

EMOTIONAL INTELLIGENCE OF ADULTS RAISED IN DIFFERENT FAMILY  
STRUCTURES

By

Mary Delinda Sloan

David Ferrier  
Assistant Professor of Psychology  
(Chair)

Amye Warren  
Professor of Psychology  
(Committee Member)

Amanda Clark  
Associate Professor of Psychology  
(Committee Member)

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A Thesis Submitted to the Faculty of the University of  
Tennessee at Chattanooga in Partial Fulfillment  
Of the Requirements of the Degree of  
Master of Science: Psychology

The University of Tennessee at Chattanooga  
Chattanooga, Tennessee

May 2020

## ABSTRACT

Emotional intelligence (EI) contributes to optimal social functioning and is predictive of numerous positive outcomes (Gallagher & Vella-Brodrick, 2008). Existing research has indicated a relationship between emotional development of an individual and the family system in which they were raised, however limited exploration has been done examining the influence of the family structure. The current study examined EI of adults raised in dual parent households, single mother households, and single father households. Four hundred and seventy-five participants from dual parent, single mother, and single father households responded to a series of measures assessing EI, emotional competence, subjective happiness, and perceived quality of relationships. Consistent with prior research, results indicated that individuals raised in dual parent households had significantly higher EI than those raised in single parent households. However, no significant difference was found in EI between adults raised in single mother homes compared to single father homes.

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## CHAPTER I

### INTRODUCTION

Emotional intelligence comprises the ability to perceive, use, understand, and manage emotion. Perceiving emotions (both the type and intensity) facilitates understanding of another person's actions (Elfenbein, Marsh, & Abady, 2002). Understanding the significance of an emotion within the social context guides attention, aides in decision-making, and allows an individual to modify his or her behavior appropriately (Damasio, 1994). The ability to manage one's emotions effectively enables an individual to express emotions and behave in socially appropriate ways (Gross, 1998). Perceiving, using, understanding, and managing emotions require an individual to effectively process and manage the emotional information in their environment in order to navigate the social world (Keltner & Kring, 1998). These emotional abilities contribute to optimal social functioning and help children form and maintain successful interpersonal relationships (Denham et al., 2003; Eisenberg, Fabes, Guthrie, & Reiser, 2000; Keltner & Haidt, 2001; Savage, 2002). Emotional abilities are associated with perceptions of relationship quality and overall subjective happiness and well-being (Brackett et al., 2005; Lopes et al., 2004). The current study examines the mechanism of how parents socialize emotion in their children, the theoretical backgrounds that contribute to the understanding of emotional intelligence and social functioning, and the outcomes associated with competent emotional development. The objective of the current study is to determine whether specific family



structures (i.e., a dual-parent home compared to a single parent home) influence the development of emotional abilities and outcomes into late adolescence and early adulthood.

### **Emotional Intelligence and Associated Outcomes**

Emotional intelligence (EI), an individual's capacity to perceive, understand, use, and manage emotion, provides a framework through which individuals develop relationships, positively cope with stressful situations, and more efficiently interact with and respond to their environment. Perceiving emotion facilitates the understanding of why another person acts and behaves the way they do. Perception of emotion can involve identifying emotions not only in oneself and others, but also in voices, stories, music, and art (i.e. Frijda, 1988; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990). When an individual understands the role of emotions in a social context, they are better able to guide attention and anticipate the outcomes of emotional experiences. If a person can perceive and understand emotions accurately, that person can utilize those emotions to reason, solve problems, and modulate their responses based on the situation (Elfenbein et al., 2002).

Perceiving, understanding, using, and modifying emotion are abilities that demonstrate EI. Emotional abilities contribute to optimal social functioning and help individuals form and maintain interpersonal relationships. Additionally, the appropriate use of emotional abilities fosters positive perceptions of one's relationships (Damasio, 1994; Gross, 1998; Keltner & Kring, 1998). Being able to effectively perceive, use, understand, and manage emotions in social settings contribute to optimal social functioning (Denham et al., 2003; Eisenberg et al., 2000; Savage, 2002). These emotional abilities are essential to functioning in social situations, and as such EI influences the most crucial spheres of life: psychological well-being, physical health,

social relationships, and professional success. When an individual understands the role of emotions in social contexts, they are better able to make decisions and modify their emotions and behavior in social-appropriate ways. In doing so, an individual is demonstrating emotional competence (EC). Acting in emotionally competent ways is related to greater self-esteem, well-being, and life satisfaction (Gallagher & Vella-Brodrick, 2008; Schutte et al., 2002). Individuals with higher emotional capacity demonstrate adaptive coping styles and improved mental health (Mavroveli, Petrides, Rieffe, & Bakker, 2007) and decreased occurrence of psychopathology in adolescents and self-harming behaviors throughout adolescence and adulthood (Mikolajczak, Petrides, & Hurry, 2009; Williams, Daley, Burnside, & Hammond-Rowley, 2010). In addition to these outcomes, individuals with higher EI perceive themselves as being successful and self-confident, capable of communicating their feelings to others, flexible and willing to adapt to new conditions, motivated, and capable of having fulfilling personal relationships (Petrides et al., 2016).

Interpersonal relationships are impacted by emotional abilities in several ways. First, individuals with higher EI are more likely to be chosen as a romantic partner (Schutte et al., 2001). Acting in emotionally competent ways leads to better social and marital relationships (Lopes et al., 2004; Lopes, Salovey, Cote, & Beers, 2005; Schutte et al., 2001). In general, individuals with high EI exhibit more prosocial behaviors, including being more cooperative and better communicators (Petrides et al., 2016). Additionally, compared to individuals with limited emotional ability, those with high knowledge and ability experience better job performance and career growth. This has been found especially true for jobs involving high levels of interpersonal contact, such as service occupations (Joseph & Newman, 2010; Van Rooy & Viswesvaran, 2004). Finally, those with higher EI exhibit greater employability and increased academic

achievement (e.g., Brasseur, Gregoire, Bourdu, & Mikolajczak, 2013; Kotsou, Nelis, Gregoire, & Mikolajczak, 2011).

The positive outcomes of greater EI depend in part on the social context. In some cases, intrapersonal emotional knowledge (being able to identify, understand, and express one's own emotions) may be more beneficial (e.g., in predicting health outcomes), whereas in other cases, interpersonal emotion knowledge (being able to identify, understand, and influence another's emotions) would be more impactful (e.g., predicting the quality of and improving social relationships) (Brasseur et al., 2013). The ability to apply this knowledge in real-world contexts demonstrates emotional competence (EC) and research indicates that EC can be learned and improved (Kotsou et al., 2011; Nelis et al., 2011). Therefore, understanding how EI develops is critical for increasing positive long-term outcomes (i.e., well-being, relationship quality).

### **Family Systems Theory**

The family structure provides a basis for children's emotional and behavioral development (Argyriou, Bakoyannis, & Tantaros, 2016). The family systems theory (FST) posits that development occurs within the context of multigenerational family systems (Williamson, 1981) and describes the mechanism through which individuals develop working models of self and others based on early childhood attachment. These working models shape cognitive, affective, and behavioral responses in the early family environment. This environmental system influences how children understand and direct their thoughts and feelings and contributes to their ability to connect and interact emotionally with other people (Hazan & Shaver, 1994; Williamson, 1991).

Family systems theory is a complex framework incorporating social systems theory, family strengths theory, social support systems, and family intervention practices (Brickman et al., 1982; Bronfenbrenner, 1979; Cohen & Syme, 1985; Stinnett & DeFrain, 1985). It is important to understand that FST conceptualizes the family system as being comprised of unique but interdependent subsystems. The child is embedded in these subsystems, each with different rules and expectations about what is appropriate in each context. For example, how emotions are expressed likely differs based on which subsystem an individual is currently interacting with. It might be appropriate for a child to express their fear or anger in the family subsystem, but it would be considered potentially inappropriate to express these emotions when in public or the school subsystem. Parents might dissuade children from expressing these negative emotions and provide positive feedback for desirable expressions of emotions (e.g., Bavelas & Segal, 1982). Thus, children learn the rules for appropriate emotional expression by observing and interacting with their parents and other members of the subsystems (Johnson & Best, 2003; Marvin, 2003; Ng & Smith, 2016).

