

DAUGHTER-TO-FATHER ATTACHMENT, DAUGHTER-TO-MOTHER  
ATTACHMENT AND EMOTION REGULATION IN COLLEGE  
FEMALES

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DAUGHTER-TO-FATHER ATTACHMENT, DAUGHTER-TO-MOTHER  
ATTACHMENT AND EMOTION REGULATION IN COLLEGE  
FEMALES

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THESIS ABSTRACT  
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ATTACHMENT, AND EMOTION REGULATION IN COLLEGE  
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Attachment theory (Bowlby, 1982/1969, 1973) and its relation to affect regulation has become an important area of research over the last several decades. This area of research is important due to the fact that fathers are slowly emerging as more salient attachment figures than past research demonstrated. Past research has demonstrated that a daughter's attachment to her mother and father can affect her psychosocial development (Grossman et al., 2002), autonomy (Kenny & Gallagher, 2002), emotional expressivity (Ducharme, Doyle, & Markiewicz, 2002), affect regulation (Braungart-Rieker et al., 2001), as well as later attachment security (Allen et al., 2004). The purpose of the present study was to assess how a daughter's attachment to her father may affect her ability to

regulate her emotions, and whether that relationship is moderated by a daughter's attachment to her mother.

The results of the current study found that a significant relationship did exist between how a daughter is attached to her father and her ability to regulate emotions. This same relationship was found for maternal attachment. However, when examining both maternal and paternal attachment together, daughter-to-mother attachment was no longer significant. Finally, daughter-to-mother attachment was not found to moderate the relationship between daughter-to-father attachment and female emotion regulations. The findings from this study add to the limited existing literature of daughter-to-father attachment and its relation to emotion regulation. Also, the results of the current study demonstrate the significance of paternal attachment in later adulthood when examining female emotion regulation. This research could be replicated and expanded upon to assess reliability and whether or not the findings are consistent within different age brackets of females.

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## INTRODUCTION

Past research has emphasized mothers as the most salient figure within the infant-parent attachment relationship. However, recent research has begun to examine the importance of fathers within the infant-parent dyad. Further, one particular relationship rarely examined is that of the daughter-to-father attachment relationship. This specific bond is unique in that it is an opposite sex attachment and can have important implications for how a daughter regulates her emotions. Also, it is largely within the parent-child relationship that a child learns about emotion regulation in the service of attaining goals and emotion regulation is thought to be influenced by the attachment relationship through the child's expectations of parental behavior (Cassidy, 1994). The study of this unique daughter-father relationship is imperative as it will add to the limited existing literature but it may also demonstrate the vital role that fathers play in daughters' ability to regulate emotions.

The existing attachment literature has examined maternal and paternal attachments both in infancy and in adolescence. In infancy, attachment research has found that parental sensitivity, both maternal and paternal, can foster infant/toddler emotion regulation, autonomy, and optimal development (Braungart-Rieker, Garwood, Powers, & Wang, 2001; Easterbrooks & Goldberg, 1984; Grossmann, Grossmann, Fremmer-Bombik, Kindler, Scheuerer-Englisch, & Zimmermann, 2002; McElwain & Booth-LaForce, 2006; Schoppe-Sullivan, Diener, Mangelsdorf, Brown, McHale, &

Frosch, 2006). In adolescence, the extant literature on attachment has found that attachment can influence both internalizing problems (e.g. anger, depression, anxiety) (Allen, Moore, Kuperminc, & Bell, 1998; Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Cooper, Shaver, & Collins, 1998; Liu, 2006; Silk, Steinberg, & Morris, 2003) and externalizing problems (e.g. delinquency, drug use, maladjustment) (Allen et al., 1998; Allen et al., 2007; Cooper et al., 1998; Silk et al., 2003; William & Kelly, 2005).

Unfortunately, the majority of research has rarely separated attachment in terms of gender of the parent and gender of the child. Specifically in infancy, much research has assessed infant-parent attachment with respect to both parents, but usually to the mother. Progressing into adolescence, very limited research has actually examined specific daughter-to-father attachment and how that attachment can influence a daughter's ability to regulate her emotions. Further, no research has examined daughter-to-mother attachment as potential moderator of the relationship between daughter-to-father attachment and a daughter's emotion regulation.

I examined the daughter-to-father attachment relationship more closely. While controlling for parental marital status, current daughter relationship status, age, and race, I gained a better understanding of late adolescent females' retrospective views of attachment to mother and father as well as their current view of these attachments. From this, I assessed daughters' current emotional states as well as how effective they were at regulating their emotions. Subsequently, statistical analyses were conducted to examine relationships between the aforementioned variables. The pursuit of this research is

necessary and the implications are great in that what is revealed of the father-daughter relationship may have never been found in the extant literature thus far.

## LITERATURE REVIEW

### *Attachment*

Attachment theory (Bowlby, 1982/1969, 1973) and its relation to affect regulation has become an important area of research over the last several decades. Affect or emotion regulation is defined as processes that monitor, evaluate, and modify the intensity, duration, and latency of emotional reactions (Thompson, 1994) that aid in the accomplishment of goals. Bowlby's (1982/1969, 1973) attachment theory argues that infants are born with a repertoire of attachment behaviors that are aimed at seeking and maintaining proximity to supportive others, or attachment figures. Further, proximity seeking is viewed as an inborn survival strategy that is designed to protect an individual from threats that are physical and psychological as well as to alleviate stress. From this, attachment security is achieved as a result of the successful accomplishment of the sensori-motor behaviors of the infant and the related exploration processes that develop (Bowlby, 1988). Bowlby (1982/1969) also studied the importance of attachment figures. These attachment figures serve two main purposes by the establishment of a secure base: (1) proximity maintenance, providing a physical and emotional safe haven, and (2) a base for exploration. Attachment figure availability is one of the major sources of variation in affect or emotion regulation strategies (Bowlby, 1973).



### *Emotion Regulation and Attachment*

An individual differs in the kind of situations or events that elicit specific emotions and intensities, in the self awareness of his/her own emotions, as well as in emotion-related behavior to adapt and regulate emotions (Zimmermann et al., 2001). Attachment theory proposes that attachment figures' support and emotional availability greatly influence a child's development of adaptive emotion regulation (Bowlby, 1973; Cassidy, 1994). Emotion regulation entails three separate components as they pertain to the individual. First, emotion regulation involves the suppression, maintenance, and heightening of emotions. Second, it involves the regulation of attention. And third, the regulation of emotions involves factors both intrinsic (e.g. temperament) and extrinsic to the child (the child's relationship with parents) (Cassidy, 1994). It is largely within the parent-child relationship that children learn about emotion regulation and how that relates to attaining their goals. Consequently, parents help their children learn several emotion response options and which of those will be effective in attaining those specified goals. When an infant is met with a particular type of caregiving (e.g., responsive, neglectful, ambivalent) he or she tailors his/her behavior to ensure the proximity of the caregiver. Children develop regulation strategies as a way to respond to the caregiving they receive. These strategies may involve how the infant regulates behavior, cognition, feelings, memory, perception and attention (Cassidy, 1994).

Emotion regulation is thought to be influenced by the attachment relationship through the child's expectations of the behavior of the parents. From this, secure children are thought to develop an expectation that their signals of emotion will be responded to; whereas, insecure children are thought to develop an expectation that signals of emotions

will be only attended to selectively (Cassidy, 1994). Further, infants whose mothers respond sensitively to their signals are more likely to be securely attached (Ainsworth et al., 1978). Through these experiences, the infant learns that a variety of emotions are acceptable and that the experiences of those emotions can be shared within social relationships (Cassidy, 1994).

#### *Parental Attachment and Sensitivity in Infancy*

Sensitivity is thought to be linked to how an infant regulates emotions within the attachment relationship. Several studies have examined how parental sensitivity can influence the attachment relationship (Braungart-Rieker, Garwood, Powers, & Wang, 2001; Easterbrooks & Goldberg, 1984; Grossmann, Grossmann, Fremmer-Bombik, Kindler, Scheuerer-Englisch, & Zimmermann, 2002; McElwain & Booth-LaForce, 2006; Schoppe-Sullivan, Diener, Mangelsdorf, Brown, McHale, & Frosch, 2006). Specifically, in regard to mother, research has found that maternal sensitivity is linked to attachment security (Braungart-Rieker et al., 2001; McElwain & Booth-LaForce, 2006). Braungart-Rieker et al. (2001) found infants whose mothers were more sensitive at 4 months were more likely to be classified as secure rather than insecure in attachment with their mothers at 12 months. Further, infants whose mothers were more sensitive showed more ability to regulate affect at 4 months. In turn, affect regulation served as a significant predictor of attachment classification. McElwain and Booth-LaForce (2006) also assessed attachment security and found maternal sensitive responsiveness to infant signals during the first year is key to fostering attachment security. Also, maternal sensitivity when the infant is ill, emotionally upset, or in physical danger may be most relevant to the development of a secure attachment relationship (McElwain & Booth-LaForce, 2006).

Parental sensitivity has also been examined in regard to father. Paternal sensitivity has been linked to attachment security as well as optimal development, specifically in toddlerhood (Easterbrooks & Goldberg, 1984). For fathers, behavioral sensitivity, lack of aggravation toward the child, and not feeling bothered about lack of parenting knowledge were most consistently related to optimal toddler development. In addition, within the child-father relationship, securely attached children exhibited more positive affect and orientation in problem solving-tasks (Easterbrooks & Goldberg, 1984).

Finally, parental sensitivity has also been examined with respect to both mother and father. Schoppe-Sullivan et al. (2006) found that mothers were more sensitive than fathers, although this finding was moderated by a significant parent by infant gender interaction. Also, the interaction between attachment to mother and infant gender predicted infant-father attachment quality. Finally, father-infant attachment security predicted by the interaction between paternal sensitivity and infant gender, such that fathers in secure infant-father relationships were equally sensitive to sons and daughters; whereas, fathers in insecure infant-father relationships were more sensitive to sons than to daughters. The research that has been examined in regard to parental sensitivity provides evidence that parents' ability to be sensitive to their infant's signals has important implications for both attachment security and emotion regulation. However, the existing literature focuses more on the importance of maternal sensitivity rather than paternal sensitivity.

### *Parental Attachment and Emotion Regulation in Infancy*

During infancy and childhood, attachment figures help their children regulate their emotions (Zimmermann *et al.*, 2001). This interaction with caregivers helps the child learn how and when to express emotions in addition to learning specific patterns of emotional expression and whether to seek the support or help of caregivers when the child feel distressed (Zimmermann *et al.*, 2001). Several studies have examined how parental attachment can influence a child's emotional competence and self-regulation (Volling, McElwain, Notaro, and Herrera, 2002) and emotional expressions and behavioral strategies for emotion regulation (Diener *et al.*, 2002).

