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**AN EXAMINATION OF RELATIONSHIP EXPERIENCES IN RELATION TO
LONELINESS AND DEPRESSIVE SYMPTOMATOLOGY IN EMERGING
ADULTHOOD**

by

STEPHANIE J.M. BERNARDON

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

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MAJOR: EDUCATIONAL PSYCHOLOGY

Approved by:

Advisor

Date

DEDICATION

To my grandpa, George Samyn (Sept. 8, 1931 - Apr. 16, 2012), You were there through it all – Grade School Graduation, High School Graduation, Bachelor of Arts Honours Graduation (I'm so grateful for and will always remember our fun drives to the university music building on "Good Old Sunset" as you called it, our McDonald's lunches, our Dollarama trips and Red Lobster dates), and Masters of Arts Graduation. And now only a mere eight months short of seeing me at my Ph.D. Graduation. I know you were always looking forward to that and you would be so proud of me today. But I know you are always with me in my heart. And so I dedicate this dissertation to you – You were always so meticulous, perfectionistic, resilient, positive, and determined in all of your work and even in all of your suffering – all of the skills and traits one requires to complete a dissertation. Thanks for passing them on to me and so much more. Love Always, "Your Tenant."



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CHAPTER 1

**AN EXAMINATION OF RELATIONSHIP EXPERIENCES IN RELATION TO
LONELINESS AND DEPRESSIVE SYMPTOMATOLOGY IN EMERGING
ADULTHOOD**

Introduction

Emerging adulthood is best described as the time between 18 to 25 years whereby most people have left the adolescence period but have not yet established their adult roles (Arnett, 2000). Individuals in their late teens and early twenties explore the possibilities available to them in their interpersonal relationships and move gradually towards establishing life long commitments. This period is both an exciting and anxious time whereby individuals have the freedom to explore different options yet many lack knowledge of where their explorations will lead. Consequently, this period is often marked by increased stress due to interpersonal (e.g., parent, family, friend and romantic relationship changes) and intrapersonal (e.g., variations in one's sense of mattering, personality dispositions, loneliness, depression) transitions.

According to Masten and Coatsworth (1998), one of the key developmental tasks during emerging adulthood is forming close friendships within and across gender. During emerging adulthood, young adults are required to expand their relationship networks (Collins, Gleason, & Sesma, 1997) by developing their capacity for mature intimacy with friends and romantic partners (Lasgaard, Goossens, Bramsen, Trillingsgaard, & Elklit, 2011). Erikson (1968) postulated that establishing intimacy in close relationships with friends and romantic partners is a central marker of emerging adulthood. Early developmental theorists and current researchers (e.g., Elicker, Englund, & Sroufe, 1992; Sroufe, Carlson, Levy, & Egeland, 1999) have demonstrated that peer relationships are embedded in early family relationships. Not surprisingly then, emerging adults are also required to negotiate their relationships with their parents. They

must balance their time with being autonomous individuals while maintaining family closeness and intimacy (Erikson, 1968; Grotevant & Cooper, 1986).

In addition to the importance of friends and romantic relationships, Paradis and colleagues (2011) also found that even though developmentally adolescents push for autonomy from parents and family, acceptance and support from their family relationships during this life stage continues to impact upon healthy functioning in adulthood. According to Bowen (1974), individuals do not function independently but rather as part of a family unit, whereby each member has specific roles to play and rules to follow. Within Bowen's family systems theory, differentiation of self, or one's ability to balance their individuality while also joining the family and social group, becomes a crucial ingredient to successful adjustment (Bowen, 1978). It is proposed that a healthy and mature adult becomes a more separate self while still maintaining optimal contact with important members of their family system. Paradis and colleagues (2011) discovered that when examining positive adjustment at age 30, including reduced mental health concerns and suicidal ideations, confiding family relationships during adolescence were more influential than confiding peer relationships. Similarly, van Wel, ter Bogt, and Rasijmakers (2002) found parents to be a crucial component for well-being in adulthood, just as important as having a romantic partner and/or best friend. With respect to psychological adjustment, Schulenberg, Sameroff, and Cicchetti (2004) indicated that early experiences may be critical for understanding the development of psychopathology; however, research has also demonstrated that current experiences are just as critical in subsequent psychopathology outcomes (e.g., Curtis & Cicchetti, 2003). Consequently, it appears that family, friends, and romantic relationships are all predictive of optimal development in emerging adulthood. In addition, the need to examine perceptions of early and current attachment relationships becomes a central focus of beneficial intervention programs.

The increasing stress between managing and expanding interpersonal relationships within emerging adulthood can create negative psychological outcomes (Schulenberg et al., 2004), one such being loneliness. Loneliness is an unpleasant and distressing subjective experience that results when a person reports a qualitative (e.g., lack of closeness felt within a relationship) or quantitative (e.g., limited or reduced number of relationship contacts) deficiency within his or her relationships (Perlman, 1988). It can vary in frequency and intensity (Russell, 1982) and has been associated with various consequences, such as reduced life satisfaction (Goodwin, Cook, & Yung, 2001), decreased academic performance and persistence (Nicpon et al., 2006-2007), psychological distress (DiTommaso & Spinner, 1997), decreased sense of belonging (Mellor, Stokes, Firth, Hayashi, & Cummins, 2008), chronic interpersonal stress and reduced social support (Aanes, Mittelmark, & Hetland, 2009), health related problems (Cacioppo, Fowler, & Christakis, 2009), and depression and anxiety (Chang, Hirsch, Sanna, Jeglic, & Fabian, 2011).

It is estimated that approximately 48% of society feels people are becoming lonelier and about 42% of society has felt depressed as a result of feeling lonely, yet only one in ten people seek assistance for their loneliness (Mental Health Foundation, 2011). Even more striking is the finding that 36% of people aged 18-34 worry about feeling lonely and 53% have experienced depression due to their loneliness. Lasgaard, Goossens, and Elklit (2010) found depression to be highly correlated with loneliness within their high school sample. In addition, 31% of young adults believe they lack in person quality contact with their family and friends and rely too heavily on social networking systems (Mental Health Foundation, 2011). It has been estimated that approximately 90% of undergraduates use social networking sites, such as Facebook, Twitter, Blogs and MySpace (College Board and Art & Science Group, 2009). Even more striking is the finding that within these social networking sites, especially Facebook, the undergraduates' sole purpose is to accumulate a large number of friends, sometimes spanning

from 300 to 1000 (Ellison, Steinfield, & Lampe, 2011) yet the quantity of social networking friendships is not as predictive of loneliness and depression as is that of the reported quality of the social interactions on the networking sites (Davila et al., 2012). Consequently, it appears that loneliness and depression are especially prevalent in emerging adulthood, a time when autonomy and technology usage increases, thus resulting in the need to examine this sensitive developmental period.

Current measures of loneliness have adopted a unidimensional measurement approach, one such example being the UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980). This approach views and measures loneliness by a single overall score (Russell, 1982). However, loneliness is a subjective and multidimensional experience whereby individuals can report different levels of loneliness (DiTommaso & Spinner, 1997). For example, a person may report great family satisfaction but experience loneliness within his or her romantic relationships. In addition, according to Lasgaard and colleagues (2011), loneliness in specific domains (e.g., friend or family loneliness) may result in different psychological outcomes for adolescents (e.g., depression and anxiety). Consequently, assessing loneliness using a unidimensional approach may obscure these discrepancies in different loneliness domains, thus decreasing the ability to identify individuals at risk for loneliness (Bernardon, Babbs, Hakim-Larson, & Gragg, 2011).

Not surprisingly then some researchers have emphasized the need to examine loneliness as a multifaceted concept, since conceptualization in a global fashion may be difficult for individuals to comprehend (Killeen, 1998). DiTommaso and Spinner (1993) proposed a three domain theory of loneliness and developed a measure that assesses loneliness in each domain: family, social, and romantic. This multidimensional approach is especially useful for studying loneliness in emerging adults within the university environment. University students must reorganize and balance their time between gaining autonomy from their families and establishing

new friendships (Green, Richardson, Lago, & Schatten-Jones, 2009; Kenny & Rice, 1995; Weiss, 1973). This transition can generate many positive social benefits, but for some students, may result in loneliness and possibly depressive symptomatology. When feelings of loneliness occur in one domain and not another (e.g., a student has established abundant peer relationships, but misses the support of his or her family and romantic partner), there may still be negative effects on the student's adjustment. Thus, the need to examine specific variables that may interact and influence the development and maintenance of loneliness within specific domains and the possibility of increased depressive symptomatology becomes apparent within the emerging adulthood period.

Early and Current Relationship Context Variables

Parental Acceptance-Rejection Theory (PARTheory) is an evidence-based theory of socialization and lifespan development that predicts the consequences of parental acceptance and rejection within children and adults worldwide (Rohner, Rohner, & Roll, 1980; Rohner & Khaleque, 2005). Within PARTheory, the "significant other" during childhood is called the attachment figure and is usually the primary caregiver(s) responsible for the child (i.e., mother and/or father). PARTheory postulates that a child's experience of parental acceptance and rejection influences developmental outcomes. Parental acceptance and rejection form the *warmth* dimension of parenting which includes a two end continuum of the quality of the affectional bond between parents and their children. The *acceptance* end includes warmth, affection, care, comfort, nurturance, support, and parental love, whereas the *rejection* end includes the absence of these feelings and behaviors and more physically and psychologically hurtful actions (Rohner, Khaleque, & Cournoyer, 2003).

According to Aquilino (1997), the dimension of warmth continues to be activated for young adults, even those living apart from their parents. Thus, early parent-child relationships

continue into the future, in that these early interactional patterns influence current interactions. In their study, Kasser, Koestner, and Lekes (2002) found parental warmth at age five to be strongly correlated with adult values at age 31 and it maintained its significant negative correlation to child security values. They thus concluded that even when emerging adults are actively attempting to become autonomous from their parents, they may still unconsciously be attempting to remain connected to their parents. It is estimated that approximately 21% of the variability in adults' psychological adjustment is due to childhood experiences of caregiver acceptance and rejection (Rohner & Khaleque, 2005). Within various clinical and non-clinical ethnic groups, early parental rejection has been found to be associated with a wide array of mental health problems including reduced self-esteem, depression, conduct disorders, and substance abuse (Patock-Peckham & Morgan-Lopez, 2009; Rohner & Britner, 2002; Rohner & Khaleque, 2005).

As emerging adults venture into the world, they continue to rely on their family for support, but also become dependent upon their social and romantic relationships (Goldberg, 2000; Kenny & Rice, 1995). Not surprisingly then, the emerging adults' social relationships influence their psychological adjustment (Corsano, Majorano, & Champretavy, 2006) and assist in the establishment of romantic relationships (Collins, Welsh, & Furman, 2009; Connolly, Furman, & Konarski, 2000; Furman, Simon, Shaffer, & Bouchey, 2002).

Closely tied to PARTheory then is attachment theory within the context of adulthood. Briefly, attachment theory posits that parental support, in the form of warmth and sensitivity to their children's needs, provides a secure base from which children can safely explore and rely on in times of distress (e.g., Bowlby, 1969). Early attachment has been found to continue into adulthood through an individual's cognitive representations (i.e., internal working models) of self and others (Bowlby, 1969), which further guide coping behaviors in stressful situations (Bowlby, 1980). Adult attachment has thus been defined as "a stable tendency of an individual to

make efforts to seek and maintain proximity to one or a few specific individuals who provide the subjective potential for physical and psychological safety and security” (Sperling & Berman, 1994, p. 8).