Family systems theory explains the development of emotional abilities via a holistic perspective. Children interact and create stable patterns and expectations, which encourages the child to adapt to social situations and develops the child's schema of socially appropriate emotional expression (e.g., Broderick, 1993). As interactions and roles develop, the child begins to understand the contextual environment of emotion. FST emphasizes the importance of context and differentiation, whereby a child navigates expectations of relationships and begins to recognize themselves as a unique individual nested in many subsystems (Bowen, 1978; Bray & Williamson, 1987; Harvey, Curry, & Bray, 1991; Prest, Benson, & Protinsky, 1998).

The primary subsystem where the socialization of emotion occurs is the child's immediate family. The immediate family could comprise a mother-father-child triadic system, represented by the traditional nuclear family, or a caregiver-child dyadic system in the case of single parent households. A child exists in the family system, but also has his or her own beliefs and behaviors apart from their attachment to the parent. Within this theoretical framework, the child is viewed as nested within the family. The child learns the rules for appropriate behavior and emotional expression by observing their parents and other members of their family unit (Ng & Smith, 2016). As interactions and roles within the family system develop, children begin to understand the contextual environment of emotion (Marvin, 2003). Family systems operate under an overarching family paradigm, wherein children are subject to shared assumptions about, expectations of, and commitments to society in general (Reiss, 1981). These goals and policies govern how family members interact with society and through the process of socialization, these norms are passed down from parents to children. The relationship between children and parents is reciprocal, interactive, and incremental; through interaction within the family system, children learn the social and emotional rules of their family and society (Broderick, 1993).

### **Development of Emotional Abilities**

Parents are the primary socializers of emotions and model social abilities and emotional information to their children (Denham et al., 2003). These early influences of the family subsystem have a lasting effect on an individual's emotional development through childhood, adolescence, and adulthood. The family provides the initial context in which children begin to disentangle the emotions and behaviors of an increasingly complex social world (Argyriou et al., 2016). Parents convey emotional philosophies which include ideas about which emotions their

children should feel, how these emotions should be expressed, and how their children should react in emotional situations (Gottman, Katz, & Hooven, 1997). Parents implicitly convey emotional significance through expression and reactions. Parental emotion philosophy is associated with children's emotional knowledge (Denham & Grout, 1992; Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997). In turn, parental beliefs about emotions make direct contributions to children's EC (Cunningham, Kliwer, & Garner, 2009; Dunsmore & Karn, 2001). Parents directly contribute to their children's ability to act in emotionally competent ways (Alegre, 2011; Dmitrieva, Chen, Greenberger, & Gil-Rivas, 2004).

Influences of family systems intervention practices and child behavioral and emotional development are based on Bronfenbrenner's (1999) contention that without necessary social supports and resources, parents will be unable to interact with their children in ways that enhance development and promote healthy outcomes (Trivette, Dunst, & Hamby, 2010). These social supports and resources include parenting beliefs, family support (including parenting support from a caregiving partner), and overall parental well-being. Lack of sufficient support and resources results in negative consequences in the efficacy of parent-child interactions and child development depending on the context of the relationships (Bronfenbrenner, 1979). The components of FST (i.e., social support, resource, family support) are significantly related to parents' self-efficacy beliefs, parental well-being, parenting competence and confidence, family function, and child development and behavior (Trivette et al., 2010). While related to these outcomes, the primary focus of research has been on the influence of parent-child interactions on child development rather than on the holistic view of the child and his or her family system through development (Trivette et al., 2010).

Children are nested within the family system establishing this early environment as the primary context into which social and emotional development takes place (Argyriou et al., 2016). Parents are the primary socializers of emotions and model social abilities and emotional information to their children (Alegre, 2011). The effects of the family environment have a long-lasting impact on an individual's emotional development through childhood, adolescence, and adulthood (Dmitrieva et al., 2004). Emotional development contributes to an individual's ability to maintain functional interpersonal relationships and navigate the social world (Denham et al., 2003; Eisenberg et al., 2000; Keltner & Kring, 1998; Savage, 2002).

Early emotional development is key to increased EI because this is the initial environment in which children learn to perceive, use, understand, and manage emotions. The emotional abilities that comprise EI develop within the family system and mature with experience and age and result in effective social functioning (Mayer & Salovey, 1997). Throughout life, children are expected to navigate social situations including developing friendships and maintaining prosocial relationships. Parents socialize contextually normative behavior by subconsciously referencing various emotional and behavioral norms and expectations established within the family system when interacting in novel situations, and as such, children require ongoing socialization, modeling, and coaching from caregivers in order to develop emotional abilities appropriate based on age and environment (Denham, Bassett, & Wyatt, 2014). This interpersonal emotional schema carries into adulthood, affecting adult psychological and health functioning, psychological distress, peer relationships, codependency, and spousal relationships (Bowen, 1978; Bray & Williamson, 1987; Harvey et al., 1991; Prest et al., 1998).

## **Family Structure and EI Development**

The family provides the initial context in which children begin to develop emotional abilities (Lopes et al., 2004), however, EC is continually influenced by the family subsystems. Additionally, research has indicated that the structure of the family subsystem in which a child is raised (i.e., mother-father-child triadic subsystem, caregiver-child dyadic subsystem) has implications on the development of emotional abilities (Marvin, 2003). For example, children raised in two-parent households demonstrate higher levels of social functioning than children raised in one-parent families (Clarke-Stewart, Vandell, McCartney, Owen, & Booth, 2000). Additionally, research has indicated that adults from dual-parent households tend to demonstrate higher levels of emotional intelligence in comparison to adults that were raised in single-parent households due to the potential for a more stressful experience and circumstances (Sahu, 2012).

While family structure is certainly a possible explanation for differences in EI, another factor is gender. Evidence suggests that emotional abilities differ with regards to gender, and thus might be socialized differently based on the gender of the parent. Women typically are better able to perceive, understand, and express emotions than men. Some research has stated that perhaps this is because parents tend to talk about emotions more with their daughters than with their sons (e.g., Fivush, Brotman, Buckner, & Goodman, 2000). However, men are better able to regulate and make use of their emotions (Brasseur et al., 2013). While these differences exist, research indicates that in terms of global EI, men and women are not significantly different (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). Definitions of social and emotional success depend on social expectations and gender norms and can complicate how one operationalizes EC (e.g., Topping, Bremner, & Holmes, 2000). Learning how and when to manage and express one's emotions within the context of socially-appropriate norms differs for



men and women, given that there is evidence that emotions are socialized differently for boys and girls (Else-Quest, Hyde, Goldsmith, & Van Hulle, 2006). Expressing emotions that violate display rules and social norms can lead to social consequences (Frijda & Mesquita, 1994; Saarni, 1999). Some amount of EI is required to form and maintain functional relationships. Therefore, because of differences in gender norms and expectations men and women learn to adaptively express and regulate emotions in different ways (Brackett et al., 2006).

Gender differences in emotional development may be amplified when examining emotional abilities of women raised by single fathers compared to men raised by single fathers. Social learning theory stresses the importance of the child modeling the behavior of the parent more similar to her- or himself, as well as the reinforcement received from others for doing so (Bussey & Bandura, 1984). Parents may be better able to understand the emotional needs of their same-sex children and better communicate the social norms experienced by a same-sex child (Denham et al., 2014). For example, emotion regulation is facilitated by mothers' appropriate expressiveness (i.e., *well-regulated*; Eisenberg et al., 2001; Eisenberg et al., 2003; Garner & Spears, 2000) and fathers' clear expressions of emotions are associated with children's ability to recognize emotional expressions (Dunsmore, Her, Halberstadt, & Perez-Rivera, 2009). Thus, children raised in mother-only or father-only households may experience differences in development of emotional outcomes in terms of EI and social functioning.