Volling *et al.* (2002) defined emotional competence as the demonstration of self-efficacy in the context of emotion-eliciting social transactions and stated that infants' emotional expressions and regulation strategies differ as a function of the caregiver's active or passive involvement. Volling *et al.* (2002) found that infants exhibited higher levels of emotional competence in the presence of more emotionally available fathers than those with less emotionally available fathers. Also, as long as the infant had one secure attachment relationship, the child had some caregiver support for emotion regulation. However, when neither parent could provide the necessary external regulation early in life, the infant had little help in regulating their emotions, and this may have left the child vulnerable and unable to regulate negative affect even in a mildly stressful situation.

In addition to emotion regulation, past research has examined emotion regulation or behavioral strategies in infancy. Diener *et al.* (2002) examined infants' behavioral strategies for emotion regulation with mothers and fathers. Behavioral strategies for

regulation included the following: social referencing, distracting, self-soothing, directed fussing, passive disengagement, and leave taking. The study found infants' behavioral strategies in an emotionally arousing situation with fathers are similar to those with mothers. Infants' emotional expressions and behavioral strategies were meaningfully related to infant-father attachment quality. Specifically, infants in secure father-infant relationships showed greater positive affect than infants in insecure father-infant relationships. Also, avoidant infants were less likely to engage in parent-directed strategies and more likely than securely attached infants to engage in strategies such as self-distraction and self-soothing. Finally, infants classified as insecure-resistant with their fathers were more likely to be self-soothers, engaging in behaviors such as thumb-sucking (Diener et al., 2002). As demonstrated in the literature, parental attachment has important implications for a child's ability to regulate emotions. As described, infants with secure attachments appear to be better able to regulate emotions and use effective strategies to do so.

#### *Infant's Paternal Attachment*

The research on the impact of fathers on their children's psychosocial development has suggested that accessibility of fathers, their positive engagement and supportive involvement, as well as their warmth and closeness to their children are critical behavioral dimensions that influence father-child relationships (Biller, 1993; Booth & Crooter, 1998; Lamb, 1997). Also, fathers' ability to provide a secure base in which infants are provided comfort and encouraged to explore will influence individuals' ability to create affectional bonds (Bowlby, 1979).

Fathers may play a particularly salient role in supporting the exploratory side of their children's attachment development in addition to providing security during dual explorations and play (Grossmann et al., 2002). Fathers provide similar security through sensitive care and challenging support as a companion when children's exploratory systems are aroused during a toddler-parent play situation, thereby adding to and complementing the secure-base-role of the mother (Grossmann et al., 2002). Grossmann et al. (2002) found during a 16-year longitudinal study of forty-four families that a measure of sensitivity that assessed emotional support and gentle challenges of fathers in a toddler-parent play situation was a stronger predictor of children's attachment representations at ages 10 and 16 than early infant-father security of attachment. In addition, at age 10, children's reported attachment behavior when feeling sad, angry, or upset was predicted by the quality of fathers' play sensitivity as assessed eight years earlier. Parental sensitivity to children's exploratory behaviors may increase the opportunity for children to concentrate, follow their curiosity, and master new skills in a way that is emotionally unimpaired (Grossmann et al, 2002). In addition, fathers' presence and increasing interactions with infants may assist in the development of the attachment relationships.

Caldera (2004) investigated the correlates of attachment security with fathers and the concordance of father-infant and mother-infant attachment as measured by the Attachment Q-set (AQS; Waters, 1987). Participants included 60 mothers and fathers of 14-month old infants. Additional measures included the Child Rearing Practices Report (CRPR; Rickel & Biasatti, 1982), the Clinical Measurement Package: A Field Manual (Hudson, 1982) to ascertain parental self-esteem, and a researcher-developed Father

Care-Taking Questionnaire designed to assess the extent of fathers' accessibility and engagement with the child on a daily basis. Caldera (2004) found that paternal involvement as measured by engagement in caregiving activities was positively and significantly related to attachment security with fathers. Also, fathers who provided regular care to their children had children who had higher security scores than children whose fathers were less involved. Finally, fathers who were involved in the caregiving of their infants described their infants as more likely to engage socially with others, play independently with toys, enjoy a warm relationship with the father, and be compliant with the father (Caldera, 2004).

#### *Infant's Maternal Attachment*

Within the first year of life, infants form important bonds with their primary caregiver, typically the mother. This bond is referred to as the infant-mother attachment relationship (Braungart-Rieker et al., 2001). Braungart-Rieker et al. (2001) sought to examine the extent to which parent sensitivity, infant affect, and affect regulation at 4 months predicted infant-mother and infant-father classifications at 1 year. A total of 94 mother-infant dyads were studied using the Strange Situation (Ainsworth and Wittig, 1969) and a number of different video coded procedures. From this, it was found that infants whose mothers were more sensitive at 4 months were more likely to be classified as secure rather than insecure in attachment with their mothers at 12 months (Braungart-Rieker et al., 1991). Further, infants' mothers who were more sensitive showed more functional affect regulation at 4 months.

Maternal sensitivity has been found to foster the development of a secure infant-mother attachment relationship (McElwain & Booth-LaForce, 2006). However,

Grossmann et al. (2002) found that infant-mother quality of attachment, but not maternal play sensitivity when in a toddler-parent play situation, predicted her child's attachment representation at ages 6 and 10. Steele, Steele and Fonagy (1996) studied associations among attachment classifications of mothers, fathers, and their infants. His study of 100 mothers, fathers, and infants, using the Adult Attachment Interview (AAI; George, Kaplan, and Main, 1996) and the Strange Situation (Ainsworth and Wittig, 1969) found that infants' emotionality may also be substantially modified by maternal personality and maternal behavior.

Bohlin, Hagekull and Rydell (2000) also studied infant attachment representations. Bohlin et al. (2000) used the Strange Situation and the Separation Anxiety Test (SAT; Slough, Goyette, & Greenberg, 1988) to assess the attachment representation and social functioning of 96 children from infancy to early childhood. These children were followed from 15 months of age to 8-9 years. The results of the study found that infants who had been secure as infants were more positive and popular at school age, socially active, and tended to report less social anxiety than children who had been classified as insecure (Bohlin et al., 2000).

#### *Attachment and Internal Working Models in Childhood and Adolescence*

The infant attachment system is a sensorimotor system that eventually becomes more internalized as internal working models of both the self and the world. Bowlby (1988) described the emergence of attachment relationships that were based on mother-infant caregiving experiences. These experiences were initially represented as sensorimotor schemes that later evolved into internal mental representations. These internal working models represent interactions with caregiver in more generalized,



abstract ways that are largely out of awareness (Fivush, 2006). The internal working model represents the individual's experiences of early caregiving as generalized models of self, world, and other (Fivush, 2006). Also, infants who receive responsive and sensitive caregiving will come to represent themselves as worthy of care, the world as a place that is safe, and others as trustworthy (Fivush, 2006). Conversely, infants who do not receive this type of caregiving will come to represent themselves as unworthy of care, the world as an unsafe place, and others as untrustworthy (Fivush, 2006).

As infants become children and then adolescents, revisions in internal working models are presumed to be increasingly more difficult to formulate (Zeanah & Anders, 1987). Typically, when information is encountered that may be incompatible with an existing working model, a healthy individual will preserve the existing model and maintain the information in conscious awareness. However, events that have tremendous psychological significance may lead to significant reorganization of internal working models (Zeanah & Anders, 1987). In fact, based on their beliefs of how internal working models manifest in the organization of language and thought about attachment led Main and Goldwyn (1984) to develop the Adult Attachment Interview (Zeanah & Anders, 1987).

#### *Adolescent Attachment and Emotion Regulation*

Research has found that adolescents with secure attachment representations are less hostile toward peers, less anxious, and less helpless than adolescents with insecure attachments (Kobak & Sceery, 1988; Zimmermann, Gliwitsky, & Becker-Stoll, 1996). In addition, secure adolescents report generally superior functioning in such areas as adaptive coping with negative emotions and sense of self-efficacy (Cooper et al. 1998).

On the other hand, adolescents with insecure attachment representations often show rigid emotion-related behaviors as well as a poor access to their emotions (Zimmermann, 1999). Adolescent insecure attachment has also been linked to high levels of psychological symptoms (i.e. depression, anxiety, anger, or hostility), poor self concept, and high levels of both problematic and risky behavior (i.e. drug and alcohol use, indiscriminate or precocious sexual behavior, delinquency, and educational underachievement) (Cooper et al., 1998). However, when attachment in adolescents is assessed, only rarely is it assessed as their attachment to mothers or to fathers; rather, a more global assessment is used, such as attachment to parents (IPPA; Armsden and Greenberg, 1987; George, C., Kaplan, N., & Main, M., 1996) or to a romantic partner (Shields & Cicchetti, 1998). Seldom is specific adolescent-father or adolescent-mother attachment assessed.

However, some research has assessed the stability of attachment into adolescence for specific adolescent-father and adolescent-mother attachments (Allen et al., 2004; Buist et al., 2002). Further, evidence has indicated that adolescent girls describe their parental attachment as more stable and consistent than do boys (Kenny, Lomax, Brabeck, & Fife, 1998). Attachment style displays a moderate degree of continuity; however, when discontinuities in individual adolescent's levels of security occur, these levels are predicted by factors that stress or support adolescent's capacities for affect regulation and for developing relatedness and autonomy in primary relationships (Allen et al., 2004). In the literature that has assessed changes in the quality of attachment in adolescence, research has found that patterns of developmental change in attachment relationships may be influenced by the gender of the adolescent as well as the gender of the parent (Buist et

al., 2002). Same-sex attachment may decrease slowly and gradually whereas attachment to the other parent may show a more erratic, nonlinear developmental pattern. In addition, evidence indicates that adolescent girls describe their parental attachment more as stable and consistent than do boys.

#### *Adolescent Attachment and Internalizing Behavior*

Attachment in adolescence has been studied in regard to one such aspect of emotion regulation, that of internalizing behaviors. One area studied extensively is adolescent depression and attachment (Allen, Moore, Kuperminc, & Bell, 1998; Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Cooper et al., 1998; Liu, 2006; Silk, Steinberg, & Morris, 2003). Attachment security in adolescence has been found to be linked to higher levels of depressive symptoms across adolescence (Allen et al., 2007). Paternal as well as maternal attachment significantly predicted adolescent depressive symptoms (Liu, 2006). Secure attachment to fathers and to mothers showed a direct path to depressive symptoms for girls (Liu, 2006). And, with respect to depressive symptoms, links to insecurity have appeared primarily for females (Allen et al., 2007). Insecure attachments, specifically with avoidant adolescents, have been shown to be significantly less hostile and depressed, but were also less socially competent than their securely attached counterparts (Cooper et al., 1998). Finally, adolescents who were able to recover from feeling sad, angry, or anxious were much less likely to report depressive symptoms (Silk et al., 2003).

