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Emotion-related parenting and young adults' emotion-related self-talk

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EMOTION-RELATED PARENTING AND YOUNG ADULTS' EMOTION-RELATED
SELF-TALK.

by
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Submitted to the Faculty of Graduate Studies
through the Department of Psychology
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ABSTRACT

The purpose of this study was to investigate self-talk as an emotion-regulation strategy and to test the emotion-related parenting model (Eisenberg et al., 1998) with young adults. It was hypothesized that a higher ratio of positive to negative self-talk would predict less emotion-regulation difficulties. Moreover, it was predicted that higher emotional expressiveness in the family and positive emotion-related parenting would predict a higher ratio of positive to negative self-talk and fewer emotion-regulation difficulties above and beyond age, gender, and affect intensity. One hundred and twenty nine undergraduates participated in this study. Of these, 33 females participated with their mothers. Participants completed self-report questionnaires. A higher ratio of positive-to-negative self-talk was found to predict fewer emotion regulation difficulties, which supported the first hypothesis. Hypotheses 2 was tested using affect intensity, mothers's self-expressiveness, and young adults' self-expressiveness as predictors. The overall model was significant and the results partially confirmed the hypothesis, with mothers' self-expressiveness being a significant predictor of total difficulties in emotion regulation. Hypothesis 3 was tested using mothers' self-expressiveness, young adults' age and affect intensity as predictors. It was not confirmed since the overall model was not significant. The results are discussed in relation to theory and research on emotional functioning and parenting.

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CHAPTER I

Introduction

The purpose of this study was to explore whether the association between parental emotion socialization and child emotional functioning outcomes, as reflected in emotion-regulation abilities, persists beyond childhood and is evident in young adulthood. An additional aim was to investigate whether parental socialization of emotions was related to children's self-talk, which is conceptualized as an emotion regulation strategy. Specifically, the model of emotion socialization developed by Eisenberg, Cumberland, and Spinrad (1998) that was originally based on research with children was tested in the current study with young adults. The study examined the relation between three aspects of emotion-related socialization behaviors (ERSB): (a) emotional expressiveness in the family, (b) parental self-expressiveness, and (c) emotion coaching, as well as two outcomes related to young adults' emotional functioning: (d) emotion regulation, and (e) self-talk. The results potentially would build on our knowledge of the development of emotion regulation abilities and the development of clinical interventions focusing on preventing and treating emotion regulation difficulties. Thus, the parental emotion socialization variables associated with emotion regulation in young adulthood could be the focus of interventions with families of children at-risk of developing emotion regulation problems.

This chapter will begin with a brief overview of the role of parental socialization in fostering emotion regulation and self-talk skills. Next, relevant conceptual and theoretical issues will be examined and the literature on parental socialization of emotions and their relation to emotion regulation and self-talk will be reviewed. Finally, the rationale for the proposed research will be introduced.

Overview

Human emotional experience is an important component of both normal and pathological functioning. Earlier conceptualizations of emotion have focused on their potential disorganizing and disruptive properties (Mora, 1980). Examples of such construals include the Freudian unconscious affective processes, which were seen as the primitive impulses dominating the first years of life (Freud, 1915/1957). According to Freud (1915/1957), as individuals grow up, these impulses become controlled by reason and social norms. Currently, the view of emotions is more differentiated. Modern theories of emotion postulate that emotions organize human behavior and serve specific functions, thus coordinating internal personal needs with environmental demands (e.g., Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983; Frijda, 1986; Izard, 1977; Plutchik, 1980). However, all theorists recognize that under certain circumstances, emotions can have adverse effects on functioning and play a major role in psychopathology. Among the mechanisms that are believed to be part of the emotional difficulties experienced by individuals with various psychopathologies are problems with the ability to regulate or adapt one's emotions to a situation, and difficulties with regulating ones' emotions through self-talk, which consists in talking to oneself in order to get through an emotional situation.

Emotion Regulation and Cognitive Processes

Emotion regulation has been defined as "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals." (Thompson, 1994, p.28). Thus, emotion regulation can be conceptualized as the physiological, behavioral, and cognitive processes that enable individuals to modulate the experience and expression of positive and

negative emotions (e.g., Bridges & Grolnick, 1995; Cicchetti, Ganiban, & Barnett, 1991; Gratz & Roemer, 2004; Gross, 1998; Kopp, 1989).

Gratz and Roemer (2004) operationally defined this concept in their development of the Difficulty in Emotion Regulation Scale (DERS). Based on their review of the literature in the areas of child development (e.g., Cole, Michel, & Teti, 1994; Thompson & Calkins, 1996) and psychopathology (e.g., Gross & Munoz, 1995; Linehan, 1993; Paivio & Greenberg, 1998), the authors concluded that emotion dysregulation can be defined according to deficits in individuals' functioning in six areas: awareness, clarity, acceptance of emotional experience, as well as the ability to access emotion regulation strategies, achieve goals, and control impulses when one is upset (Gratz & Roemer, 2004). Since the development of this measure, the authors have conducted several studies that documented the validity of several of these dimensions. For instance, Gratz and her colleagues demonstrated that outpatients with Borderline Personality Disorder, a disorder characterized by major difficulties in emotion regulation, are less willing to tolerate emotionally upsetting emotions in order to pursue goal-directed behaviour. They exhibit higher nonacceptance of negative emotions than individuals who do not present Personality Disorder symptomatology (Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006). Moreover, Gratz and collegues investigated the relation between early life environment and nonacceptance of emotions (Gratz, Bornovalova, Delany-Drumsey, Nick, & Lejuez, 2007). The authors found that emotional and sexual abuse promotes nonacceptance of emotions, which leads to experiential avoidance and the associated maladaptive coping behaviours such as self-harm and substance abuse (Gratz et al., 2007).

Several constructs, such as emotional control and coping, are related to emotion regulation, but are conceptually different. For instance, emotional control involves

restraining emotional experience, which is different from the ability to dynamically adjust the emotion to the environment embedded in emotion regulation (Cole et al., 1994). Coping, on the other hand, focuses primarily on decreasing negative emotional experience as opposed to modulating the experience of both positive and negative emotions (Gross, 1998). Moreover, Gross (1998) cautioned that emotion regulation should not be confused with affect regulation, which is a construct that is superordinate to emotion regulation, and mood repair. Specifically, affect regulation encompasses all the regulatory processes that deal with or involve emotions. Thus, affect regulation includes coping, emotion regulation, and traditional ego-defenses (Gross, 1998). Mood repair, on the other hand, refers more to altering emotional experience than emotion behavior.

The importance of emotion regulation abilities becomes evident when one considers its role in adjustment difficulties and various clinical disorders. For instance, poor emotion regulation along with high levels of negative emotions predicts lesser social competence and decreased peer acceptance and liking (Eisenberg & Fabes, 1992). Moreover, emotion dysregulation, defined as difficulty with the flexible integration of emotion with other processes (Cicchetti et al., 1991; Katz & Gottman, 1991), constitutes a feature of many *DSM-IV* (APA, 1994) disorders, such as Borderline Personality Disorder and Mood Disorders. In addition, helping clients to better regulate their emotions is the goal of many different psychotherapeutic approaches (Cole et al., 1994; Gross & Munoz, 1995).

It appears that the integration of cognition with emotions is an important task in healthy emotion regulation. Specifically, the important role of cognitive processes in emotion regulation has been empirically documented (Gross & John, 2003; Richards & Gross, 2000; McCarthy, Lambert, & Seraphine, 2004). Some of the cognitive emotion regulation strategies proposed by researchers include reappraisal, which refers to change in

cognitions, and suppression, defined as modulation of experiential, behavioral, or physiological responses (Gross & John, 2003). Reappraisal was found to be associated with successful emotion-regulation by enabling individuals to experience a potentially stressful event as less stressful, thus increasing the perceived coping resources (Folkman & Lazarus, 1988; Lazarus & Folkman, 1984).

Another way in which cognitive processes and emotions are related is evident in individuals' decision-making in emotionally salient dilemmas (Blanchard-Fields, Jahnke, & Camp, 1995; Blanchard-Fields, 1986). Consistent with Thompson's definition of emotion regulation as strategies employed to reach a goal (Thompson, 1994), the role of emotions appears to be especially important when individuals are solving highly emotional interpersonal dilemmas (Berg et al., 1994; Labouvie-Vief, 1992; Blanchard-Fields, Stein, & Watson, 2004). Specifically, there seems to be a developmental progression in how individuals deal with these highly emotional social dilemmas, with young adults being at a different stage than older adults (Blanchard-Fields & Norris, 1994; Labouvie-Vief & Medler, 2002). Thus, young adults exhibit less cognitive and affective complexity, defined as a deeper understanding and differentiation of affective experiences, than middle age adults when dealing with highly emotional interpersonal decisions (Labouvie-Vief, 1998). With increased emotional and intellectual maturity, individuals progress to higher levels of emotional exploration and further integration of emotions with the cognitive aspects of problem-solving (Labouvie-Vief, 1998; Blanchard-Fields & Norris, 1994; Blanchard-Fields, 1986).

In a cross-sectional study of emotion-regulation and problem-solving, Blanchard-Fields, Stein, and Watson (2004) used the think aloud procedure and asked adolescents, young adults, and older adults to describe recent situations that were and were not

emotionally salient for them. For each problem, participants were instructed to describe how they dealt with the situation, as well as with the emotions elicited by the situation. Subsequently, they classified individuals' responses to the think aloud procedure according to three types of emotion-regulation strategies: instrumental, passive emotional regulation, and proactive emotion-regulation. Instrumental strategies included cognitive efforts to understand the problem and solve it through logical analysis, as well as self-initiated overt behaviors. Passive emotion-regulation refers to the avoidance of the thoughts and emotions related to the situation, as well as suppression of emotions. Finally, proactive emotion-regulation involves acceptance of responsibility as well as reflecting on one's emotions and taking into consideration another person's viewpoint. They found that middle-age adults demonstrated greater use of instrumental and proactive strategies than young adults in situations that involved a high level of emotional salience. Young adults, on the other hand, exhibited higher use of passive emotion-regulation strategies. The authors interpreted this discrepancy by pointing out that young adults are not as able as middle-aged adults to regulate their emotions when faced with a highly emotional interpersonal dilemma. The researchers further speculated that young adults' lack of experience in dealing with such situations may lead them to feel overwhelmed and employ less efficient strategies to regulate their emotions. These results suggest that young adults who use instrumental or proactive emotion regulation strategies, such as self-talk, when confronted with highly emotional interpersonal problems may be more mature and efficient in regulating their emotions than equal aged peers who engage in passive strategies. It can be concluded from this research that self-talk is one of the instrumental strategies that could indicate such developmental progress. Specifically, as individuals mature, they appear to make more use of active problem-solving strategies such as self-talk.

Self-talk or inner speech has been conceptualized as a "dialogue through which the individual interprets feelings, perceptions, regulates and changes evaluations and convictions, and gives him/herself instructions and reinforcement." (Hackfort & Schwenkmezger, 1993, p. 355). Thus, self-talk can be defined as the general tendency to silently talk to oneself (Morin, 2005; Zivin, 1979) or to engage in overt self-verbalization (Duncan & Cheyne, 1999). Self-talk has instructional and motivational functions and can be subdivided into positive aspects, such as self-encouragement and negative aspects such as self-criticism (Hardy, 2006; Treadwell & Kendall, 1996), all of which are hypothesized to influence coping with potentially stressful emotional events (Catanzaro & Greenwood, 1994). Moreover, self-talk has been found to predict emotional intelligence, defined as the self-awareness and the ability to self-regulate, in college students (Depape, Hakim-Larson, Voelker, Page, & Jackson, 2006).

Various theories emphasize the importance of this cognitive process in the development of emotional disorders. For instance, in his 1976 theory of depression, Beck emphasized the link between inner speech and the development of affective disorders. Each emotional disorder is characterized by a specific cognitive content. Thus, depression is characterized by predominantly negative cognitions that take the form of pervasive, absolute statements about loss, deprivation, failure, and personal inadequacy. In anxiety, on the other hand, cognitive processes reflect anticipation of harm and danger in various situations (Beck, Brown, Steer, Eidelson, & Riskind, 1987; Clark, Beck, & Brown, 1989). Similarly, Rehm's Self-Control Model of Depression (Rehm, 1977) posits that depressed individuals exhibit negativistic patterns of thought in the form of negative self-monitoring, misattribution, stringent goal-setting, excessive self-punishment, and insufficient self-reward.

While negative thinking has been linked to specific emotional disorders, its relation to positive thinking has also been investigated. Specifically, Schwartz and Garamoni (1986) developed a state of mind (SOM) model of cognitive balance, which posits that a specific proportion of positive-to-negative self-statements accounts for optimal emotional adjustment, while dysfunction occurs when the ratio shifts. Specifically, the optimal ratio of positive to negative self-talk was assumed to be between .67 and .90 (Schwartz, 1997). The importance of positive thoughts in emotional adjustment was further emphasized by Kendall's 1984 concept of "power of nonnegative thinking", which posits that a lower frequency of negative thoughts, as opposed to the simple presence of positive ones, is more relevant to differentiate between normal and maladaptive groups (Ronan, Kendall, & Rowe, 1994; Treadwell & Kendall, 1996).

Clinical Applications of Self-Talk

Treatment approaches grounded in the tradition of cognitive and cognitive-behavioural therapies incorporate self-talk in their conceptualization of the etiology of emotional disorders and the associated intervention strategies. The overall cognitive basis for diseases involving emotional dysfunction originated with the stoic philosophers such as Epictetus who theorized that the cause of individuals' upset lies in their judgments about events and situations (Epictetus, as cited in Reinecke & Freeman, 2003). In modern times, this emphasis on individuals' interpretations of their world as promoting psychopathology has led to the elaboration of Kelly's 1955 theory of personal constructs of emotional disorders. According to Kelly's theory, individuals' perceptions represent their way of categorizing their experiences and determine how they will respond to events (Kelly, 1955). Following the Cognitive Behavioural Therapy (CBT) perspective, individuals' interpretations and construal of events mediates how they feel and behave (Reinecke &

Freeman, 2003). Moreover, the interpretation of events is purported to be active and ongoing, and to reflect individuals' idiosyncratic belief systems through the filter of which information about the self and the environment is interpreted. When the belief system includes maladaptive and overlearned coping responses, they can lead to impaired functioning. The cognitive content of this belief system includes automatic thoughts, assumptions, as well as the internal and external dialogues (Reinecke & Freeman, 2003).

