especially resolution of conflict, was closely associated with young adults’ emotion regulation capabilities, and at least part of the relations were achieved through parent-child dynamics including parenting practices and parent-child attachment.

The influence of family extends into emerging adult years (David & Murphy, 2004). Although the influence of interparental conflict has been widely investigated in children, little is known about how older adolescents and emerging adults could be impacted by interparental conflict (David & Murphy, 2004; Parke & Buriel, 1998). Research studies have demonstrated that interparental conflict led to less responsive, consistent, and more intrusive parenting (Katz & Gottman, 1996; Shelton & Harold, 2008), and was related to an insecure parent-child
relationship among children and adolescents (Doyle & Markiewicz, 2005). However, it is unclear whether similar patterns exist for emerging adults. The current study supported the proposition that interparental conflict was associated with ineffective parenting practices and less secure emotional connections between parents and their emerging adult children. In the current study, a significant proportion of variance in parent-child attachment was explained, demonstrating that the emotional discord between parents greatly impacts the affective relationships between parents and children, and the impact was mostly realized through dimensions of parenting practices. In particular, whether parents could effectively resolve disagreement directly impacted whether their children felt related to parents emotionally.

Limitations of the Study

There were several limitations in the current study. In the first place, a college sample was used to represent emerging adults, which as a population is composed of both college students and young individuals living in communities who chose not to pursue higher education. The current sample limits the generalizability of these findings to all emerging adults. In addition, the participants were recruited from a research pool, with an unbalanced number of males and females and an overwhelming proportion of Caucasians. To prompt the data collection, the researcher inquired about opportunities to meet with potential participants and worked with course instructors to gain access to the sample. It should be acknowledged that the varied support from instructors might have introduced some bias in the sample. Further, because the data were collected through an online survey, the researcher was not able to spot possible problems during the data collection process and could not address participants’ questions in a prompt manner.
Directions for Future Study

The complex family dynamic contains three subsystems: interparental, parent-child, and sibling relations (Erel & Burman, 1995). The current study focused only on how two of the three realms, that is, how relations between parents and parenting practices and parent-child attachment impact emerging adults’ emotion regulation. Future studies should also examine how sibling relations might influence individuals’ emotion regulation capabilities. In previous research, marital conflict and ineffective parenting were associated with disturbed sibling relationships (Deal, Hagan, Bass, Hetherington, & Clingempeel, 1999). Some researchers suggested that “meta-emotion coaching” proposed by Gottman and colleagues (1996) could be viewed as a new dimension of parenting (Cowan & Cowan, 2002), which focuses on how parents regulate emotions of their own and their children. “Emotionally coaching” parents are good at labeling, recognizing and utilizing their and their children’s emotions, they accept and validate children’s emotion expression, especially negative ones, and use it as optimal opportunity to teach emotion regulation strategies and enhance parent-child closeness. “Emotion dismissing” parents, on the other hand, refuse to recognize and accept the existence of negative emotions in children, invalidate such emotions, and induce shame and doubt to discourage the expression of negative emotions. Future researchers may consider examining how such parenting dimensions might be related to parent-child relations and impact emerging adults’ emotion regulation capabilities. In the current study, the measure of interparental conflict mainly focused on overt conflict, and neglected how covert conflict might influence emerging adults’ outcomes. Future researchers might consider measuring both overt and covert conflict and examine the various patterns between types of conflicts and emerging adults’ emotional outcomes.
In the current study, college students reported their perceptions of interparental conflicts, parenting practices, parent-child attachment, and their emotion regulation capacities. Although some people might argue that such subjective perceptions may not be accurate, youth perceptions’ of interparental conflict reflect what they actually observe and feel, thus would be considered a better predictor of their developmental outcomes than parent-reported information (Emery & O’Leary, 1982). In fact, child reported dimensions of interparental conflict were consistently associated with their adjustment as reported by other informants (e.g., teachers, parents, peers), whereas parent-reported data were only related to children’s adjustment problems reported by parents (Grych et al., 1992; Fincham et al., 1994). However, future researchers might consider assessing interparental conflict using multiple informants, and compare and contrast the possible different patterns in youths’ social and emotional outcomes.

Historically, the conceptualization of marital functioning included marital satisfaction and interparental conflict (Buehler et al., 1998); but, in the current study, only interparental conflict was assessed for it has been found to be a better predictor of youth outcomes (Cummings, Davies, & Simpson, 1994; Katz & Gottman, 1993).