#### *Adolescent Attachment and Externalizing Behavior*

Adolescents who have problems regulating their emotions may be more vulnerable to not only internalizing problems but externalizing problems as well. Past

research has examined adolescent attachment and its relation to problems behaviors (Allen et al., 1998, Allen et al., 2007; Cooper et al., 1998; Silk et al., 2003; William & Kelly, 2005). Specifically, research has assessed insecure attachment and its relation to externalizing behaviors. Attachment insecurity has displayed a trend toward associations with higher levels of externalizing behavior by early adolescence (Allen et al., 2007). Anxious-ambivalent adolescents have been found to be the most poorly adjusted, reporting not only the highest symptom levels and poorest self-concepts, but also the highest levels of problematic or risky behavior (Cooper et al., 1998). Also, avoidant adolescents are less involved in both delinquent and substance use behaviors. In fact, avoidant adolescents have been found not to differ from their secure counterparts on the majority of risk or problem behaviors, as well as being significantly less likely than secures ever to have had sex or used substances (Cooper et al., 1998). However, adolescents who are relatively more able to talk about attachment experiences in ways that reflected balance, perspective, autonomy, and open acknowledgement of the importance of attachment are less likely to engage in externalizing or delinquent behaviors (Allen et al., 1998).

#### *Adolescent Paternal Attachment and Emotion Regulation*

Past research has demonstrated that infant-father attachment is specifically predictive of adolescent's coping strategies (Zimmermann & Grossmann, 1997). Zimmermann and Grossmann (1997) assessed 44 families and explored fathers' and mothers' specific contribution to their children's attachment representations at ages 6, 10, and 16. Fathers' and mothers' play sensitivity was assessed in toddlerhood using the sensitive and challenging interactive play scale (SCIP; Kassubek, 1995). Quality of

attachment was measured using the Strange Situation (Ainsworth et al., 1978) procedure at age 6 and attachment security was assessed using the Separation Anxiety Test at later ages. Zimmermann and Grossmann (1997) found that at age 10, children's reported attachment behavior strategies when feeling angry, sad, or upset were predicted by fathers' play sensitivity eight years earlier. Also, for fathers, though not for mothers, a measure of sensitivity that assessed emotional support and gentle challenges in a toddler-parent play situation was found to be a strong predictor of the child's attachment representation at both age 10 and 16 to both mother and father (Zimmermann & Grossmann, 1997). The findings from this study have important implications for the current study as well as the relationship between emotion regulation and attachment. Specifically, if a father's emotional support has been shown to be a strong predictor of later child's attachment representation, could this emotional support be related to how daughters regulate their emotions in late adolescence and early adulthood? The proposed study will assess the relationship between attachment to father and a daughter's ability to regulate emotion.

Amato (1994) sought to investigate the closeness of young adults to their fathers and whether or not that closeness was positively associated with adult children's psychological well-being, independent of being close to mothers. The study included 471 young adults who were assessed using Bengston and Schrader's (1982) Positive Affect Scale, Langner's (1962) screening scale of psychiatric symptoms, Rosenberg's (1965) Self-Esteem scale, as well as several researcher-developed scales. The results of the study supported the notion that fathers were salient figures in the lives of their adult offspring (Amato, 1994). Also, for three out of the four measures of psychological well-being (life

satisfaction, psychological distress, and happiness), closeness to fathers yielded associations that were significant and independent of closeness to mothers. Finally, the father-young adult relationships appeared to be as closely tied to the well-being of daughters as compared to sons.

In addition, paternal involvement may be a protective factor against psychological maladjustment in adolescents in families that are not intact and against psychological distress, especially for women (Flouri & Buchanan, 2003). Flouri and Buchanan (2003) used data from 8,441 cohort members of the National Child Development Study. They sought to explore links between father involvement at age 7 and behavioral and emotional problems at age 16 as well as between father involvement at 16 and psychological distress at age 33. Participants were assessed using the Rutter 'A' Health and Behaviour Checklist (Rutter, Tizard, & Whitmore, 1970) and the Malaise Inventory (Hirst & Bradshaw, 1983) as well as a number of researcher-developed scales. They found no evidence suggesting that the impact of father involvement in adolescence on children's later mental health in adult life varies with the level of maternal involvement.

Kenny and Gallagher (2002) investigated the relationship of affective and fostering of autonomy components of paternal and maternal attachment in 172 10<sup>th</sup> and 12<sup>th</sup> grade female and male students. Kenny and Gallagher (2002) used the Parental Attachment Questionnaire (PAQ; Kenny, 1987), the Bem Sex Role Inventory (BSRI; Bem, 1974), and the Self-Perception Profile for Adolescents (SPPA; Harter, 1988). For sons and daughters fathers were found to foster more autonomy than did mothers (Kenny & Gallagher, 2002). Paternal attachment was associated positively and significantly with traditional feminine traits of expressivity as well as instrumental and social/relational

competence, with the exception of empathy (Kenny & Gallagher, 2002). These findings demonstrate that fathers influence many aspects of adolescents' lives. This influence, specifically for daughters, may affect one such aspect: that of adolescents' regulation of emotions. The current study will further examine if such a relationship exists, and if so, what are the implications for that relationship.

#### *Adolescent Maternal Attachment and Emotion Regulation*

Children's relationships with their caregivers have important influences on their emotional and social development (Bowlby, 1969/1982, 1979). The caregiver most often studied has been the mother. Kobak (1993) sought to examine attachment and emotion regulation during mother-teen problem solving. Using the Adult Attachment Interview and Q-Set (AAI Q-set; George, Kaplan, & Main, 1996; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993), Kobak (1993) found that adolescents with secure attachments expressed less dysfunctional anger toward their mothers.

Ducharme, Doyle and Markiewicz (2002) sought to examine 105 15-16-year olds and their attachment security to mother in adolescence. Several measures assessed this security including the Relationship Questionnaire (RQ; Batholemew, 1996), the Emotional Expressivity Scale (EES; Kring, Smith, & Neale, 1994), and a diary that was coded for positive and negative affect. They found that adolescents with secure attachment to their mothers reported being more emotionally expressive as well as less affectively negative in interactions with both of their parents (Ducharme et al., 2002). Also, with respect to attachment to mother, dismissing (avoidant) adolescents reported more disengagement when resolving conflict with parents.

Allen et al. (2004) also assessed attachment stability in relation to depression in adolescence. This study included 101 adolescents between the ages of 16 and 18 over a 2-year period of time. These adolescents were assessed using several different measures including the Adult Attachment Interview and Q-Set (AAI Q-set; George, Kaplan, & Main, 1996; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993), the Autonomy and Relatedness Coding System (Allen, Hauser, Bell, McElhaney, & Tate, 1988), the Adolescent Self-Perception Profile (Harter, 1988), the Mother-Father-Peer-Scale (Epstein, 1983), the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987), and the Beck Depression Inventory (Beck & Steer, 1987). When assessing the stability of attachment security to mothers in adolescence, Allen et al. (2004) found that adolescents' depressive symptoms predicted relative decreases in levels of security over a 2-year period. This depression may overwhelm adolescents emotionally and lead to insecurity and coping that is defensive (Bowlby, 1980). Also, Allen et al. (2004) found that adolescents who perceived their mothers as being supportive during disagreements made relative gains in attachment security over the 2 year-period the adolescents were tested.

### *This Study*

Past research has demonstrated that a daughter's attachment to her mother and father can affect her psychosocial development (Grossman et al., 2002), autonomy (Kenny & Gallagher, 2002), emotional expressivity (Ducharme et al., 2002), affect regulation (Braungart-Rieker et al., 2001), and later attachment security (Allen et al., 2004). For the current study, our goal is to examine whether daughters' attachment to their fathers influences their ability to regulate emotion. If a relationship does exist



between attachment to father and emotion regulation, we will assess whether this relationship might be moderated by daughters' attachment to their mothers.

A moderator is quantitative or qualitative variable that can affect the direction and/or strength of the relationship between a predictor or independent variable and a criterion or dependent variable (Baron and Kenny, 1986). Another way to examine a moderator is that it is a variable that influences the strength of a relationship between two other variables. For the current study, a daughter's attachment to her mother will be assessed as a moderator that may influence the strength of the relationship between daughter-to-father attachment and a daughter's ability to regulate her emotions. It is important to examine a daughter's attachment to her mother as a moderator due to the fact that the strength of the relationship between her attachment to her father and emotion regulation may be influenced either positively or negatively by this third variable.

Fox, Kimmerly, and Shafer (1991) conducted a meta-analysis of 11 studies that examined the concordance of mother/father attachment in infancy. Quantitative synthesis was used to analyze common effect sizes across these studies. In this meta-analysis they found that security of attachment to one parent may be dependent on security of attachment to another parent (Fox et al., 1991). Also, the type of insecure attachment (avoidant/resistant) to one parent was dependent on the type of insecurity to the other parent. If this is true, will a daughter's attachment to each parent have the same influence on her emotion regulation? Our ultimate goal is that the research we conduct contribute to the limited existing research about the relationship between attachment of daughters to their fathers, and that this research will help academics gain insight to the importance of fathers' roles in the lives of their daughters.

### *Research Questions*

The research questions for the current study were follows: (1) How is daughter-to-father attachment related to the emotion regulation of late adolescent female college students? And (2) Is this relationship moderated by the daughter's maternal attachment?

## METHOD

### *Participants*

There were 172 female participants from Auburn University who completed several measures for the current study. These participants were recruited from classes in the College of Human Sciences. One class was from the Department of Consumer Affairs (CAHS 2000) while the other 3 were Human Development and Family Studies Courses (HDFS 2000, HDFS 2010, and HDFS 4670). These participants were between 19 and 25 years of age. Participants were primarily Caucasian-American ( $n=110$ , 63.95%) and African-American ( $n=9$ , 5.2%), although there were some participants who were of different nationalities. The majority of the participants was either single ( $n=95$ , 55.23%) or dating ( $n=71$ , 41.28%) and had regular contact with their parents (daily:  $n=95$ , 57.0%; couple of times a week:  $n=58$ , 33.7%). Also, the father primarily assessed in the current study was the biological father ( $n=162$ , 94.19%). Finally, the majority of parents of the participants were married ( $n=136$ , 79.53%) (Table 1).

Table 1. *Descriptive Statistics for Demographic Variables*

	Total Sample	
	<i>n</i>	%
Age		
19	60	35
20	52	30
21	34	20

22	12	7
23	8	5
24+	6	3
Number of Sibling		
0	22	13
1	66	38
2	54	31
3	22	13
4	2	1
5+	6	3
Race		
European American	110	64
African American	9	5
Other	53	31
Relationship Status		
Single	95	55
Dating	71	41
Other	6	3
Parental Contact		
Every Day	98	57
Couple of Times a Week	58	34
Once a Week	7	4
Couple of Times a Month	5	3
Once a Month	3	2
4-6 Times a Year	0	0
1-3 Times a Year	1	1
Never	0	0
Father		
Biological	162	94
Other	10	6

#### Parent's Marital Status

Cohabiting	1	1
Married	136	80
Divorced	20	12
Remarried	10	6
Widowed	4	2

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#### *Measures*

Several measures were used in the current study to assess the quality of daughter-father attachment, daughter-mother attachment, and emotion regulation strategies of the participants. These measures included the Inventory of Parent and Peer Attachment (IPPA; Armsden and Greenberg, 1987), the Parental Bonding Instrument (PBI; Parker et al., 1979), the Coping Inventory for Stressful Situations (CISS; Endler & Parker 1990a, 1990b), and the Emotion Regulation Checklist (ERC; Dolbin-McNab & Keiley, 2006). In addition, participants were asked to complete the PANAS (Watson, Clark, & Tellegen, 1988) and a researcher-developed demographics questionnaire. The PANAS assessed how often an individual had experienced a number of emotions in the last few weeks while the demographics allowed the ability to control for variables such as age, number of siblings, race, current relationship status, frequency of contact with parents, parent's marital status, and which father (biological or step-father) was examined in answering each of the questionnaire items.