A variety of conceptualizations exist to comprehend present relationship statuses as well as the resulting attachment style patterns. Hazan and Shaver (1987) developed three attachment styles in a self-report measure: secure attachment, avoidant attachment, and anxious/ambivalent attachment. Bartholomew (1990) extended the work of Hazan and Shaver (1987) to include four styles of adult attachment in a self-report measure: secure attachment, preoccupied attachment, fearful-avoidant attachment, and dismissing-avoidant attachment. Research demonstrates that individual differences are best measured in terms of security of attachment along with the two continuous insecure attachment dimensions (anxiety and avoidance) rather than the underlying prototypes (Brennan, Clark, & Shaver, 1998; Fraley & Waller, 1998). The *attachment anxiety* dimension is characterized by a negative self-image, demanding interpersonal style, fear of rejection and high negative affect (Bartholomew & Horowitz, 1991). Individuals in this category are preoccupied with relationships and worry about being abandoned by others (Brennan et al., 1998). The second dimension, *attachment avoidance*, is associated with a negative image of others, interpersonal hostility, social withdrawal and defensive affect minimization (Bartholomew & Horowitz, 1991). Individuals in this category experience discomfort with intimate relationships as well as discomfort with self-disclosure and depending on others for support (Brennan et al., 1998).

Sense of Mattering Variable

Another concept embedded within attachment and PARTheory is a sense of mattering, which refers to an individuals’ belief that important significant others (e.g., mother, father, and friends) view them as essential, show interest in them, attend to them, depend on them, and care

about their overall well-being (Rosenberg & McCullough, 1981). Similarly, a sense of belonging has been defined as one's personal involvement and feelings of an integral part of a system and/or environment (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier, 1992). Elliott, Kao, and Grant (2004) identified three dimensions of mattering, including *awareness* (i.e., the feeling that others are attending to one's needs), *importance* (i.e., the feeling that one matters to others and is the object of others' attention), and *reliance* (i.e., the feeling that others turn to them to meet their needs). Research on mattering demonstrates differences between mattering for different people; that is, some people matter to others for different reasons and to different extents (Taylor & Turner, 2001). Consequently, the need to examine the differences in mattering to family and friends among emerging adults becomes apparent.

Perceived mattering or needing to belong is a basic human motivator that influences an individual's interpretation of the quality and quantity of support they are receiving from others within their interpersonal relationships (Baumeister & Leary, 1995; Elliott, Colangelo, & Gelles, 2005; Marshall, 2001). In addition, it affects an individual's development of "self" and "other" internal representations and behavior in the world (Elliott et al., 2005) and is thereby closely linked to the concept of adult attachment. It is a global and multifaceted construct whereby one's sense of maturity is likely to influence both one's subsequent establishment and stability of relationships (Mak & Marshall, 2004; Marshall, 2001).

Sense of mattering or a need to belong is a psychological construct often studied in relation to psychological adjustment (Sargent, Williams, Hagerty, Lynch-Sauer, & Hoyle, 2002) yet it has been understudied in relation to emerging adulthood. Mattering is especially important during emerging adulthood when role and environment transitions are salient (Marshall, Liu, Wu, Berzonsky, & Adams, 2011). Young adults with a high sense of mattering to parents and friends report a higher sense of belonging (Marshall, 2001). Conversely, a lack of sense of mattering has

been associated with a myriad of consequences for young adults including higher levels of academic stress (Rayle & Chung, 2007-2008), depression (Taylor & Turner, 2001), reduced self-esteem and self-concept (Marshall, 2001), suicidal ideation (Elliott et al., 2005), diminished social support, belongingness, job satisfaction, and psychosocial well-being (Marshall, 2001; Rayle, 2006), and ultimately social isolation and loneliness (Elliott et al., 2005; Stevens, Martina, & Westerhof, 2006).

Personality Context Variable

Personality can be defined as a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviors in various situations (Ryckman, 2008). PARTheory's Personality Subtheory is also an evidence-based theory that attempts to predict and explain major mental health-related consequences of perceived parental acceptance and rejection (Rohner & Khaleque, 2005). Closely tied to this subtheory is the biologically-based emotional need for positive responses from parental or attachment figures (Ainsworth, 1989; Baumeister & Leary, 1995; Bowlby, 1980). Thus, closely embedded within this framework is also attachment theory. According to PARTheory, the need for positive responses from attachment figures is a powerful human motivator, such that failure to have this need satisfied results in feelings of insecure attachment (Rohner & Khaleque, 2005). Khaleque and Rohner (2002) presented data from a meta-analysis of 43 studies supporting the notion that parental acceptance and rejection is associated with one's psychological adjustment or maladjustment. Specifically, several combinations of expressions can result due to parental rejection, including hostility/aggression, dependence, impaired self-esteem, impaired self-adequacy, emotional unresponsiveness, emotional instability and a negative worldview. These personality dispositions have been found to be associated with various psychological disorders, such as depression, substance abuse, and anxiety (Demetriou & Christodoulides, 2011; Rohner &

Britner, 2002). However, limited research is available examining these personality dispositions and psychological adjustment within emerging adulthood.

Behavioral and Cognitive Context Variables

Closely tied but differing from personality characteristics is the process of coping (Bolger, 1990; Lazarus, 1999). According to Lazarus and Folkman's (1984) coping theory, coping refers to the individual's constant cognitive (i.e., specific thoughts) and behavioral (i.e., specific actions) attempts to minimize, avoid, tolerate, and/or accept various expected, unexpected, chronic internal stressors and/or chronic external stressors (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) distinguished between problem-focused coping, defined as the individual's attempt to directly handle a problem in order to reduce emotional responses (e.g., use of instrumental support), and emotion-focused coping, defined as dealing with the dilemma by regulating one's emotions (e.g., use of emotional support). Researchers (e.g., Folkman & Moskowitz, 2004) have established coping as an ongoing, changeable, multidimensional, and contextual construct, identifying a wide range of coping styles, such as self-distraction, humor, self-blame, mental disengagement and behavioral disengagement (Carver, Scheier, & Weintraub, 1989; Carver, 1997). These coping styles may become increasingly prevalent and negatively impact upon the emerging adults' development. Consequently, the need to examine various forms of coping as opposed to strictly relying on problem-focused and emotion-focused coping becomes apparent.

When examining the literature on coping styles and psychological outcomes, it appears that individuals reporting more loneliness tend to use less emotional and instrumental coping and more withdrawal (Hawkley & Cacioppo, 2003; Segrin & Passalacqua, 2010). Despite this finding, limited research has examined these coping styles or other coping styles (e.g., self-distraction, self-blame) in relation to loneliness among emerging adults. In addition, the

socialization hypothesis states that men are socialized to use more active and instrumental coping styles whereas women are socialized to be more passive and use more emotion-focused coping styles (Pearlin & Schooler, 1978). Research consistently demonstrates that women cope with problems by discussing them with family and friends, whereas men either confront the problem or deny that it exists (e.g., Carver et al., 1989; Compas, Orosan, & Grant, 1993; Lussier, Sabourin, & Turgeon, 1997; Kemp & Neimeyer, 1999; Tamres, Janicki, & Helgeson, 2002). However, again limited research examining this association within the context of emerging adulthood and loneliness has been conducted. Moreover it has been postulated that emotional closeness, support, and communication within parent-child relationships may assist young adults with developing appropriate and adaptive coping styles (Ghazarian & Buehler, 2010) and may be linked with personality traits (Bolger, 1990), thereby facilitating healthy adjustment. However, limited research is available examining coping as a mediator between family, current relationships and psychological adjustment in emerging adults.

Summary and Proposed Research Study

Emerging adulthood viewed within the lens of developmental theory states that the transition between adolescence and early adulthood is not specific. Rather, it is a complex, multidimensional, multifaceted, unique, and system-oriented concept (Schulenberg et al., 2004); that is, embedded within the individual's development are a variety of factors, each of which influences subsequent adulthood outcomes (i.e., adaptive and maladaptive pathways). Thus, the need to understand the various pathways to adult adjustment becomes more apparent within this developmental period. To date, there appears to be a paucity of literature examining relationship experiences in relation to loneliness and depressive symptomatology in emerging adulthood. Understanding the factors related to loneliness and depressive symptomatology in emerging adulthood could assist in early identification and the development and implementation of

interventions during this sensitive developmental period. Such interventions could include facilitating protective processes, such as family systems boundaries, parent-child communication, social support groups, educational workshops, and so forth. In addition, limited research is available examining sense of mattering and loneliness within multiple domains. Moreover, although one might postulate that an individual's psychological adjustment or coping styles could impact upon these areas, no research to date has examined the mediating effects of psychological adjustment and coping in relation to family, social, and romantic loneliness within emerging adulthood.

Given the importance of studying psychological adjustment and different types of loneliness in emerging adulthood, the purpose of the present study is to assess depressive symptomatology and family, social, and romantic loneliness in emerging adulthood and to examine what factors are associated with greater depressive symptomatology and loneliness in these domains. This study is both systemic and developmental in nature, such that perceptions of early parent-child relationship experiences, current attachment relationship experiences, and sense of mattering to family and friends are postulated to be related to loneliness and depressive symptomatology. Specifically, the present study will examine the impact of PARTheory (i.e., early relationship context), current attachment experiences in close relationships (i.e., current relationship context) and sense of mattering (both family and friends) on emerging adults' overall reports of family, social, and romantic loneliness (psychological outcome) and depressive symptomatology (psychological outcome). In addition, this study will explore whether coping styles (i.e., behavioral and cognitive context) and psychological adjustment (i.e., personality context) mediate the role between early family and current attachment relationship experiences and the emerging adult's reports of family, social, and romantic loneliness.

Research Questions

The following overarching research questions are proposed. Each question will be followed by specific hypotheses in Chapter 2:

- 1) Will early relationship context, current relationship context, sense of mattering to family and friends, coping styles, and psychological adjustment be unique predictors of emerging adults' reports of depressive symptomatology and family, social, and romantic loneliness?
- 2) Does psychological adjustment mediate the relation between perceptions of early parent-child relationship experiences and family, social, and romantic loneliness?
- 3) Do coping styles mediate the relation between current attachment relationship experiences and family, social, and romantic loneliness?
- 4) Do attachment style differences in sense of mattering, coping styles, and loneliness exist among emerging adults?
- 5) Do gender differences in loneliness, sense of mattering, and coping styles exist among emerging adults?
- 6) Does the amount of time spent engaging in social networking systems and outside group involvement/activities influence subsequent reports of family, social, and romantic loneliness?

Operationalization of Constructs/Variables

Loneliness. Drawing on DiTommaso, Brannen-McNulty, Ross, and Burgess' (2003) research, within this study, loneliness will be conceptualized as multidimensional and include the emerging adults' feelings and thoughts of their relationships with their family members, friends, and romantic partners, including feeling alone or feeling close to their family (*family loneliness*), friends (*social loneliness*), and romantic partners (*romantic loneliness*)

Sense of mattering. Drawing on Rosenberg and McCullough's (1981) definition and Elliott and colleagues' (2004) work, within this study, sense of mattering will refer to

interpersonal mattering and include the emerging adults' perceptions of how much they matter to specific individuals in their life, defined as the family environment (i.e., mother, father, siblings) and the social environment (i.e., friends), including the dimensions of *awareness* (i.e., feeling that others are attending to our needs), *importance* (i.e., feeling that we matter to others and are the object of their attention), and *reliance* (i.e., feeling that others turn to us to meet their needs).

Adult attachment. Drawing on the work of Brennan and colleagues (1998), within this study, attachment will be defined as the emerging adults' general experience of their close romantic relationships (e.g., boyfriend, girlfriend, and spouse) including feelings of *security* (e.g., feeling safe, confident and independent while trusting that others will be there to comfort them), *anxiety* (e.g., fear of abandonment and rejection) and *avoidance* (e.g., fear of closeness and discomfort with dependence on others).

Coping. Drawing on Folkman and Moskowitz's (2004) and Carver and Scheier's (1994) work, within this study, coping will be conceptualized as multidimensional with the emerging adults' stable and consistent use of similar specific coping styles, specifically *use of instrumental support* (e.g., seeking advice during stressful relationship situations), *use of emotional support* (e.g., seeking comfort from others during stressful relationship situations), *self-distraction* (e.g., mentally or physically removing oneself from the relationship), *self-blame* (e.g., blaming oneself for the stressor within the relationship), and *behavioral disengagement* (e.g., reducing effort to cope with the relationship problem) over time and across situations.