In the current study, the impact of interparental conflict on various aspects of parenting was examined, however, the relations between interparental conflict and parenting could be reciprocal (Grych, 2002). When parents could not reach agreement on how to discipline children, their disagreement might escalate into serious conflicts. Parenting practices also are under the influence of many other factors (e.g. parental personalities, external stress) (Grych, 2002), and future research might take such factors into consideration when examining the relations between interparental conflict and parenting, as well as their effects on emerging adults’ emotion regulation. Researchers should also consider examining how interparental conflict, parenting
practices, and parent-child relations could impact young emerging adults’ adjustment in blended families, cohabiting families, and single-parent families. In the current study, no differentiation was made for participants from divorced and intact families, since what really impacts children is conflict, not necessarily the marital status itself (Deal et al., 1999). The emotional problem differences that existed between children from divorced and non-divorced groups could be traced back to early years when their parents were still married (Cherlin, Chase-Lansdale, & McRae, 1998). In other words, when exposed to interparental conflict, children in intact families suffer similarly as those in divorced families (Amato & Keith, 1991).

**Conclusion**

The current study as a “process-oriented” research (Cummings & Davies, 2002) explicited the multiple protective and risk factors in the parent-child realm, and demonstrated how various parenting practices and parent-child attachment might contribute to emerging adults’ emotion regulation. The conceptual model of the current study was derived from frameworks proposed by Morris et al. (2007) and Cummings and Davies (2002) for a process-oriented direction in examining how interparental conflict impact children’s outcomes. Based on the results, interparental conflict negatively impacted parenting practices, which in turn influenced parent-child attachment. Indeed research studies have consistently shown that stresses such as marital conflict induced negative emotions which in turn influenced the quality of parenting (Dix, 1991; Doyle & Markiewicz, 2005; Owen & Cox, 1997). As the “barometers of parenting,” parents’ emotions predicted a healthy or dysfunctional parent-child relationship (Dix, 1991, p. 4). In essence, this is in line with the spillover hypothesis, that the negative affect generated from a disturbed marital conflict, could be transferred to the parent-child subsystem.
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Appendix A

**Emotion Regulation**
(Emotional Intelligence Scale; Schutte et al., 1998)

In this section, you will be asked about yourself. Please indicate how true each statement is for you.

1 = Not at all true, 2 = Slightly untrue, 3 = Neither true nor untrue, 4 = Slightly true, 5 = Very true

1. I know when to speak about my personal problems to others.
2. **When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.**
3. I expect that I will do well on most things I try.
4. Other people find it easy to confide in me.
5. I find it hard to understand the non-verbal messages of other people.
6. Some of the major events of my life have led me to re-evaluate what is important and not important.
7. When my mood changes, I see new possibilities.
8. Emotions are one of the things that make my life worth living.
9. I am aware of my emotions as I experience them.
10. **I expect good things to happen.**
11. I like to share my emotions with others.
12. **When I experience a positive emotion, I know how to make it last.**
13. I arrange events others enjoy.
14. **I seek out activities that make me happy.**
15. I am aware of the non-verbal messages I send to others.
16. I present myself in a way that makes a good impression on others.
17. When I am in a positive mood, solving problems is easy for me.
18. By looking at their facial expressions, I recognize the emotions people are experiencing.
19. I know why my emotions change.
20. When I am in a positive mood, I am able to come up with new ideas.
21. I have control over my emotions.
22. I easily recognize my emotions as I experience them.
23. **I motivate myself by imagining a good outcome to tasks I take on.**
24. I compliment others when they have done something well.
25. I am aware of the non-verbal messages other people send.
26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.
27. When I feel a change in emotions, I tend to come up with new ideas.
28. **When I am faced with a challenge, I give up because I believe I will fail.**
29. I know what other people are feeling just by looking at them.
30. I help other people feel better when they are down.
**31. I use good moods to help myself keep trying in the face of obstacles.**
32. I can tell how people are feeling by listing to the tone of their voice.
33. It is difficult for me to understand why people feel the way they do.

*Note.* Items on the emotion regulation factor and used in the analyses are shown in boldface.
Appendix B

Interparental Conflict
(Children’s Perceptions of Interparental Conflict Scale; Grych, Seid, & Fincham, 1992)

I live with _____ both my mom and my dad
   _____ only one of my parents
   _____ another relative (e.g., grandparents, aunt)

How often do you see your parents?
   _____ less than once a semester
   _____ more than once a semester
   _____ once a month
   _____ once a week
   _____ every day

In every family there are times when the parents don't get along. When their parents argue or disagree, kids can feel a lot of different ways. We would like to know what kind of feelings you have when your parents have arguments or disagreements. If your parents don't live together in the same house with you, think about times that they are together when they don't agree or about times when both of your parents lived in the same house, when you answer these questions.

1 = True, 2 = Sort of true, 3 = False

Conflict Properties

Frequency
1. I never see my parents arguing or disagreeing.
2. They may not think I know it, but my parents argue or disagree a lot.
3. My parents are often mean to each other even when I’m around.
4. I often see my parents arguing.
5. My parents hardly ever argue.
6. My parents often nag and complain about each other around the house.