Participants completed the parental section of the IPPA twice, once about their mothers and once about their fathers. The IPPA was used to assess adolescent perceptions of the overall quality of his or her relationship with parents in terms of the degree of trust,

communication, and alienation in those relationships (Allen et al., 2007). The Communication scale measured the extent to which an adolescent experienced high quality of communication with family members (Buist et al., 2002). The Trust scale measured to what extent an adolescent trusted other family members to respect and accept his or her feelings or wishes (Buist et al., 2002). Finally, the Alienation scale measured the extent to which an adolescent experienced feelings of negativity toward other family members (Buist et al., 2002). Each of these three domains was assessed with eight 5-point Likert scale items (Allen et al., 2007). Each of the following are examples of items the participant found on the IPPA: “My mother respects my feelings;” “I tell my father about my problems and troubles.” The IPPA was originally designed to assess specific working models of attachment by assessing both positive affective/cognitive experiences of trust and good communication (Buist et al., 2002). The internal consistency of the sum of these three scales (trust, communication, and alienation) has been shown to be high (Cronbach’s  $\alpha = 0.87$ ) (Allen et al., 2004).

The PBI was completed twice by participants, once for mother and once for father. The PBI is a 25-item self-report questionnaire developed to measure the subjective experience of being parented before the age of 16 years (Wilhelm et al., 2005). Participants were asked to score each item from “Very Like” to “Very Unlike”. Example items include each of the following: “Let me decide things for myself;” “Was overprotective of me.” Twelve items were used to assess parental care and 13 items were used to assess parental overprotection (Toda et al., 2008). This measure contains four subscales including maternal care, maternal overprotection, paternal care, and paternal overprotection (Wilhelm et al., 2005). Higher care scores indicated perceived acceptance

and affection, while lower care scores indicated perceived indifference and rejection. Higher overprotection scores indicated perceived overprotection and interference, while lower overprotection scores indicated perceived encouragement of independence (Toda et al., 2008).

The CISS was developed to examine three dimensions (task-oriented, emotion-oriented, and avoidant) of self-reported responses to stressful circumstances (Endler & Parker, 1994). The task oriented subscale includes items that indicate an active approach to stressful situations. The emotion-oriented coping subscale includes items about engagement in maladaptive behaviors such as ruminating or becoming emotional in response to stress. Finally, the avoidance subscale includes items about avoiding stressful situations. This measure is a 48-item questionnaire that asks respondents to rate the extent to which they engage in various types of coping activities when confronted with a particular stressful situation using a 5-point Likert scale ranging from “Not at All” to “Very Much” (Cohan, Jang, & Stein, 2006). Each of the following was questions that appeared on the CISS: “Become very tense;” “Talk to someone whose advice I value.”

The ERC is a 24-item other-report measure that is composed of both negatively and positively weighted items (Shields & Cicchetti, 1998). These items target processes central to regulation and emotionality, including affective liability, valence, flexibility, intensity, and situational appropriateness of emotional expressions. Each item included a 4-point Likert scale ranging from 1 (*almost always*) to 4 (*never*) (Shields & Cicchetti, 1998). Example items from the ERC included the following: “Am a cheerful person;” “Am prone to angry outbursts/tantrums easily.” Originally this scale was created for caregiver assessment of children’s emotion regulation, but by permission from the author,

the scale has subsequently been adapted for use with grandparents raising grandchildren (Dolbin-McNab & Keiley, 2006) and for use with adolescents and adults about their own affect regulation (Keiley, 2007). The ERC contains two subscales: Lability/Negativity and Emotion Regulation. The Lability/Negativity subscale is comprised of items representing mood lability, lack of flexibility, and dysregulated negative affect. The Emotion Regulation subscale is comprised of items describing affective displays, emotional self-awareness, and empathy (Shields & Cicchetti, 1997). The internal consistency estimates for the ERC are .96 for the lability-negativity factor and .83 for the emotion regulation factor, suggesting good reliability for the ERC (Shields & Cicchetti, 1997). The internal consistency estimate for the composite score is acceptable at .89.

#### *Procedure*

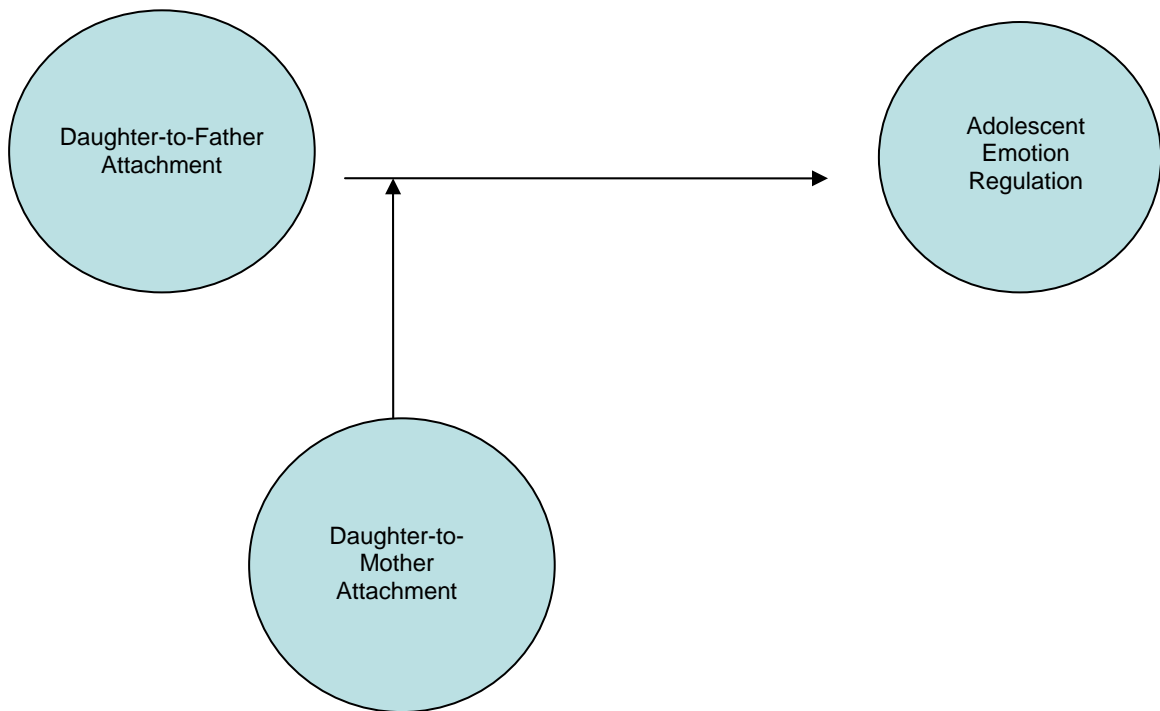
The questionnaires for the current study were available online through surveymonkey.com. We went to each of the classes selected to participate (CAHS 2000, HDFS 2000, HDFS 2010, and HDFS 4670) and explained the current study to the participants. We then obtained a list of the participants' email addresses and names, and by email the participants were sent a link to the site by blind copy. This link was the only way that a participant was able to access the survey and it ensured that each person completed the surveys only one time. After completing the survey, each participant who completed the survey was marked off the master list and their names were submitted to each professor, as each of the students received extra credit. The surveys were available to the students for one week. After the deadline passed, the data was downloaded.



*Analysis Plan*

After the appropriate univariate and bivariate preliminary analysis, using path analysis, we assessed the relationships among quality of attachment and emotion regulation strategies of female adolescent participants, controlling for the quality of the attachment relationship to mother to answer the first research question. To answer the second question, we fit a second path analysis that tested the moderation of the effect from daughter-to-father attachment to emotion regulation (Figure 1).

Figure 1. Daughter-to-Father Attachment and Emotion Regulation: Daughter-to-Mother Attachment as a Moderating Variable



## RESULTS

### *Univariate analysis*

I used the SAS program to conduct the univariate analyses of my variables. Within the measures used, several items had to be reverse scored from the ERC, CISS, and PBI prior to the beginning of analysis. From this, I then examined the Cronbach's alphas for each of my measures, each of which was quite high (Table 2).

Table 2  
*Estimated Cronbach alphas for sample (N=172)*

Measure	Cronbach Alpha
PANAS	.72
Subscale: Positive	.87
Subscale: Negative	.82
Emotion Regulation Checklist	.80
Coping Inventory for Stressful Situations	.83
Subscale: Task	.89
Subscale: Emotion	.87
Subscale: Avoidance	.79
Parental Bonding Instrument: Father	.75
Subscale: Care	.94
Subscale: Overprotection	.82

Parental Bonding Instrument: Mother	.75
Subscale: Care	.93
Subscale: Overprotection	.84
Inventory of Parent and Peer Attachment: Father	.97
Subscale: Trust	.94
Subscale: Communication	.92
Subscale: Alienation	.85
Inventory of Parent and Peer Attachment: Mother	.97
Subscale: Trust	.92
Subscale: Communication	.92
Subscale: Alienation	.88

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A principle component analysis was conducted to examine how many composites each scale contained in addition to how much weight to give each item. The largest eigenvalue for each scale and subscale and the amount of variance that each eigenvalue represents is presented (Table 3). For example, the PANAS loaded on one component with an eigenvalue of 5.80 and contains 29% of the variance. Both the eigenvalues and proportions can be interpreted similarly for each of the scales and subscales.

Table 3  
*Eigenvalues for variables (N=172)*

Scale	1 <sup>st</sup> Eigenvalue	Proportion of Variance Contained
PANAS	5.80	.29
Subscale: Positive	4.73	.47
Subscale: Negative	3.86	.39
Emotion Regulation Checklist	4.62	.19
Coping Inventory for Stressful Situations	7.71	.16
Subscale: Task	6.18	.39
Subscale: Emotion	5.59	.33
Subscale: Avoidance	4.02	.25
Parental Bonding Instrument: Father	9.05	.36
Subscale: Care	7.37	.61
Subscale: Overprotection	4.24	.33
Parental Bonding Instrument: Mother	8.70	.35
Subscale: Care	7.00	.58
Subscale: Overprotection	4.58	.35
Inventory of Parent and Peer Attachment: Father	14.07	.56
Subscale: Trust	6.59	.66
Subscale: Communication	5.10	.64
Subscale: Alienation	3.83	.55
Inventory of Parent and Peer Attachment: Mother	14.50	.58

Subscale: Trust	5.94	.59
Subscale: Communication	5.24	.65
Subscale: Alienation	4.15	.59

Next, I created an average scale score for each of the items used in the current study. This was done by adding up the items in each scale, then dividing by the total number of items. Next, I examined the Wilkes-Shapiro statistic. When examining the stem-and-leaf plots, all measures appeared to be normally distributed. The average scale scores, Wilkes-Shapiro, and additional univariate statistics are presented in Table 4.