Psychological adjustment. Using the work of Ryckman (2008) and Rohner and Khaleque (2005), within this study, personality will be defined as the dynamic and organized set of characteristics (hostility/aggression, dependency, negative self-esteem, negative self-adequacy, emotional unresponsiveness, emotional instability, negative worldview) influencing

the emerging adults' psychological adjustment, defined as psychologically adjusted or psychologically maladjusted.

Assumptions

Within this study, it is assumed that individuals who complete the online survey will vary in their subjective experience of their parent-child relationship perceptions, their current attachment relationship perceptions, their sense of mattering to family and friends, their levels of depression, and their levels of family, social, and romantic loneliness. In addition, it is assumed that the participants will be motivated and completely honest and forthcoming with all information. It is also assumed that a balanced gender ratio will be obtained and that a normal distribution for the included variables will be found. Finally, it is assumed that variations will be observed in the degree of loneliness and parental acceptance and rejection as reported by the emerging adults.

Limitations

A number of limitations are inherent in the current study. First, the retrospective and cross-sectional nature of this study will not allow for the observance of any fluctuation in sense of mattering, loneliness, and coping style choices over time. Next, the correlational design of the current study will not allow for the manipulation of the outcome variable and thus cause and effect relationships cannot be implied based on this study. Thirdly, participants are not randomly selected to participate in the current study, thus affecting internal validity. Next, given that this research will use a sample of university students, the generalizability of the results is limited to the university student population. Another limitation concerns the implementation of self-report measures. The sole reliance on the use of questionnaire format for measuring attachment style and loneliness does not enable a comprehensive picture of the various attachment styles or of the perception differences with regards to loneliness and sense of mattering. Finally, the differences

in definitions of sense of mattering and loneliness could affect the validity of the study. Nevertheless, the operational definition of the variables will help to reduce the various responses of experiences with sense of mattering and loneliness.

Summary

This introductory chapter has defined the current state of the problem and has explained the need and purpose of this research study. A brief overview of the research questions has also been presented. Finally, the definition of the variables and the significance to society has been outlined. Specifically, findings of this research will contribute to the growing literature on emerging adulthood emphasizing the need to examine a variety of factors in the development of psychological distress, including depressive symptomatology and loneliness. Maintaining a developmental perspective in mind, this study was developed to provide a more accurate diagnosis and clinically relevant treatment approaches for emerging adults suffering from depressive symptomatology and loneliness. In the next chapter, there will be a review of the guiding concepts and frameworks used for the theoretical basis of this research: Emerging Adulthood (Arnett, 2004), Parental Acceptance and Rejection Theory (PARTheory; Rohner & Khaleque, 2005), Two-Dimensional Model of Attachment (Fraley, Waller, & Brennan, 2000), Multidimensional Approach to Sense of Mattering (Elliott et al., 2004), Multidimensional Approach to Coping (Carver, 1997), and Multidimensional Approach to Loneliness (DiTommaso & Spinner, 1993).

CHAPTER 2

REVIEW OF LITERATURE

Within the past 50 years, demographic changes have resulted in various differences in the attitudes, behaviors, and cultures of young people in Western society (Arnett, 2004). The prolonged education of young people has resulted in delayed marriage and deferred parenthood, thus causing an increase in young adults' levels of uncertainty, variability, instability, self-focus, and possibility (Arnett, 2004). With all of these changes, the need to designate a title for this developmental phase became apparent. Consequently, Arnett (2000) coined the term "emerging adulthood" to represent this period whereby individuals from 18 to 25 years do not yet consider themselves full adults but rather feel that they are somewhere in between adolescence and adulthood. They acknowledge both independence and limited adulthood responsibilities as they approach the adult world ready to engage in commitments to interpersonal relationships (Arnett, 2000).

Transitioning from adolescence to adulthood thus requires a complex negotiation between maintaining family closeness and establishing new, independent, and intimate relationships, such as those with friends or romantic partners. According to family system's theorist, Murray Bowen (1966), 'differentiation' is the means by which individuals move toward delineation of the self in relation to the family or significant other(s). Bowen (1974) further distinguished between the "pseudo self" (i.e., the part of self that is sensitive to needing love and approval from a significant other) and the "people pleasing self" (i.e., the part of self that will give into others in order to make them happy). Thus, in order to reduce anxiety associated with the 'true self' and the self in relation to others, one may respond by being over involved with family (i.e., enmeshment/dependency/vulnerability) or sever ties with family members (i.e., family cut-offs) to regulate their emotional responsiveness. Modern interpretations of the theory

suggests that as one moves through the process of differentiation, one begins to integrate the idea of the 'balance' between self and other and thus one begins to not focus merely on individuation through an intellectualized self-actualization process (Knudsen, 2007).

Emerging adulthood has thus been found to be both an exciting and stressful time. Not surprisingly then, some researchers document positive psychological adjustment (e.g., Galambos, Barker, & Krahn, 2006; Perttit, Roberts, Lewinsohn, Seeley, & Yaroslavsky, 2011) whereas others document increases in loneliness and depression (e.g., Helson & Kwan, 2000; Nelson & McNamara Barry, 2005; Roberts, Caspi, & Moffitt, 2001; Roberts & Chapman, 2000). As emerging adults still lack complete autonomy, they often still rely on their parents for important life decisions along with financial and emotional support (Arnett, 2004). Researchers have thus postulated that it is during this crucial time that the parent-child relationship becomes increasingly important (Arnett, 2004; DiTommaso & Spinner, 1997; Levitt, Silver, & Santos, 2007; Nosko, Tieu, Lawford, & Pratt, 2011). Consequently, the need to understand the theory and literature of these parental relationships becomes vital. In addition, researchers have posited that social relationships also become essential during emerging adulthood (Galambos et al., 2006; Shulman, Kalnitski, & Shahar, 2009). Therefore, more research is required to understand the mechanisms surrounding both friend and romantic relationships.

Loneliness, Attachment and Depressive Symptomatology

Loneliness. Loneliness is one common measure of psychological adjustment in young adults (Milevsky, 2005) that varies in intensity and frequency (Russell, 1982). Although it is plausible to hypothesize that individuals with limited social networks would experience higher levels of loneliness, this objective indicator is limited in measurement because individuals with large social networks can also experience higher levels of loneliness (Rokach, 2004). Loneliness can thus be defined as the individual's subjective discrepancy that often results when he or she

experiences a lack of felt intimacy within his or her interpersonal relationships (de Jong, Gierveld, & Havens, 2004). In 1982, Peplau and Perlman first wrote: “Few of us have escaped the painful experience of loneliness. [Throughout our lifetime,] our social relationships begin, change, and end” (p. 10). Years later, Cacioppo and colleagues (2009) discovered that individuals spread their feelings of loneliness through and within their social networks, thus causing them to conceptualize loneliness as “contagious.” In addition, they found that this “contagious” process was stronger for friends than family and romantic partners as well as stronger for women than men.

Loneliness has often been studied using an overall total score (e.g., UCLA Loneliness Scale; Russell et al., 1980), yet research has demonstrated that individuals can report relationship satisfaction in one area (e.g., friends) yet loneliness in another (e.g., romantic partners). Weiss (1973) indicated several factors that contribute to loneliness with the most essential being an individual’s inability to achieve a social or emotional goal. Thus, both emotional and social loneliness are frequently encountered in society and affect about 50 million individuals on a weekly basis (Perlman, 1988). Social loneliness can usually be prevented by establishing an adequate social network where an individual feels a sense of belonging. However, preventing emotional loneliness is difficult since close emotional attachments must be mended and new secure relationships must be established (Weiss, 1973). Weiss (1973) proposed that during young adulthood, individuals must relinquish parent attachments and develop new attachments to friends and romantic partners. Not surprisingly then, loneliness is especially prevalent among young adults (Mental Health Foundation, 2011). Consequently, the need to assess loneliness within emerging adulthood as a multidimensional construct becomes apparent. DiTommaso and Spinner (1993) proposed and developed the Social and Emotional Loneliness Scale for Adults (SELSA) to assess loneliness in family, social, and romantic relationships. The family and

romantic loneliness domains are components of Weiss' (1973) emotional loneliness, which is influenced by attachment styles, whereas social loneliness is influenced by social networks (DiTommaso & Spinner, 1997). When trying to avoid loneliness, Baumeister and Leary (1995) emphasized the need for intimate connections rather than social contact, thus supporting the emotional component. DiTommaso and Spinner (1997) reported attachment to significantly predict emotional loneliness while social support and social network integration significantly predicted social loneliness. In their study, Larose, Guay, and Boivin (2002) discovered loneliness to be associated with attachment and emotional support, but not with social support. However, this study utilized the unidimensional UCLA Loneliness Scale (Russell et al., 1980), which does not assess different domains of loneliness. Bernardon and colleagues (2011) found attachment to be associated with family, social, and romantic loneliness and these relations were mediated by perceived social support. Thus, these mixed findings suggest a need for further research to examine the three domains of loneliness with a wide range of predictors.

Attachment styles. Closely correlated with loneliness are attachment styles (Knoke, Burau, & Roehrl, 2010), which generally consist of three domains: family, friends, and romantic partners (Brannen & DiTommaso, 2001). Attachment theory states that early attachment relationships with caregivers help form cognitive frameworks called "internal working models" that affect individuals' expectations for security and support in future relationships (Bowlby, 1969). Early parent-child relationships that are warm and supportive in nature tend to facilitate secure attachment styles, which are characterized by positive self and other internal working models. Conversely, inadequate parent-child relationships may result in emotional isolation and the development of insecure attachment styles, which are characterized by more negative internal working models. Attachment security has been associated with having secure working models of relationships with friends (Furman et al., 2002) as well as more

satisfying, confident and committed romantic relationships (Bierhoff & Grau, 1999). Conversely, individuals with anxious and avoidant attached styles are found to report less satisfaction and trust in their relationships (Bierhoff & Grau, 1999; Knoke et al., 2010). In addition, because of their lack of intimacy in close relationships, individuals with insecure attachment styles are more prone to experiencing loneliness and its negative consequences (DiTommaso et al., 2003; Knoke et al., 2010; Wiseman, Maysel, & Sharabany, 2006).

Given that attachment styles are related to positive or negative internal working models of relationships, it is conceivable that if what is expected and what is being experienced in one's current relationships is incongruent, greater loneliness may develop. Studies using unidimensional measures of loneliness have consistently shown that attachment security in adulthood is associated with lower levels of loneliness (e.g., Kafetsios & Sideridis, 2006; Larose et al., 2002; Wiseman et al., 2006). Emotional loneliness is often correlated with attachment whereas social loneliness is correlated with contact with friends. In addition, for young adults, friends tend to be more important than romantic relationships (Green et al., 2009). Despite these differences, limited research is available examining how attachment is related to the different types of loneliness proposed by DiTommaso and Spinner (1993). Given the typical developmental progression in establishing close relationships, changes in family, social, and romantic relationships might also become apparent (Bernardon et al., 2011). For example, adolescent loneliness has been shown to be associated mainly with family relationship deficits, whereas loneliness in university students tends to be associated with peer relationship deficits (Goldenberg & Perlman, 1984). In their initial study using the SELSA, DiTommaso and Spinner (1997) found attachment to be the best predictor of romantic loneliness. In addition, Knoke and colleagues (2010) found that emotional forms of loneliness and attachment styles are crucial for marital relationship quality. Consequently, it would appear that current attachment relationship

experiences would be more predictive of romantic loneliness, whereas perceptions of early parent-child relationship experiences would be more predictive of family loneliness. However, no research to date has examined this hypothesis within emerging adulthood.