For several decades, research on outcomes in single-parent families has focused on single-mother households (e.g., Biblarz & Gottainer, 2000; Krein, 1986; Krein & Beller, 1988). Research regarding parental reactions to emotions typically have addressed mothers only, despite the need to understand the larger family system (e.g., Cowan, 1996; Eisenberg, Cumberland, & Spinrad, 1998; Gottman et al., 1997). Differences in the nature of the mother-child and father-

child relationship suggest that each dyad uniquely contributes to the emotional development of children (McElwain, Halberstadt, & Volling, 2007). Within families, parents react in different ways to their children's emotions (e.g., Eisenberg, Fabes, & Murphy, 1996). Having these differing levels of emotional expressiveness may allow children to develop a deeper understanding and awareness of the complexities of emotions and is referred to as a *divergent* model of emotion socialization. This posits that varying levels of mothers' and fathers' emotional expression, reaction, and socialization will be associated with optimal child outcomes such as increased critical thinking and an understanding of the complexity of emotion (McElwain et al., 2007). When parents differ, children are exposed to multiple schema and may attain more effortful processing of emotional information (Dunsmore & Halberstadt, 1997). Children who experience differing levels of emotional support develop a heightened awareness that people differ in reactions to emotional events and thus may develop more complex thinking about and a deeper understanding of emotions (Dunsmore & Halberstadt, 1997). McElwain and colleagues (2007) suggest that this increased emotional awareness and competence may not be replicated in other family structures where two parents are not present.

Divorced and single-mother homes are associated with lower self-esteem and increased social difficulties of children when compared to dual-parent and single-father households (Clarke-Stewart et al., 2000). Consistent with the FST, most studies comparing outcomes in single-mother homes posit that differences in emotional outcomes could be related to a lack of social support and resources (i.e., income, time, energy). These differences could lead to lower social control and interrupted socialization of their children (Amato & Keith, 1991; Lareau, 1989; McLanahan & Booth, 1989; McNulty & Bellair, 2003; Meyer & Garasky, 1993; Rankin & Wells, 1994).

Single mothers report more difficulties with finances, daily hassles and stressors relating with the other biological parent than do single fathers (Weinraub & Gringlas, 1995). Statistically, single mothers are five times more likely to be in poverty than married mothers and were twice as likely to be in poverty than single fathers (Berlan & Harwood, 2018). Recent research has revealed that over half of single mothers rely on welfare and food stamps, and one third of single mother households experience food insecurity (Cronquist & Lauffer, 2019). These economic factors can contribute to stress and depression in mothers and fathers alike, potentially resulting in reduced parenting ability in single parents which may have detrimental effects on children (Clarke-Stewart & Bailey, 1989; Clarke-Stewart & Hayward, 1996; Hetherington, 1993; Simons, 1996). In numerous studies, child emotional outcomes have been strongly and consistently predicted by family income and mothers' education, ethnicity, child-rearing beliefs, depressive symptoms, and capacity to provide support and stimulation (Cherlin, Chase-Lansdale, & McRae, 1998; Clarke-Stewart et al., 2000; Conger & Chao, 1996; Hetherington, Bridges, & Insabella, 1998).

Compared to single mothers, single fathers are generally better off than single mothers in terms of income, education, and social support (Coles, 2015). Research indicates single fathers report increased confidence in their efficacy as parents and tend to spend more time in leisure activities with their children compared to single mothers, and single fathers are often either offered or request more social support than do single mothers (Coles, 2015; Hall, Walker, & Acock, 1995). Although single mothers have more contact with their own families, they report more strained relationships, risking an increase in conflict and ambivalence (Hilton & Koperafrye, 2007). Single fathers have higher relationship quality with not only their own family, but also reported communication with their child's maternal grandparents, providing the

single father with a broader range of support from extended family. These additional supports add both practical help for the father as well as forms of social capital for their children (Clarke-Stewart & Hayward, 1996; Santrock & Warshak, 1979). While the majority are employed, single fathers report work-family frustrations similar to single mothers, such as the inability to take time off or increased workload at home in addition to career responsibilities (Coles, 2015).

Increased support, income, and education have been associated with improved overall psychological well-being, self-esteem, and reduced depression, anxiety, and problem behaviors in single father families (Clarke-Stewart & Hayward, 1996). Teenagers from single-father homes consistently rate their fathers' involvement (e.g., shopping, playing sports, attending events, aiding with school projects) higher than teens from two-parent households (Hawkins, Amato, & King, 2006). While studies have reported on the positive relations between single-father homes and emotional competence (Clarke-Stewart & Hayward, 1996), some research indicates worse behavioral outcomes for children raised by single-fathers. These include higher levels of externalizing behaviors (e.g., antisocial and violent behaviors), substance use (e.g., cigarette smoking, alcohol, drugs), and higher levels of delinquency (Cookston, 1999; Demuth & Brown, 2004; Downey & Powell, 1993; Hoffman & Johnson, 1998). However, other research indicates that child outcomes are more consistently predicted by income and education than they were by family structure. Yet, gender differences exist in how parents socialize emotions, and thus may result in different outcomes in regard to emotional development of their children (Clarke-Stewart et al., 2000). Gleason (1975) suggested that father-child, rather than mother-child, conversations present greater cognitive benefit for children (also see Park & McDowell, 1998). Research indicates that perhaps emotionally supportive fathers might ask more questions related to causes and consequences of their child's emotions which might lead to a more complex understanding

of others' minds and emotions and a greater capacity to manage interpersonal conflicts. These outcomes may even be more productive and salient when not accompanied by the presence of maternal support (Gleason, 1975). However, little is known about fathers' emotion socialization practices and how it relates to children's EC and social functioning (McElwain et al., 2007).

### **Rationale for Current Study**

Emotional intelligence and the ability to act in emotionally competent ways are predictive of key outcomes in academic and workplace success, intrapersonal health and well-being, and success in social relationships (Brackett et al., 2005; Denham et al., 2003; Mavroveli et al., 2007; Petrides et al., 2016). Existing research suggests a relationship between emotional development of children and the family system in which the child resides (e.g., Eisenberg et al., 1998; Morris, Silk, Steinberg, Myers, & Robinson, 2007). Children are exposed to parental expression and reaction of emotion, and the divergent model of emotional response states that a more diverse range of emotional expression and responses is related to expanded emotional knowledge and competency in children (McElwain et al., 2007). However, research on emotional outcomes has focused primarily on infancy through middle childhood, with little attention on the process of emotional development in adolescence and into adulthood (Stocker et al., 2007). Few studies examine the differences in family structure that might result in different predicted outcomes of emotional abilities (e.g., Afzal & Afzal, 2016; Carlson & Corcoran, 2001). The developmental literature has consistently demonstrated that emotional abilities can be taught and learned (e.g., Denham et al., 2014; Eisenberg et al., 1998; Kotsou et al., 2011; Nelis et al., 2011) and an understanding of additional factors in development would be beneficial to increasing emotional intelligence and social competence.