Table 4

*Univariate Statistics for PANAS (with positive and negative subscales), Emotion Regulation Checklist, Coping Inventory for Stressful Situations (with task, emotion, and avoidance subscales), Parental Bonding Instrument (for both father and mother including care and overprotection subscales), and the Inventory of Parent and Peer Attachment (for both father and mother including trust, communication, and alienation subscales)(N=172)*

Scales	N	M	SD	Median	Skewness	Range	Kurtosis	W/S
PANAS	150	2.66	.37	2.65	.23	2.55	.94	.99 (p=.26)
PANAS-P	159	3.33	.65	3.40	-.17	3.60	.04	.99 (p=.54)
PANAS-N	161	2.00	.58	1.90	.77	2.70	.21	.94 (p<.001)
ERC	158	3.29	.28	3.33	-.47	1.29	-.19	.97 (p < .01)
CISS	144	3.40	.35	3.41	.04	1.58	-.56	.98 (p=.34)
CISS-T	157	3.68	.60	3.69	-.07	2.56	-.69	.98 (p < .10)
CISS-E	171	3.37	.60	3.47	-.30	3.24	-.19	.99 (p=.15)
CISS-AV	159	3.15	.58	3.13	-.01	3.06	-.34	.99 (p=.82)
PBI-F	159	2.57	.34	2.68	-.91	1.80	.93	.94 (p < .001)

PBI-F-C	165	3.32	.70	3.58	-1.19	3.00	.74	.86 (p < .001)
PBI-F-OV	161	1.88	.46	1.85	1.02	2.85	2.27	.95 (p < .001)
PBI-M	154	2.80	.29	2.80	-.61	2.12	2.28	.97 (p < .001)
PBI-M-C	158	3.64	.52	3.88	-2.16	2.92	5.09	.71 (p < .001)
PBI-M-OV	160	2.02	.51	1.92	.66	2.77	.37	.97 (p < .001)
IPPA-F	160	3.91	.86	4.16	-1.17	3.80	.83	.89 (p < .001)
IPPA-F-T	162	4.10	.88	4.40	-1.52	4.00	2.02	.84 (p < .001)
IPPA-F-C	163	3.77	.92	4.00	-.93	4.00	.40	.92 (p < .001)
IPPA-F-A	163	3.82	.87	4.00	-.92	3.43	.07	.91 (p < .001)
IPPA-M	154	4.26	.76	4.52	-1.69	4.00	3.16	.83 (p < .001)
IPPA-M-T	158	4.33	.73	4.60	-1.79	4.00	3.60	.81 (p < .001)
IPPA-M-C	160	4.23	.83	4.50	-1.49	4.00	2.19	.84 (p < .001)
IPPA-M-A	161	4.22	.77	4.43	-1.63	4.00	3.08	.84 (p < .001)

### *Bivariate Analysis*

A bivariate analysis was conducted to examine the relationship between among all of the variables. This relationship revealed ten significant relationships (Table 5), the strongest of which were between attachment to father (IPPA\_F) and emotion regulation (ERC) ( $r=.27, p < .001$ ), attachment to mother (IPPA\_M) and emotion regulation (ERC) ( $r=.38, p < .001$ ), attachment to father (PBI\_F) and emotion regulation (ERC) ( $r=.22, p < .01$ ), and attachment to mother (PBI\_M) and emotion regulation (ERC) ( $r=.23, p < .01$ ). Also, there were significant correlations between the attachment measures as well as the

emotion regulation measures, which was expected due to the fact that they were assessing the same constructs.

Table 5  
*Pearson Correlation Coefficients for the Inventory of Parent and Peer Attachment (IPPA)(for both mother and father), the Parental Bonding Instrument (PBI) (for both mother and father), the Emotion Regulation Checklist (ERC), and the Coping Inventory for Stressful Situations (CISS)(N= 172)*

	IPPA_F	IPPA_M	PBI_F	PBI_M	ERC	CISS
IPPA_F	1.00					
IPPA_M	.31***	1.00				
PBI_F	.63***	.12	1.00			
PBI_M	-.13	.37***	.11	1.00		
ERC	.27***	.36***	.22**	.23**	1.00	
CISS	.18*	.25	.17*	.06	.41***	1.00

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

#### *Multivariate Analysis*

The MPlus program was used to fit my models with a path analysis with emotion regulation measured as a latent construct that influenced scores on the CISS, ERC, and the two scales of the PANAS (negative and positive affect). This process allowed me to simultaneously estimate the relationships among several variables. A total of five models were fit, two models corresponding to the first research question and three models corresponding to the second hypothesis. The first research question examined the relationship between daughter-to-father attachment as measured by the IPPA and the PBI

and a daughter's emotion regulation. This question was examined by Model 1 in which emotion regulation was predicted by daughter-to-father attachment. In addition, I examined emotion regulation but as it related to attachment to mother, as measured by the IPPA and the PBI (see Model 2). The second research question examined daughter-to-mother attachment as a potential moderator of the relationship between daughter-to-father attachment and emotion regulation. The main effects are examined by Model 3 while two different interactions that assess moderation are examined by Model 4 and Model 5 in which the interaction of attachment to mother and father is assessed within time and across time. In addition, I examined the Chi-square ( $\chi^2$ ) including the associated degrees of freedom (df) and corresponding p-value (see Table 6). The demographic variables (race, parental marital status, frequency of parental contact, age of participant) were entered for each model, but were not statistically significant, thus they are omitted from the presentation of the results.



Table 6  
*Fit statistics for models of regressions fit in Mplus (N=172)*

Model	N	$\chi^2$	df (p-value)
1. Emotion Regulation on Early And Late Attachment To Father	172	7.90	8 ( <i>p</i> =.44)
2. Emotion Regulation on Early And Late Attachment To Mother	172	19.43	8 ( <i>p</i> =.01)
3. Emotion Regulation on Early And Late Attachment To both Mother and Father	172	21.48	14 ( <i>p</i> =.09)
4. Emotion Regulation On Early Attachment to Both Mother and Father and Late Attachment to Both Mother and Father	172	24.51	20 ( <i>p</i> =.22)
5. Emotion Regulation on Early And Late Attachment moderated By Early and Late Attachment To Mother	172	32.49	20 ( <i>p</i> =.04)

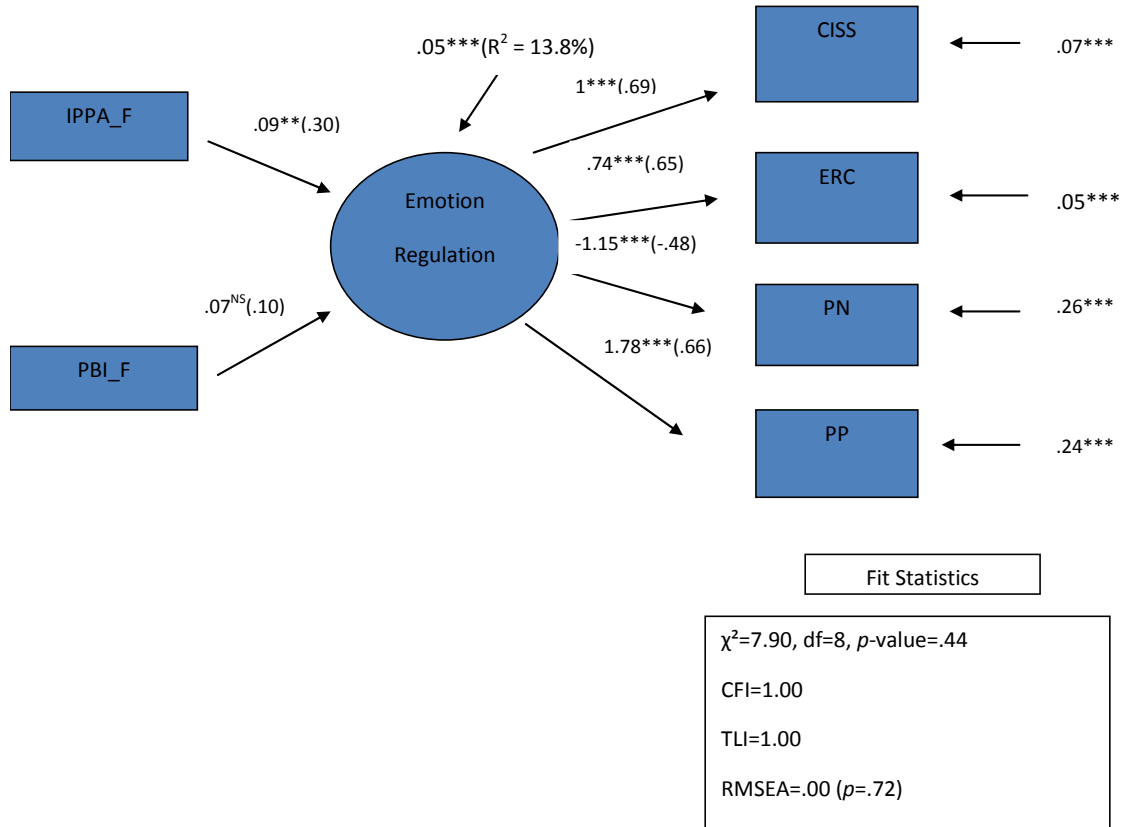
### *Research Question 1*

My first research question examined the relationship between daughter-to-father attachment and daughters' emotion regulation. I hypothesized that a significant relationship would exist between the two aforementioned constructs. The latent construct, emotion regulation was regressed on daughter-to-father early (PBI) and current (IPPA) views of attachment. An examination of the results demonstrated that this model is a good fit with the data according to the CFI (1) and the TLI (1) scores, as indicated by these scores falling between .9 and 1. In addition, the RMSEA score for this model is equal to .00 ( $p = .72$ ), which indicates that the model is a close fitting model (RMSEA <0.05). With  $p = .72$ , we fail to reject the null hypothesis  $H_0 = \text{RMSEA is zero in the population}$ , supporting that the model is a good fit. Finally, a Chi-square test of model fit was conducted, with a null hypothesis  $H_0 = \text{the model fits the general population}$ . Because  $\chi^2 = 7.90$  ( $df = 8, p = .44$ ), we fail to reject the null hypothesis, indicating that the model fits in the population. The results also indicate that a significant relationship exists between a daughter's current view of her attachment to her father and how she regulates emotions ( $\beta = .09, p < .01$ ). This means that higher levels of attachment to father are associated with better emotion regulation strategies, and vice versa (Figure 2, Model 1).