Intensity
7. My parents get really mad when they argue.
8. When my parents have a disagreement they discuss it quietly.
9. When my parents have an argument they say mean things to each other.
10. When my parents have an argument they yell a lot.
11. My parents hardly ever yell when they have a disagreement.
12. My parents have broken or thrown things during an argument.
13. My parents have pushed or shoved each other during an argument.
Resolution
14. When my parents have an argument they usually work it out.
15. Even after my parents stop arguing they stay mad at each other.
16. When my parents disagree about something, they usually come up with a solution.
17. When my parents argue they usually make up right away.
18. After my parents stop arguing, they are friendly toward each other.
19. My parents still act mean after they have had an argument.
Appendix C

Psychological Control
(Barber, 1996)

In this section, you will be asked about your parents. Please indicate how true each statement is for you.

1 = Not at all true, 2 = Slightly untrue, 3 = Neither true nor untrue, 4 = Slightly true, 5 = Very true

1. My parents change the subject, whenever I have something to say.
2. My parents finish my sentences whenever I talk.
3. My parents often interrupt me.
4. My parents act like they know what I’m thinking or feeling.
5. My parents would like to be able to tell me how to feel or think about things all the time.
6. My parents are always trying to change how I feel or think about things.
7. My parents blame me for other family members’ problems.
8. My parents bring up my past mistakes when they criticize me.
Appendix D

Psychological Autonomy Granting
(Silk et al., 2003)

In this section, you will be asked about your parents. Please indicate how true each statement is for you.

1 = Not at all true, 2 = Slightly untrue, 3 = Neither true nor untrue, 4 = Slightly true, 5 = Very true

1. My parents emphasize that every member of the family should have some say in family decisions.
2. My parents emphasize that it is important to get my ideas across even if others don’t like it.
3. My parents say that you should always look at both sides of the issue.
4. My parents talk at home about things like politics or religion, where one takes a different side from others.
5. My parents keep pushing me to think independently.
6. My parents let me make my own plans for things I want to do.
7. When I get a good grade, my parents give me more freedom to make my own decisions.
8. My parents admit that I know more about some things than adults do.
Appendix E

Behavioral Control
(Statton & Kerr, 2000)

In this section, you will be asked about your parents. Please indicate how true each statement is for you.

1 = Never, 2 = Seldom, 3 = Sometimes, 4 = often, 5 = Very often

1. How often do your parents ask you about your activities outside of classes?
2. How often do your parents ask you to tell them what happens on campus?
3. How often do your parents initiate a conversation with you about things you do with your friends?
4. How often do your parents ask you about how you spend your money?
5. How often do your parents initiate a conversation with you about what happens during your free time?
6. How often do your parents ask you about places you go with your friends?
7. How often do your parents initiate a conversation with you about how your schoolwork is going?
8. How often do your parents ask you about your grades?
9. How often do your parents require you to ask for their permission before you go out?
10. How often do your parents often require you to tell them where you are going and what you are doing before you go out?
11. How often do your parents require you to speak with them before you decide on plans for weekends with your friends?
12. How often do your parents require you to tell them where you are going and what you are doing before you go out on weekends?
13. How often do your parents require you to explain where you went and what you did if you come home late?
14. How often do your parents require you to let them know how you are doing in school?
15. How often do your parents require you to let them know how much time you spend studying?
16. How often do your parents require you to let them know your grades on your schoolwork?
Appendix F

Parent-Child Attachment
(The Inventory for Parent and Peer Attachment; Armsden & Greenberg, 1987)

Please indicate how true the following statements are for you.

1= Almost never or never true, 2= Seldom true, 3= Sometimes true, 4= Often true, 5= Almost always or always true

Trust
1. My parents respect my feelings.
2. I feel my parents are successful as parents.
3. I wish I had different parents.
4. My parents accept me as I am.
13. When we discuss things, my parents consider my point of view.
21. My parents understand me.
23. When I am angry about something, my parents try to be understanding.
24. I trust my parents.

Communication
6. I like to get my parents’ point of view on things I’m concerned about.
7. I feel it’s no use letting my feelings show.
8. My parents sense when I’m upset about something.
15. My parents have their own problems, so I don’t bother them with mine.
16. My parents help me to understand myself better.
17. I tell my parents about my problems and troubles.
20. My parents encourage me to talk about my difficulties.
26. I can count on my parents when I need to get something off my chest.
28. If my parents know something is bothering me, they ask me about it.

Alienation
5. I have to rely on myself when I have a problem to solve.
9. Talking over my problems with my parents makes me feel ashamed or foolish.
10. My parents expect too much from me.
11. I get upset easily at home.
12. I get upset a lot more than my parents know about.
18. I feel angry with my parents.
19. I don’t get much attention at home.
22. I don’t know whom I can depend on these days.
25. My parents don’t understand what I am going through these days.
27. I feel that no one understands me.