Of the few studies on attachment and different types of loneliness, there is evidence to suggest that secure and insecure attachment styles affect loneliness (e.g., Bernardon et al., 2011; DiTommaso et al., 2003). Bernardon and colleagues (2011) found a positive model of self to be associated with less family, social, and romantic loneliness, whereas a positive model of others was associated with less family and social loneliness. However, little is known about the two-dimensional attachment model (attachment anxiety and attachment avoidance) and these types of loneliness. Fraley and colleagues (2000) developed the Experiences in Close Relationships Scale-Revised (ECR-R) to measure secure attachment, avoidant attachment and anxious attachment styles. Individuals high on *attachment anxiety* tend to exhibit hyperactivation strategies (i.e., they intensify their negative emotional states), while those high on *attachment avoidance* exhibit deactivation strategies (i.e., they distance from their emotional states; Besser, Neria, & Haynes, 2009). It could be that the hyperactivation experienced by those with attachment anxiety facilitates the development of loneliness since these individuals would be more likely to report dissatisfaction within their relationship contacts. Conversely, the deactivation experienced by those with attachment avoidance may facilitate the development of depression since these individuals would be more likely to use distancing and withdrawal from their relationships. According to Shaw, Krause, Chatters, Connell, and Ingersoil-Dayton (2004), a strong parallel exists between the need for a secure base during infancy, when children engage in independent exploration, and during emerging adulthood, when young adults leave home for the first time to once again engage in exploration and independence. This parallel prompts the need for more research within the attachment domain. In addition, an individual's attachment

style may evoke specific cognitive and/or behavioral aspects that, in turn, facilitate the development of subsequent loneliness. Again, no research to date has examined this hypothesis within emerging adulthood.

Depressive symptomatology. As demonstrated, closely linked with loneliness is depressive symptomatology, which is found to be especially prevalent among emerging adults (Mental Health Foundation, 2011; Nelson & McNamara Barry, 2005) and females (Dwairy, 2011). Researchers have confirmed loneliness to be a specific correlate of depressive symptomatology in university students (Hagerty & Williams, 1999; Joiner, 1997). Individuals experiencing depression tend to also experience a wide range of interpersonal problems, such as increased dependency in relationships, excessive support-seeking, insecure attachment styles and withdrawal (Joiner, 1997; 2000), which results in the hypothesis that depression may predict loneliness. It has been suggested that the increases in depressive symptomatology during emerging adulthood are due to the emerging adults' attempts to discover their identity as well as their exploration with romantic relationships (Nelson & McNamara Barry, 2005). Depressive symptomatology in middle adolescence may impair romantic relationships in emerging adulthood, such that emerging adults will use less positive problem-solving strategies and experience greater conflict in their interpersonal relationships (Vujeva & Furman, 2011). During emerging adulthood, individuals become independent from their parents and perhaps childhood friends. Separation can also cultivate depressive symptomatology (Bowlby, 1973) as well as result in loneliness which in turn can initiate depressive symptomatology (Harter, 1999). Consequently, the need to examine the interplay between loneliness and depressive symptomatology becomes vital during this critical development period.

PARTheory and Attachment

Parental Acceptance-Rejection Theory (PARTheory) is an evidence-based theory of socialization and lifespan development that predicts the consequences of parental acceptance and rejection within children and adults worldwide (Rohner et al., 1980; Rohner & Khaleque, 2005). Parental acceptance and rejection are proposed to occur in a complex ecological (e.g., family, community, sociocultural) context, with one's personality influencing the subsequent forming and quality of interpersonal relationships (Rohner et al., 2003). Parental acceptance and rejection form the *warmth* dimension of interpersonal relationships, which functions as a continuum. On one end is *perceived acceptance*, which refers to a relationship characterized by warmth, affection, nurturance, care and support. The other end of the continuum is *perceived rejection*, which refers to a relationship that lacks these positive warmth behaviors and feelings and is rather characterized by more harmful physical (e.g., hitting) and verbal behaviors (e.g., critical comments).

When attachment relationships are disrupted in childhood, often characterized as parental rejection, children begin to develop distorted cognitive representations which result in the formation of specific personality dispositions (Rohner & Britner, 2002). Individuals who experience parental rejection tend to seek out, create, interpret, and perceive their relationships in a way that confirms their negative cognitive representations which further limits their capacity to cope effectively with stressful situations (Rohner et al., 2003). For example, adults who were rejected as children might perceive hostility in their current relationships even when it does not exist (Rohner & Britner, 2002). The feelings of rejection create feelings of decreased self-worth which in turn leads to impaired self-esteem and self-adequacy (Rohner et al., 2003). For example, adults might devalue their importance and self-worth even when evidence exists to suggest that their perceptions are inaccurate (Rohner & Britner, 2002). Rejection is proposed to ultimately

result in insecure and anxious attachment styles. Consequently, embedded within PARTheory is attachment theory. Despite this unique association, limited research is available examining the connection between PARTheory and attachment style formation, especially among emerging adults. One study by Nosko and colleagues (2011) found that more positive parent-child relationships were associated with more secure attachment styles nine years later and attachment styles were associated with overall romantic relationship quality. Overall, it appears that a lack of early parental care and nurturance creates an impaired self-concept, which in turn results in the individual anticipating continual rejection and consequently dissatisfaction in interpersonal relationships (Blatt, 2004; Wiseman et al., 2006).

Sense of Mattering, Social Support and Attachment

Another common measurement of psychological adjustment and relationship experiences is a sense of mattering to others (Sargent et al., 2002). Fundamentally, all people want to know the answer to the pending question “Do I matter to others?” Morris Rosenberg (Rosenberg & McCullough, 1981) first defined the concept of mattering as the feeling that we are the object of another person’s attention, that we are important to that person, and that others are dependent on us. More recently, Elliott and colleagues (2004) conceptualized mattering as “the perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us” (p. 339). Within these definitions are three central dimensions. First, *awareness* or attention is the feeling that we as unique individuals command the interest of another person (Rosenberg & McCullough, 1981). This dimension is important in demonstrating the impact of sense of mattering during emerging adulthood. Children and adults tend to have higher levels of attention and awareness whereas emerging adults often report feeling “in between” and lacking a full identity and purpose in life (Arnett, 2004). It is thus understandable that they might feel that others are not providing them with adequate attention (Rosenberg & McCullough, 1981) which

may influence their relationship experiences and psychological adjustment. Next, *importance* refers to the feeling and belief that others care about what we want, think, and do. As such, this dimension is closely linked to the notion of social support (Rosenberg & McCullough, 1981) especially use of emotional support coping (Marshall, 2001). Finally *reliance* or dependence refers to the feeling and belief that others need help and turn to us to satisfy their basic human need of belonging. Thus, closely linked to mattering is a sense of belonging which refers to “the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment” (Hagerty et al., 1992, p. 173).

Mattering or belonging develops through positive interpersonal interactions (i.e., parent-child relationships) and functions to provide individuals with subsequent positive interactions (i.e., current interpersonal relationships) which in turn influences the individuals’ perception and use of social support (Marshall, 2001). However, mattering differs from social support in that it refers to others’ overall continued interest in one’s well-being whereas the latter refers to others’ willingness to provide specific forms of support (i.e., emotional or instrumental) during difficult times (Elliott et al., 2005). Despite this difference, these two concepts are often linked to one another and function simultaneously to predict overall well-being. To feel that one does not matter creates an internal world of suffering whereby one feels socially invisible (Elliott et al., 2005). For example, Rosenberg and McCullough (1981) first proposed that adolescents who feel they matter little to their parents report lower self-esteem, more depression and anxiety, and are more likely to demonstrate delinquent behaviors. Not surprisingly then, sense of mattering within peer relationships has been found to be essential to young adults’ adjustment (Marshall et al., 2011), such that the quality of contact with others is more strongly correlated with loneliness than the actual quantity of social contacts (Pinquart & Sorensen, 2001). Van Orden and colleagues (2008) found a sense of belonging among college students to be associated with

reduced suicidal ideation whereas a lack of belonging was linked with higher levels of suicidal ideation, especially during the summer. In addition, in their study on friendships and belonging in older women, Stevens and colleagues (2006) found that new and improved friendships contributed to reduced loneliness levels. Thus, the support that others seek and the meaningful connections that others establish appear to be crucial for preventing loneliness (Segrin & Passalacqua, 2010).

An examination of the differences in mattering across individuals shows mixed results. For example, Rayle (2005) found females to report higher levels of perceived mattering to their family as well as higher levels of social support from school friends. In their study on mattering within college students, Rayle and Chung (2007-2008) found female students to report higher levels of family support and mattering to friends and their college. In addition, both male and female students reported mattering to be highly influenced by the level of friendship and social support within their college environment. Using the Mattering to Others Questionnaire (MTOQ; Marshall, 2001), Marshall (2004) found that perceived mattering to friends added to perceived mattering to parents in predicting psychological well-being. In a subsequent study with the MTOQ (Marshall, 2001), Marshall and colleagues (2011) found that young adults' mattering to mothers changed across time whereas their sense of mattering to fathers and friends remained stable. In addition, consistent with prior research (e.g., Marshall, 2001; Schieman & Taylor, 2001), young adult females reported more mattering to parents and friends and were more negatively impacted by a lack of mattering. These findings support Taylor and Turner's (2001) suggestion that research must explore gender differences in mattering among emerging adults.

Limited research is also available examining the association between mattering and attachment styles. However, mattering denotes that a positive representation of self and others exists and these representations form the basis of attachment security (Racque-Bogdan, Ericson,

Jackson, Martin, & Bryan, 2011). Attachment theory (Bowlby, 1973) postulates that positive relationships with parents and then later with friends and romantic partners may facilitate positive emotional development. Mak and Marshall (2004) found young adults reported higher mattering to their romantic partner when they perceived their importance to their partner to be higher than with their other friends. Within the two-dimensional attachment model, *attachment anxiety* is associated with negative representations of oneself. These individuals are thus preoccupied with relationship distress, their feelings of worthiness and thus constantly worry about their relationships with others, including levels of availability and responsiveness within their relationships (Collins & Feeney, 2004). These preoccupations in turn result in the individuals' evaluation of their sense of mattering as negative (Racque-Bogdan et al., 2011). Conversely, *attachment avoidance* is associated with negative representations of others. These individuals often report higher levels of discomfort with intimacy and thus tend to suppress their emotional responses while devaluating their importance to others (Collins & Feeney, 2004). This in turn causes them to negatively evaluate their sense of mattering to others (Racque-Bogdan et al., 2011). Using the ECR-R (Fraley et al., 2000) and the Interpersonal Mattering Scale (Elliott et al., 2004), Racque-Bogdan and colleagues (2011) found that mattering mediated the relation between attachment orientation and mental health. The present study will examine the impact of attachment on sense of mattering among emerging adults and subsequent reports of loneliness and depressive symptomatology.

PARTheory's Personality Subtheory

Personality, as defined in PARTheory, refers to the individuals' "more or less stable set of predispositions to respond and actual modes of responding in various life situations" (Rohner et al., 2003, p. 92). According to this definition, an individual's behavior is proposed to be influenced by both internal (e.g., emotional) and external (e.g., environmental) factors. Four

fundamental propositions are proposed by this subtheory. First, “*child adjustment*” suggests that children of all socio-cultural systems, racial and ethnic groups and genders respond identically to their parents’ acceptance and rejection. Next, “*adult adjustment*” proposes that one’s childhood experience of parental acceptance and rejection continues throughout the lifespan, such that these experiences are vividly remembered and re-experienced in adulthood. The third proposition is “*partner adjustment*” which states that one’s perceived rejection by current romantic partners or other attachment figures in adulthood is likely to result in the psychological maladjustment that occurred in childhood due to parental rejection. Finally, “*universality*” proposes that parental acceptance and rejection is experienced within every culture and results in what is known as the “Acceptance-Rejection Syndrome” (Demetriou & Christodoulides, 2011; Rohner, 2004; Rohner & Khaleque, 2008).