The specific application of self-talk in the Cognitive-Behavioural approaches includes using it as a strategy to help clients monitor their thoughts and behaviors (Kendall & Choudhury, 2003; Rehm, 1977, 1981, 1982). Self-talk was also applied by Meichenbaum (1977) in the context of treatment of children with depression or impulse control difficulties. Specifically, clients engaged in self-instructional training through the rehearsal of adaptive self-statements, modeling, and self-reinforcement. Furthermore, self-talk was also incorporated into the Dialectical Behavioural Therapy (DBT), which is an adaptation of CBT to the treatment of Borderline Personality Disorders (BPD) (Linehan, 1993). Specifically, DBT focuses on BPD's difficulties with emotional regulation and self-awareness by striking a balance between extreme expression of emotions and strict rationalization. In doing so, the therapist uses techniques that promote discussion and problem solving though self-talk (Salsman & Linehan, 2006).

Common Developmental Origins of Emotion Regulation and Self-Talk Skills

The development of emotion regulation and self-talk skills appears to be fostered within the social context of the family. Specifically, interactions with parents are related to children's emotional competence (Denham, 1998; Eisenberg, Cumberland, & Spinrad, 1998; Parke & McDowell, 1998). Emotion regulation is one of the aspects of emotional competence that is significantly influenced by the family environment (Cassidy, 1994;

Schulz, Waldinger, Hauser, & Allen, 2005; Thompson, 1994). Thus, parental modeling of various emotional experiences and their modulation play an important role in the development of individuals' emotion regulation abilities (Cicchetti et al., 1991; Denham, 1998; Gottman & Katz, 2002). Children appear to learn from parents about the appropriate expression of emotions, possible reactions to others' positive and negative emotions, and the types of situations that are likely to elicit emotions (Eisenberg, Fabes, Carlo, & Karbon, 1992; Izard, 1991). Moreover, according to the concept of social or affective referencing, children monitor parents' emotional reactions to uncertain situations and use this information to regulate their own emotions (Feinman, 1992; Walden & Baxter, 1989). Specifically, it appears that observing parents' expression and handling of emotional situations fosters the development of the clarity, understanding, and awareness components of emotion regulation proposed by Gratz and Roemer (2004) in their definition of emotion regulation.

Similarly, self-talk abilities have been conceptualized to be the result of interaction with family members. According to Vygotsky's socio-cultural perspective (1934/1962; 1930-35/1978), the development of self-talk abilities follows a developmental sequence. Specifically, it occurs in the context of *collaborative dialogues* between a skillful tutor and a novice learner. Thus, the tutor models the activity and transmits verbal instructions while the learner attempts to understand the tutor's instructions and internalize the process, subsequently using it to regulate his or her behavior.

Vygotsky (1934/1962) posited that first, parents engage in scaffolding, which consists in developmentally appropriate verbal instructions given by an adult to a child. These instructions are given when the child is accomplishing a specific task or solving a given problem. Gradually, the child internalizes these instructions and the parent withdraws

his or her support (Vygotsky, 1934/1962). At this point, the child is able to use private speech, which refers to the child's overt self-instructions that help him or her plan strategies and regulate behaviors in order to accomplish goals (Vygotsky, 1934/1962; 1930-35/1978). The final step of this process is when the overt self-verbalizations transform into covert self-statements, which are also termed inner speech or self-talk. Moreover, consistent with the research on the link between emotion and cognition (e.g., Blanchard-Fields et al., 2004; Treadwell & Kendall, 1996), as well as the principles of CBT, self-talk can be used as a strategy to deal with and regulate emotions. Thus, it appears that the family environment, characterized by a parent who is guiding the child's self-talk and helping him or her develop problem solving skills, plays an important role in the child's adjustment and the development of emotion regulation strategies.

A Model of Family Socialization of Emotions (Eisenberg, Cumberland, & Spinrad, 1998)

The model of parental emotion socialization developed by Eisenberg et al. (1998), which is based on the available literature on emotion socialization, provides the opportunity to integrate the link between cognition and emotion into a developmental framework. The authors posit that parents engage in certain emotion-related socialization behaviors (ERSBs) that promote or preclude the development of various outcomes related to emotional adjustment. The emotion-related socialization behaviours include reactions to child's emotions, discussion of emotions, and emotional expressiveness. These parental ERSBs are purported to be related to the characteristics of the child, such as age, gender, and temperament, and parent characteristics, which include gender, emotion-related beliefs, and personality, as well as the characteristics of the culture and subculture, such as emotion-related norms and values, as well as gender stereotypes. Several important parental ERSBs are hypothesized to be related to children's emotion regulation abilities and self-

talk. Among these are parental and family emotional expressiveness, as well as emotion coaching. Some of the child characteristics found to be associated with these parental ERSBs are child's age, gender, and temperamental features such as affect intensity.

Parent Characteristics: Emotion-Related Parenting Behaviors

    Emotional expressiveness in the family. One of the ways through which the early family interactions are believed to influence individuals' emotion regulation abilities is parental emotional expressiveness (Denham & Kochanoff, 2002; Eisenberg, Fabes, Carlo, & Karbon, 1992; Halberstadt, 1991; Izard, 1991; Jones, Bowling, & Cumberland, 1998). Parental emotional expressiveness is defined as the dominant style of exhibiting verbal and nonverbal expressions of emotions within a family (Halberstadt, Cassidy, Stifler, Parke, & Fox, 1995).

    An especially clear demonstration of how parental emotional expressiveness contributes to children's emotion regulation comes from a study by Jones, Bowling, and Cumberland (1998). In this study, researchers presented children with emotion-provoking vignettes and asked them how the main character would feel inside and what he or she would express on the outside. In addition, mothers filled out a questionnaire on family expressiveness. Overall, it was found that children from families characterized by negative emotional expressiveness are significantly more likely to use display rules characterized by vigilance and careful emotional expression. This could potentially adversely affect the acceptance component of emotion regulation, as defined by Gratz and Roemer (2004), by teaching children that it is not acceptable to express certain types of emotions or to exhibit a certain level of emotional intensity. Specifically, in expressing their emotions, not only do parents teach their children about the nature of different emotions, but they also model the modulation of different types of emotions (Denham, Zoller, & Couchoud, 1994; Eisenberg

et al., 1998; Jones et al., 1998). It is potentially through the modeling of emotional

modulation that parental expressiveness can promote children's emotion regulation

abilities. Thus, children's vicarious experience of parental emotionality seems to contribute

to the development of the ability to access emotion regulation strategies, to pursue goals

and control impulsive behaviours during an emotionally upsetting episode, all of which

have been delineated as being components of emotion regulation (Gratz & Roemer, 2004).

The results of the studies conducted with children are consistent with the

investigations conducted with young adults. Specifically, it appears that the relation of

family emotional expressiveness with individuals' emotional functioning extends beyond

childhood. In a meta-analysis conducted by Halberstadt and Eaton (2002), it was found that

global family expressiveness exhibited while individuals were growing up was significantly

related to individuals' expressiveness in adolescence and young adulthood. Clark and

Phares (2004) reported similar findings in their study on the relation between parental

conflict and emotional expressiveness in undergraduates. The results of this study suggests

that higher levels of negative self-expressiveness are related to higher levels of negative

family expressiveness, whereas higher levels of positive self-expressiveness were related to

higher levels of positive family expressiveness. The results were consistent with the

hypothesis that young adults from more negatively expressive families would report higher

levels of negative self-expressiveness and would express anger more often. However, while

there is evidence for a relation between family emotional expressiveness and emotional

expressiveness in adulthood, and there is evidence that individuals suffering from disorders

such as schizophrenia have less difficulty regulating their emotions when their family

environment is low in emotional expressiveness (e.g., Butzlaff & Hooley, 1998), no study

found for this review has explicitly demonstrated the link between family emotionality and

young adult emotion regulation in non-clinical samples. Thus, this will be addressed in the present study.

    Parental approach to emotion socialization. Another aspect of family environment that plays an important role in the socialization of emotion regulation abilities is the parental approach to emotion socialization. According to the conceptualization presented by Gottman and DeClaire (1997), parents have a meta-emotion philosophy that represents the organized set of feelings and thoughts about one's own and one's children's emotions. This philosophy is reflected in parents' reactions to their children, which are classified into four categories that can be combined to form negative and positive dimensions. The negative category includes dismissing and disapproving parenting. Parents who exhibit a dismissing style of socializing emotions in their children are described as lacking awareness of emotions in self and others, believe that negative emotions are toxic, and are afraid of being emotionally out of control. Thus, when their children exhibit negative emotions, they treat them as unimportant, ignore them, or attempt to distract the children so that their emotions quickly disappear. They also believe that their children's expression of negative emotions reflects badly on them as parents. A lot of these characteristics are also present in the reactions of parents who present with a disapproving style of emotion-socialization. However, these tendencies are more extreme and negative. In response to their children's negative emotions, these parents judge and criticize their children, emphasizing conformity to good standards of behaviour. They also reprimand, discipline, or punish the child regardless of whether the child is misbehaving. They believe that children use emotions to manipulate their environments, that emotional expression makes people weak, and that emotions are a waste of time.

On the positive side, Gottman and DeClaire (1997) argue that parents can display either the laissez-faire or the emotion-coaching parenting style. Parents practicing the laissez-faire approach to emotion socialization freely accept all emotional expressions coming from their child and they offer comfort. However, they do not help children to problem-solve when undergoing an emotional episode or take their children's emotional expression as an opportunity to teach them about emotions. They believe that the best way to deal with negative emotions is to ride them out. In contrast, parents who adopt the emotion-coaching approach to emotion socialization value their children's negative emotions as an opportunity for intimacy and view it as an opportunity to problem-solve and teach their children about emotions. Overall, these parents are aware of their emotions and perceive their children's negative emotions as an important area of parenting.

The association between these parental emotion-socialization styles and emotional adjustment outcomes in young adulthood has not yet been investigated, and will be the focus of the present research. According to Gottman and DeClaire (1997), parents' beliefs and behaviours reflected in each style are transmitted to their children. Thus, children of parents who displayed negative parenting styles learn that their feelings are wrong, inappropriate, and not valid. Because of having such a negative view of emotions, they may have difficulty regulating their emotions (Gottman & DeClaire, 1997). Children of parents who practiced more positive forms of parenting tend to display better outcomes. For instance, positive emotion parenting skills were found to be associated with children's healthy emotion regulation abilities (Cole et al., 1994; Camras, Sachs-Alter, & Ribordy, 1996; Denham, Mason, & Couchoud, 1995; Denham & Kochanoff, 2002), as well as emotional awareness (Brown & Dunn, 1992). It seems plausible that positive parenting styles such as emotion coaching may be related to better overall emotion regulation in

young adult children, as well as their choice of adaptive emotion-regulation strategies such as certain forms of self-talk.

Child Characteristics

   Children's Affect Intensity and Parental Emotion Socialization. An important child characteristic in parental ERSB is the affect intensity aspect of the child's temperament. Affect intensity is defined as the individual differences in response intensity to a given level of emotion-provoking stimulation (Diener, Larsen, Levine, & Emmons, 1985; Larsen & Diener, 1987). According to Larsen and Diener (1987), affect intensity is a temperamental, and not personality, characteristic as it refers to the stylistic aspect of behaviour as opposed to the specific content of it. Specifically, affect intensity is different from the personality construct of negative emotionality since it refers not to the tendency to experience specific emotions, but their intensity. The intensity is uniform across emotion valences and is not influenced by extreme response sets (Diener et al., 1985; Larsen & Diener, 1985). Affect intensity was also found to appear early in life. Larsen (1986) asked parents of 76 undergraduate students about specific childhood emotional intensity behaviours displayed by the students while they were growing up. He found that parents' retrospective reports of childhood emotional intensity correlated positively with students' self-reports of emotional intensity (Larsen, 1986). The intensity of affective responses appears to be maintained even further along the lifespan. In a cross-sectional study by Diener, Sandvik, and Larsen (1985), the affect intensity of 242 participants between the ages of 16 and 68 was examined. The authors found that although the affect intensity decreases as individuals get older, the rank order among individuals is stable (Diener et al., 1985). Thus, if one is high in affect intensity in childhood compared to others in their age-group, one will still be high in

adolescence and adulthood in comparison to other individuals in the same sample in spite of the overall decrease in all individuals.

Affect intensity was found to be related to parental emotional socialization (Eisenberg, Cumberland, & Spinrad, 1998) and emotional functioning (Larsen, Diener, & Emmons, 1986; Flett, Blankstein, & Obertynski, 1996). Several studies have investigated the bidirectional relation between parental efforts in socializing emotion regulation and children's emotional intensity. In a study by Fabes and colleagues (1994), mothers of children in kindergarten and grade two were asked to tell stories with negative emotional themes to their children. It was found that mothers who viewed their kindergarten children to be more prone to intense emotions attempted to modulate their children's negative emotions by expressing higher levels of positive emotions. This was in opposition to the mothers of second graders, who displayed less warmth and support in reaction to their children's negative emotions if they believed that their children were prone to higher emotional intensity. These results were replicated in other studies (e.g., Eisenberg & Fabes, 1994; Eisenberg, Fabes, & Murphy, 1996). It was hypothesized that such results may be reflective of the parents' expectations of normal developmental progression in children's emotional expression (Eisenberg et al., 1998). Thus, parents expect younger children (e.g., kindergarten) to be higher in emotional intensity and to have less of a grasp on their emotional expressiveness. However, they expect that as children grow older, their capacity to regulate their emotions and their expression will increase and consequently, their emotional intensity will decrease. Thus, when a child who was supposed to have "outgrown" the emotional burst-outs still tends to display intense emotions, parents may feel that their socialization of emotion regulation is not effective and they may switch to authoritarian control and disciplining of their children's emotional expression.