Currently, a gap exists within the modern body of literature regarding the influence of family structure on the importance of the caregiver-child subsystems in developing EI. Studies regarding how children learn and develop EI typically assess a dual-parent household and while these studies provide a backbone for our knowledge of child development, they generalize the process of emotional development across all family systems (e.g., Alegre, 2011; Costa et al., 2018; Stocker et al., 2007). Furthermore, a substantially larger body of literature exists examining the outcomes of EI in single-mother homes compared to children raised in single-father homes (e.g., Clarke-Stewart et al., 2000; Coles, 2015; MacKinnon, Brody, & Stoneman, 1982). Recent estimates indicate that approximately 23.7% of children in the United States reside in mother-only households with only 4.1% of children living in single-father homes (Coles, 2015; Garasky & Meyer, 1996; U. S. Census Bureau, 2013). While the number of children in father-only homes represents a small portion of the population, research indicates that fathers make a unique and significant contribution to the emotional development of children (Dunsmore et al., 2009). Additionally, divorce and custody laws have undergone change in recent years allowing for more equal treatment of spouses and parents and thus have facilitated more paternal custody of children (Coles, 2009; Hamer & Marchioro, 2002; Pearson, Munson, & Thoennes, 1982). Compared to previous trends in single-parenting, a greater percentage of single fathers now attain their role following non-marital births (Child Trends Databank, 2013). With the current trends and the changing nature of household structure, the current body of research would benefit by increased study of the emotional and social development and outcomes of children raised by single fathers as they progress through childhood, adolescence, and adulthood.

The purpose of the current study is to explore the emotional outcomes of adult children raised in different family structures. The current study compares levels of EI in adults raised in dual-parent and single-parent homes in order to answer the following research questions:

*RQ1. How does EI differ in adults based on the family structure in which they were raised?* Emotional competence is continually influenced by the family subsystem in which a child is raised (Lopes et al., 2004). Research indicates that children from dual-parent households tend to demonstrate increased levels of social functioning than those raised in single-parent families (Clarke-Stewart et al., 2000). Therefore, I hypothesized that when comparing levels of emotional abilities, individuals raised in dual-parent families will have significantly higher levels of emotional intelligence than individuals raised in single-parent families.

*RQ2. How do adults raised in mother-only homes compare in levels of EI compared to those raised in father-only homes?* The context of social learning differs in a family consisting of a mother-child or father-child dyad. Gender differences could exist in how parents socialize emotions and may result in outcome-differences in children, yet literature also indicates that both parents make a unique contribution to the development of emotional abilities (Dunsmore et al., 2009). Because of this, I hypothesized that when comparing adults raised by single parents, those raised in mother-only homes will not have significantly different levels of global emotional intelligence compared to adults raised in father-only homes.

*RQ3. How does family structure moderate the relationship between EI and subjective happiness and/or perceived quality of relationships?* Emotional abilities are a component of social functioning and allow individuals to establish friendships and maintain relationships with others (Denham et al., 2003; Eisenberg et al., 2000; Savage, 2002). When an individual appropriately interacts in a social environment, their perception of relationship is enhanced

(Damasio, 1994; Gross, 1998; Keltner & Kring, 1998). While family structure may influence EI, I hypothesized that EI would predict outcomes on measures of subjective happiness and perceived quality of interpersonal relationships regardless of family structure. That is, an increased EI would relate to increased subjective happiness and higher perceived quality of relationships.



## CHAPTER II

### METHODOLOGY

#### **Power Analysis**

A power analysis was run to calculate the sample size needed to compare individuals in multiple family structures using *t*-tests and ANOVAs to detect a moderate effect size with a power of .80 and a significance level of 0.05. Results of the power analysis indicated that in order to compare individuals raised by dual-parents and single-parents using a *t*-test, a sample of 276 individuals would be required. To compare individuals raised in three family structures (dual-parent, mother-only, father-only) using a one-way ANOVA, 162 individuals would be required to achieve the desired power and effect parameters.

#### **Participants**

The current study included 475 participants (74.5% female). Participants include adults between the ages of 18 and 28 ( $M_{\text{age}} = 22.23$  years,  $SD = 3.2$ ). The SONA participant management system was used to recruit participants from all family types (170 participants from single-mother homes, 54 participants from single-father homes, and 237 participants from dual parent). In order to recruit participants from the limited population of adults raised by single-fathers, Amazon's MTurk platform supplemented participant acquisition. While qualitatively different, MTurk allows access to a large enough population to obtain the desired sample. SONA participants were compensated through course extra credit and participants obtained through

Amazon's MTurk Prime service were compensated between \$0.60 and \$0.90 for their participation in the study. In order to reduce qualitative differences, MTurk participants were restricted to English-speaking adults, age 18-25, living within the United States.

## **Measures**

Measures used for this study include a demographic questionnaire including items regarding age, ethnicity, and education (see Appendix B), as well as measures of subjective happiness (Subjective Happiness Scale, SHS; Lyubomirsky & Lepper, 1999), perceived interpersonal relationships (Quality of Interpersonal Relationships, QIR; Senecal, Vallerand, & Vallieres, 1992), trait EI using the Trait Emotional Intelligence Questionnaire (Trait Emotional Intelligence Questionnaire- Short Form, TEIQue-SF; Petrides, 2009), and EC via the Profile of Emotional Competence (PEC; Brasseur et al., 2013).

### **Family Structure**

Family structure was determined by a multiple-choice question in which participants reported the family structure in which they were primarily raised. Options were limited to “raised by both parents”, “raised by a single-mother”, “raised by a single-father”, or “Other.” In cases where individuals were raised in a single parent home, participants were asked to consider the caretaker who had primary custody—that is, the guardian with whom the individual lived at least 60% of the time (U. S. Department of Justice, 2001). In order to investigate any qualitative differences that might occur between family structures, participants were asked with whom they lived during stages in their childhood (e.g., birth to five years, elementary school, middle school, and high school).

### Subjective Happiness Scale

Happiness was assessed via the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999). The measure includes four items scored on a 7-point Likert scale, and has been designed to assess whether an individual is a generally happy or unhappy person (e.g., “compared to my peers, I consider myself... 1-*less happy* to 7-*more happy*”). The SHS has high internally consistency (alpha values ranged from 0.79 to 0.94). Additionally, no significant age or sex differences have been observed for the SHS (Lyubomirsky & Lepper, 1999).

### Quality of Interpersonal Relationships Scale

Perceived quality of relationships was assessed using the Quality of Interpersonal Relationships Scale (EQRI; Senecal et al., 1992). The current study utilized a short adaption, which measures the quality of relationships with close relatives and includes four items on a 7-point Likert scale (e.g., “How accurately does this describe you: I have experienced many warm and trusting relationships with others.”). The internal consistency of this measure was  $\alpha = 0.81$ .

### Trait Emotional Intelligence Questionnaire- Short Form

Trait emotional intelligence was evaluated using the Trait Emotional Intelligence Questionnaire- Short Form (TEIQue-SF; Petrides, 2009), which is a self-report questionnaire that is designed to assess the trait EI (Petrides & Furnham, 2001). This measure is based on psychological theory integrating EI and social functioning outcomes (See Appendix B for the entire TEIQue-SF). Studies have demonstrated the ability of the TEIQue-SF to predict social functioning outcomes significantly better than similar self-report emotional intelligence questionnaires (e.g., Freudenthaler, Neubauer, Gabler, Scherl, & Rindermann, 2008; Gardner &

Qualter, 2010). The TEIQue-SF comprises 30 items designed to measure global trait emotional intelligence. Example items include “I usually find it difficult to regulate my emotions” and “I’m usually able to influence the way other people feel” (Petrides, 2009). These items are rated using a 7-point Likert scale (1= *Completely Disagree*, 7=*Completely Agree*). A global EI score was calculated by averaging scores all item (Petrides, 2009). The TEIQue-SF demonstrates excellent internal consistency ( $\alpha = 0.90$ ).