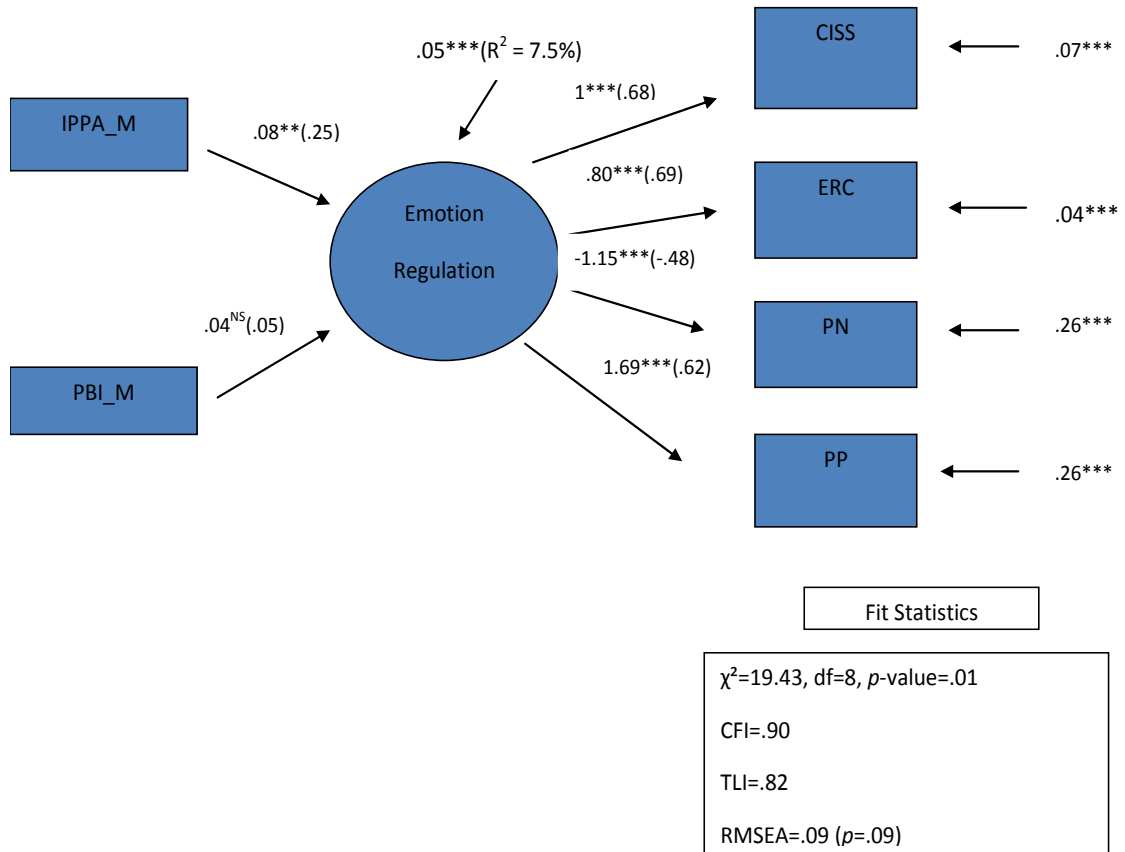
In addition, I examined the relationship between daughter-to-mother attachment (PBI, IPPA) and emotion regulation. Our examination of the results demonstrated that this model is not a good fit with the data according to the CFI (.90) and the TLI (.82) scores, as indicated by these scores falling just short of .9 and 1. In addition, the RMSEA score for this model is equal to .09 ( $p = .09$ ), which indicates that the model is not a close fitting model (RMSEA >0.05). With  $p = .09$ , we reject the null hypothesis  $H_0 = \text{RMSEA is}$

zero in the population, not supporting that the model is a good fit. Finally, a Chi-square test of model fit was conducted, with a null hypothesis  $H_0$ = the model fits the general population. Because  $\chi^2=19.43$  (df=8,  $p=.01$ ), we reject the null hypothesis, indicating that the model does not fit in the population. This analysis yielded similar results to Model 1 in that a positive significant relationship was found between a daughter's current view of attachment and how she regulates emotions ( $\beta=.08$ ,  $p<.01$ ). This means that higher levels of attachment to mother were associated with better emotion regulation strategies, and visa versa (Figure 3, Model 2).

Model 1. The impact of daughters' views of early and late attachment to fathers on daughters' current emotion regulation ( $N=172$ ).



Model 2. The impact of daughters' views of early and late attachment to mothers on daughters' current emotion regulation ( $N=172$ ).



## *Research Question 2*

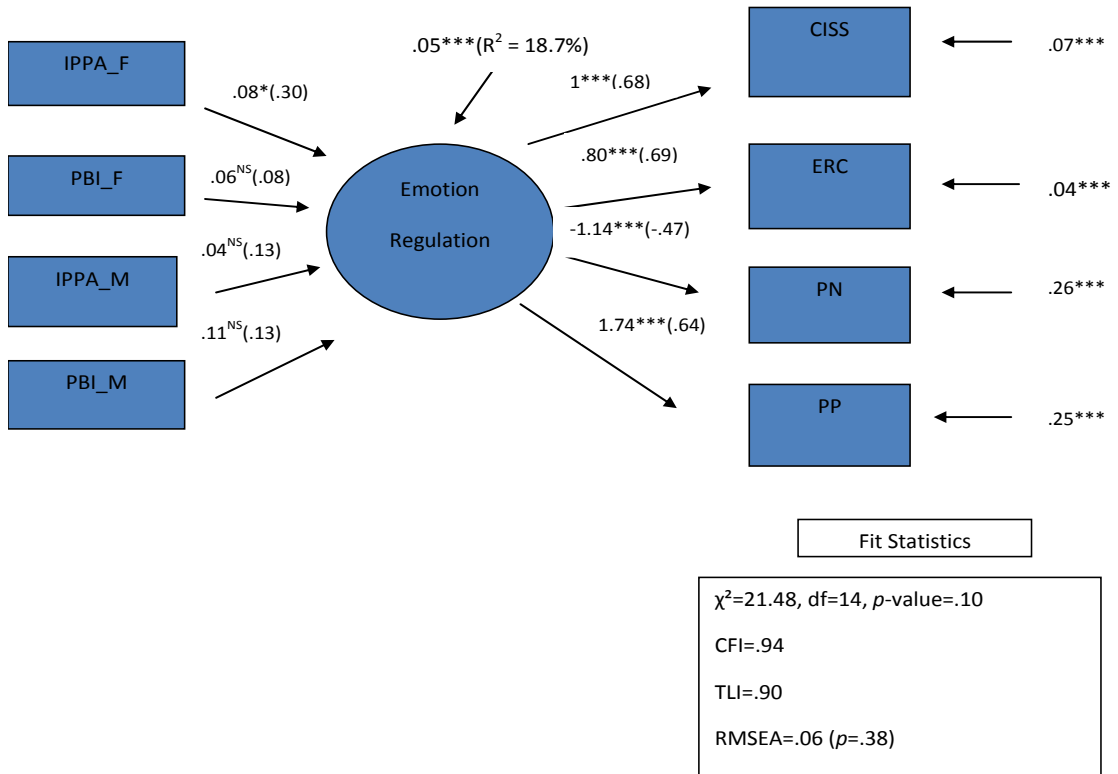
My second research question examined daughter-to-mother attachment as a potential moderator of the relationship between daughter-to-father attachment and a daughter's emotion regulation. I hypothesized that daughter-to-mother attachment would serve as a moderator of the aforementioned relationship. An examination of the results demonstrated that this model is a good fit with the data according to the CFI (.94) and the TLI (.90) scores, as indicated by these scores falling between .9 and 1. In addition, the RMSEA score for this model is equal to .06 ( $p = .38$ ), which indicates that the model is a relatively close fitting model ( $RMSEA > 0.05$ ). With  $p = .38$ , we fail to reject the null hypothesis  $H_0 = RMSEA$  is zero in the population, supporting that the model is a good fit. Finally, a Chi-square test of model fit was conducted, with a null hypothesis  $H_0 =$  the model fits the general population. Because  $\chi^2 = 21.48$  ( $df = 14, p = .10$ ), we fail to reject the null hypothesis, indicating that the model fits in the population. I first examined the main effects of these early and late attachment relationships to each parent and found only one moderately positive significant relationship which was daughter's current attachment to father and emotion regulation ( $\beta = .08, p < .05$ ). The most interesting finding in this model is that when attachment to mother controlled for attachment to father, there was no longer an effect of attachment to mother (Figure 4, Model 3).

Next, I examined the interaction of early attachment to mother and father and the interaction of late attachment to mother and father to assess if daughter-to-mother attachment moderated the relationship between daughter-to-father attachment and emotion regulation. The results demonstrated that this model is a good fit with the data according to the CFI (.96) and the TLI (.94) scores, as indicated by these scores falling

between .9 and 1. In addition, the RMSEA score for this model is equal to .04 ( $p = .66$ ), which indicates that the model is a close fitting model ( $RMSEA < 0.05$ ). With  $p = .66$ , we fail to reject the null hypothesis  $H_0 = RMSEA$  is zero in the population, supporting that the model is a good fit. Finally, a Chi-square test of model fit was conducted, with a null hypothesis  $H_0 =$  the model fits the general population. Because  $\chi^2 = 24.51$  ( $df = 20, p = .22$ ), we fail to reject the null hypothesis, indicating that the model fits in the population. None of the examined paths were found to be significant. These findings indicate that daughter-to-mother attachment was not found to be a moderator within time (Figure 5, Model 4).

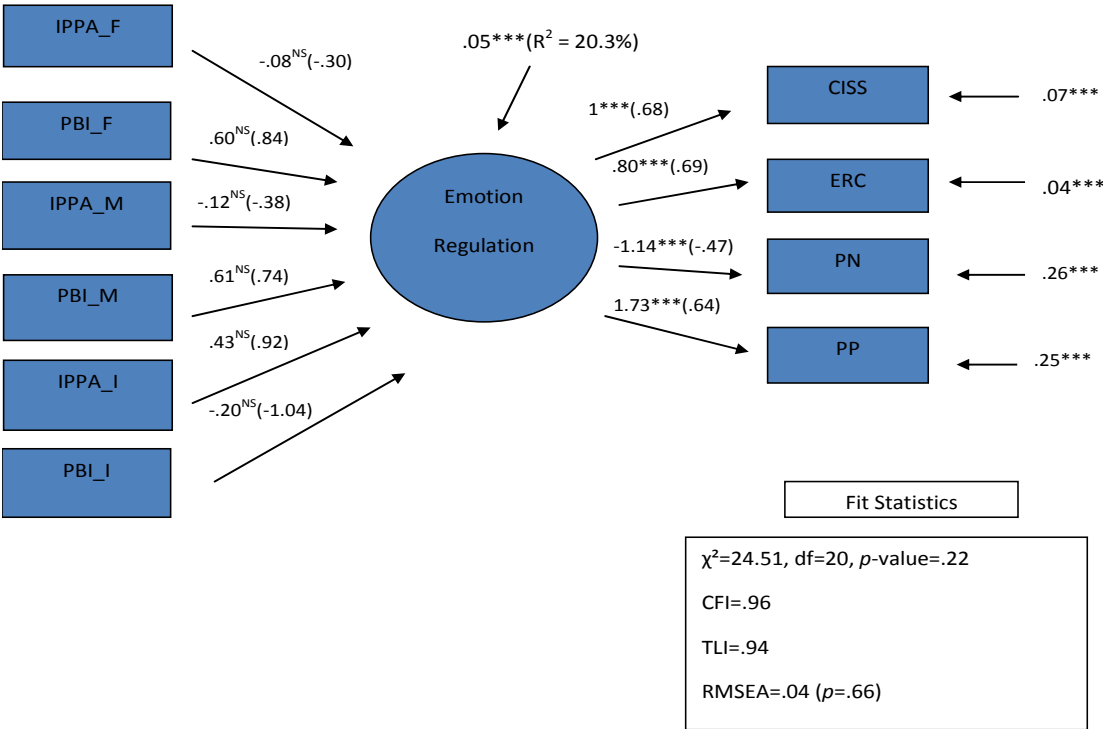
Finally, I examined the interaction of early attachment to mother and late attachment to father and the interaction of early attachment to father and late attachment to mother to see if daughter-to-mother attachment moderated the relationship between daughter-to-father attachment and emotion regulation. An examination of the results demonstrated that this model is not a good fit with the data according to the CFI (.90) and the TLI (.85) scores, as indicated by these scores falling just short of .9 and 1. In addition, the RMSEA score for this model is equal to .06 ( $p = .30$ ), which indicates that the model is a close fitting model ( $RMSEA > 0.05$ ). With  $p = .30$ , we fail to reject the null hypothesis  $H_0 = RMSEA$  is zero in the population, supporting that the model is a good fit. Finally, a Chi-square test of model fit was conducted, with a null hypothesis  $H_0 =$  the model fits the general population. Because  $\chi^2 = 32.49$  ( $df = 20, p = .04$ ), we reject the null hypothesis, indicating that the model does not fit in the population. Again, none of the paths were found to be significant. This indicates that how a daughter is attached to her mother will not moderate the relationship between how a daughter is attached to her father at any time period (Figure 6, Model 5).