Recent studies have found that negative parental reactions to children's high negative emotionality contribute to maladaptive outcomes. According to the susceptibility hypothesis, children with difficult temperaments (i.e., frequent display of negative emotions, low adaptability, high activity level, difficulties in regulating emotions) are more susceptible to positive and negative parenting than those who have an easier temperament (Belsky, 1997; 2005; Gallagher, 2002) and that the child outcomes depend on the type of parenting (Boyce & Ellis, 2005; Klein Velderman, Bakermans-Kranendurg, Juffer, & Van IJzendoorm, 2006). For instance, in their study of mothers' hostility in reaction to their 7-year-old children's difficulties in emotion regulation and heightened affect intensity, Morris and colleagues (2002) found that the mothers had a high occurrence of externalizing problems while the children had a higher occurrence of internalizing problems. Similarly, children aged 4 and 7 with difficult temperaments showed differential ability to regulate their emotions in the face of emotion-provoking stimuli depending on their relationship with their mother (Gillisen, Koolstra, Van IJzendoorn, Bakermans-Kranenburg, & Van der Veer, 2007). Specifically, when the parent-child relationship was supportive and showed the trust and reciprocal positive emotionality indicative of secure attachment, even children with difficult temperaments were able to efficiently regulate their emotions. Overall, it appears that difficult temperament is characterized in part by high affect intensity, which may foster insecure attachment and put individuals at risk of maladjustment in the long term. On the other hand, an easy going temperament promotes resilience and acts as a protective factor (Smith & Prior, 1995).

Child's Age and Parental Emotion Socialization. In the first years of life, caregivers appear to significantly influence their children's emotional experiences. While interacting with infants, mothers express their emotions such as to regulate their infants'

emotions by maintaining their positive arousal and decreasing their negative arousal (Tronick, 1989). Thus, the way in which caregivers interact and respond to their infants' emotions influences the way in which infants learn to express and regulate their internal states (Gable & Isabella, 1992; Gianino & Tronick, 1988; Malatesta, Culver, Tesman, & Shepard, 1989; Stifler & Moyer, 1991).

While the regulation of emotions becomes more internalized as individuals grow up, the association between the way parents socialized emotions and the emotion regulation outcomes may persist into young adulthood. For instance, lack of parental support for children's negative emotions such as distress, fear, sadness, and anger are associated with negative social and emotional outcomes for children (Eisenberg, Fabes, & Murphy, 1996; Gottman, Katz, & Hooven, 1996). Specifically, children learn to hide the expression of negative emotions (Buck, 1984; Jones, Bowling, & Cumberland, 1998), which is likely to lead to increased physiological arousal (Gottman et al., 1997) and to foster the development of an emotional disorder (Gross & Levenson, 1997). Overall, parental ERSBs affect the child's emotional security, feelings, and understanding in relation to social interactions, all of which are posited to influence children's emotion regulation abilities (Albrecht, Burleson, & Goldsmith, 1994; Davies & Cummings, 1994; Thompson, 1998). Moreover, studies suggest that the influence of parental ERSBs persists beyond childhood and into young adulthood (e.g., Halberstadt, 1986). No research was found to examine this relation in young adults, but it is conceivable that age could be associated with how young adults regulate their emotions, especially in light of the progression in cognitive and emotional maturity characteristic of this developmental period, and all the changes that are achieved when individuals exit the period of adolescence. This will be investigated further in the present study.

Gender. Gender appears to be an especially important correlate of parental ERSBs. Research suggests that gender differences in emotional expression appear in the preschool years, which indicated that they are likely to be the consequence of parental socialization (Brody, 1985; Hall, 1984). Studies suggest that children may be experiencing different emotional environments, with girls being subjected to a more emotionally expressive environment than boys while growing up. Specifically, mothers appear to be higher in expressiveness and range of emotions when interacting with daughters than with sons (Brody, 1993). Moreover, parents may encourage different kinds of emotions with their sons and daughters, with sadness eliciting more maternal responsiveness when displayed by daughters (Lewis & Michalson, 1983). In contrast, anger is more encouraged in boys (Fuchs & Thelen, 1988).

The patterns of gender-specific emotion-related family socialization persist into adolescence and young adulthood. In adolescence, there appears to be higher emotional expressiveness in families with daughters than in families with sons (Noller & Callan, 1989). Similarly, female college students perceive their families to be slightly more expressive than do male college students (Halberstadt, 1981). However, high family expressiveness in general can lead to better emotional adjustment for both males and females. For instance, in a study of late adolescence, individuals whose families have been more emotionally expressive and accepting of emotions in everyday life were more likely to express emotions that were not typical of their gender role (Bronstein, Briones, Brooks, & Cowan, 1996). These characteristics representative of androgyny were shown to be associated with better regulation of behaviour (Shaffer, Pegalis, & Cornell, 1992).

While the literature shows that parental ERSBs have an influence on various aspects of individuals' emotional functioning, the specific influence of parental socialization on

young adults' ability to regulate emotions is not clear. Moreover, these studies focus on the interactions that parents have with one specific child, without considering the general climate of emotional expressiveness in the family. Thus, although gender of the child is an important variable to consider, it is not clear whether differences in parents' emotional expressiveness with sons and daughters have implications for the development of children's emotional competence (Eisenberg et al., 1998).

Summary

In sum, ERSBs, such as emotional expressiveness in the family and parental approach to emotion socialization, appear to play an important role in the socialization of children's emotion regulation abilities and self-talk (Eisenberg et al., 1998). Specifically, parents are likely to influence their children's ability to regulate emotions through modeling (Bandura, 1969). In expressing their emotions in a certain way, parents implicitly teach their children certain display rules, thus influencing the way their children will experience and express their emotions (Jones, Bowling, & Cumberland, 1998). Moreover, parents engage in explicit emotion socialization through their responses to their children's emotions (Gottman et al., 1997). Thus, by verbally and behaviourally communicating their attitudes towards their children's emotions and the way to deal with them, parents engage in a scaffolding process that is acquired and internalized by the child (Vygotsky, 1934/1962; 1930-35/1978). The result of this scaffolding process is likely to be the self-talk that children use to regulate their emotions. According to this conceptualization, self-talk is a strategy that individuals use to regulate their emotions.

However, while the relation between parental emotional expressiveness and individuals' emotional functioning has been demonstrated to persist beyond infancy and childhood, the association of parental emotional expressiveness with young adult emotion

regulation abilities has not been demonstrated. Moreover, the concept of parental emotion socialization styles has been investigated only concurrently in relation to children's emotion regulation outcomes and not retrospectively as it relates to emotion regulation abilities in young adulthood.

Along the same lines, the concept of self-talk as it relates to emotional functioning is often conceptualized as attached to psychopathology (e.g., depression). Thus, its' association with broader emotional functioning represented by overall emotion regulation difficulties, has not yet been thoroughly investigated. Consequently, it has not been articulated as a strategy that individuals engage in for the purpose of regulating their emotions in their day to day life. In the current study, the use of self talk as a strategy to regulate emotions in non-clinical populations will be investigated. Moreover, no study found for this review investigated the relation between emotion-related parenting of individuals while they were growing up and the self-talk that they display in young adulthood. Ultimately, having an idea of the parenting variables that promote certain kinds of self-talk would provide insights into how individuals that come from non-clinical populations regulate their emotions. Therefore, this will be tested in the present study.

Purposes of the Current Study and Hypotheses

One purpose of the current study was to assess the relation between emotion-regulation abilities and self-talk in a non-clinical population of college students. In doing so, a measure of self-talk that contextualizes self-verbalizations in specific situations rather than global ones was used in the attempt to provide more conceptually specific estimates of self-talk.

Another purpose of the current study was to test portions of Eisenberg and colleagues' (1998) model of family socialization of emotions in a sample of young adults.

The first goal was to determine whether the posited associations between emotion-related socialization behaviors and emotion regulation as well as the associated strategies persist beyond infancy and childhood. Moreover, since both the model developed by Eisenberg and her colleagues (1998) as well as research on parenting and child temperament (e.g., Belsky, 2005) suggest that associations between emotion-related parenting behaviours and child outcomes are evident even after accounting for child characteristics, the aim was to determine whether parental emotion-related parenting behaviours predicted emotion regulation and self-talk above and beyond child demographic and temperamental variables.

The third purpose concerned addressing the methodological limitations of previous research and providing new methodological contributions for future research. Consistent with the theoretical and empirical limitations, the methodological issues addressed in the present study concern the ways in which parental styles of socialization of emotions and self-talk are measured. Specifically, since parental emotion socialization styles have been investigated only concurrently as parents were parenting their young or school-aged children, there is as yet no retrospective measure of this kind of parenting identified for this review. Therefore, modifying the ERPSST in order to asses emotion-related parenting retrospectively could contribute a tool for researchers to continue the investigation of this construct in future research.

Another methodological improvement concerns the measure of self-talk. Specifically, earlier measures of automatic thoughts or self-statements consisted of asking individuals to rate how often they engaged in specific self-verbalizations in their past experiences (e.g., Brinthaupt, unpublished; ATQ-R; Kendall, Howard, & Hays, 1989; CCL-A; Beck, Brown, Steer, Eidelson, & Riskind, 1987). Thus, those measures often relied on individuals' retrospective self-report that may be biased (Calvete et al., 2005). Calvete and

her colleagues (2005) developed the Self-Talk Inventory, a measure of automatic thoughts that individuals have in response to specific situations. The Self-Talk Inventory consists of ten vignettes from a previous study by Cacioppo and his colleagues (1997), in which undergraduate students were asked to recall situations in which they experienced anger, happiness, anxiety, and depression. In the Self-Talk Inventory, respondents are primed using the vignettes and asked to indicate the probability that they would have specific thoughts in response to the situations illustrated in the vignettes. This represents an improvement upon previously used methods by providing a more reliable assessment of individuals' self-reported self-talk.

Hypothesis 1: Ratio of Positive to Negative Self-Talk and Emotion Regulation. In line with the research on state of mind (SOM) ratios of positive versus negative self-statement scores and their association with emotional disorders (e.g., Schwartz & Garamoni, 1986; Treadwell & Kendall, 1996), it was anticipated that the ratio of positive to negative self-statement scores would predict the self-reported overall emotion regulation abilities. Thus, it was hypothesized that a lower ratio of positive versus negative self-talk scores would predict more difficulties in regulating emotions.

Hypothesis 2: Young Adults' Emotion Regulation, Emotion-Related Parenting, and Young Adults' Characteristics. Based on the model developed by Eisenberg and colleagues (1998) and the studies conducted with children (e.g., Jones et al., 1998; Hoffman, 1983) and young adults (e.g., Clark & Phares, 2004), it was anticipated that the level of emotional expressiveness in the family of origin would be related to emotion regulation abilities in young adulthood. Specifically, it was hypothesized that individuals who reported higher levels of emotional expressiveness in their families and whose mothers reported higher levels of self-expressiveness, and whose mothers displayed positive emotion-related

parenting styles exemplified by emotion coaching, would report better emotion regulation abilities. Based on the research reviewed by Eisenberg and colleagues (1998), these variables were expected to predict emotion regulation difficulties above and beyond young adults' age, gender, and affect intensity.

Hypothesis 3: Young Adults' Ratio of Positive to Negative Self-Talk Scores, Emotion-Related Parenting, and Young Adults' Characteristics. Similarly, in the light of the research carried out with children and the importance of scaffolding-praising in the parental emotion coaching literature (e.g., Denham et al., 1995; Gottman et al., 1996), it was expected that the emotion-related parenting experienced by young adults would be associated with their ability to regulate emotions through self-talk. Thus, it was hypothesized that higher levels of emotional expressiveness in the families high scores on emotion coaching, and higher mothers' self-expressiveness would predict high positive-to-negative self-talk ratio scores on the Self-Talk Inventory among young adults. As suggested by Eisenberg and colleagues (1998), these variables were expected to predict the ratio of positive-to -negative self-talk scores above and beyond young adults' age, gender, and affect intensity.

CHAPTER II

Method

This study was conducted in two phases. Specifically, phase one was part of a pilot project that examined the relations among various measures of self-talk and emotion regulation in young adults. Phase two, which used a subset of individuals recruited in phase one, was conducted in order to test the relations between parenting and young adult emotion regulation and self-talk. Therefore, the young adults were recruited together with their mothers in this phase. Since the young adults in phase one and phase two completed the same emotion regulation and self-talk measures, participants in both phases were used to test the hypotheses for the current study.

Participants

Given that no studies that were similar to the present studies were located, it was not possible to calculate a sample size based on the effect sizes in the published literature. Therefore, two sets of recommendations were taken into consideration when deciding on the sample size. First, the guidelines given by Cohen (1992) in order to detect a medium effect size were used. The effect size is defined as the degree to which the results are significant. Cohen (1992) proposed three levels of effect size, the small, the medium, and the large. With six predictors in a multiple regression analyses, which are the analyses that were used in the present study, 97 participants would be needed to detect a medium effect size, and 45 participants would be needed to detect a large effect size. Since it was not possible to estimate the effect size from published literature, the guidelines for a medium effect size were used since it approximates the effect size usually observed in studies (Cohen, 1992) and is the usual practice when one cannot calculate the effect size (Jackson,

personal communication, October 11, 2008). Moreover, the specific guidelines provided by Tabachnik and Fidell (2007) to ensure sufficient power in the multiple regression analyses were used. Specifically, they suggest that 15 cases per predictor should be used (Tabachnik and Fidell, 2007). At the initial stages of the study, it was planned that 150 young adult participants would be recruited overall, and that 100 of the participants would be recruited with their mothers.

Young Adults in Phase 1. Fifty-two participants (24 males and 28 females, mean age = 22.4, *SD* = 7.24) were recruited as part of the first phase. An additional 79 participants (11 males and 68 females, mean age = 21.3, *SD* = 3.68) were recruited as part of the second phase. The final sample was composed of 131 undergraduate students (35 males and 96 females) enrolled in psychology classes at the University of Windsor. The mean age of the participants was 21.8 (*SD* = 5.38). Most participants were Caucasian (76.2%) and reported the income bracket of their family to be over $70,000 (43.5%). The majority of the young adults indicated that they were raised in a two-parent family (77.9%) and 40.7% had two siblings. Moreover, the majority (67.9%) reported living with their parents. A small minority of the participants (9.9%) reported receiving diagnoses of LD, ADHD, and emotional disorders. Similar distribution of characteristics was evident when the outliers were taken out and the sample was reduced to 129 (33 males and 96 females, mean age = 21.78, *SD* = 5.41). See Table 1 for a summary of phase 1 young adults' participant characteristics.