### Profile of Emotional Competence

Global emotional competence was assessed using the Profile of Emotional Competence (PEC; Brasseur et al., 2013). The PEC was developed to comprehensively detail the emotional competence profile of an individual and assess the theoretical dimensions of competence in order to determine effective intervention goals (Brasseur et al., 2013). The PEC comprises 50 items covering the dimensions of emotional competences: identifying (i.e., the ability to perceive and identify expressed emotions in others), expressing (i.e., the ability to express emotions in a socially acceptable way), understanding (i.e., the ability to understand the causes and consequences of emotions), regulating (i.e., the ability to modulate emotions in context), and using (i.e., the ability to use emotions to improve decisions and actions). The items on the PEC are measured on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items for each subscale are averaged to produce a subscale score and a global score is obtained by calculating the average of the subscale scores. Internal consistency of the subscales ranged from good to excellent ( $\alpha$ 's = .62 – .77) and the global score demonstrated excellent reliability ( $\alpha = .92$ ). The global PEC score is highly correlated with the TEIQue-SF, indicating evidence of convergent validity between the two measures (Brasseur et al., 2013). It should be noted,

however, that despite this similarity, the TEIQue-SF and PEC measure separate facets of emotional abilities and thus are both used in the current study.

## **Procedure**

Participants were provided an informed consent document to review and endorse electronically, after which they completed the demographic questionnaire. Upon completion of the demographic portion, two measures were administered: the TEIQue-SF (Petrides, 2009) and the PEC (Brasseur et al., 2013). The order in which these measures were administered was randomized to guard against order effects. Participants recruited via SONA were compensated for their participation with extra credit in participating courses per UTC SONA policy and subjects obtained through MTurk were compensated between sixty and ninety cents. Altogether, the questionnaires required approximately 15 minutes to complete.

## CHAPTER III

### RESULTS

Table 1 shows a summary of demographic information from the sample. Before conducting additional analyses, correlations were calculated among variables.

Table 1 Demographic characteristics of sample gender, race, marital status, employment, and educational attainment

Factor	Total Sample	Family Structure		
		Dual Parent	Single Mother	Single Father
<b>Gender</b>				
<i>N</i>	475	237	170	54
% Female	74.5	79.7	72.9	51.9
<b>Race</b>				
% Caucasian or White	67.4	76.8	54.1	61.1
% Black or African American	12.4	9.7	18.2	7.4
% Asian	6.1	4.2	8.2	9.3
% Hispanic or Latino	5.1	3.8	5.9	9.3
% American Indian or Alaskan Native	1.3	0.8	1.2	3.7
<b>Marital Status</b>				
% Single or never married	80.4	84	80.6	61.1
% Married	16.8	15.2	15.9	29.6
% Divorced	1.5	0.4	2.4	3.7
<b>Employment</b>				
% Employed, full-time	27.4	18.6	35.9	46.3
% Employed, part-time	45.5	51.5	40	35.2
% Unemployed, looking for work	12.2	12.2	14.1	7.4
% Not employed, not looking for work	13.3	17.3	7.1	7.4
<b>Education</b>				
% High school or equivalent (e.g., GED)	36	43.5	29.4	22.2
% Some college/Two-year degree	36.2	35	38.8	27.8
% Bachelor's degree	19.8	12.7	25.3	38.9
% Graduate degree	7.8	8.9	5.9	11.1

## Correlations Between Key Variables

Significant positive correlations exist between all measures and can be found in Table 2. Trait EI was positively correlated with EC ( $r = .41, p < .01$ ), subjective happiness ( $r = .72, p < .01$ ), and perceived quality of relationships ( $r = .52, p < .01$ ). Additionally, EC was positively correlated with subjective happiness ( $r = .45, p < .01$ ) and perceived quality of relationships ( $r = .49, p < .01$ ). Finally, subjective happiness was positively correlated with perceived quality of relationships ( $r = .41, p < .01$ ). Notably, significant gender differences were not found in this sample relating to EI ( $t(467) = -.64, p > .01$ ), EC ( $t(467) = -2.52, p > .01$ ), subjective happiness ( $t(467) = -1.65, p > .01$ ), or perceived quality of relationships ( $t(467) = -2.03, p > .01$ ).

Table 2 Descriptive statistics and correlations between key variables

	Mean ( <i>SD</i> )	1	2	3	4
1. SHS	17.43 (5.37)	1	.41**	.64**	.45**
2. QIR	7.11 (7.72)		1	.52**	.49**
3. TEIQue-SF	134.35 (27.54)			1	.72**
4. PEC	3.36 (.53)				1

*Note:* \*\*  $p < .01$ ; SHS = Subjective Happiness Scale; QIR = Quality of Interpersonal Relationships; TEIQue-SF = Trait Emotional Intelligence Questionnaire-Short Form; PEC = Profile of Emotional Competence

## Comparison of Dual-Parent and Single-Parent Households

To examine the emotional abilities of adults raised in different family structures (i.e., dual-parent vs. single-parent households), differences in levels of global EI were compared using an independent samples *t*-test. Scores from the PEC were significantly higher for individuals raised in a dual-parent home ( $M = 139.13, SD = 25.09$ ) than for individuals raised by a single

parent ( $M = 129.04$ ,  $SD = 29.06$ ),  $t(459) = 3.996$ ,  $p < 0.01$ ,  $d = 0.37$ . Global EI scores on the TEIQue-SF were also significantly higher for adults raised in dual-parent homes ( $M = 3.42$ ,  $SD = 0.49$ ) than for adults raised in single parent homes ( $M = 3.29$ ,  $SD = 0.58$ ),  $t(549) = 2.772$ ,  $p < 0.01$ ,  $d = 0.26$ .

### **Effect of Specific Family Structure on EI**

To examine the effect of specific family structure (dual parent, mother-only, father-only) on levels of EI, a one-way ANOVA was performed to compare mean differences in emotional competence (as measured by PEC) and trait emotional intelligence (as measured by TEIQue-SF). A significant difference in EC was found between family structures ( $F(3, 471) = 5.49$ ,  $p < 0.01$ ). A Bonferroni *post hoc* analysis determined that levels of EC were significantly higher in adults raised in dual parent homes compared to adults raised single father homes ( $p = .02$ ). There was not a significant difference in emotional competence between a dual parent and a mother-only family structure. Additionally, there was not a significant difference in EC between adults raised in mother-only and father-only family structures ( $p = .24$  and  $p = .94$ , respectively).

When comparing EI, a smaller, yet still significant, difference was found between family structures ( $F(3, 471) = 3.27$ ,  $p = 0.02$ ). Bonferonni *post hoc* analysis further clarified these differences, with individuals raised by two parents having higher EI than individuals raised by a mother only ( $p < .01$ ) and by a father only ( $p = .03$ ). No significant differences were found in EI based on parent gender in single-parent households ( $p > .1$ ).



## EI as a Predictor of SHS and QIR

The current study found EI to be a predictor of subjective happiness (SHS) ( $\beta = .06, p < .01$ ), as well as perceived quality of relationships (QIR) ( $\beta = .53, p < .01$ ). Moreover, these predictors accounted for 40% and 26% of the total variance in the models, respectively. To evaluate whether family structure moderated the relation between EI and both SHS and QIR, respectively, the PROCESS macro (Model 1: simple moderation) for SPSS was utilized (Hayes, 2013). The PROCESS macro is beneficial in that it provides bootstrapped confidence intervals of estimates. Results of the moderation analyses revealed that there was a significant interaction effect between EI and subjective happiness by family structure ( $\beta = -0.04, p < .05$ ). Additionally, there was a significant interaction effect between EI and quality of interpersonal relationships ( $\beta = .06, p = .05$ ) by family structure. When examining variance explained when accounting for the above moderated effects,  $\Delta R^2 = .01$  ( $p < .01$ ) and  $.01$  ( $p = .05$ ), respectively. Additionally, family structure was examined as a moderator of the relation between EI and perceived quality of relationships, with the interaction term between family structure and EI explaining a significant increase in variance in perceived quality of interpersonal relationships,  $\Delta R^2 = .29, (F(3, 457) = 60.73, p < .01)$ . Simple slopes depicting the equations representing the different family structures (dual- vs single-parent) can be found in Figures 1 and 2.