According to PARTheory’s Personality Subtheory, children who experience “cold and rejecting parents” tend to develop negative personality characteristics, such as low self-esteem, increased aggression, anger and resentment, reduced impulse control and insecure attachment styles (Egeland & Sroufe, 1981; Rohner et al., 2003). In addition, in order to protect themselves from their intense and negative feelings of rejection, they become emotionally closed within their interpersonal relationships (Demetriou & Christodoulides, 2011). Thus, within the personality subtheory of PARTheory, parental acceptance and rejection results in the “*independence-dependence continuum*”, whereby parental rejection leads to specific personality outcomes, including hostility and aggression, and other psychological problems, such as emotional unresponsiveness, emotional instability, impaired self-esteem, impaired self-adequacy and an overall negative worldview (Rohner & Khaleque, 2005). Each of these seven personality dispositions falls on a continuum of “more” or “less”, with the “negative” expressions of these dispositions (e.g., emotional unresponsiveness) representing a constellation of interrelated and

measurable characteristics (Rohner & Khaleque, 2008). These in turn are postulated to be powerful influences on subsequent psychological maladjustment, such as the development of depression (Rohner & Britner, 2002). A description of each dimension follows:

The *dependence dimension* refers to the adults' psychological wish for emotional support, including care, comfort, attention and nurturance from their attachment figures, as well as their behavioral attempts to achieve such responsiveness. Thus, this dimension is closely linked to attachment theory. When children and adults do not receive the needed positive responses from their "attachment figures" or "significant others", they are likely to feel insecure and anxious. In an attempt to fulfill their yearning for positive responses as well as to decrease their feelings of anxiety, these individuals often become extremely dependent (Khaleque & Rohner, 2002).

Next, the *hostility/aggression dimension* refers to the adults' internal feeling of anger and resentment, which is expressed behaviorally with the aim to harm another person, object, or oneself. This dimension can be divided further into verbal aggression (e.g., sarcasm, humiliating acts and criticism towards others), physical aggression (e.g., hitting, throwing things), passive aggression (e.g., stubbornness, bitterness, irritability, temper tantrums), and problems managing hostility and aggression (Demetriou & Christodoulides, 2011).

The *emotional responsiveness dimension* refers to the adults' ability to freely and candidly express their emotions and their comfort in forming warm, intimate, and lasting attachment relationships. Healthy psychological adjustment is defined by emotionally responsive individuals, since they tend to report close and satisfying interpersonal relationships. Conversely, psychological maladjustment is portrayed by emotionally unresponsive individuals, since they report restricted, non-personal, and defensive interpersonal relationships. These individuals often report difficulty with giving and receiving affection from others.

The *emotional stability dimension* refers to the steadiness of the adults' mood, including their ability to cope with minor setbacks, failures, difficulties, and other stresses without becoming emotionally upset (Demetriou & Christodoulides, 2011). Emotionally stable individuals represent healthy psychological adjustment, since they tend to maintain composure under minor emotional stress and revert quickly to their prior mood state. Conversely, emotionally unstable individuals report wide, frequent, and unpredictable mood shifts and thus this dimension is viewed as unhealthy (i.e., psychological maladjustment).

The *self-esteem dimension*, is the first part of the self-evaluation scale (Demetriou & Christodoulides, 2011) and refers to the adults' global emotional judgment that others make about their worth and value. Individuals with positive self-esteem tend to be comfortable with themselves, are rarely disappointed in themselves, and perceive themselves to be worthy of acceptance. Conversely, individuals with negative self-esteem report feelings of dislike, disapproval, and inferiority, and they tend to devalue and perceive themselves to be worthy of criticism. The negative self-esteem dimension is thus viewed as the maladjusted personality disposition within PARTheory's Personality Subtheory.

The second part of the self-evaluation scale is the *self-adequacy dimension*, which refers to the adults' feelings of competence in meeting their daily living demands. Individuals with positive self-adequacy are usually self-assured and self-confident and therefore report feeling capable of effectively handling their problems. Conversely, individuals with negative self-adequacy report feeling incompetent and unable to meet daily demands successfully. The negative self-adequacy dimension is thus viewed as the maladjusted personality disposition within PARTheory's Personality Subtheory.

Finally, the *worldview dimension* refers to the adults' overall evaluation of life and the quality of their existence. This dimension is closely tied to Erikson's (1968) psychosocial

development theory, whereby the development of trust results in the universe being viewed as positive whereas mistrust in infancy results in the universe being perceived as negative. Consequently, adults with a positive worldview see life as a secure, friendly, happy and unthreatening place, whereas adults with a negative worldview perceive life to be an insecure, hostile, unpleasant and threatening place.

According to O'Connor and colleagues (2011), strong parent and peer relationships predict positive adjustment in emerging adulthood. In a longitudinal study of emerging adults, Levitt and colleagues (2007) found that decreased levels of parental support over the transition to adulthood led to lower levels of satisfaction with the parent-child relationship, which in turn is often negatively associated with depressive symptoms for both males and females during the transition to adulthood (Needham, 2008). Not surprisingly then, perceived parental rejection is associated with psychological maladjustment across all cultures (Khaleque & Rohner, 2002). For example, Kim (2008) found Korean American adolescents who perceived low parental warmth reported overall poor psychological health. Varan, Rohner, and Eryuksel (2008) found that acceptance from mothers, fathers, and current romantic partners made significant and independent contributions to psychological adjustment in males and females from Turkey. In addition, among Turkish males, approximately 22% of the variance in psychological adjustment was explained by perceived partner acceptance and remembered maternal and parental acceptance, whereas for females, about 18% of the variance was explained by these factors. A more recent study by Demetriou and Christodoulides (2011) found perceived acceptance by "major childhood caregivers" to be an important predictor for healthy psychological functioning in adulthood for their Greek-Cypriot youth sample (15-23 years). Dwairy (2011) found females displayed and received more parental acceptance than males. Interestingly, results of this study indicated that males were impacted by perceived parental acceptance and rejection both at home

and at school, whereas females were only impacted at home. Much less is known regarding PARTheory within the period of emerging adulthood (18-25 years) and how it relates to a sense of mattering, depressive symptomatology, and loneliness. In addition, the need to adopt this systemic research approach, which includes a wide range of predictive factors, to psychological adjustment is required (Dwairy, 2011).

Coping and Attachment

Researchers (e.g., Cutrona, 1990; Lazarus & Folkman, 1984) have typically identified two types of coping. First, *problem-focused coping* involves behaviors used to alter the stressor, such as active coping, planning, and using others as a resource for information (i.e., seeking instrumental support). Second, *emotion-focused coping* involves behaviors used to alter the person's response to the stressor, including rumination (i.e., replaying the stressful event over in one's mind), self-blame (i.e., blaming oneself for the stressor), denial (i.e., denying the existence of the stressor), and using others for emotional comfort (i.e., seeking emotional support). Modern researchers (e.g., Carver, 1997; Folkman & Moskowitz, 2004; Rantanen, Mauno, Kinnunen, & Rantanen, 2011) however have identified coping to be a multidimensional, ongoing and fluctuating response, one that varies within and across individuals and time. They propose that the complex nature of coping designates a more global definition and thus identify a wide range of coping styles. For example, some researchers (e.g., Carver, 1997; Endler & Parker, 1994) have distinguished between avoidance coping (i.e., trying to avoid the problem and believing that time alone will result in a solution) and disengagement (mentally or physically reducing one's effort to cope with the stressor). Within avoidance coping are also the coping strategies of distraction (e.g., mentally or physically removing oneself from the stressor) and social diversion (e.g., using others as a form of distraction from the stressor). Disengagement can further be divided into mental disengagement and behavioral disengagement, both of which can fluctuate

on a continuum of being positive and negative responses to the stressor depending upon the situation and time.

Bowlby (1980) indicated that attachment styles are likely to be related to an individual's use of coping strategies. Attachment levels seem to increase under perceived stress and vary according to attachment style (Fuendeling, 1998), which in turn impacts coping. Depending on their attachment style (i.e., secure or insecure), when encountering the perception of stress, individuals tend to either rely more heavily on those around them for support or reject support, which then affects their ability to cope with the stressor at hand. Social support is thus a multidimensional concept that includes not only the support received from others (e.g., in the form of emotional and instrumental support) but also the sources of the support (e.g., in the form of family, friends, and so forth). Because securely attached individuals view themselves and others positively, they usually perceive their social relationships to be supportive and are thus confident in their ability to seek out instrumental and/or emotional support (Florian, Mikulincer, & Bucholtz, 1995; Mikulincer, Florian, & Weller, 1993). Conversely, individuals with insecure attachment styles tend to dismiss seeking social support as a coping option since they view others as unavailable and unresponsive (Hazan & Shaver, 1987; Klohnen & John, 1998), thereby facilitating their perceived social networks deficits.

Research has confirmed differences in one's attachment style and tendency to seek social support as a coping strategy (Bernardon et al., 2011). Some researchers have found secure individuals to seek out more social support (e.g., Mikulincer et al., 1993; Rholes, Simpson, Campbell, & Grich, 2001; Seiffge-Krenke, 2006; Simpson, Rholes, & Nelligan, 1992) whereas other research documents that secure and anxious adults seek out more social support as compared to avoidant adults (e.g., Ognibene & Collins, 1998; Mikulincer & Florian, 1995). Specifically, Seiffge-Krenke (2006) found that when coping with relationship stressors, securely

attached individuals used their social networks for support. Conversely, individuals with avoidant attachment styles engaged in less support seeking behaviors and those with preoccupied styles tended to withdraw from others and from the problem at hand.

In addition, the connection between attachment style and subsequent coping style choices in adults has been established with the finding that insecure attachment results in the use of maladaptive coping styles when dealing with stressful situations, while secure attachment leads to the use of more adaptive coping styles. In studying the impact of the Gulf war on adults, Mikulincer and colleagues (1993) found secure individuals to use support-seeking coping, but did not find any differences between attachment style and use of problem-focused coping. Lussier and colleagues' (1997) study on marital adjustment differed from the latter in that they found secure attachment to predict problem-focused coping. In their study using the COPE inventory (Carver et al., 1989), Greenberger and McLaughlin (1998) reported a positive relation between secure attachment and support seeking and planful-action coping styles among college students. Torquati and Vazsonyi (1999) found insecure attachment to be related to higher levels of emotion-focused and avoidant coping when dealing with interpersonal conflicts, but did not find any differences between secure and insecure individuals with the use of problem-focused coping. Much of this literature has relied on early adolescence or middle to late adulthood. More research is thus needed to refine the literature on attachment and coping style differences within the relationships that form emerging adulthood.

Depressive Symptomatology and Loneliness: Sense of Mattering, Attachment, PARTheory, Social Networking, Gender and Coping as Predictors

Sense of mattering. In 1973, Weiss proposed that both social and emotional loneliness were vital to an individual's well-being. Almost a decade later, Russell, Cutrona, Rose, and Yurko (1984) found depression to be significantly related to social loneliness. In addition,

supporting the link between depression and belonging (Hagerty et al., 1992; Hagerty & Patusk, 1995), they found depression to be best predicted by emotional loneliness. Rosenberg and McCullough (1981) first proposed a negative relation between mattering and depression. Recent researchers (Elliott, 2009; Schieman & Taylor, 2001) have found a positive association between one's level of mattering and one's overall well-being. Using items from the Interpersonal Mattering Scale (Elliott et al., 2004), Elliott and colleagues (2005) found that as one's sense of mattering decreases, the likelihood of experiencing depression increases, which can result in suicidal ideations in those with severe depression. Support in one area (e.g., friends) may thus assist in promoting positive adjustment when support is lacking in another domain (e.g., family), leaving the need to examine both domains (i.e., sense of mattering to family and friends) and their association with depressive symptomatology.