Young Adults in Phase 2. Overall, 42 young adults participated in phase 2. Two participants were excluded because of extensive missing data, which reduced the participants to 40 (4 males and 36 females, mean age = 20.9, *SD* = 2.63). The majority of the young adult participants in phase 2 were Caucasian (82.5%), came from families where

Table 1

Summary of Young Adult Participant Characteristics in Phase 1

Variable	Phase 1		Phase2	
	N =131	n = 129	n = 40	n = 33
	n (Percent of Total)			
Gender				
Male	35	33	4	0
Female	96	96	36	33
Ethnicity [a]				
Caucasian	99 (76.2)	95 (73.8)	33 (82.5)	28 (84.8)
Asian	8 (6.9)	8 (6.25)	1 (2.5)	1 (3)
Other	7 (5.3)	10 (7.8)	5 (12.5)	3 (9.1)
Arabic	6 (4.6)	6 (4.7)	0	0
Indian	5 (3.8)	4 (3.1)	0	0
Black	5 (3.8)	5 (3.9)	1 (2.5)	1 (3)
Income bracket [b]				
Less than 10000	2 (1.5)	2 (1.6)	1 (2.5)	1 (3)
11000-20000	10 (7.6)	9 (7)	1 (2.5)	1 (3)
21000-30000	3 (2.3)	3 (2.3)	1 (2.5)	1 (3)
31000-40000	6 (4.6)	6 (4.7)	1 (2.5)	1(3)
41000-50000	9 (6.9)	9 (7)	1 (2.5)	1 (3)
51000-60000	10 (7.6)	10 (7.8)	3 (7.5)	3 (9.1)

Table 1 (Continued)

Variable	Phase 1		Phase 2	
	N =131	n = 129	n = 40	n=33
	n (Percent of Total)			
Income bracket[b]				
61000-70000	10 (7.6)	10 (7.8)	2 (5)	2 (6.1)
Over 70000	57 (43.5)	56 (43.4)	17 (42.5)	13 (39.4)
Family Composition				
Two-parent	102 (77.9)	100 (77.5)	31 (77.5)	26 (79)
Single-parent family (raised by mother)	13 (9.9)	13 (10.1)	3 (7.5)	2 (6.1)
Shared custody between the mother and father	10 (7.6)	10 (7.8)	5 (12.5)	4 (12.1)
Other	6 (4.6)	6 (4.7)	1 (2.5)	1 (3)
Number of siblings[c]				
0	17 (13)	17 (13.2)	4 (10)	2 (6.1)
1	46 (40.4)	45 (34.9)	17 (42.5)	14 (42.4)
2	36 (27.5)	36 (27.9)	11 (27.5)	10 (30.3)
3	20 (15.3)	20 (15.5)	5 (12.5)	5 (15.2)
4	5 (3.8)	4 (3.1)	3 (7.5)	2 (6.1)
5	4 (3.1)	3 (2.3)	0	0
Living arrangements[d]				
Parents	89 (67.9)	87 (67.4)	30 (75)	27 (81.8)
Roommates	17 (12.9)	16 (12.4)	4 (10)	3 (9.1)

Table 1 (Continued)

Variables	Phase 1		Phase 2	
	$N=131$	$n=129$	$n=40$	$n=33$
		n (Percent of Total)		
Living arrangements[d]				
Alone	9 (6.9)	9 (6.9)	3 (7.5)	2 (6.1)
Other	10 (8.3)	10 (8.5)	2 (5)	1 (3.1)
Significant other	5 (3.8)	5 (3.8)	1 (2.5)	0
Diagnoses				
Depressive disorders	4 (3.1)	4 (5.2)	1 (2.5)	1 (3.1)
Comorbid depression and other disorders	2 (1.5)	1 (.8)	0	0
ADHD	1 (.8)	1 (.8)	0	0
Eating disorders	1 (.8)	1 (.8)	0	0
LD	1 (.8)	1 (.8)	0	0

Note. [a]$n = 130$ and 128 for Phase 1

[b]$n = 107$ and 105 for Phase 1, $n = 27$ and 23 for Phase 2

[c]$n = 128$ and 125 for Phase 1

[d]$n = 130$ and 127 for Phase 1

the income was over $ 70,000 (42.5%) and were raised by two parents (77.5%). In addition,

most had one sibling (42.5%) and still lived with their parents (75%). One participant

indicated having been diagnosed with depression. A similar distribution of characteristics

was evident when the four males and the outliers were taken out and the sample was

reduced to 33 (mean age = 20.57, *SD* = 2.06). See Table 1 for a summary of the

characteristics of the young adult participants in phase 2.

Mothers. Out of the 79 targeted mothers, nine indicated that they did not wish to

participate. Seventy mothers indicated on the form that they were willing to participate, but

fourteen could not be reached by phone. Consequently, it was impossible to get a mailing

address to which the questionnaires could be sent. Overall, 56 mothers were sent the

questionnaires and 42 (75%) mailed the questionnaires back. Since two cases were

excluded because of extensive missing data, the sample size was reduced to 40 mothers.

(mean age = 48.40, *SD* = 5.41). The majority of mothers (82.5%) described themselves as

Caucasian. Most mothers were married (85%) and more than one third graduated from

college or university (45%). None of the mothers endorsed diagnoses of LD or ADHD, but

four (10%) had been diagnosed with depression. Most mothers expressed enthusiasm and

positive sentiments when asked to report on their feelings regarding their participation in

this study. However, one mother felt that the questions included in the questionnaire were

repetitive, one found that the questions were too specific, and two others reported that the

study was taking too much of their time and was an extra task in their busy schedule.

Similar distribution of characteristics was evident when the four males and the outliers

were taken out. Table 2 presents a summary of mothers' demographic characteristics.

Table 2

Summary of Mother and Female Young Adults Demographic Characteristics in Phase 2

Variable	n=40	n=33
	n (Percent of Total)	
Ethnicity[a]		
Caucasian	33 (82.5)	28 (84.8)
Black	2 (5)	2 (6.1)
Hispanic	2 (5)	1 (3)
Other	2 (5)	1 (3)
Marital Status		
Married	34 (85)	27 (81.8)
Divorced	3 (7.5)	3 (9.1)
Separated	2 (5)	2 (6.1)
Widowed	1 (2.5)	1 (3)
Educational Level		
College or University Graduate	18 (45)	16 (48.5)
High School Graduate or the Equivalent	10 (25)	7 (21.2)
Some College or University	6 (15)	5 (15.2)
Graduate or Professional School	4 (10)	3 (9.1)
Trade or Technical School	1 (2.5)	1 (3)
Less than 7 years	1(2.5)	1 (3)
Emotional and Behavioural Disoder Diagnosis		
Depressive Disorders	4 (10)	4 (12.1)

[a]n = 39 and 32

Procedure

After receiving Ethics clearance from the University of Windsor research ethics board, young adult participants were recruited from the University of Windsor Department of Psychology Participant Pool. They received psychology course credit in exchange for their participation. The participating mothers were entered in a draw with the possibility of winning one of three $25.00 gift certificates redeemable at a bookstore. Participants were scheduled to complete all questionnaires in the laboratory in order to control for distractions. To facilitate mother-young adult pairs participation in the second phase, the Participant Pool website included a screening question asking whether participants thought that their mothers might be willing to take part in the study. Participants were asked to bring a printed form available from the researcher upon which parents indicated whether they would be willing to be contacted to participate in the study (see Appendix A). Once participants arrived, they were informed of the purpose of the study and their rights as research participants. They were also asked to sign the consent form. The mothers who agreed to be contacted were reached by e-mail or phone to obtain their explicit consent for participation. The consent forms are presented in Appendices B and C. The questionnaires were sent by mail with an addressed and stamped envelope.

Measures

Demographic Questionnaire

A questionnaire on demographic characteristics was designed for the study. Participants were asked to indicate their age, gender, and ethnic background. In addition, they were also asked whether or not they currently live with their parents. If they were no longer living with their parents, they were asked to specify with whom they lived. A Chi

Square test was conducted to determine whether the sample participants came from

(recruited alone and recruited with their mothers) was associated with a difference in

number of individuals who lived with or without their parents. The Chi Square test was not

significant, with $X^2 = .85$, $p < .05$. This indicates that there is no association between the

number of participants who live with their parents and independently in the two samples. In

addition, the Chi Square test was also conducted to determine whether there was a

difference in the number of males and females in the samples. The test was significant, with

$X^2 = 16.8$, $p < .05$. This result indicates that there was a significant association between the

sample and the number of males and females. The demographic questionnaire is presented

in Appendix D. Mothers completed a similar demographic questionnaire presented in

Appendix E.

Measures Administered to Young Adults

Emotional Expressiveness in the Family Questionnaire (EEFQ; Halberstadt,

1986). This questionnaire was developed in order to assess family socialization of affect. It

consists of 40 items involving emotional expression in the family. These items are rated

according to their frequency on a 9-point Likert scale ranging from 1 (*not at all frequently*

in my family) to 9 (*very frequently in my family*). The measure contains four subscales of 10

items each representing the affect dimension crossed by the power dimension, which are

the two dimensions most often discussed in nonverbal research. Specifically, the subscales

are positive-dominant ("Showing forgiveness to someone who broke a favorite

possession."), positive-submissive ("Snuggling up to a family member."), negative-

dominant ("Negative momentary anger over a trivial irritation."), and negative-submissive

("Crying when someone leaves."). The structure of the instrument follows the one

presented in the Profile of Nonverbal Sensitivity test (PONS; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979).

This measure was chosen because it measures the environmental aspect of emotional expressiveness in the family. Specifically, it is not focused on behaviors of specific family members, but instead on the perception of the overall emotional dynamics in the family system as a whole. Moreover, the measure was developed with college students and presents good psychometric properties in this sample. Specifically, the internal consistency coefficients were .88, .87, .75, and .88 for the positive-submissive, positive-dominant, negative-submissive, and negative-dominant quadrants, respectively. The 10-day test-retest reliability was between .89 and .92 for the four quadrants, indicating the stability of individuals' self-reports (Halberstadt, 1986). Halberstadt (1986) also reported high discriminant validity for the measure as the self-reports on the FEQ showed high negative correlation ($r = -.62$) with a measure of self-expressiveness (Friedman, Prince, Riggio, & DiMatteo, 1980). Moreover, self-reports on this measure show agreement between family members. Specifically, the correlations between parent and young adult self-reports were significant.

In the present study, the alpha reliability coefficients were .83 for the Positive-Dominant quadrant, .83 for the Positive-Submissive Quadrant, .83 for the Negative-Dominant Quadrant, .69 for the Negative-Submissive Quadrant, and .86 for the overall measure.

Difficulty in Emotion Regulation (DERS; Gratz & Roemer, 2004). The Difficulties in Emotion Regulation Scale is a 36-item questionnaire which assesses six dimensions of emotion regulation: non-acceptance of emotional responses, difficulties in engaging in goal-directed behaviors, impulse control difficulties, lack of emotional awareness, limited

access to emotion regulation strategies, and lack of emotional clarity. Participants were asked to indicate the frequency with which each statement applies to them on a 5-point Likert scale ranging from 1 (*almost never*) to 5 (*almost always*).

The measure was reported to have high overall internal consistency ($a = .93$). The internal consistency coefficients for the scales were .85 for nonacceptance of emotional responses (e.g., "When I'm upset, I feel guilty for feeling that way."), .84 for lack of emotional clarity (e.g., "I have difficulty making sense out of my feelings."), .89 for difficulties in engaging in goal-directed behaviors ("When I'm upset, I have difficulty getting work done.), .86 for impulse control difficulties ("When I'm upset, I lose control over my behaviours"), .80 for lack of emotional awareness ("I am attentive to my feelings"), and .88 for limited access to emotion regulation strategies ("When I'm upset, I believe that there is nothing I can do to make myself feel better.") (Gratz & Roemer, 2002). The measure also showed a good test-retest reliability over a period ranging from 4 to 8 weeks ($\rho_I = .88, p < .01$), and adequate construct validity ($r = .60$) in comparing the DERS with the Acceptance and Action Questionnaire (Hayes, Strosahl, & Wilson, 1999), an instrument measuring the tendency to avoid unwanted emotions and thoughts (Gratz & Roemer, 2004). Although the measure has been investigated with a normative sample of college students, it has not yet been standardized with a sample that is representative of the population, which does not allow the comparison of the results to norms in the population. This measure was selected because of its range of aspects of emotion regulation sampled and its good psychometric properties in samples of university students.

In the present study, the alpha reliability coefficients for the subscales of the Self-Talk Inventory were .44 for the Clarity subscale, .92 for the Awareness subscale, .75 for the

Impulsivity subscale, .86 for the Nonacceptance subscale, .61 for the Goals subscale, .82

for the Strategies subscale, and .89 for the overall measure.

Self-Talk Inventory (STI; Calvete et al., 2005). The Self-Talk Inventory was

developed by Calvete et al. (2005) using a sample of Spanish undergraduate students and

consists of 52 thoughts in response to 10 imaginary situations. Some of these situations are

positive (e.g., passing an important exam, being praised by a parent in front of relatives for

efforts put in studies), whereas others are negative (e.g., not being invited to an outing all

your friends went to, doing a team project in which one of the team members does not do

the tasks assigned to him or her). Participants rate the likelihood that they will have the

listed thoughts in response to the described situation using a 4-point Likert scale ranging

from (1) not very probable, to (4) very probable. The measure was developed based on the

thought procedure created by Cacioppo, Hippel, and Ernst (1997). Calvete and colleagues

(2005) applied this procedure by asking 110 undergraduate students to describe situations

in which they felt happy, anxious, angry, or depressed. Subsequently, students were asked

to write down the thoughts that popped into their heads. Calvete and colleagues (2005)

selected the most frequent positive and negative situations and the reported self-talk, while

excluding self-talk that was atypical and one that described tragic life events (e.g., death of

a relative). Consequently, they derived the broad dimensions of negative self-talk and

positive self-talk. The sub-scales associated with the negative self-talk include depressive

thoughts (e.g., "It's my own fault; I must have done something wrong."), anxious thoughts

(e.g., "I'll blush and everyone will realize how nervous I am."), and angry thoughts (e.g.,

"I'm fed up!"). On the other hand, the subscales composing positive self-talk encompass

minimization (e.g., "I shouldn't let it bother me."), positive orientation (e.g., "This is

wonderful!"), and coping self-instructions (e.g., "Calm down, think a bit and don't get

blocked."). In order to test the procedures, six independent psychologists were given descriptions of the subscales and scales, as well as the items, and were asked to classify the items into the scales and subscales. The inter-rater Kappa reliability coefficient ranged between .93 and .97. Moreover, the authors applied a method for calculating the STI Ratios of Positive-to-Negative Self-Talk. Specifically, they anchored the scores used to calculate the STI Ratio of Positive-to-Negative Self-Talk to 0 (e.g., 1 = 0, 2 = 1, 3 = 2, 4 = 3). These re-coded scores were then used to calculate the ratio by dividing the positive self-statements scores by positive-plus-negative self-statement scores.