Model 3. The main effects of daughters' view of early and late attachment to both mothers and fathers on daughters' emotion regulation ( $N=172$ ).

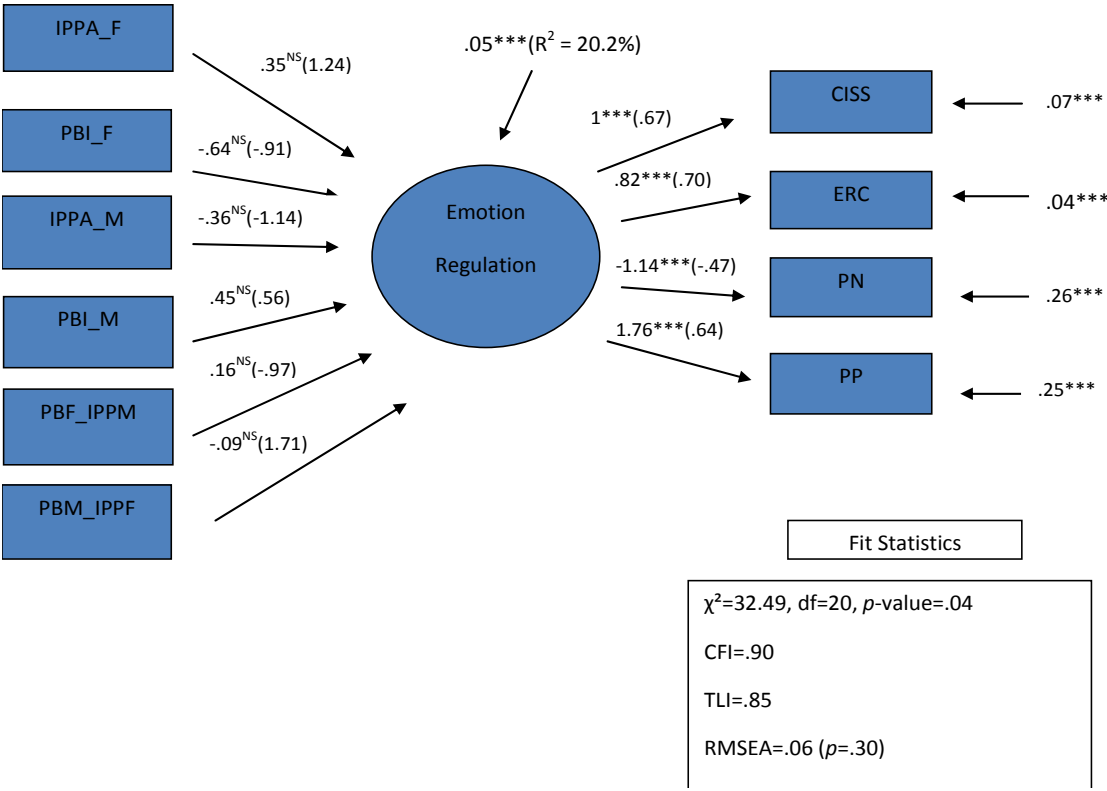




Model 4. The interaction of daughters' view of early attachment to both mothers and fathers, the interaction of daughters' view of late attachment to both mothers and fathers, and its influence on daughters' emotion regulation (N=172).



Model 5. The interaction of daughters' view of early attachment to father and late attachment to mother, the interaction of daughters' view of early attachment to mother and late attachment to father, and its influence on daughters' emotion regulation ( $N=172$ ).



## DISCUSSION

### *Summary of Results*

*Hypothesis 1: Daughter-to-father attachment is related to a daughter's emotion regulation.* Results from Model 1 indicate that this hypothesis was fully supported. Daughter-to-father attachment has been shown to be significantly related to a daughter's ability to regulate emotions. However, it must be noted that the significance of this relationship was found in a daughter's current view of attachment, and not her early views of attachment to her father. This indicates that how a daughter was attached to her father in early childhood may not have as great an impact on her ability to regulate emotions as her current attachment relationship with her father.

These findings were partially supported by the findings of Kenny and Gallagher (2002) that paternal attachment is associated positively and significantly with traditional feminine traits of expressivity. Expressivity may be linked with emotion regulation in that females who are expressive may be able to better articulate their emotions as compared to those females who may be more withdrawn.

In addition to examining the relationship between daughter-to-father attachment and emotion regulation, we also examined the relationship of daughter-to-mother attachment and emotion regulation. Examining this would allow us to see if the results held true for mother as well. The results did in fact indicate a significant relationship between a daughter's current view of attachment to her mother and her ability to regulate

emotions. An interesting finding to note is how a daughter's current view of attachment to both mother and father indicates a relationship to emotion regulation while early attachment to both parents does not. This may be the result of the adolescent valuing the current relationship more in the assistance of parents to help cope with stressful situations whereas the early attachment relationship may not be as significant in relation to current emotion regulation strategies.

Adolescence is a time of many changes and decision-making, especially when entering college. Many stressful situations may occur, more so during this time than any other previous time in the life of a late adolescent girl thus far. Because of this, there may be more contact made with both mother and father asking for their assistance in helping cope during stressful situations. In fact, in our sample, most of the women (95 %) had weekly contact with their parents. Therefore, the level of attachment to both mother and father during this time can have a profound influence on how a daughter is regulating her emotions.

*Hypothesis 2: The relationship between daughter-to-father attachment and a daughter's emotion regulation will be moderated by a daughter's attachment to mother.* Results from Model 4 and 5 indicate that this hypothesis was not supported. While it was hypothesized that daughter-to-mother attachment would be a moderator when examining paternal attachment and emotion regulation, the results demonstrated that maternal attachment as a moderator was not significant. To assess this relationship we looked at interactions of attachment to father and mother both within time and across time. Even when examining these two interactions separately, daughter-to-mother attachment was still not found to be a moderator of the daughter-to-father attachment relationship and

emotion regulation. This finding is interesting as maternal attachment has been more widely examined in the research field of attachment than paternal attachment. The fact that paternal attachment is not necessarily influenced by maternal attachment when examining daughters' emotion regulation indicates that these attachment relationships are significant but not necessarily dependent upon one another.

These findings do not support those of Fox et al. (1991). In their meta-analysis they found that security of attachment to one parent may be dependent on security of attachment to another parent (Fox, Kimmerly, & Shafer, 1991). Even though attachment security may be similar to both parents, the impact of that attachment on developmental outcomes may be different, as was found in the current study. In addition, the results of the Amato (1994) study supported the notion that fathers were salient figures in the lives of their adult offspring. Also, for three out of the four measures of psychological well-being (life satisfaction, psychological distress, and happiness), closeness to fathers yielded associations that were significant and independent of closeness to mothers. The current study is supported by these findings. Finally, Flouri and Buchanan (2002) found no evidence suggesting that the impact of father involvement in adolescence on children's later mental health in adult life varies with the level of maternal involvement. While the Flouri and Buchanan (2002) study did not specifically examine attachment, paternal and maternal involvement is necessary for the development of a secure attachment; therefore, the results of this study also support the current study.

Attachment is significant in both early childhood and late adulthood. In early childhood, children may look to parents to cope with a stressful situation for them and assist them in regulating their emotions. In late adulthood, adolescents and adults have

learned the coping strategies that work best for them. Attachment plays a significant role in how an individual regulates emotions. While it was hypothesized that maternal attachment would moderate paternal attachment, these two relationships have a significant impact on emotion regulation, separately, but not when both are included in the same model.

The most important finding of the current study was found when examining the main effects of early and late attachment to both mother and father (Model Figure 3). When current or prior attachment to mother was controlled in the model, then only current attachment to father was predictive of daughter's emotion regulation. This means that when examining a daughter's current view of attachment to both parents, attachment to father was the only significant predictor for how a daughter regulates her emotions. This could be the result of a daughter relying more on her father in late adolescence/early adulthood for emotional support during difficult transitions and stressful situations.

#### *Implications of Research Findings*

There are several implications for the research findings of this study. First, as the findings demonstrate, daughter-to-father attachment may be more significant than previous research findings have indicated. This daughter-to-father attachment bond is shown to influence how a daughter copes with stressful situations, over and above attachment to mother. From the current study, these findings implicate that the daughter-father relationship is important and the daughter's attachment to her father may be just as salient or perhaps more so than her attachment to mother in terms of the influence on emotion regulation.

A second implication of the research findings focuses on the differential impact a mother and father can have on a daughter. Mothers and fathers influence their children in different ways. Not only that, they influence their sons and daughters differently. These findings indicate that a father may have more of an influence on the emotional development of a daughter in late adolescence/early adulthood. Whereas, because we found, controlling for attachment to father, that attachment to mother had no effect on emotion regulation, a mother may have a greater influence on emotional development in early and middle childhood. More research needs to be done in this area to see if the findings hold true.

Third, attachment has been widely assessed and researched for decades. The findings of the current study contradict some of the major findings regarding daughter-to-father attachment. This study found the daughter-to-father attachment relationship to be significant in predicting daughter's successful emotion regulation strategies. Because of this, the current study adds to the limited existing literature on daughter-to-father attachment and provides support for the significance of paternal attachment.