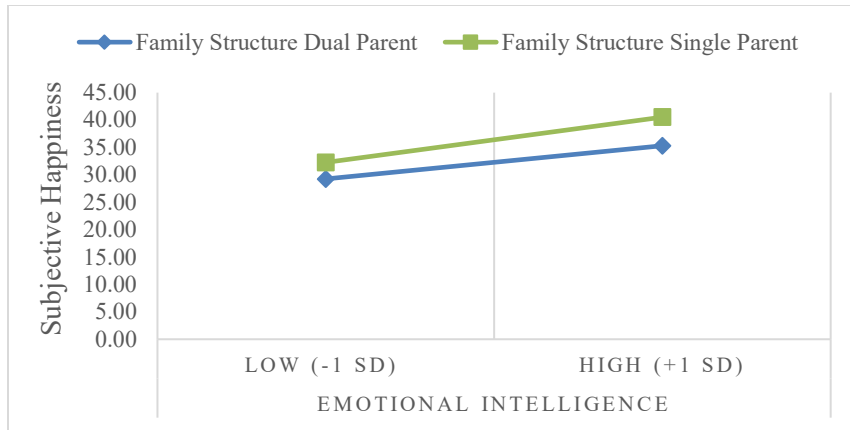


Figure 1 Simple slopes mapping of the interaction between emotional intelligence and SH by family structure

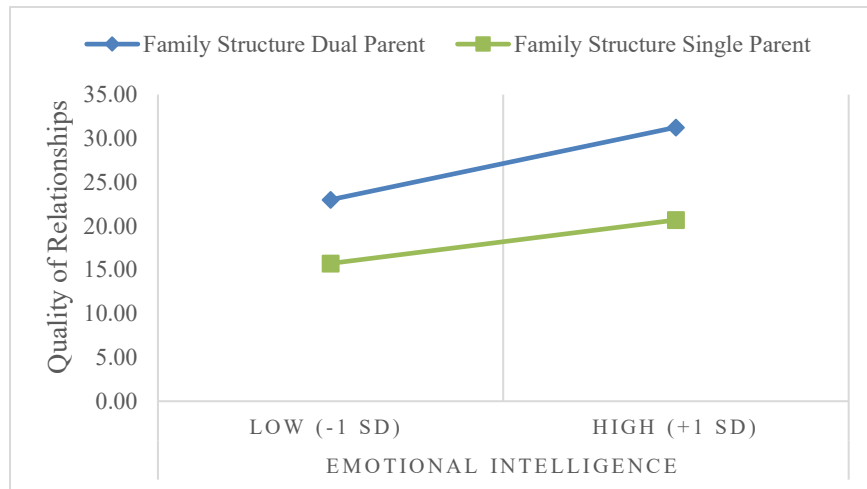


Figure 2 Simple slopes mapping of the interaction between emotional intelligence and QIR by family structure

## CHAPTER IV

### DISCUSSION

Numerous studies note higher levels of EI as a predictor of positive outcomes in life such as academic and career success, improved health and overall well-being, and increased success in social relationships (e.g., Brackett et al., 2005; Denham et al., 2003; Mavroveli et al., 2007; Petrides et al., 2016). While studies have explored the mechanisms through which EI is developed in children (e.g., Eisenberg et al., 1998; Morris et al., 2007), the aim of the current study was to explore how EI might differ based on the family structure in which an adult was raised for the majority of their childhood. Participants responded to self-report questionnaires assessing EI, EC, perceived quality of relationships, and subjective happiness.

*RQ1. How does emotional intelligence differ in adults based on the family structure in which they were raised?* Based on research indicating that adults raised in single-parent homes exhibited lower EI than those having been raised in dual-parent homes (e.g., (Clarke-Stewart et al., 2000), it was hypothesized that when comparing levels of emotional abilities, individuals raised in dual-parent homes would have significantly higher levels of EI. Consistent with previous research, EI differed significantly between adults raised in dual- and single-parent households, with adults raised in dual-parent households having higher levels of EI.

The reciprocal and interactive relationship between parents and children allow children to develop emotion schemas that inform emotional abilities and increase EI (Broderick, 1993; Reiss, 1981). Children are constantly incorporating the emotional information gleaned from

others into their own emotional knowledge and behavior (Denham et al., 2014). In dual-parent families, between-parent differences in emotional expressiveness may contribute to more complete emotional schemas and support a deeper understanding of emotions and how to express them (Dunsmore & Halberstadt, 1997). In line with the divergent model of parental emotion responsiveness (i.e., when two parents react in different ways to their child's expression of emotion), experiencing multiple reactions to emotions may contribute to EI outcomes in adulthood (McElwain et al., 2007). Individuals raised with one parent—and thus only one source of emotional information contributing to their own understanding, expression, and reactivity—are perhaps limited in their exposure to emotional information and might be restricted in their own development of emotional abilities and EI.

While household income was not addressed in this study, another potential explanation for differences in EI between adults raised in dual-parent homes and adults raised in single parent homes could include structural and socioeconomic variables such as parental employment, financial status, and access to resources. EI outcomes experienced by adults raised by single parents are often cited as a result of the absence of a parent, when it could be more attributable to lower levels of income, inconsistent discipline and emotional communication (Demuth & Brown, 2004). Parents who are limited in resources might be more tense and pass less emotionally positive and less well-regulated emotional knowledge to their children. This in turn may create more negative reciprocity during adolescence, and less opportunity to practice and develop deeper emotional understanding into adulthood (Denham et al., 2014). While dual parent households typically have more economic resources, they may also have the benefit of two individual emotional schemas that impact the development of a child's EI. Parents are pivotal in the development of emotional knowledge and competencies and these early emotional abilities

provide the bedrock for further, and future, EI and EC capacities across the lifespan (Denham et al., 2014).

*RQ2. How do adults raised in mother-only homes compare in levels of emotional intelligence compared to those raised in father-only homes?* Emotional learning occurs differently based on both parent gender and child gender (e.g., Eisenberg et al., 1996). Parents react to their children's emotions in different ways, and these differences allow children to develop complex emotional schemas (McElwain et al., 2007). However, while the context of social learning may differ in families consisting of a mother-child or father-child dyad, it was hypothesized that adults raised by single mothers would have comparable levels of EI to adults raised by single fathers. Mothers and fathers make unique contributions to the development of emotional abilities (Dunsmore et al., 2009) and findings for fathers' contributions have been limited and counterintuitive—that is, that father-child emotional conversations are perhaps more cognitively challenging and provide increased opportunity to gain emotional knowledge (Gleason, 1975). While single mothers may initially have higher EI based on gender differences (Brasseur et al., 2013), emotionally supportive fathers might ask more questions about causes of emotions and the consequence thereof, compensating for lower levels of EI (McElwain et al., 2007). During elementary, middle, and high school, aspects of emotion knowledge are predicted by parental emotion socialization. For example, adolescents with greater skill in recognizing emotions have been found to have fathers that demonstrate clear expressions of emotion (Denham et al., 2014). Parental discussion of emotion with their children is associated with emotion knowledge—in particular, mothers' explanations of emotions is useful in promoting emotion knowledge. Moreover, verbal support of emotions promotes more adaptive emotion regulation during conversations (Morelen & Suveg, 2012). The gender of parents has also been

associated with differences in emotion socialization, with mothers and fathers reacting differently to varying emotions (Klimes-Dougan et al., 2007), and these reactions may also depend on the gender of the child. However, consistent with literature, the contributions of both parents are valuable to the development of EI, in both dual-parent and single parent households (Dunsmore et al., 2009).