The Cronbach alpha coefficients were .90 for the Negative Self-talk scale, .80 for the Positive Self-Talk scale, .83 for Depressive Thoughts, .87 for Anxious Thoughts, .82 for Angry Thoughts, .73 for Minimization, .74 for Positive Orientation, and .44 for Coping Self-Instructions (Calvete et al., 2005). Moreover, the construct validity of the measure was examined by analyzing the difference in the endorsements of thoughts according to the clinical disorders symptoms. The measure was revealed to be valid as, compared with individuals whose depressive symptoms were in the average range, the endorsement of depressive thoughts was found to be significantly higher for individuals whose depression symptoms were at clinical range. Similar results were found for anxiety and anger symptoms. Although this measure was translated by Calvete and colleagues (2005), no published studies using the English version were found for this review.

In the present sample, the alpha coefficient reliabilities were .84 for the Positive Self-Talk scale, .84 for the Negative Self-Talk scale, .81 for the Depressive Thoughts subscale, .84 for the Anxious Thoughts subscale, .75 for the Angry Thoughts subscale, .80 for the Minimization subscale, .74 for the Positive Orientation subscale, and .42 for the Coping Self-Instructions Subscale.

Affect Intensity Measure (AIM; Larsen, 1984). The Affect Intensity Measure is a 40-item questionnaire assessing the characteristic strength or intensity with which an individual typically experiences his or her emotions. Specifically, the items were developed based on the definition of affect intensity that distinguished between frequency of emotional experiences and intensity of experienced emotions, regardless of their valence (Diener & Larsen, 1986). Participants are asked to indicate on a Likert scale ranging from 1 (*Never*) to 6 (*Always*) how often they go through the specified affective experiences (e. g., "When I solve a small personal problem, I feel euphoric."; "My emotions tend to be more intense that those of most people."; "When I do something wrong, I have strong feelings of shame and guilt."; "When I do feel anxiety, it is normally very strong."). A higher score indicates that the individual experiences high levels of both positive and negative affect.

Larsen (1984) reported that internal consistencies range from .90 to .94 across four samples of college students. The 1-, 2-, and 3-month test-retest reliabilities reported by the authors were .80, .81, and .81, respectively. Moreover, the construct validity of the instrument was supported. The measure possesses good discriminant validity. The AIM has not been found to correlate significantly with extreme response set measures, the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1984), measures of faking good or faking bad, and measures of defensiveness (Larsen, 1984), which ensures the measurement of affect intensity in a valid fashion. Furthermore, the convergent validity of the measure was also demonstrated. Thus, scores on the AIM correlated significantly with averaged amplitude of self-reported daily mood and a questionnaire that identifies individuals at risk of developing cyclothymia and bipolar affective disorders (Larsen, 1984). This questionnaire was selected because its psychometric properties have been thoroughly investigated and supported by empirical evidence. In addition, it is one of the few measures

that assess, via self-report, the typical affect intensity experienced by individuals in various situations. In the present study, the alpha reliability coefficients were .68 for the Negative subscale, .87 for the Positive subscale, .50 for the Neutral subscale, and .88 for the overall measure.

Measures Administered to Mothers

Self-Expressiveness in the Family Questionnaire (SEFQ; Halberstadt, Cassidy, Stifler, Parke, & Fox, 1995). This measure was developed with the aim to measure the frequency of emotional expressiveness of an individual within the family context. Thus, this measure was selected to assess the emotional expressiveness that the young adults and their mothers exhibited in the family environment. The SFEQ contains the 40 items included in the EEFQ, some of which were slightly modified by Halberstadt and colleagues (1995), and that represent a range of emotions in a variety of settings typical of many families. However, participants are asked to indicate on a 9-point Likert Scale, ranging from 1 (*not at all frequently*) to 9 (*very frequently*), the extent to which they engage in the specific behaviors described in the items. Thus, the aim is not to assess the emotional climate within the family, as it is the case with the EEFQ, but rather to obtain mothers' reports about their own emotional expressiveness. The questionnaire is divided in a 23-item positive expressiveness scale ("Exclaiming over a beautiful day.") and a 17-item negative expressiveness scale ("Sulking over unfair treatment by a family member.") and has good psychometric properties. Specifically, the internal consistency coefficients for positive and negative scales, as well as the overall measure were .92, .85, and .89 respectively (Halberstadt et al., 1995). Moreover, the measure was not found to correlate with social desirability, which ensures that individuals' responding is not biased and increases the

validity of the instrument. The alpha reliability coefficients for the present study were .88 for the Positive scale, .87 for the Negative scale, and .84 for the overall measure.

Emotion-Related Parenting Styles Self-Test (ERPSST-T/F; Gottman, 1997; ERPSST-Likert; Hakim-Larson, Parker, Lee, Goodwin, & Voelker, 2006). The ERPSST was initially as a measure of emotion-related parenting style. The original measure was composed of 81 items that break down into four scales that represent a different parenting style based on Gottman's 1997 meta-emotion theory. The four scales are the emotion-coaching (e.g., "When my child is sad, it's a time to problem solve."), laissez-faire (e.g., "You should express the anger you feel."), dismissing (e.g.,"I don't want to make a big deal of my child's sadness."), and disapproving (e.g., "When she gets sad, I warn her about developing a bad character.").

The response format of this initial questionnaire was True or False. However, to improve the psychometric properties of the measure, Hakim-Larson and her colleagues (2006) modified the response format to a 5-point Likert-scale, ranging from 1 (*always false*) to 5 (*always true*), thus reflecting the frequency with which the individuals engage in specific emotion-related parenting. Average scores are computed for each scale. The scale on which the participant has the highest average score represents his or her emotion parenting style.

This modification improved the construct validity of the measure. Specifically, the emotion coaching and laissez faire dimensions were related to positive emotional expressiveness, whereas dismissing and disapproving styles were related to negative emotional expressiveness. In addition, as would be predicted by the meta-emotion theory (Gottman, 1997), emotion coaching correlated positively with expressive encouragement and negatively with minimization reaction coping styles (Hakim-Larson et al., 2006).

In order to assess emotion coaching retrospectively, the Emotion-Related Parenting Self-Styles Test (Gottman, 1997; Hakim-Larson et al., 2006) was modified to prompt responses based on the retrospective recall of the four emotion-related parenting styles: emotion coaching, laissez-faire, dismissing, and disapproving. Moreover, the Cronbach's coefficients of internal consistency for the revised measure were .82 for emotion coaching, .72 for laissez-faire, .72 for dismissing, and .91 for disapproving (Hakim-Larson et al., 2006). In the present study, the measure was modified to get at retrospective reports of mothers' emotion-related parenting styles. The alpha reliability coefficients were .90 for the Emotion-Coaching dimension, .81 for the Dismissive dimension, .66 for the Laissez-faire dimension, and .89 for Disapproving dimension.

Table 3 displays the variables, corresponding measures, as well as the possible and obtained ranges of scores.

Table 3

Ranges of Scores on the Measures

Variable	Measure	Subscales	Range of Possible Scores	Range of Obtained Scores
Emotion Regulation	Difficulties in Emotion Regulation Scale (DERS)	Total	30-180	48-146
		Lack of Clarity	5-25	5-19
		Lack of Awareness	6-30	6-30
		Nonacceptance	6-30	6-30
		Impulsivity	6-30	6-27
		Goals	5-25	6-25
		Strategies	8-40	10-36
Self-Talk	Self-Talk Inventory (STI)	Positive Self-Talk	26-104	43-93
		Minimization	12-48	15-46
		Coping Self-Instructions	4-16	5-16
		Positive Orientation	10-40	16-40
		Negative Self-Talk	26-104	33-104
		Anxious Self-Talk	9-36	9-36
		Depressive Self-Talk	11-44	11-44
		Angry Self-Talk	6-24	6-24
Affect Intensity	Affect Intensity Measure (AIM)	Total	1-6	2.5-5.2
		Positive	1-6	2.6-5.2
		Negative	1-6	1.2-5.2
		Neutral	1-6	1.7-5.3

Table 3 (Continued)

Variables	Measures	Subscales	Range of Possible Scores	Range of Obtained Scores
Emotional Expressiveness in the Family	Emotional Expressiveness in the Family Questionnaire (EEFQ)[a]	Total	1-9	3.5-7.7
		Positive-Dominant	1-9	2.4-9
		Negative-Dominant	1-9	2-8.1
		Positive-Submissive	1-9	1.1-8.8
		Negative-Submissive	1-9	2.6-7.7
Mothers' Self-Expressiveness in the Family	Self-Expressiveness in the Family Questionnaire (SEFQ)[a]	Total	1-9	4.4-7.5
		Positive Expressiveness	1-9	4.4-8.4
		Negative Expressiveness	1-9	2.1-6.9
Emotion Coaching	Emotion-Related Parenting Self-Styles Test-Likert Version (ERPSST)[a]	Emotion Coaching	1-5	1.6-5
		Laissez-Faire	1-5	1.4-4.6
		Disapproving	1-5	1.2-3.7
		Dismissive	1-5	1.9-4

Note. [a] scores calculated as averages

CHAPTER III

Results

Phase 1: Young Adults

    Preliminary analyses.

        Before undertaking the analyses, the data were screened for missing cases. Only two cases had extensive missing data on one questionnaire, both of them involving mother questionnaires. Therefore, these cases were not included in the analyses involving mother-young adult pairs, which reduced the number of mother-young adult pairs to 40. The rest of the data were analyzed following the steps recommended by Tabachnik and Fidell (2007). Specifically, the missing data were assessed for patterns since data missing at random poses fewer problems than data missing in a systematic manner. The SPSS MVA (Missing Values Analysis) command was used to determine whether the data of missing data presented a random pattern. The little MCAR test was not significant, which indicated that data are missing completely at random. The missing data were estimated using the expectation maximization (EM) procedure and missing cases were filled in with the estimated values. The EM is an iterative procedure, also available in SPSS, that derives missing data values based on the likelihood of under normal distribution and estimation of parameters. Following the estimation of missing cases, the entire sample of 131 young adults was screened for outliers and three cases whose z score values were inferior to -3 or superior to 3 were found, which reduced the sample to 129 individuals used in the analyses. The characteristics of the participants are presented in Table 1.

Hypothesis 1: Young Adults' Difficulty in Emotion Regulation and STI Ratio of Positive to Negative Self-Talk

Hypothesis 1 stated that a lower ratio of positive versus negative self-talk scores on the Self-Talk Inventory (STI; Calvete et al., 2005) would predict higher scores on the Difficulties in Emotion Regulation (DERS; Gratz & Roemer, 2004), which is indicative of more maladaptive emotion regulation. Only young adult participants were included in this analysis.

In order to determine whether sample characteristics were correlated with total difficulty in emotion regulation score and STI ratio of positive-to-negative self-talk, a correlational analysis was conducted. The sample characteristics included in the analyses were participants' gender, age, and the subsample group (i.e., those who were recruited without their mothers and those who were recruited with their mothers). The latter variable was included to determine whether the sample group was associated with the dependent variable and needed to be controlled for in subsequent analyses. Table 4 presents the correlation matrix. The STI ratio of positive-to-negative self-talk, gender, and subsample group were significantly correlated with the total scores on emotion regulation. The positive directions of the correlations indicate that having a higher difficulty in emotion regulation score was associated with being female and with being in the sample group that was recruited with their mothers and composed predominantly of females (see Table 1 for numbers of males and females in the samples). However, age was not significantly associated with total difficulties in emotion regulation, thus it was not included in the multiple regression analyses.

Before running the analyses, the data were screened for the assumptions of multiple regressions and none of them appeared to be violated. Specifically, no outliers were found

Table 4

Zero-Order Correlations between Age, Gender, Sample Group, DERS total, and STI Ratio

of Positive-to-Negative Self-Talk

	Age	Gender	Sample Group	DERS Total
Gender	-.15[†]			
Sample Group	-.09	.35**		
DERS Total	-.13	.25**	.48**	
STI Ratio	-.04	-.15	-.09	-.58**

Note. DERS Total = Total Score on the Difficulties in Emotion Regulation Scale, STI Ratio

= Ratio of Positive-to-Negative Self-Talk on the Self-Talk Inventory

n=129

*$p < .05$

**$p < .01$

[†]$p < .10$

using the critical leverage value of .09 (calculated using the formula 3(k+1)/N). No influential observations were found using the Cook value cut-off of 1, and the DIFFIT value of 2. Moreover, there was no multicollinearity given that all tolerance values were above .10. Moreover, the bi-variate plot of standardized residuals was examined for the assumptions of homoscedasticity and linearity, both of which were met.

Planned Multiple Regression Analysis. In order to test Hypothesis 1, a hierarchical multiple regression analysis was run. Gender and sample group were entered in the first step and STI ratio of positive-to-negative self-talk was entered in the second step, with the total Difficulty in Emotion Regulation score being the outcome variable. The mean STI ratio of positive-to-negative self-talk was .61 (SD = .12) and the mean score on the Difficulty in Emotion Regulation Scale was 97.37 (SD = 21.70).

As shown in Table 5, the overall model was significant, with $F(3, 125) = 34.36$, $p <$ .01, thus indicating that the ratio of positive-to-negative self-talk predicts the total difficulty in emotion regulation score above and beyond gender and sample group. Table 6 displays the unstandardized regression coefficients (B), the standardized regression coefficients (β), the semipartial correlations, and R, R^2, and adjusted R^2 after entry of all independent variables. R was significantly different from zero after each step. The results of step 1 show that gender and sample group explained 0.8% of the variability in the total Difficulty in Emotion Regulation score. The entry of STI ratio of positive-to-negative self-talk in step 2 explained an additional 36% of variability in the total difficulty in emotion regulation score. The inclusion of all variables in the model accounted for 45% of variability in the total Difficulty in Emotion Regulation score. An examination of the β coefficients demonstrates that sample group and STI ratio of positive to negative self-talk significantly predict change in total difficulty in emotion regulation score. Specifically, with every unit of change in

Table 5

Summary of Hierarchical Regression Analysis for Variables Predicting Total Scores on the

Difficulty in Emotion Regulation Scale (n = 129)

Variable	B	*SE B*	β	sr^2
Step 1				
Sample Group	-14.9	4.23	-.32	.09**
Gender	8.03	4.74	.15	.02
Step 2				
Sample Group	-15.52	3.30	-.33	.09**
Gender	3.37	3.73	.07	.003
STI Ratio	-199.80	21.75	-.62	.36**

Note. After Step 1, R^2 = .09, Adjusted R^2 = .08; After Step 2, R^2 = .45, Adjusted R^2 = .44, ΔR^2 = .36 ($p < .001$). B = unstandardized regression coefficient, *SE B* = standard error of the regression co-efficient, β = standardized regression coefficient, sr^2 = squared semipartial correlation.