#### *Future Research*

The current study can contribute to future research in several ways. First, adolescent daughter-to-father attachment is rarely assessed and these research findings contribute to the limited existing literature on paternal attachment. The initial literature on attachment assessed the mother-child relationship. More recently, paternal attachment has been shown to have as much of an influence on developmental outcomes as maternal attachment. The current study contributes to the literature depicting the importance of fathers.

Second, future research should focus on not just daughters but both daughters and sons. There may be very important differences in how daughters and sons regulate their emotions and how each chooses to cope with stressful situations. This research could examine the differences in how paternal attachment can influence both a daughter's and son's ability to regulate emotions. In addition, it would be interesting to look at not just daughters and sons separately, but a daughter and son as siblings and what the influence of their attachment to their father would have on their ability to regulate emotions.

Third, future research could examine the relationship between daughter-to-father attachment and emotion regulation longitudinally. The research could examine the relationship in early childhood, middle childhood, adolescence, and early adulthood. This would allow the researcher to examine how the attachment relationship changes and the differential impact it has on emotion regulation over time. It would be interesting to see if the findings from the current study remain true when assessed at several different points within a daughter's developmental trajectory.

Finally, future research could also include several measures that assess the female's current romantic relationship. The current study asked a demographic question about relationship status, but neglected to include any measures focusing on romantic relationships. Future research could assess whether or not a daughter's attachment level has changed upon entering a serious relationship and the influence that relationship may have on her ability to regulate emotions.

### *Strengths*

The existing literature on paternal attachment seldom focuses on paternal attachment exclusively. Further, this assessment rarely examines paternal attachment and



the influence this attachment can have on a number of developmental outcomes for daughters. One strength of the current study is that it adds to the limited existing literature and offers insight into the father-daughter relationship. This relationship has been shown to have an influence on how a daughter regulates her emotions.

Another strength of the current study was that both a retrospective and current measure was used to examine attachment and emotion regulation. This allowed us to examine what a daughter's retrospective attachment to parents was as a child and how similar that was into late adolescence/early adulthood. Finally, using both retrospective and current measures allowed us to look at several different interactions of attachment both within time and across time and how those attachment relationships influence emotion regulation.

Finally, while this study included a convenience sample, the sample size was relatively large ( $N=172$ ). The number of participants in the current study allowed us to infer realistic conclusions about the father-daughter relationship. The population for the current study was young women at Auburn University in Human Sciences courses. Because of this, the findings from the current study might be able to be generalized to this particular population such that for these female participants, fathers may have more of an impact on their emotion regulation than mothers.

### *Limitations*

One limitation of the current study is that a convenience sample was used. Only five classes were used for this study and all were in the College of Human Sciences. This may have influenced the results in that the participants may have been more similar than

different. Adding classes from other departments may have contributed to the strength of the study. In addition, no random sampling methods were used.

Another limitation is that the responses of this study were only gathered at one point in time, making this study cross-sectional, and they were all self-report measures. Also, due to the fact that the results were collected at one point in time, the participants may have been biased in their responses and motivated only to receive extra credit for their participation.

Finally, the institution used for this study does not have a representative sample of race. The majority of participants were European American or African American leaving the responses of the majority of participants to be relatively biased toward one ethnic group.

## CONCLUSION

In conclusion, daughter-to-father attachment has been shown to influence how a daughter regulates her emotions in late adolescence/early adulthood. The current study provides evidence suggesting that paternal attachment is just as salient as maternal attachment in late/adolescence early adulthood. In fact, paternal attachment may be more salient than maternal attachment in relation to a daughter's ability to regulate emotions in early adulthood. Further research needs to replicate this study to see if the results remain true and to examine additional variables in the daughter-to-father attachment relationship.

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## APPENDICES

## APPENDIX A

### PANAS

Use the scale below to indicate how often you have experienced the listed emotion in the last several weeks.

- 1 = Very slightly or not at all
- 2 = A little
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely

- 1. Interested
- 2. Distressed
- 3. Excited
- 4. Upset
- 5. Strong
- 6. Guilty
- 7. Scared
- 8. Hostile
- 9. Enthusiastic
- 10. Proud
- 11. Irritable
- 12. Alert
- 13. Ashamed
- 14. Inspired
- 15. Nervous
- 16. Determined
- 17. Attentive
- 18. Jittery
- 19. Active
- 20. Afraid



## APPENDIX B

### Emotion Regulation Checklist (ERC)

Use the scale below to rate how the following statements pertain to you

1 = Rarely/Never

2 = Sometimes

3 = Often

4 = Almost Always

1. Am a cheerful person
2. Exhibit wide mood swings (move quickly from positive to negative mood)
3. Respond positively to neutral or friendly overtures by others
4. Transition well from one activity to another; I don't become angry, anxious, distressed or overly excited when moving from one activity to another
5. Can recover quickly from upset or distress; I don't pout or remain sullen, anxious or sad after emotionally distressing events
6. Am easily frustrated
7. Respond positively to neutral or friendly overtures by peers (friends)
8. Am prone to angry outbursts/tantrums easily
9. Am able to delay gratification (can wait to get something I want)
10. Take pleasure in the distress of others (for example, I laugh when another person gets hurt or punished or I enjoy teasing others)
11. Can modulate excitement; I don't get "carried away" in high energy situations or overly excited in inappropriate contexts.
12. Am whiny or clingy with others
13. Am prone to disruptive outbursts of energy and exuberance (excitement)
14. Respond angrily to limit-setting by others
15. Can say when I am feeling sad, angry or mad, fearful or afraid
16. Feel sad or listless
17. Am overly exuberant (excited) when attempting to engage others in activities
18. Display flat affect; My expression is vacant, absent, or inexpressive or I seem emotionally absent to others
19. Respond negatively to neutral or friendly overtures by peers (for example, I speak to friends in angry tone of voice or respond fearfully)
20. Am impulsive
21. Am empathic towards others; I show concern when others are upset or distressed
22. Display exuberance (excitement) that others find intrusive or disruptive

23. Display appropriate negative emotions (anger, fear, frustration, distress) in response to hostile, aggressive or intrusive acts by peers (friends)
24. Display negative emotions when attempting to engage others in activities

## APPENDIX C

### Coping Inventory for Stressful Situations (CISS)

Use the following scale to rate the items as they pertain to how you cope with stressful situations

- 1 = Not At All
- 2 =
- 3 =
- 4 =
- 5 = Very Much

1. Schedule my time better
2. Focus on the problem and see how I can solve it
3. Think about the good time I've had
4. Try to be with other people
5. Blame myself for procrastinating
6. Do what I think is best
7. Preoccupied with aches and pains
8. Blame myself for having gotten into this situation
9. Window shop
10. Outline my priorities
11. Try to go to sleep
12. Treat myself to a favorite food or snack
13. Feel anxious about not being able to cope
14. Become very tense
15. Think about how I solved similar situations
16. Tell myself it is really not happening to me
17. Blame myself for being too emotional about the situation
18. Go out for a snack or meal
19. Become very upset
20. Buy myself something
21. Determine a course of action and follow it
22. Blame myself for not knowing what to do
23. Go to a party
24. Work to understand the situation
25. "Freeze" and don't know what to do
26. Take corrective action immediately

27. Think about the event and learn from my mistakes
28. Wish that I could change what happened or how I felt
29. Visit a friend
30. Worry about what I am going to do
31. Spend time with a special person
32. Go for a walk
33. Tell myself that it will never happen again
34. Focus on my general inadequacies
35. Talk to someone whose advice I value
36. Analyze the problem before reacting
37. Phone a friend
38. Get angry
39. Adjust my priorities
40. See a movie
41. Get control of the situation
42. Make an extra effort to get things done
43. Come up with several different solutions to the problem
44. Take time off and get away from the situation
45. Take it out on other people
46. Use the situation to prove that I can do it
47. Try to become more organized so I can be on top of the situation
48. Watch TV

## APPENDIX D

### Parental Bonding Instrument (PBI)

Use the following scale to rate the following items as they pertain to you

- 1 = Very Like
- 2 = Moderately Like
- 3 = Moderately Unlike
- 4 = Very Unlike

1. Spoke to me with a warm and friendly voice
2. Did not help me as much as I needed
3. Let me do those things I liked doing
4. Seemed emotionally cold to me
5. Appeared to understand my problems and worries
6. Was affectionate to me
7. Liked me to make my own decisions
8. Did not want me to grow up
9. Tried to control everything I did
10. Invaded my privacy
11. Enjoyed talking things over with me
12. Frequently smiled at me
13. Tended to baby me
14. Did not seem to understand what I needed or wanted
15. Let me decide things for myself
16. Made me feel I wasn't wanted
17. Could make me feel better when I was upset
18. Did not talk with me much
19. Tried to make me dependent on him
20. Felt I could not look after myself unless he was around
21. Gave me as much freedom as I wanted
22. Let me go out as often as I wanted
23. Was overprotective of me
24. Did not praise me
25. Let me dress in any way I pleased

## APPENDIX E

### Inventory of Parent and Peer Attachment (IPPA)

Use the following scale to rate how the following items pertain to you with father and with mother

- 1 = Almost Never or Never True
- 2 = Not Very Often True
- 3 = Sometimes True
- 4 = Often True
- 5 = Almost Always are Always True

1. My father respects my feelings
2. I feel my father does a good job as my father
3. I wish I had a different father
4. My father accepts me as I am
5. I like to get my father's point of view on things I am concerned about
6. I feel it's no use letting my feelings show around my father
7. My father can tell when I am upset about something
8. Talking over my problems with my father makes me feel ashamed or foolish
9. My father expects too much from me
10. I get upset easily around my father
11. I get upset a lot more than my father knows about
12. When we discuss things, my father cares about my point of view
13. My father trusts my judgment
14. My father has his own problems, so I don't bother him with mine
15. My father helps me to understand myself better
16. I tell my father about my problems and troubles
17. I feel angry with my father
18. I don't get much attention from my father
19. My father helps me to talk about my difficulties
20. My father understands me
21. When I am angry about something, my father tries to be understanding
22. I trust my father
23. My father doesn't understand what I'm going through these days
24. I can count on my father when I need to get something off my chest
25. If my father knows something is bothering me, he asks me about it

1. My mother respects my feelings
2. I feel my mother does a good job as my mother
3. I wish I had a different mother
4. My mother accepts me as I am
5. I like to get my mother's point of view on things I am concerned about
6. I feel it's no use letting my feelings show around my mother
7. My mother can tell when I am upset about something
8. Talking over my problems with my mother makes me feel ashamed or foolish
9. My mother expects too much from me
10. I get upset easily around my mother
11. I get upset a lot more than my mother knows about
12. When we discuss things, my mother cares about my point of view
13. My mother trusts my judgment
14. My mother has her own problems, so I don't bother her with mine
15. My mother helps me to understand myself better
16. I tell my mother about my problems and troubles
17. I feel angry with my mother
18. I don't get much attention from my mother
19. My mother helps me to talk about my difficulties
20. My mother understands me
21. When I am angry about something, my mother tries to be understanding
22. I trust my mother
23. My mother doesn't understand what I'm going through these days
24. I can count on my mother when I need to get something off my chest
25. If my mother knows something is bothering me, she asks me about it