Much of the research examining sense of belonging and loneliness has relied on the unidimensional loneliness approach. For example, using the UCLA Loneliness Scale (Russell, 1996), Milevsky (2005) found that sibling support received during emerging adulthood was associated with reduced loneliness and this received support was a protective mechanism for those with minimal support from other networks (e.g., mother, father, friends, etc.). Using the UCLA Loneliness Scale (Russell, 1996) and an adult population, Mellor and colleagues (2008) found loneliness to mediate the relation between the adult's unmet need for belonging and his or her overall life satisfaction. In addition, they found that adults living alone reported a lower need to belong. Moreover, they concluded that when individuals are unsatisfied with their personal relationships, independent of their need to belong, they will experience greater loneliness. These findings thus support Sargent and colleagues' (2002) need for future research to identify factors influencing a person's sense of belonging. Finally, using the Revised UCLA Loneliness Scale (Russell et al., 1980), Chang and colleagues (2011) found loneliness to predict depression and

anxiety in Latina college students. To date, there appears to be a paucity of literature examining the relation between sense of mattering, depressive symptomatology, and loneliness within specific relationship domains. As demonstrated in the reviewed studies, much research has focused on an overall sense of mattering and loneliness score, but as can be seen by the diversity within and across individuals, it becomes apparent to target specific domains. One recent study using the SELSA-S and a high school student sample (Lasgaard et al., 2011) found family and social loneliness to be associated with depression. Romantic loneliness was not associated with depression in this study. More research into this area is thus warranted to refine the literature on depressive symptomatology and specific loneliness domains within emerging adulthood.

PARTheory, attachment and social networking. According to PARTheory, parental rejection in childhood is often associated with the development of depression in adolescents and adults (Rohner & Britner, 2002) whereas support from family and friends is associated with less depressive symptomatology (Pertit et al., 2011). This association tends to exist more strongly for females. For example, among females, higher perceived family support at age 21 predicted lower depression at age 30, whereas among males, higher levels of depression at age 21 predicted lower perceived family support at age 30 (Pertit et al., 2011). In a more recent study, using the Revised UCLA Loneliness Scale (Russell et al., 1980) and the ECR-R (Fraley et al., 2000), Gentzier, Oberhauser, Westerman, and Nadorff (2011) found that college students with higher contact with parents via telephone reported more satisfying parental relationships, whereas those who used electronic communication (e.g., social networking) reported higher loneliness, anxious attachment styles, and more parent-child conflict. Furthermore, Valkenburg, Peter, and Schouten (2006) and Davila and colleagues (2012) found the quality of social networking experiences to be associated with depressive symptomatology, such that young adults who reported less positive

social interactions via networking systems also reported greater depression over time, thus supporting the hypothesis that poor interpersonal relationships result in loneliness and depression (La Greca, Davila, & Siegel, 2008).

Coping and attachment. Another possible link between relationship context and loneliness may be the cognitive and behavioral mechanism of coping. Researchers have postulated that lonely people tend to use more withdrawal and less coping through use of emotional and instrumental support (Hawkey & Cacioppo, 2003; Segrin & Passalacqua, 2010). Indeed about 57% of people who experience depression have isolated themselves from others (Mental Health Foundation, 2011), thereby not utilizing social support as a coping mechanism. In addition, individuals reporting loneliness are less likely to seek out emotional support and more likely to withdraw from others, thereby further increasing their loneliness (Mental Health Foundation, 2011). Finally, the use of avoidance and behavioral disengagement has been found to be associated with higher levels of helplessness and depression, which in turn have been associated with perceived parental support (Carver et al., 1989; Felsten, 1998; Rantanen et al., 2011).

For example, Butler and colleagues (2009) examined specific psychosocial predictors of resilience after the September 11th, 2001 terrorist attacks, relying on the Brief-COPE (Carver, 1997) to assess various coping strategies used by individuals who were not directly (i.e., part of the attacks) or indirectly (i.e., had a relative, friend, or colleague die or be injured in the attacks) exposed by the attacks. Overall, they found that the most frequent coping strategies used were acceptance, planning, active coping, religion, self-distraction, emotional support and positive reframing. Within this sample, more negative emotion-focused coping strategies (i.e., emotional suppression, self-blame and denial) were positively related to increased physical symptoms and depressive symptoms. Conversely, greater psychological well-being in the short-term and long-

term was associated with having a large social network and using more positive coping strategies such as active coping and seeking emotional support. Interestingly, use of instrumental support was found to be associated with higher reported distress levels in the short-term and focusing on or discussing the event in great detail was found to result in poorer psychological well-being in the long-term. Using the COPE (Carver et al., 1989) and SELSA-S (DiTommaso et al., 2003), Bernardon and colleagues (2011) found that securely attached students reporting greater use of instrumental coping also reported less social loneliness. Conversely, students with insecure attachment styles reported less family loneliness when they used more instrumental coping styles. Less is known regarding coping strategies and depressive symptomatology and family, social, and romantic loneliness within emerging adulthood. In addition, there appears to be a paucity of literature exploring the possible relations between perceptions of early parent-child relationships and current attachment relationship experiences and loneliness by way of the mediator, use of instrumental support. Moreover, little research exists examining the use of self-blame in relation to depressive symptomatology and loneliness among emerging adults. However, self-blame appears to lead to maladaptive outcomes, such as negative affect, lower self-esteem, poor psychological health under stress, and increased internalizing and externalizing behaviors, including anxiety and depression in youth and adults, as well as increased suicidal ideation (Bolger, 1990; Garnefski, Kraaij, & Spinhoven, 2001; Grych, Fincham, Jouriles, & McDonald, 2000; Lazarus & Folkman, 1984; Mausbach, Roepke, Depp, Patterson, & Grant, 2009).

An initial study by Carver and colleagues (1989) found that adult females were more likely to use self-blame when coping with stressful situations. More recently, Grych and colleagues (2000) examined the use of self-blame among adolescents, finding that this coping strategy was higher for males. In addition, for males, self-blame was a mediator between interpersonal conflict and internalizing problems. Using a student and community sample,

Rokach (2004) found that participants reported using social support networks as a beneficial strategy for coping with loneliness. Depressive symptomatology was not included as a variable of interest in this study. Another study by Larose and colleagues (2002) found that less emotional support seeking was associated with higher levels of loneliness, independent of attachment style differences. Again, depressive symptomatology was not included as a variable of interest in this study. One recent study by Sud and Monga (2009) used a civil service student (20-28 yrs.) sample and the Brief-COPE (Carver, 1997). They found self-blame, self-distraction, behavioral disengagement, and emotion-focused coping to be positively correlated with anxiety. Depressive symptomatology and loneliness were not included as variables of interest in this study. In their high school sample, Fear and colleagues (2009) found that youth's perceptions and use of self-blame and distractions were independent predictors of internalizing and externalizing problems. Finally, Ghazarian and Buehler (2010) conducted a study examining self-blame in children and found that self-blame for both girls and boys mediated the relation between interpersonal conflict and academic achievement. It thus appears that self-blame is important when considering the psychological adjustment of individuals, leaving the need to examine this coping strategy within emerging adults and whether it functions as a mediator between current attachment relationships and family, social, and romantic loneliness.

Coping and gender. Overall, research has documented that females are more likely to feel lonely, experience depressive symptomatology due to their loneliness, be aware of their feelings of loneliness, and seek assistance for their loneliness (Mental Health Foundation, 2011). Specifically, females with depressive symptomatology tend to report more rumination whereas males with a depressed mood report the use of distraction as a coping mechanism (Eaton & Bradley, 2008). Compas and colleagues (1993) reported females to focus more on ruminative methods of emotion-focused coping, while males were more likely to use distraction. Lussier and

colleagues (1997) found females to use more emotion-focused and avoidance coping styles than males. However, no gender differences were found with regards to task-oriented coping. In another study, Ognibene and Collins (1998) reported females to seek more support in response to stress. Similarly, Kemp and Neimeyer (1999) found females to use support seeking coping styles more than males. Differing slightly from the above studies, Felsten (1998) found that although females used more social support seeking, no gender differences on problem-solving and avoidance coping were found. In their review paper, Tamres and colleagues (2002) found females used more rumination, sought out more emotional support, used more positive self-talk and engaged in seeking out more instrumental support as a coping strategy. No gender differences were found with respect to the use of denial, venting and self-blame. Using the COPE (Carver et al., 1989) and their emerging adult sample, Eaton and Bradley (2008) found females used more emotion-focused coping (i.e., use of emotional support, venting and disengagement) and problem-focused coping (i.e., active coping and use of instrumental support) while males only used more problem-focused coping. Clearly the findings on coping and gender are mixed and more research is warranted to understand the unique associations between these variables in emerging adulthood. In addition, these cognitive and behavioral factors in the form of use of instrumental support and use of self-blame, may mediate the relation between current attachment relationship experiences and loneliness.

Summary and Need for Present Study

Emerging adulthood is considered a relatively newly defined stage of confusion with respect to identity and relationship development. Much of the research on emerging adulthood has focused on exploration, commitment and identity development (e.g., Schwartz, Cotes, & Arnett, 2005) and has demonstrated the complexity of this developmental process and the psychological distress that can arise during the exploration process, such as the development of

depression and loneliness. In addition, despite the importance of early family and current relationships, research to date has not fully examined these variables in relation to psychological adjustment among emerging adults. Much of the literature has also relied on the youngest of emerging adults (i.e., 18-19 years) thereby limiting the generalizability of the findings. Moreover, the question of whether coping styles and psychological adjustment are potential mediators for the associations between perceptions of early parent-child relationships and current attachment relationship experiences and the emerging adults' reports of loneliness remains unexplored.

As loneliness is associated with higher subjective appraisal of stress, exaggerated physiological stress responses, sleep problems, accelerated aging and overall poor mental and physical health (e.g., Cacioppo et al., 2002; Hawkley, Burleson, Berntson, & Cacioppo, 2003; Segrin & Passalacqua, 2010), it becomes imperative to identify potential causes of loneliness in various domains to assist in appropriate prevention strategies. The purpose of the present study was to offer increased awareness of the role of past (i.e., early relationship context) and current attachment relationships (i.e., current relationship context), including sense of mattering to family and friends, and their influence on psychological well-being (measured by loneliness and depressive symptomatology) during this sensitive period. In addition, this study was conducted to offer increased awareness of the role of coping strategies (i.e., cognitive and behavioral context) and overall psychological adjustment (i.e., personality context) on the emerging adults' reported levels of loneliness and depressive symptomatology. The implications of this study were such that by understanding the possible links between various predictive constructs, mental health professionals might attend to these issues in their clients and further incorporate such developmental processes into their conceptualizations of treatment. Treating clients with this developmental perspective in mind may ultimately help provide a more accurate diagnosis and a more clinically relevant treatment approach.

Hypotheses

The following specific hypotheses correspond to the overarching questions presented in Chapter 1:

Hypothesis 1: Based on the reviewed literature, the following specific hypotheses were proposed for depressive symptomatology and family, social, and romantic loneliness as outcome variables.

Hypothesis 1a. It was hypothesized that gender, perceptions of maternal and paternal acceptance and rejection, sense of mattering to family, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors for emerging adults' reports of family loneliness.

Hypothesis 1b. It was hypothesized that gender, perceptions of maternal and paternal acceptance and rejection, sense of mattering to friends, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors for emerging adults' reports of social loneliness.

Hypothesis 1c. It was hypothesized that gender, perceptions of maternal and paternal acceptance and rejection, current attachment experiences in close relationships, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors for emerging adults' reports of romantic loneliness.

Hypothesis 1d. It was hypothesized that gender, perceptions of maternal and paternal acceptance and rejection, current attachment experiences in close relationships, sense of mattering to family and friends, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors for emerging adults' reports of depressive symptomatology.

Hypothesis 1e. Based on the reviewed literature, especially that of van Wel and colleagues (2002) which emphasized the importance of parent-child bond as opposed to friendships and romantic relationships in predicting emerging adults' well-being, it was hypothesized that the emerging adults' higher reported levels of parental acceptance would be associated with lower levels of family, social, and romantic loneliness.

Hypothesis 1f. It was proposed that lower psychological maladjustment scores would be related to higher levels of sense of mattering to family and friends and lower levels of family, social, and romantic loneliness.