**$p < .001$

sample group and STI of positive to negative ratio, there is respectively a change in -.33 and -.61 units in total difficulty in emotion regulation score.

Moreover, as predicted, higher STI ratio of positive-to-negative self-talk was associatedwith lower total scores on the Difficulty in Emotion Regulation Scale. Finally, the squared semipartial correlations were examined in order to determine the shared variance and the unique variance associated with each independent variable. As can be seen in Table 5, the variables included in the final model explained all of the variance in total score on the Difficulties in Emotion Regulation Scale. Sample group and STI ratio of positive-to-negative self-talk each uniquely contributed to most of the variance in the total tcore on the Difficulties in Emotion Regulation Scale.

Additional Analyses. In order to investigate the differences in the Difficulty in Emotion Regulation Score due to sample group, a one-way ANCOVA was performed while controlling for gender. The sample was divided into those who were recruited without their mothers, those who were recruited with their mothers but whose mothers did not participate, and those who participated with their mothers. The sample group variable was entered as a fixed factor while gender was entered as a covariate. The data were screened for assumptions. The assumptions of absence of outliers and relation between covariate and dependent variable were met. The homogeneity of covariate regression coefficients was analyzed by testing the interaction between gender and sample size, and it was nonsignificant, which indicates that the assumption was met. The assumption of homogeneity of variance was tested using the Levene's test. The Levene's test was significant, indicating that the assumption has been violated. In order to correct for this violation, the more stringent alpha significance level of .025 was used.

The ANCOVA yielded a significant difference between the three sample groups, with $F(2, 125) = 6.20$, $p < .01$. Gender was not significant, with $F(1, 125) = 2.90$, n.s. The Tukey post-hoc analyses revealed that the mean score on the Difficulty in Emotion Regulation Scale was significantly higher for those who were recruited without their mothers compared to those who were recruited with their mothers, whether she participated or not (see Table 6 for sample group means). On the other hand, the Difficulty in Emotion Regulation Scale means were not significantly different between those whose mothers participated and those whose mothers did not participate.

Phase 2: Mother-Young Adult Pairs

Preliminary Analyses. Because there were only 4 males and 36 females, the males were removed in order to eliminate any confounds related to gender and allow for better generalization, which decreased the sample to 36 females. Prior to conducting the analyses, the variables were screened for outliers and three data points whose z-scores were above 3 or below -3 were removed, thus reducing the sample to 33 females (see Table 1 for the female young adult characteristics and Table 2 for the mother characteristics). Table 7 presents the means and standard deviations of the variables related to parenting and young adults' characteristics. Correlational analyses were conducted in order to examine the relations between the predictor variable and the correlation matrix is presented in Table 8. As can be seen in Table 8, mothers' self-expressiveness was significantly positively correlated with emotion coaching. In addition, emotional expressiveness in the family as reported by the students was significantly positively associated with affect intensity.

Table 6

Means and Standard Deviations on the Difficulty in Emotion Regulation by Sample Group

Sample Group	*M*	*SD*
Recruited Without Mother[a]	102.70	19.30
Mother Did Not Participate[b]	90.91	22.06
Mother Participated[c]	89.20	25.80

Note. [a]*n*=51, [b]*n*=36, [c]*n*=42

Table 7

Means and Standard Deviations of Variables Related to Parenting and Female Young Adults

Variables	M	SD
Age	20.58	2.06
Emotional Expressiveness in the Family	6.01	0.57
Mothers' Self-Expressiveness	5.49	0.78
Emotion Coaching	3.61	.50
Affect Intensity	3.89	.42

Note. n=33.

Table 8

Zero-Order Correlations for Emotion-Related Parenting and Female Young Adult Characteristics

	Family Emotional Expressiveness	Affect Intensity	Mothers' Self-Expressiveness	Age
Affect Intensity	.37*			
Mothers' Self-Expressiveness	.14	-.04		
Age	-.22	.05	.06	
Emotion coaching	-.03	.06	.42*	.03

Note. n=33

*p < .05

Hypothesis 2: Young Adults' Difficulties in Emotion-Regulation, Demographic and

Temperamental Characteristics, and Emotion-Related Parenting Variables

Hypothesis 2 predicted that individuals who reported higher levels of emotional

expressiveness in their family, as reflected by higher scores on the Emotional and the Self-

Expressiveness in the Family Questionnaire (SEFQ; Halberstadt et al., 1995), and

whose parents obtained higher scores on the emotion coaching style of the ERPSST

(ERPSST-T/F; Gottman, 1997; ERPSST-Likert; Hakim-Larson et al., 2006) while they

were growing up, would report better emotion regulation abilities, as indicated by lower

scores on the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004).

Moreover, it was stated that these variables would predict scores on the DERS above and

beyond age, gender, and Affect Intensity Measure (Larsen, 1984) total score. The mother-

young adult pairs were included in the analysis.

In order to examine the relations between the variables, a correlational analysis was

run. Table 9 shows the means and standard deviations for the total score on the Difficulty in

Emotion Regulation Scale, as well as the subscales. The resulting matrix, shown in Table

10, indicates that affect intensity and mothers' self-expressiveness were significantly

positively correlated with total score on the Difficulty in Emotion Regulation Scale, as well

as the Strategies and Goals subscales. In addition, mothers' self-expressiveness was

significantly positively correlated with the Nonacceptance, Impulsivity, and Clarity

subscales. Positive trends towards significance were exhibited between affect intensity and

the Impulsivity ($p = .06$) and Nonacceptance ($p = .09$) subscales. Emotional expressiveness

in the family as rated by young adults was significantly associated with the Awareness

subscale.

Table 9

Means and Standard Deviations of Variables and Subscales of the Difficulty in Emotion Regulation Scale (DERS)

Variables	M	SD
DERS Total	103.78	18.93
DERS Strategies	20.18	6.55
DERS Goals	17.74	3.57
DERS Nonacceptance	14.03	4.67
DERS Impulsivity	15.18	5.28
DERS Awareness	23.59	2.45
DERS Clarity	13.03	1.89

Note. DERS = Difficulties in Emotion Regulation Scale

n=33

Table 10

Zero-Order Correlations for the Total Score and Subscales of the Difficulties in Emotion Regulation Scale (DERS), Young Adult Characteristics, and Emotion-Related Parenting

	Family Emotional Expressiveness	Affect Intensity	Mothers' Self-Expressiveness	Age	Emotion coaching
DERS Total	.10	.43*	.50**	-.08	.10
DERS Strategies	-.02	.38*	.41*	-.03	-.06
DERS Goals	.03	.45**	.42*	-.11	.23
DERS Nonacceptance	.07	.30†	.43*	-.17	.06
DERS Impulsivity	.03	.33†	.41*	-.02	.07
DERS Clarity	.14	.14	.47**	.04	.11
DERS Awareness	.40*	.22	-.01	.01	.18

Note. DERS = Difficulties in Emotion Regulation Scale

n=33

*p < .05

**p < .01

†p < .10

Planned Analyses. While the sample size was insufficient to conduct the planned

analyses with six predictors, an exploratory multiple regression analysis was conducted

with three predictors following advice given by Jackson (personal communication, October

11, 2008). Specifically, emotional expressiveness in the family, mothers' self-

expressiveness, and affect intensity were chosen as predictors based on the literature

reviewed earlier. Prior to the analyses, the data were screened for assumptions of multiple

regressions. In screening for outliers on outcome variable and using the leverage value of

.36 (calculated using the formula 3(k+1)/N), no outliers were found. The screening for

outliers on the predictor variable showed that there were no values outside of the range of

+3 and -3. In screening for multivariate outliers, six values above 2 were found. Overall, six

outliers were found and deleted, which reduced the sample size to 27 individuals. The

assumption of multicollinearity was met given that all tolerance values were above .10.

Moreover, the bi-variate plot of standardized residuals was examined for the assumptions

of homoscedasticity and linearity, both of which were met.

Affect intensity was entered in the first step while emotional expressiveness in the

family and mothers' self-expressiveness were entered in the second step. The overall model

was significant, with $F(3, 23) = 11.46, p < .001$. Table 11 presents the unstandardized

regression coefficients (B), the standardized regression coefficients (β), the semipartial

correlations, and R, R^2, and adjusted R^2 after entry of all independent variables. R was

significantly different from zero after each step. As can be seen in the results of step 1,

affect intensity explained 22% of the variability in the total Difficulty in Emotion

Regulation score. An additional 38% was explained after the entry of emotional

expressiveness in the family and mothers' self-expressiveness. The inclusion of all

variables in the model accounted for 60% of variability in the total Difficulty in Emotion

Table 11

Summary of Hierarchical Regression Analysis for Variables Predicting Total Score on the

Difficulties in Emotion Regulation (DERS) (n = 27)

Variable	B	$SE\,B$	β	sr^2
Step 1				
Affect Intensity	20.81	7.91	.47	.21**
Step 2				
Affect Intensity	22.67	6.41	.51	.21**
Emotional Expressiveness in the Family	-.20	.13	-.23	.04
Mothers' Emotional Expressiveness	.40	.09	.60	.35**

Note. After Step 1, $R^2 = .22$, Adjusted $R^2 = .19$; After Step 2, $R^2 = .60$, Adjusted $R^2 = .55$,

$\Delta R^2 = .38$ ($p < .05$). B = unstandardized regression coefficient, $SE\,B$ = standard error of

the regression co-efficient, β = standardized regression coefficient, sr^2 = squared

semipartial correlation.

*p < .05

**p < .001

Regulation score. An analysis of the β coefficients shows that affect intensity and mothers' self-expressiveness significantly predict change in total Difficulty in Emotion Regulation Score. Specifically, with every unit of change in affect intensity and mothers' self-expressiveness in the family, there is respectively a change of .51 and .60 units in total Difficulty in Emotion Regulation Score. The positive association between mothers' self-expressiveness in the family and emotion regulation difficulties was the opposite of what was expected. The squared semi-partial correlations were examined to determine the shared and unique contribution of variables. The variables in the final model accounted for all of the variance in the difficulty in emotion regulation score. The examination of the unique contributions of variables indicates that mothers' self-expressiveness accounted for two thirds of the variance, whereas mothers' self-expressiveness accounted for about a third.

Hypothesis 3: Young Adults' Ratio of Positive-to-Negative Self-Talk, Demographic and Temperamental Variables, and Emotion-Related Parenting

Hypothesis 3 stated that individuals who reported higher levels of emotional expressiveness in their families, as reflected by higher scores on the Emotional Expressiveness Questionnaire (EEFQ; Halberstadt, 1986) and on the Self-Expressiveness in the Family Questionnaire (SEFQ; Halberstadt et al., 1995), and whose parents displayed emotion coaching parenting style, as reflected by mothers' responses on the ERPSST (ERPSST-T/F; Gottman, 1997; ERPSST-Likert; Hakim-Larson et al., 2006) while they were growing up, would report higher positive-to-negative ratio scores on the STI (STI; Calvete et al., 2005). Moreover, it was expected that these variables would predict STI ratio of positive-to-negative self-talk above and beyond age, gender, and total score on the Affect Intensity Measure (AIM; Larsen, 1984).

Before conducting the planned analyses, correlational analyses were conducted to examine the relations between the subscales of the Self-Talk Inventory and characteristics related to young adults and parenting (see Table 12 for means and standard deviations of the subscales of the Self-Talk Inventory). As can be seen from the correlation matrix presented in Table 13, significant positive correlations were evidenced between affect intensity, Depressive Thoughts, Negative Self-Talk, and Positive Orientation. Mothers' self-expressiveness was significantly negatively associated with Coping Self-Instructions. The correlation between affect intensity and Angry Thoughts exhibited a trend towards a positive association ($p = .07$). On the other hand, the correlation between between mothers' self-expressiveness in the family and minimization displayed a trend towards significance in the negative direction ($p = .08$).

Planned Analyses. Because the sample size was insufficient to conduct the planned analyses with six predictors and have enough power, the analysis was modified following the guidelines given by Jackson (personal communication, October 11, 2008). Specifically, an exploratory multiple regression analysis was conducted with three predictors. Specifically, age, affect intensity, and mothers' self-expressiveness, were chosen as predictors based on the reviewed literature and the pattern of correlations of the predictors with the dependent variable. Prior to conducting the analyses, the data were screened for assumptions of multiple regressions. Outliers on the outcome variable were screened using the leverage value of .36 (calculated using the formula 3(k+1)/N). The data were also screened for outliers on the predictor variable and there were no standardized residual values outside of the range of +3 and -3. In screening for multivariate outliers using DIFFITS and Cook's values, no problematic values were found. No outliers were found,

Table 12

Means and Standard Deviations for the Variables and the Subscales of the Self-Talk Inventory (STI)

Variables	M (SD)
STI Ratio	.59 (.13)
STI Coping Self-Instructions	10.77 (1.82)
STI Positive Orientation	28.01 (4.65)
STI Minimization	31.73 (7.17)
STI Positive Self-Talk	70.58 (10.37)
STI Angry Thoughts	17.24 (3.74)
STI Anxious Thoughts	17.42 (5.56)
STI Depressive Thoughts	23.00 (6.39)
STI Negative Self-Talk	57.67 (13.24)

Note. STI = Self-Talk Inventory

n=33

Table 13

Zero-Order Correlations for the Self-Talk Inventory, Young Adult Characteristics, and Emotion-Related Parenting

Self-Talk Inventory Subscales	Age	Emotional Expressiveness in the Family	Affect Intensity	Mothers' Self-Expressiveness	Emotion Coaching
Ratio of Positive-to-Negative Self-Talk	-.24	-.19	-.23	-.21	.01
Coping Self-Instructions	-.20	-.04	.23	-.43*	-.04
Positive Orientation	-.22	.18	.36*	-.25	-.002
Minimization	-.22	-.22	-.11	-.31†	-.05
Positive Self-Talk	-.28	-.08	.13	-.40*	-.04
Angry Thoughts	.09	.26	.32†	.13	.23
Anxious Thoughts	.14	.20	.28	-.06	-.25
Depressive Thoughts	.02	.12	.39*	.001	-.10
Negative Self-Talk	.09	.21	.39*	.01	-.09

Note. n=33

*$p < .05$

$^{\dagger}p < .10$

therefore the sample of 33 females remained intact. The assumption of absence of multicollinearity was met given that all tolerance values were above .10. Moreover, the bivariate plot of standardized residuals was examined for the assumptions of homoscedasticity and linearity, both of which were met. The overall model was non-significant, with $F(3.29) = 2.13$, ns. None of the variables included in the model were significant. Table 14 presents the unstandardized regression coefficients (B), the standardized regression coefficients (β), the semipartial correlations, and R, R^2, and adjusted R^2 after entry of all independent variables.