*RQ3. How does family structure moderate the relationship between EI and subjective happiness and/or perceived quality of relationships?* It was hypothesized that increased levels of subjective happiness and perceived quality of interpersonal relationships would reflect higher levels of EI, regardless of family structure. In childhood, emotional and social competencies were associated with how emotions are understood, which has implications for successful navigation of social interactions with peers (Denham et al., 2003; Halberstadt, Denham, & Dunsmore, 2001; Hubbard & Coie, 1994; Saarni, 1999). When an individual appropriately interacts in a social environment, they are able to experience improved relationships (Damasio, 1994; Gross, 1998; Keltner & Kring, 1998). Higher EI allows individuals to perceive, understand, and moderate their emotions and build friendships and experience greater subjective happiness (Brasseur et al., 2013). Initial correlation analyses demonstrated that the EI was correlated positively with subjective happiness and perceived quality of relationships, consistent with previous research. While this correlation is seen in adults raised in dual-parent and single parent households, family structure was found to be a moderator of this relationship. Increases in EI were related to a larger increase in both subjective happiness and perceived quality of interpersonal relationship in dual parent households. While EI of individuals raised in single parent households was found to be a predictor of subjective happiness and perceived quality of relationships, the degree of the increase in happiness and relationship quality was diminished.

This indicates that increasing EI in adolescents and young adult may be able to encourage other positive EI outcomes between adults from different family structures.

### **Limitations**

In the current study, only self-reported measures were used. Self-reports, especially when related to EI are prone to social desirability bias. Individuals with high EI might overestimate other's EI and underestimate their own, and those with lower EI may lack the metacognitive skills to accurately report on their own emotional abilities (Brasseur et al., 2013). Another limitation presented by the current study is the quantitative and qualitative operationalization of the definition of family structure. The terms designating single fathers vary, as do what qualifies a family structure as father-only households (Coles, 2015). Additionally, while the current study did not find significant gender differences in EI of participants, it would likely be beneficial to have an idea of the EI of the participants' parents.

### **Future Directions**

Consistent with extant research, the current study found adults raised by two parents had higher levels of EI than adults raised by a single parent. Some investigators have recommended that this discrepancy could be more related to family income, educational attainment, child-rearing beliefs, depressive symptoms, and parenting behavior, rather than the specific family structure in which the individual was raised (Clarke-Stewart et al., 2000). Traditionally, these have been limiting factors specifically for single mothers, given that the majority of single parents have been historically mothers (Coles, 2015). However, laws governing divorce and custody are continually changing in ways that facilitate more father custody and support parents

more equally (Coles, 2009; Hamer & Marchioro, 2002; Pearson et al., 1982). Future studies could investigate family process, such as how parents interact and socialize emotional knowledge, rather than family structure. Outcomes are best when parents have more education, adequate incomes, and are enabled to provide stimulation and support (Clarke-Stewart et al., 2000).

The circumstances surrounding the single parent family structure vary greatly (e.g., Weinraub, Horvath, & Gringlas, 2002). The divergent model may apply to single-parent households that include additional parental figures, such as grandparents or non-married parents (McElwain et al., 2007). Future directions may include investigation on family structures and EI development in contexts where emotional socialization occurs with adults outside of the nuclear family, such as teachers, daycare providers, or extended family members.

### **Policy and Practice Implications**

Emotional intelligence and social functioning are a result of the interaction between a child and their interdependent family system. These abilities are modeled, expressed, and encouraged by the caregiver in order to develop socially appropriate emotional expression. Studies have shown that it is possible to develop one's emotional abilities, even as an adult, and doing enables an individual to experience increased happiness and relationship satisfaction (Kotsou et al., 2011; Nelis et al., 2011). However, because EI is not universally indicative of outcomes, researchers could examine the individual dimensions of an individual's emotional knowledge and better understand how EI contributes to individual outcomes. At the clinical level, utilizing a family-systems approach to intervention, resource-building, and help-giving practices can increase parental self-efficacy beliefs and well-being which in turn could improve



parent-child interactions and child development (Trivette et al., 2010). Family-systems intervention practices help put in place the resources and supports that ensure parents have the time and energy to interact with their children in ways that provide them developmentally-enhancing experiences and opportunities which promote social and emotional learning and expression.

Although research indicates single fathers often have sufficient financial resources (Coles, 2015), many could benefit from social services and community support. Based on the current study, emotional abilities of adults raised in single-father households are comparable to adults raised by single mothers. Policies and programs could be put in place to enable both parents to parent cooperatively and foster emotional understanding in their children.

## **Conclusion**

The current study investigated how family structure relates to differences in EI. Results from this study are in line with previous findings that dual-parent households are related to higher levels of EI compared to single-parent households. However, no significant difference was found in EI of adults raised single mothers compared to single fathers. These findings are also consistent with extant research in demonstrating the relationship between higher EI and increased subjective happiness and perceived quality of relationships. The current study added to this in finding family structure to have a moderating effect on the relationship of EI and subjective happiness and the relationship of EI and perceived quality of relationship. By comparing specific family structures and including mother-only and father-only structures, more information can contribute to the overall understanding of factors that influence EI and the development thereof.

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APPENDIX A  
IRB NOTICE OF EXEMPTION

**Institutional Review Board**

Dept 4915  
615 McCallie Avenue  
Chattanooga, TN 37403  
Phone: (423) 425-5867  
Fax: (423) 425-4052  
instrb@utc.edu  
<http://www.utc.edu/irb>

TO: Mary Sloan **IRB # 19-114**  
Melissa Matera, Dr. David Ferrier

FROM: Lindsay Pardue, Director of Research Integrity  
Dr. Amy Doolittle, IRB Committee Chair

DATE: 9/12/2019

SUBJECT: IRB #19-114: Emotional Competence of Adult Children Raised in Single-Father Households

Thank you for submitting your application for exemption to The University of Tennessee at Chattanooga Institutional Review Board. Your proposal was evaluated in light of the federal regulations that govern the protection of human subjects.

Specifically, 45 CFR 46.104(d) identifies studies that are exempt from IRB oversight. The UTC IRB Chairperson or his/her designee has determined that your proposed project falls within the category described in the following subsection of this policy:

**46.104(d)(2)(i):** Research only includes educational tests, surveys, interviews, public observation and recorded information cannot readily identify the subject (directly or indirectly/linked)

Even though your project is exempt from further IRB review, the research must be conducted according to the proposal submitted to the UTC IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an Application for Changes, Annual Review, or Project Termination/Completion form to the UTC IRB. Please be aware that changes to the research protocol may prevent the research from qualifying for exempt review and require submission of a new IRB application or other materials to the UTC IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the UTC IRB as soon as possible. Once notified, we will ask for a complete explanation of the event and your response. Other actions also may be required depending on the nature of the event.

The University of Tennessee at Chattanooga is a comprehensive, community-engaged campus of the University of Tennessee System. 