Hypothesis 2. Based on the reviewed literature, the following meditation hypothesis was proposed for the early relationship context, psychological adjustment, and loneliness within emerging adulthood.

Hypothesis 2a. It was hypothesized that emerging adults' overall psychological adjustment would mediate the relation between their perceptions of early parent-child relationship experiences and their current reports of family, social, and romantic loneliness.

Hypothesis 3. Based on the reviewed literature, the following meditation hypotheses were proposed for the current relationship context, use of instrumental support, use of self-blame and loneliness within emerging adulthood.

Hypothesis 3a. Based on the findings of Bernardon and colleagues (2011) that instrumental support coping but not emotional support coping was associated with family, social, and romantic loneliness, it was hypothesized that use of instrumental support coping would mediate the association between current attachment relationship experiences and family, social, and romantic loneliness within emerging adulthood.

Hypothesis 3b. It was hypothesized that use of self-blame would mediate the relation between current attachment relationship experiences and family, social, and romantic loneliness within emerging adulthood.

Hypothesis 4. Based on the reviewed literature, the following specific hypotheses were proposed for attachment, sense of mattering, coping, depressive symptomatology and family, social, and romantic loneliness.

Hypothesis 4a. Based on the reviewed literature suggesting that attachment and sense of mattering are interrelated, it was hypothesized that emerging adults with secure attachment styles would report higher levels of sense of mattering while those with insecure attachment styles would report lower levels of sense of mattering.

Hypothesis 4b. Based on the reviewed literature suggesting that securely attached individuals report using more adaptive coping styles (e.g., Mikulincer et al., 1993), it was hypothesized that emerging adults scoring high on attachment security would report higher levels of use of emotional support and use of instrumental support and lower levels of use of behavioral disengagement, use of self-distraction, and use of self-blame.

Hypothesis 4c. Based on the reviewed literature suggesting that securely attached individuals report lower levels of loneliness (e.g., Bernardon et al., 2011; DiTommaso et al., 2003), it was hypothesized that emerging adults with secure attachments would also report lower levels of family, social, and romantic loneliness.

Hypothesis 5. Based on the reviewed literature, the following specific hypotheses were proposed for gender, sense of mattering, coping, depressive symptomatology and family, social, and romantic loneliness.

Hypothesis 5a. Based on the literature reviewed suggesting that females report higher levels of perceived support (e.g., Rayle, 2005; Rayle & Chung, 2007-2008) and are more

negatively impacted by a lack of mattering (e.g., Marshall, 2001), it was hypothesized that females would report higher levels of sense of mattering, depressive symptomatology and loneliness.

Hypothesis 5b. Based on the reviewed literature suggesting that females report more rumination and rely more heavily on emotion-focused coping strategies (e.g., Compas et al., 1993; Eaton & Bradley, 2008; Lussier et al., 1997; Tamres et al., 2002), it was hypothesized that females would report higher levels of use of emotional support and self-blame.

Hypothesis 5c. Based on the literature reviewed suggesting that males report more distancing from problems and rely more heavily on problem-focused coping strategies (e.g., Compas et al., 1993; Eaton & Bradley, 2008), it was hypothesized that males will report higher levels of use of instrumental support and behavioral disengagement.

Hypothesis 6. Based on the reviewed literature, the following specific hypotheses were proposed for social networking, group involvement, and family, social, and romantic loneliness.

Hypothesis 6a. Based on the literature reviewed suggesting that 31% of young adults believe they lack in person quality contact with their family and friends and rely too heavily on social networking systems (Mental Health Foundation, 2011), it was hypothesized that those who report higher use of social networking would also report more family, social, and romantic loneliness.

Hypothesis 6b. Based on the findings from Bernardon and colleagues (2011) suggesting that group involvement facilitates a sense of belonging, thereby decreasing loneliness, it was hypothesized that those who report higher levels of group involvement would also report lower levels of family, social, and romantic loneliness.

Final Overview

Overall, this study was designed to examine factors contributing to psychological well-being in emerging adulthood. Figure 1 outlines the hypotheses, variables, and statistical analysis that were used to examine the data. Figures 2 to 5 were proposed conceptual models based on the emerging adulthood literature. These models conceptualized early parent-child relationship and current attachment relationship experiences, including a sense of mattering to family and friends, as the predictors of psychological well-being in emerging adulthood. In addition, overall psychological adjustment and coping styles were proposed to influence psychological well-being. Psychological well-being was conceptualized as the emerging adults' reported levels of depressive symptomatology and family, social, and romantic loneliness.

Figure 1: Research Hypotheses

Research Hypotheses	Variables	Statistical Analyses
<p>1) Will early relationship context, current relationship context, sense of mattering to family and friends, coping styles and psychological adjustment be unique predictors of emerging adults' reports of depressive symptomatology and family, social, and romantic loneliness?</p>		
<p>H1a: Perceptions of maternal and paternal acceptance and rejection, sense of mattering to family, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors for emerging adults' reports of family loneliness?</p> <p>H1b: Perceptions of maternal and paternal acceptance and rejection, sense of mattering to friends, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors for emerging adults' reports of social loneliness?</p> <p>H1c: Perceptions of maternal and paternal acceptance and rejection, current attachment experiences in close relationships, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors for emerging adults' reports of romantic loneliness?</p> <p>H1d: Perceptions of maternal and paternal acceptance and rejection, current attachment experiences in close relationships, sense of mattering to family and friends, psychological</p>	<p>Predictor Variables:</p> <ul style="list-style-type: none"> • Maternal acceptance and rejection (PARQ) • Paternal acceptance and rejection (PARQ) • Attachment styles (ECR-R) • Sense of mattering to family (Interpersonal Mattering Scale) • Sense of mattering to friends (Interpersonal Mattering Scale) • Psychological adjustment (PAQ) • Use of instrumental support (Brief-COPE) 	<p>1) Bivariate Correlations</p> <p>2) Partial Correlations</p> <p>3) One-way ANOVA analyses</p> <p>4) Hierarchical Multiple Regression Analyses</p>

<p>adjustment, use of instrumental support and use of self-blame would be unique predictors for emerging adults' reports of depressive symptomatology?</p> <p>H1e: Higher levels of parental acceptance would be associated with lower levels of family, social, and romantic loneliness.</p> <p>H1f: Lower psychological maladjustment scores would be related to higher levels of sense of mattering to family and friends and lower levels of family, social and romantic loneliness.</p>	<ul style="list-style-type: none"> • Use of self-blame (Brief-COPE) <p>Dependent Variables:</p> <ul style="list-style-type: none"> • Family loneliness (SELSA-S) • Social loneliness (SELSA-S) • Romantic loneliness (SELSA-S) • Depressive Symptomatology (CES-D Scale) 	
<p>2) Does psychological adjustment mediate the relation between perceptions of early parent-child relationship experiences and family, social, and romantic loneliness?</p>		
<p>H2a: Overall psychological adjustment would mediate the relation between perceptions of early parent-child relationship experiences and current reports of family, social, and romantic loneliness.</p>	<p>Predictor Variables:</p> <ul style="list-style-type: none"> • Psychological adjustment (PAQ) <p>Dependent Variables:</p> <ul style="list-style-type: none"> • Family loneliness • Social loneliness • Romantic loneliness (SELSA-S) 	<p>1) Separate Hierarchical Multiple Regression Analyses</p> <p>2) Sobel's Test</p>
<p>3) Do coping styles mediate the relation between current attachment relationship experiences and family, social, and romantic loneliness?</p>		
<p>H3a: Use of instrumental support coping would mediate the relation between current attachment relationship experiences and family, social, and romantic loneliness.</p>	<p>Predictor Variables:</p> <ul style="list-style-type: none"> • Use of instrumental support 	<p>1) Separate Hierarchical Multiple Regression</p>

<p>H3b: Use of self-blame coping would mediate the relation between current attachment relationship experiences and family, social, and romantic loneliness.</p>	<p>(Brief-COPE)</p> <ul style="list-style-type: none"> • Use of self-blame (Brief-COPE) <p>Dependent Variables:</p> <ul style="list-style-type: none"> • Family loneliness • Social loneliness • Romantic loneliness (SELSA-S) 	<p>Analyses</p> <p>2) Sobel's Test</p>
<p>4) Do attachment style differences in sense of mattering, coping styles, and loneliness exist among emerging adults?</p>		
<p>H4a: Emerging adults with secure attachment styles would report higher levels of sense of mattering while those with insecure attachment styles would report lower levels of sense of mattering.</p> <p>H4b: Emerging adults scoring high on attachment security would report higher levels of use of emotional support and use of instrumental support coping and lower levels of use of behavioral disengagement, self-distraction, and self-blame.</p> <p>H4c: Emerging adults with secure attachments would also report lower levels of family, social, and romantic loneliness.</p>	<p>Variables:</p> <ul style="list-style-type: none"> • Sense of mattering to family and Sense of mattering to friends (Interpersonal Mattering Scale) • Attachment styles (ECR-R) • Family, social, and romantic loneliness (SELSA-S) • Use of emotional support, use of instrumental support, use of behavioral disengagement, use of self-distraction and use of self- 	<p>1) Bivariate Correlations</p> <p>2) Partial Correlations</p> <p>3) One-way ANOVA analyses</p> <p>4) Univariate ANCOVA analyses</p>

	blame (Brief-COPE)	
5) Do gender differences in loneliness, sense of mattering, and coping styles exist among emerging adults?		
H5a: Females would report higher levels of sense of mattering and depressive symptomatology and loneliness. H5b: Females would report higher levels of use of emotional support and self-blame. H5c: Males would report higher levels of use of instrumental support and behavioral disengagement.	Variables: <ul style="list-style-type: none"> • Sense of mattering to family and friends (Interpersonal Mattering Scale) • Family, social, and romantic loneliness (SELSA-S) • Depressive Symptomatology (CES-D Scale) • Use of emotional support, use of instrumental support, use of behavioral disengagement and use of self-blame (Brief-COPE) 	1) Bivariate Correlations 2) Partial Correlations 3) One-way ANOVA analyses 4) Repeated-measures ANCOVA analysis
6) Does the amount of time spent engaging in social networking systems and outside group involvement/activities influence subsequent reports of family, social, and romantic loneliness?		
H6a: Emerging adults reporting higher use of social networking would report lower family, social, and romantic loneliness. H6b: Emerging adults reporting higher levels of	Variables: <ul style="list-style-type: none"> • Social networking rating (Demographics 	1) Bivariate Correlations

<p>group involvement would report lower levels of family, social, and romantic loneliness.</p>	<p>questionnaire)</p> <ul style="list-style-type: none"> • Group involvement rating (Demographics questionnaire) • Family, social, and romantic loneliness (SELSA-S) 	<p>2) Partial Correlations</p> <p>3) One-Way ANOVA analyses</p>
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Figure 2: Proposed Model of Family Loneliness in Emerging Adulthood