Summary of Results

In order to test self-talk as an emotion regulation strategy and to investigate how the Eisenberg et al. (1998) model of parental socialization of emotions applies to young adults, a multiple regression analyses was conducted. The multiple regression testing the hypothesis that self-talk is associated with difficulties in emotion regulation in young adults supported the first hypothesis. Specifically, the analyses confirmed that STI ratio of positive to negative self-talk significantly predicted emotion regulation above and beyond the sample group from which the participants came, and participants' gender. Moreover, a one-way ANCOVA controlling for gender showed that there was a significant difference between sample groups on total difficulty in emotion regulation. Specifically, the total difficulty in emotion regulation was significantly higher among the young adults who were recruited without their mothers. The difference due to gender was not significant. The second set of analyses was conducted to test the hypothesis that the emotion-related parenting, as reflected by higher emotional expressiveness in the family, higher mothers' self-expressiveness, and the extent of mothers' endorsement of emotion coaching would predict total difficulties in emotion regulation above and beyond affect intensity,

Table 14

Summary of Hierarchical Regression Analysis for Variables Predicting Total Positive-to-Negative Self-Talk Ratio Scores (n = 33)

Variable	B	$SE\ B$	β	sr^2
Step 1				
Affect Intensity	-.09	.05	-.28	.08
Age	-.02	.01	-.30	.08
Step 2				
Affect Intensity	-.09	.05	-.29	.08
Age	-.02	.01	-.29	.08
Mothers' Emotional Expressiveness	.00	.001	-.21	.04

Note. After Step 1, $R^2 = .14$, Adjusted $R^2 = .08$; After Step 2, $R^2 = .18$, Adjusted $R^2 = .09$, $\Delta R^2 = .04$, ns. B = unstandardized regression coefficient, $SE\ B$ = standard error of the regression co-efficient, β = standardized regression coefficient, sr^2 = squared semipartial correlation.

age, and gender. Since the sample size was not sufficient to ensure adequate power if the hypothesis were tested as predicted, the number of predictors was reduced to three. Specifically, the analysis involved testing whether mothers' self-expressiveness and emotional expressiveness in the family as perceived by the young adults would predict difficulties in emotion regulation above and beyond young adults' affect intensity. The analysis partly confirmed the hypothesis, with one of the parenting variables significantly predicting variance in emotion regulation difficulties. Thus, mothers' self-expressiveness explained a significant additional amount of variance in difficulties in emotion regulation even after accounting for affect intensity. However, the direction of the association was positive, thus indicating that those young women whose mothers reported higher levels of self-expressiveness displayed more difficulty in regulating their emotions. This result was the opposite of what was expected.

The analysis to test the third hypothesis stating that the emotion-related parenting, as reflected by emotional expressiveness in the family, mothers' self-expressiveness, and the extent of mothers' endorsement of emotion coaching would predict the STI ratio of positive-to-negative self-talk above and beyond affect intensity, age, and gender were similarly modified. Specifically, because of the low sample size and the associated risk of low power if the analyses were conducted as planned, three predictors were selected for the analysis. Thus, age, affect intensity, and mothers' self-expressiveness in the family were used to predict the STI ratio of positive-to-negative self-talk. The resulting overall model was not significant, and none of the variables included in the model emerged as significant contributors to STI ratio of positive-to-negative self-talk. Table 15 summarizes the hypotheses and the corresponding results.

Table 15

Summary of the Results

Hypothesis	Results

Hypothesis 1

    Higher Self-Talk Inventory ratio of positive-to-negative self-talk scores would predict a lower score on the Difficulties in Emotion Regulation Scale.

The hypothesis was confirmed in an hierarchical MRA analysis controlling for gender and sample group. Follow up ANCOVA and post hoc test revealed that even when controlling for gender, the STI ratio of positive-to-negative self-talk predicted difficulty in emotion regulation.

Hypothesis 2

    Higher emotional expressiveness in the family as reported by the young adult, higher mothers' self-expressiveness, and higher emotion coaching would predict lower young adult scores on the Difficulties in Emotion Regulation Scale above and beyond young adults' age, gender, and affect intensity.

Because of small sample size, the analyses were conducted with affect intensity, mothers' emotional expressiveness and emotional expressiveness in the family. The proposition was partially confirmed since one of the parenting variables, mothers' self-expressiveness, explained a significant proportion of variance in emotion regulation difficulty even after accounting for affect intensity. However, the pattern of results was contrary to what was expected. Specifically, mothers' self-expressiveness was positively related to difficulties in emotion regulation.

Table 15 (Continued)

Hypothesis 3

Higher emotional expressiveness in the family as reported by the young adult, higher mothers' self-expressiveness, and higher emotion coaching would predict lower young adult STI ratio of positive to negative self-talk scores above and beyond young adults' age, gender, and affect intensity.

Since the sample size was small, which reduces power, the analyses were conducted with age, affect intensity, and emotion coaching. The overall model was not significant and none of the variables emerged as significant contributors to STI ratio of positive-to-negative self-talk.

CHAPTER IV

Discussion

The two goals of the present study were to investigate the relation between self-talk and emotion-regulation, as well as to examine the aspects of the family environment that contribute to their development. The results of the analyses conducted to test the first hypothesis demonstrated that self-talk is an important cognitive emotion regulation strategy used by young adults to regulate their emotions. Specifically, the ratio of positive to negative self-talk significantly predicted emotion regulation above and beyond the sample group from which the participants came and participants' gender. Moreover, additional analyses showed that the total difficulty in emotion regulation score was different between the participants that were recruited without their mothers, and those recruited with their mothers, regardless of whether she participated or not, with the former exhibiting significantly more difficulties in emotion regulation than the latter.

This pattern of results suggests that when emotion regulation difficulties are considered in relation to gender only, there is a significant association between the two variables. However, when this variable is entered in a regression or is used in follow-up analyses with ratio of positive-to-negative self-talk and sample group and its relation to emotion regulation difficulties in considered in a multivariate fashion, the latter two variables appear to exhibit stronger associations with emotion regulation difficulty. Therefore, the contribution of gender in the variance in emotion regulation difficulties is subsequently decreased. This indicates that when gender is controlled for, sample group and the ratio of positive-to-negative self-talk are significant predictors of difficulties in emotion regulation. While the former is consistent with previous literature on the

associations between self-talk and emotional difficulties (e.g., Kendall & Choudhury, 2003; Salsman & Linehan, 2006), the latter is an intriguing finding.

The group that was recruited without their mothers did not have to commit as much as those recruited with their mothers since the first group only had to report on their own emotional functioning and their experience of the emotional climate in their own family. The group recruited with their mothers had an additional commitment of asking their mothers to participate and report on their parenting, which could be threatening both for young adults and their parents since the questions make parents think about the quality of their parenting. Therefore, the young adults must have a close enough relationship with their mothers in order to be comfortable asking their mothers to participating in the second phase. The fact that a big percentage of the mothers whose participation was solicited participated, and that only a few mothers reported negative feelings towards the study suggests that it might be the case. Perhaps, the lower emotion regulation difficulties exhibited by the group recruited with their parents can be in part explained by an emotionally supportive relationship between these young adults and their mothers.

While the sample size of participants was small in the second phase of the study, regressions were still conducted with a smaller number of predictors in order to explore how Eisenberg et al.'s (1998) model of parental socialization of emotions applies to young adults, as advised by Jackson (personal communication, October 11, 2008). Thus, while the analyses offer interesting insights into how concepts of emotion-related parenting in childhood apply to young adults' emotional functioning, the results should be considered exploratory because of the low power. In the second hypothesis, it was originally stated that young adults' lower difficulty in emotion regulation would be predicted by higher mothers' self-expressiveness, emotional expressiveness in the family as reported by young adults,

and mothers' emotion coaching above and beyond gender, age, and affect intensity. Therefore, the analyses were modified and only affect intensity, mothers' emotional expressiveness, and emotional expressiveness in the family were used as predictors. These predictors were chosen based on the reviewed literature.

The preliminary correlational analyses showed that higher emotional expressiveness in the family was related to less awareness of emotions. Moreover, with higher maternal reports of self-expressiveness in the family, individuals reported more difficulty regulating their emotions in general, accessing their emotions, being able to achieve their goals when upset, accepting their emotions, and inhibiting impulsive behaviours when undergoing an emotional episode. Similarly, higher self-ratings of affect intensity on the part of the young women were also related to overall difficulty in regulating emotions, accessing emotion regulation strategies, and achieving goals when upset. The the multiple regression showed that mothers' emotional expressiveness and emotional expressiveness in the family as rated by the young women predicted difficulties in emotion regulation above and beyond the young women's affect intensity. However, the direction of the prediction was the opposite of what was hypothesized. Specifically, mothers' self-expressiveness was positively associated with difficulty in emotion regulation.

While these results appear counterintuitive and contradict the originally formulated hypothesis, they can be understood in the light of the evidence reported by Halberstadt (1991). Specifically, Halberstadt (1991) states that while overall, a family emotional climate that is characterized by high expressiveness is beneficial to the development of individuals' understanding and regulation of emotions, very high levels of emotionality in the family could prevent these constructs from developing in a healthy manner. Specifically, a family environment characterized by very high emotional expressiveness

does not teach individuals the modulation of emotions since all emotions are expressed in a very intense and uninhibited manner. This lack of emotional modulation in the family could lead to increased difficulties in regulating emotions in young adulthood.

The results concerning affect intensity are consistent with the theory on temperament and affect intensity (e.g., Larsen & Diener, 1987). Specifically, individuals with higher affect intensity experience their emotions as more intense, and therefore may have difficulty regulating their emotions effectively. In the present study, while parenting variables explained a significant amount of variance even when added after affect intensity into the equation, affect intensity remained an important variable.

Similarly to the issue of low power due to low sample size that occurred in Hypothesis 2, regressions were conducted with a smaller number of predictors in order to explore how Eisenberg et al. (1998) model of parental socialization of emotions applies to young adults as advised by Jackson (personal communication, October 11, 2008). Thus, the results should be considered exploratory because of the low power. The third hypothesis originally advanced that higher mothers' self-expressiveness, emotional expressiveness in the family as reported by young adults, and mothers' emotion coaching would predict higher ratio of positive-to-negative self-talk above and beyond gender, age, and affect intensity. Therefore, the analyses were modified to use only affect intensity, age, and mothers' emotion coaching as predictors. These predictors were chosen based on the literature and the pattern of significant associations between predictors and outcome variable in the preliminary correlational analyses. The preliminary correlational analyses showed that young women whose mothers' self-expressiveness was higher endorsed less of the positive kinds of self-talk such as minimization and coping self-instructions. Moreover, the higher was the young women's affect intensity, the more they endorsed negative kinds

of self talk, such as anxious thoughts, angry thoughts, depressive thoughts, as well as positive orientation. The regression analysis did not confirm the hypothesis since the overall model was not significant.

Affect Intensity and mothers' self-expressiveness appear to be important variables to consider in understanding some of the characteristics that are associated with self-talk in young adults. These results are consistent with research on affect intensity, which suggests that this temperamental trait defines individuals' emotional experience (Larsen & Diener, 1987) and is stable across the lifespan (Diener et al., 1985). While affect intensity was significantly correlated mostly with negative kinds of self-talk, a significant correlation with self-talk reflecting positive orientation, also emerged. This is consistent with the fact that affect intensity manifests itself across emotional valences. Thus, it appears that when individuals who are high in affect intensity experience negative emotions, they tend to increase these negative emotions by engaging in negative self-talk. A similar phenomenon seems to happen with positive self-talk characteristic of positive orientation, which contains statements that increase positive emotions (e.g., "I'm cool!) in response to situations that elicit positive situations (e. g., being praised for one's achievements).

The negative associations between mothers' self-expressiveness and participants' use of positive self-talk is the opposite of what was predicted. However, it appears to present a pattern similar to the one in hypothesis 2, where mothers' self-expressiveness predicted more overall emotion regulation difficulties. Therefore, it could be explained by Halberstadt's (1991) conclusion that those individuals who are exposed to very high levels of emotional expressiveness in their family do not learn how to regulate their emotions effectively. Since positive kinds of self-talk can be used to regulate emotions, those

participants who experienced very high levels of emotional expressiveness may not have learned how to use self-talk to regulate their emotions.

The fact that the overall model was not significant and the hypothesis was not confirmed is contrary to the propositions of the model developed by Eisenberg and colleagues (1998) using results that came from studies with children and to the originally formulated hypothesis. While these results are likely due to the low power of the analyses, it is possible that the variables predicting outcomes for children do not necessarily predict the same outcomes for older individuals.

Limitations of the Current Study. While the current study offered provided support for the hypothesis that individuals use self-talk as an emotion regulation strategy and provides some support for Eisenberg's and colleagues (1998) emotion-socialization model in young adults, it also presents some limitations. One set of limitations concerns the sample.

The overall sample of young adults in this study, while being somewhat representative of a typical population of undergraduate students enrolled in psychology classes, is rather restricted in terms of socio-economic status, ethnicity, and gender. Thus, the majority of the participants who were female in phase one, and all female in phase 2, described themselves as Caucasian and indicated that the income of their family of origin was above $70,000. Additionally, most of them reported still living with their parents, which is characteristic of the university setting, where the majority of students are local and therefore do not need to move away to attend university. This may not be representative of a typical undergraduate population where a higher proportion of students live away from their parents.