APPENDIX B  
DEMOGRAPHIC INFORMATION

<i>Demographic Information</i>	
Item	Response Options
1. What is your age?	18, 19, 20, 21, 22, 23, 24, 25
2. What is your race/ethnicity?	American Indian or Alaskan Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, White, Other, Prefer not to say
3. How would you identify your sexual orientation?	Heterosexual, Gay, Lesbian, Bisexual, Asexual, Other, Prefer not to say
4. With which gender do you identify?	Male, Female, Non-Binary, Other, Prefer not to say
5. What is your current marital status?	Married, Widowed, Divorced, Separated, Never married, Prefer not to say
6. What level of education have you completed?	High school degree or equivalent (e.g., GED), Some college but no degree, Bachelor's degree, Graduate degree, Prefer not to say
7. Which of the following categories best describes your employment?	Employed, working 1-39 hours per week; Employed, working 40 or more hours per week; Not employed, looking for work; Not employed, NOT looking for work; Disabled, Not able to work
8. In which U.S. State do you currently reside?	
9. In which U.S. State did you primarily grow up?	
10. Do you, your biological mother, or biological father have a history of any of the following?	ADHD, ASD, Anxiety, Depression, Schizophrenia, Severe Head Injury
11. Growing up, were you raised primarily by your:	Both parents, Mother only, Father only, Other
Questions 12-15 will ask participants to place their time spent with parents on a slider with 'Mother' and 'Father' anchored on opposite ends representing 100% of time with either, and an anchor at 25%, 50% (mother and father equally), and 75%.	
12. During early childhood (birth to age 5), how much time would you say you lived with each parent?	Mother (0%-100%), Father (0%-100%), Both parents equally, Other
13. During elementary school, how much time would you say you lived with each parent?	Mother (0%-100%), Father (0%-100%), Both parents equally, Other
14. During middle school, how much time would you say you lived with each parent?	Mother (0%-100%), Father (0%-100%), Both parents equally, Other
15. During high school, how much time would you say you lived with each parent?	Mother (0%-100%), Father (0%-100%), Both parents equally, Other

APPENDIX C  
SUBJECTIVE HAPPINESS SCALE



*Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999)*

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Item

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1. In general, I consider myself: 1-not a very happy person, 2, 3, 4, 5, 6, 7-a very happy person
2. Compared with most of my peers, I consider myself: 1-less happy, 2, 3, 4, 5, 6, 7-more happy
3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you: 1-not at all, 2, 3, 4, 5, 6, 7-a great deal
4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you: 1-not at all, 2, 3, 4, 5, 6, 7-a great deal

$\alpha = .80$

APPENDIX D  
QUALITY OF RELATIONSHIPS INVENTORY

*Quality of Relationships Inventory (EQRI; Senecal, Vallerand, & Vallieres, 1992)*

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Item

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1. How accurately does this describe you (1-*not at all* to 5-*completely like me*):  
I often feel lonely because I have few close friends with whom to share my concerns.
  2. How accurately does this describe you (1-*not at all* to 5-*completely like me*):  
I find it difficult to really open up when I talk with others.
  3. How accurately does this describe you (1-*not at all* to 5-*completely like me*):  
It seems to me that most other people have more friends than I do.
  4. How accurately does this describe you (1-*not at all* to 5-*completely like me*):  
I know that I can trust my friends, and they know they can trust me.
  5. How accurately does this describe you (1-*not at all* to 5-*completely like me*):  
I don't have many people who want to listen when I need to talk.
  6. How accurately does this describe you (1-*not at all* to 5-*completely like me*):  
I have not experienced many warm and trusting relationships with others.
- 

$\alpha = .80$

APPENDIX E

TRAIT EMOTIONAL INTELLIGENCE QUESTIONNAIRE- SHORT FORM

*Trait Emotional Intelligence Questionnaire- Short Form*

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Items

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1. Expressing my emotions with words is not a problem for me.
  2. On the whole, I'm a highly motivated person.
  3. I generally don't find life enjoyable.
  4. I tend to change my mind frequently.
  5. I feel that I have a number of good qualities.
  6. I'm usually able to influence the way other people feel.
  7. Those close to me often complain that I don't treat them right.
  8. On the whole, I'm able to deal with stress.
  9. I'm normally able to "get into someone's shoes" and experience their emotions.
  10. I'm usually able to find ways to control my emotions when I want to.
  11. I would describe myself as a good negotiator.
  12. I often pause and think about my feelings.
  13. I tend to "back down" even if I know I'm right.
  14. I generally believe that things will work out fine in my life.
  15. Generally, I'm able to adapt to new environments.
  16. I often find it difficult to see things from another person's viewpoint.
  17. I usually find it difficult to regulate my emotions.
  18. I can deal effectively with people.
  19. Many times, I can't figure out what emotion I'm feeling.
  20. I often find it difficult to stand up for my rights.
  21. On the whole, I have a gloomy perspective on most things.
  22. I often find it difficult to adjust my life according to the circumstances.
  23. I often find it difficult to show my affection to those close to me.
  24. I normally find it difficult to keep myself motivated.
  25. On the whole, I'm pleased with my life.
  26. I tend to get involved in things I later wish I could get out of.
  27. I believe I'm full of personal strengths.
  28. I don't seem to have any power at all over other people's feelings.
  29. I find it difficult to bond well even with those close to me.
  30. Others admire me for being relaxed.
- 

$\alpha = .74$

APPENDIX F  
PROFILE OF EMOTIONAL COMPETENCE

*Profile of Emotion Competence*

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Items

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1. As my emotions arise, I don't understand where they come from.
2. I know what to do to win people over to my cause.
3. I can tell whether a person is angry, sad, or happy even if they don't talk to me.
4. When I am feeling low, I easily make a link between my feelings and a situation that affected me.
5. I can easily explain the emotional responses of the people around me.
6. When I am touched by something, I immediately know what I feel.
7. When I see someone who is stressed or anxious, I can easily calm them down.
8. I try to learn from difficult situations or emotions.
9. I find it difficult to explain my feelings to others even if I want to.
10. I find it difficult to listen to people who are complaining.
11. I feel uncomfortable if people tell me about their problems, so I try to avoid it.
12. I find it difficult to establish a link between a person's response and their personal circumstances.
13. I find it difficult to handle my emotions.
14. I am often surprised by people's responses because I was not aware they were in a bad mood.
15. When I am sad, I often don't know why.
16. I feel uneasy when other people tell me about something that is difficult for them.
17. When I am feeling low, I find it difficult to know exactly what kind of emotion it is I am feeling.
18. I don't always understand why I respond in the way I do.
19. I am often at a loss to understand other people's emotional responses.
20. I am good at describing my feelings.
21. I can easily get what I want from others.
22. Most of the time I understand why people feel the way they do.
23. If I dislike something, I manage to say so in a calm manner.
24. During an argument, I do not know whether I am angry or sad.
25. Other people tend to confide in me about personal issues.
26. I don't always understand why I am stressed.
27. I often take the wrong attitude with people because I am not aware of their emotional state.
28. I know what to do to motivate people.
29. I am usually able to influence the way other people feel.
30. The people around me tell me I don't express my feelings openly.
31. My feelings help me to focus on what is important to me.
32. Quite often I am not aware of people's emotional state.
33. When I am confronted with an angry person, I can easily calm them down.
34. In a stressful situation, I usually think in a way that helps me stay calm.
35. If I wanted, I could easily influence other people's emotions to achieve what I want.
36. When I feel good, I can easily tell whether it is due to being proud of myself, happy, or relaxed.

37. I never base my personal life choices on my emotions.
  38. I easily manage to calm myself down after a difficult experience.
  39. When I am sad, I find it easy to cheer myself up.
  40. I do not understand why the people around me respond the way they do.
  41. I used my feeling to improve my choices in life.
  42. My emotions inform me about changes I should make in my life.
  43. If someone came to me in tears, I would not know what to do.
  44. I am good at sensing what others are feeling.
  45. I am good at lifting other people's spirits.
  46. If I wanted, I could easily make someone feel uneasy.
  47. When I am angry, I find it easy to calm myself down.
  48. Others don't accept the way I express my emotions.
  49. Other people tell me I make a good confidant.
  50. I am aware of my emotions as soon as they arise.
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## VITA

Mary Delinda Sloan was born in Dalton, GA. She's an only child and attended Whitfield County schools where she was active in numerous band programs and 4-H. After high school, Mary studied Psychology at Georgia State University in Atlanta, GA. As an undergraduate, Mary worked under the direction of Dr. Diana Robins investigating the early detection of autism in toddlers. She graduated in December 2009 with a Bachelor of Arts in Psychology, minoring in Anthropology. After growing her family, Mary pursued her desire of continuing her education at the University of Tennessee at Chattanooga in the Research Psychology Program, under the mentorship of Dr. David Ferrier. Mary graduated with a Master of Science degree in Psychology in May 2020.