Moreover, the sample size in the second phase of the study was small and composed only of females, which presents low power and limits the generalizability of the results. Additional limitations related to the sample concern the types of parenting represented in the present study. Because the large majority of young and adults and mothers were Caucasian and the majority of mothers had a college or university education, the sample is not representative of different socio-cultural and ethnic groups. Therefore, the parenting styles assessed in the present study are not generalizable to these different groups.

The low sample size may be due to the recruitment procedures, which announced that the purpose of the study was to investigate emotions and included a screening question about soliciting mothers' participation. This may have attracted a particular kind of participants. Thus, the sample may not be random, but rather representative of individuals who are interested in emotions and who are comfortable reporting about their emotions and childhood experiences, and potentially have a good enough relationship with their mother to solicit her participation. This could have excluded individuals who experienced extreme kinds of negative parenting. Moreover, because participants were recruited though the Psychology Department's Participant Pool, they all had to take classes in psychology to receive course credits. Again, this targets individuals who have specific interests in human behaviours and emotions.

Another limitation includes the reliability of the measures. In the present study, because the ERPSST (Hakim-Larson et al., 2006) was modified to be retrospective and the STI (Calvete et al., 2005) had never been used before with a sample of North American undergraduate students, the reliabilities for both measures were calculated. While the subscales on the ERPSST (Hakim-Larson et al., 2005) were found to have, for the most part, an acceptable reliability, the low reliability of the Coping Self-Instructions subscale

made the interpretation of some of the results tenuous. Thus, the results of the present investigation should be considered as an initial glimpse into the relation between emotion-related parenting and a cognitive emotion-regulation strategy.

Directions for Future Research. The first avenue for future research relates to the findings on the relation between the ratio of positive-to-negative self-talk and emotion regulation. This relation should be investigated further by studying how different kinds of self-talk are associated with different areas of emotion regulation.

Moreover, given that the results of the second phase of the present study are limited by the low power due to small sample size, future studies should investigate whether the results found in the present study are replicated with a larger sample. The method used in the present study, which involved recruiting mothers and young adults through the participant pool, did not ensure that a sufficient number of participants are recruited. Perhaps, longer periods of recruitment than the four-month period used in the present study are needed, and other ways of recruiting mothers and young adult pairs should be investigated. Also, mothers and young adults could be targeted in information meetings that are conducted by the university as part of recruitment activities. Another strategy would be to ask for ethical clearance to send questionnaires to mothers of a sufficient sample of undergraduate students from different programs and invite them to participate in the study with their son or daughter that is attending the university. In a related fashion, the sample used in future studies should be more varied in terms of socio-economic status, education, and gender. It is important for future studies to perhaps adapt the recruitment strategy to recruit more males. This may be accomplished by giving additional incentives to males. Including young people who are not attending university may also provide a deeper insight into emotion-related parenting and its association with outcomes in young adulthood.

Along the same lines, the measure of emotional expressiveness in the family used in this study presents additional opportunities for investigating the association between specific aspects of emotional climate and young adults' emotional functioning outcomes. While it was not the purpose of the present study to investigate the emotional valence of the family expressiveness and their relation to further emotional adjustment, this could be addressed in future research. However, Halberstadt, the researcher who developed the EEFQ (Halberstadt, 1986), advised against exclusively classifying individuals into the quadrants that are represented by the subscales since they could be high in all quadrants or low in all quadrants (Halberstadt, personal communication, January 7, 2007). Thus, future researchers should give priority to the broader dimensions of positive and negative emotionality in the family.

Finally, given the low reliability associated with the Coping Self-Instructions subscale of the Self-Talk Inventory, it is desirable to conduct more extensive research with this measure with samples of English-speaking young adults. While the authors performed Confirmatory Factor Analysis on the data collected with Spanish college students, such analyses were not performed with data coming from English-speaking young adults. Moreover, the low reliability of the Coping Self-Instructions subscale in the present study is comparable to what was obtained by Calvete et al. (2005) in their validation of the measure. Commenting on the low reliability of the measure, the authors remarked that it might be due to the low number of items in the subscale relatively to the other subscales of the measure. It appears that this could be corrected by developing and validating additional items for this subscale.

Concluding Remarks

Overall, the results of the present study demonstrate the importance of the interaction of emotional and cognitive processes. Consistent with the propositions of other authors (e.g., Gross & John, 2003), the importance of cognitive strategies in regulating emotions is underscored. This illustrates that even in non-clinical populations, the ratio of positive-to-negative self-talk is importantly associated with success in regulating one's emotions.

Additionally, the results of the present study show that certain aspects of emotion-related parenting and individuals' characteristics are associated with emotion regulation difficulties young adulthood. However, the results also demonstrate that self-talk is perhaps associated more with young adults' characteristics such as affect intensity as opposed to specific emotion-related parenting. While the results offer some support for the Eisenberg et al.'s (1998) model of parental emotion-related socialization, they would need to be replicated with a larger and demographically more diverse sample.

Appendix A

Parental Participation Form

I would like to participate in the study entitled *Parental Emotion-Related Socialization and Young Adults' Emotion-Related Self-Talk* conducted by Tatiana Nedecheva (please check one):

_____Yes _____No

If yes, please provide your name, phone number, and the best time to contact you.

Name:_____

Phone number:_____

Best time to contact you (please check one):

____Mornings ____Afternoons ____Evenings

Appendix B

UNIVERSITY OF

WINDSOR

CONSENT TO PARTICIPATE IN RESEARCH-STUDENTS

Title of Study: Parental Emotion-Related Socialization and Young Adults' Emotion-Related Self-Talk.

You are asked to participate in a research study conducted by Tatiana Nedecheva under the supervision of Dr. Julie Hakim-Larson, from the Department of Psychology at the University of Windsor. This research project is conducted by Tatiana Nedecheva in partial fulfilment of her Masters of Arts degree in Child Clinical Psychology and is funded by the Social Sciences and Humanities Research Council (SSHRC).

If you have any questions or concerns about the research, please feel to contact Dr. Hakim-Larson at (519) 253-3000, ext. 2241.

PURPOSE OF THE STUDY
The purpose of the current study is to investigate how parental socialization of emotions is associated with emotional functioning in young adults. Specifically, the present research will aim to investigate how different parental behaviours are associated with young adults' abilities to use different strategies in order to deal with their emotions.

PROCEDURES
If you volunteer to participate in this study, we would ask you to do the following things:

Complete written questionnaires, which may require about one hour of your time. The questionnaires are to be completed in one session in a quiet room at the University of Windsor at a prearranged time.

POTENTIAL RISKS AND DISCOMFORTS
While no significant risks are foreseen in association with the participation in the current study, some participants may experience slight psychological discomfort when answering questionnaires. In the event of such occurrence, participants are free to skip questions that make them uncomfortable. In addition, participants are provided with a list of resources should they feel the need to get help. Moreover, participants are free to withdraw from the study at any time without penalty or prejudice.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY
Participants will not directly benefit from the participation in this study. However, the results of this study will enable researchers to gain better understanding of how parents socialize emotions in their children, and how this affects their competence in dealing with their own emotions.

PAYMENT FOR PARTICIPATION
No payment will be given to the participants in exchange for their participation. However, they will receive course credit toward one of their psychology classes.

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

In order to maintain anonymity, participants' questionnaires will be assigned numbers, and all identifying information will be separated from the responses. All questionnaires and identifying information will be kept in a locked filing cabinet at the University of Windsor. Only the research team working on the study will have access to this information.

PARTICIPATION AND WITHDRAWAL
You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS

The finding from this research project will be available.

Web address: _____www.uwindsor.ca/reb_____

Date when results are available: _____August 2008_____

SUBSEQUENT USE OF DATA
This data will be used in subsequent studies to answer additional questions about emotional development, parenting, and family environment.

RIGHTS OF RESEARCH SUBJECTS
You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; telephone: 519-253-3000, ext. 3916; e-mail: lbunn@uwindsor.ca.

SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE
I understand the information provided for the study *Parental Emotion-Related Socialization and Young Adults' Emotion-Related Self-Talk.* as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____

Name of Subject

_____   _____

Signature of Subject   Date

SIGNATURE OF INVESTIGATOR
These are the terms under which I will conduct research.

_____   _____

Signature of Investigator   Date

Appendix C

UNIVERSITY OF
WINDSOR

CONSENT TO PARTICIPATE IN RESEARCH-MOTHERS

Title of Study: Parental Emotion-Related Socialization and Young Adults' Emotion-Related Self-Talk.

You are asked to participate in a research study conducted by Tatiana Nedecheva under the supervision of Dr. Julie Hakim-Larson, from the Department of Psychology at the University of Windsor. This research project is conducted by Tatiana Nedecheva in partial fulfilment of her Masters of Arts degree in Child Clinical Psychology and is funded by the Social Sciences and Humanities Research Council (SSHRC).

If you have any questions or concerns about the research, please feel to contact Dr. Hakim-Larson at (519) 253-3000, ext. 2241.

PURPOSE OF THE STUDY
The purpose of the current study is to investigate how parental socialization of emotions is associated with emotional functioning in young adults. Specifically, the present research will aim to investigate how different parental behaviours are associated with young adults' abilities to use different strategies in order to deal with their emotions.

PROCEDURES
If you volunteer to participate in this study, we would ask you to do the following things:

Complete written questionnaires, which may require about half an hour of your time. The questionnaires are to be completed privately at the participant's convenience and returned to the researcher upon completion.

POTENTIAL RISKS AND DISCOMFORTS
While no significant risks are foreseen in association with the participation in the current study, some participants may experience slight psychological discomfort when answering questionnaires. In the event of such occurrence, participants are free to skip questions that make them uncomfortable. In addition, participants are provided with a list of resources should they feel the need to get help. Moreover, participants are free to withdraw from the study at any time without penalty or prejudice.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY
Participants may potentially benefit from this study by gaining more insight into their emotions and feelings about parenting. Moreover, the results of this study will enable researchers to gain better understanding of how parents socialize emotions in their children, and how this affects their competence in dealing with their own emotions.

PAYMENT FOR PARTICIPATION
No payment will be given to the participants in exchange for their participation. However, they will be entered in a draw to win one of the three $ 25.00 gift certificates redeemable at a bookstore.

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

In order to maintain anonymity, participants' questionnaires will be assigned numbers, and all identifying information will be separated from the responses. All questionnaires and identifying information will be kept in a locked filing cabinet at the University of Windsor. Only the research team working on the study will have access to this information.

PARTICIPATION AND WITHDRAWAL
You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS
The finding from this research project will be available.

Web address: _____www.uwindsor.ca/reb_____

Date when results are available: _____August 2008_____

SUBSEQUENT USE OF DATA
This data will be used in subsequent studies in order to answer additional questions about emotional development, family environment, and parenting.

RIGHTS OF RESEARCH SUBJECTS
You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; telephone: 519-253-3000, ext. 3916; e-mail: lbunn@uwindsor.ca.

SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE
I understand the information provided for the study *Parental Emotion-Related Socialization and Young Adults' Emotion-Related Self-Talk.* as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____

Name of Subject

_____   _____

Signature of Subject   Date

SIGNATURE OF INVESTIGATOR
These are the terms under which I will conduct research.

_____   _____

Signature of Investigator   Date

Appendix D

Demographic Questionnaire-Young Adults

Please complete the following form.

1. Your age: _____

2. Your birth date: year_____ month _____ day_____

   Today's date: year _____ month _____ day_____

3. Your sex (please indicate one): (1) ____Male   (2) ___Female

4. Your year of study: ___1st __2nd ___3rd___4th

5. Your major: _____

6. Ethnicity (Optional):

      (1)___Caucasian

      (2)___Black

      (3)___Hispanic

      (4)___Asian/Pacific

      (5)___Native/Aboriginal

      (6)___Arabic

      (7)___Indian

      (8)___Other (please specify):_____

7. Were you born in Canada? (1) ____Yes   (2)_____No

              If not, what country were you born in? _____

8. What is the approximate total income bracket of your family? (Optional)

(1)____less than 10,000

(2)____11,000-20,000

(3)____21,000-30,000

(4)____31,000-40,000

(5)____41,000-50,000

(6)____51,000-60,000

(7)____61,000-70,000

(8)____over 70,000

9. Have you ever been diagnosed with (please check all that apply)

(1) ADHD ____Yes ____No
(2) LD ____Yes ____No
(3) other emotional or behavioral problems ____Yes ____No
Please specify_____

10. What is the composition of your family of origin?

(1) _____ Two-parent family
(2) _____ Single-parent family (raised by mother)
(3) _____ Single-parent family (raised by father)
(4) _____ Shared custody between mother and father
(5) _____ Other (please specify) _____

11. Do you have any siblings? (1) _____ Yes (2) _____ No

If yes, please list the age and sex of each of your siblings: _____

_____

12. Do you still live with your parents? (1) _____Yes (2) _____No

If not, who do you live with? _____

Appendix E

Demographic Questionnaire- Mother

Please complete the following form.

1. Your age:_____

2. Your birth date: day_____ month _____ year _____

   Today's date: day_____ month _____ year_____

3. Ethnicity (Optional):

   (1)___Caucasian

   (2)___Black

   (3)___Hispanic

   (4)___Asian/Pacific

   (5)___Native/Aboriginal

   (6)___Arabic

   (7)___Indian

   (8)___Other (please specify):_____

4.   Were you born in Canada? (1)____Yes   (2)_____No

           If not, what country were you born in? _____

5.   What is your current status?

   (1) _____ Married

   (2) _____ Single

   (3) _____ Divorced

   (4) _____ Separated

   (5) _____ Widowed

   (6) _____ Living together

6. Please mark the highest level of schooling that you achieved:

    (1)_____ Less than 7 years

    (2)_____ Some junior high school

    (3)_____ Some high school

    (4)_____ High school graduate, or equivalent of high school diploma

    (5)_____ Post high school – trade or technical school

    (6)_____ Some college or university

    (7)_____ College or university graduate

    (8)_____ Graduate and/or professional school

    (9)_____ Other (please specify) _____

7. What is the approximate total income bracket of your family? (Optional)

    (1)____less than 10,000

    (2)____11,000-20,000

    (3)____21,000-30,000

    (4)____31,000-40,000

    (5)____41,000-50,000

    (6)____51,000-60,000

    (7)____61,000-70,000

    (8)____over 70,000

8. Have you ever been diagnosed with (please check all that apply)

    (4) ADHD _____Yes _____No
    (5) LD _____Yes _____No
    (6) other emotional or behavioral problems ____Yes _____No
    Please specify_____

9. How do you feel about participating in this study?

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