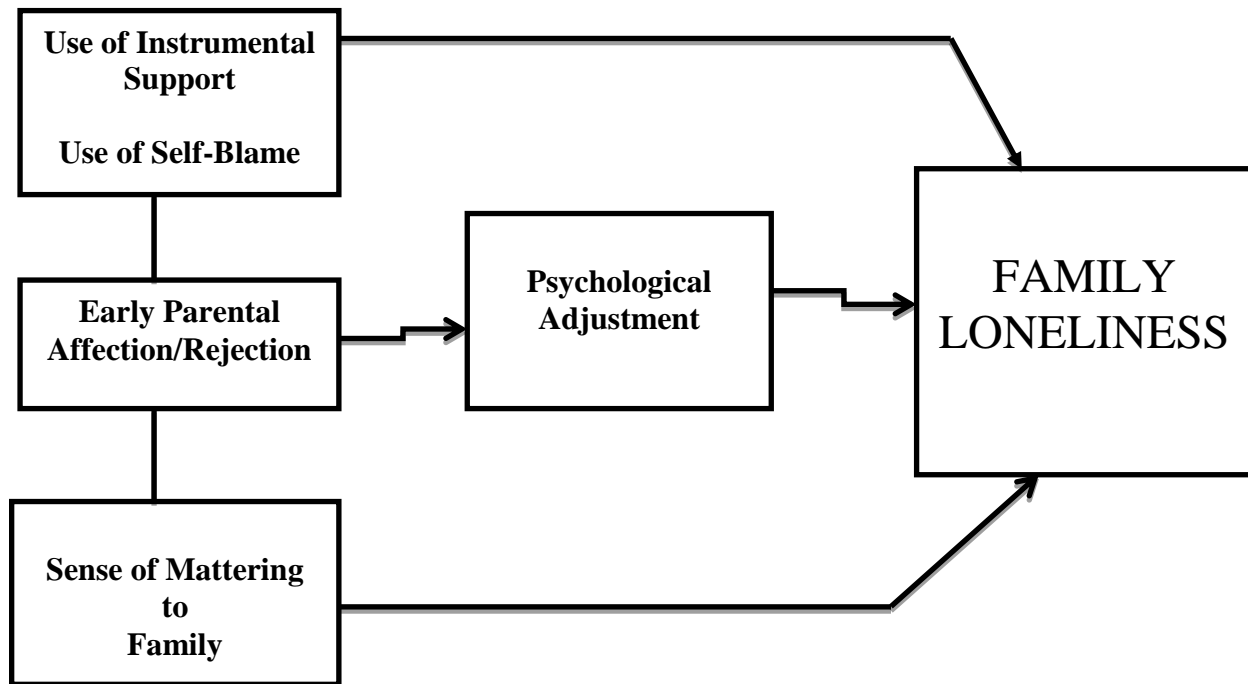


Figure 3: Proposed Model of Social Loneliness in Emerging Adulthood

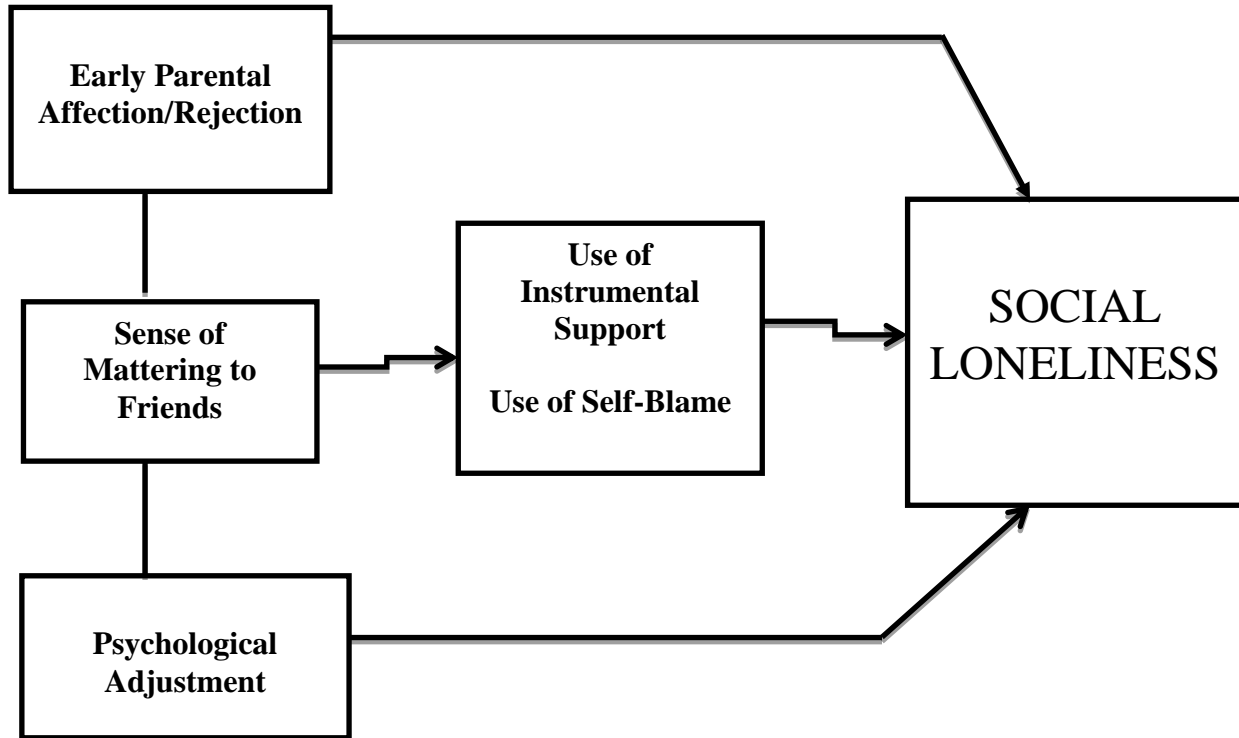


Figure 4: Proposed Model of Romantic Loneliness in Emerging Adulthood

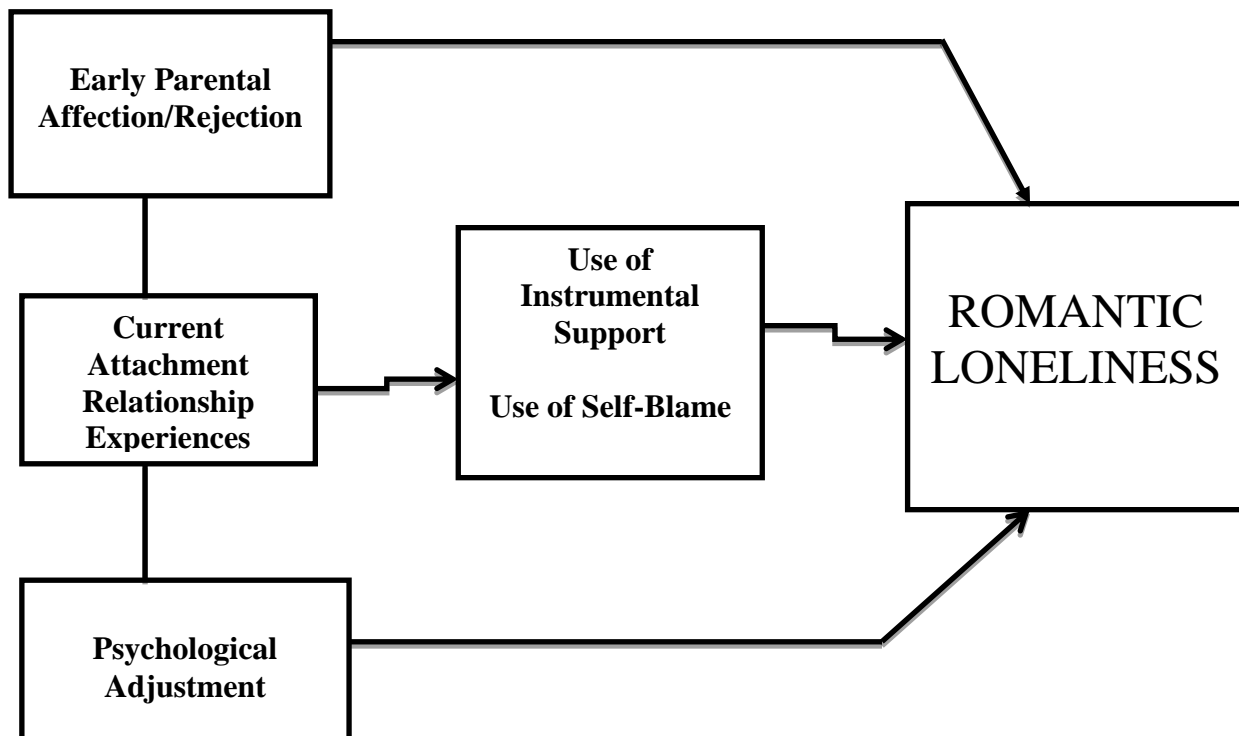
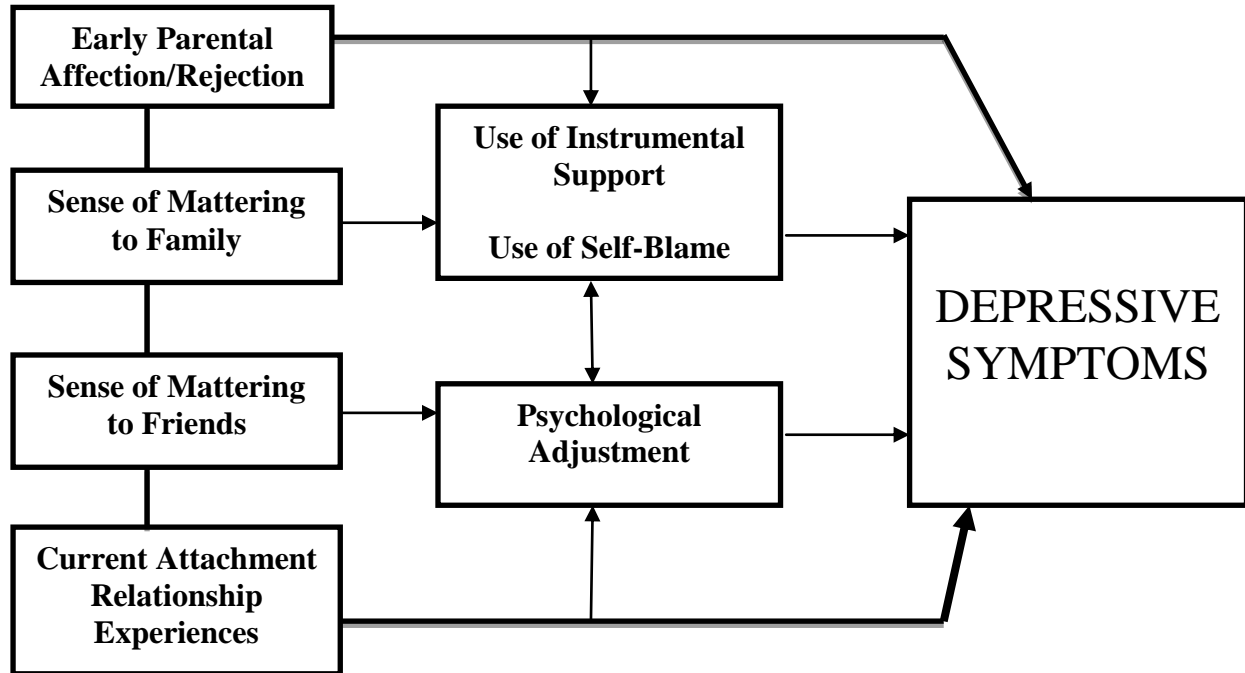


Figure 5: Proposed Model of Depressive Symptomatology in Emerging Adulthood

CHAPTER 3

METHOD

Participants

After receiving approval from the Human Investigation Committee (HIC) at Wayne State University (WSU; Appendix A), 604 participants were recruited through a notice/announcement flyer (Appendix B) posted on the WSU Pipeline as well as throughout the university campus. In addition, an announcement was posted on the SONA system (online psychology participant research pool). The inclusion criteria included being between the ages of 18-to-25 years old, being a university student, enrolment in at least one undergraduate and/or graduate level course, and the ability to speak and read English. In addition, participants required access to a computer in order to complete the online survey. The exclusion criteria for the current study included anyone under the age of 18 and over the age of 25 years, as well as anyone who could not speak and read English or have access to a computer.

Of the 604 completed protocols, 30 were unusable due to significant missing data across all scales, resulting in a sample size of 574. The Boxplot method (Field, 2005) was then used to identify outliers within the current data. From the 574 protocols, 16 participants had more than one outlying value (z -score greater than 2) on key variables and thus were excluded from the analyses. Of the remaining 558 participants, 172 were male and 386 were female. In order to receive a balanced gender ratio, SPSS was used to obtain a stratified sample of females. Thus, from the original female sample ($n = 386$), 60% of the females were randomly sampled and then merged with the original data. The final sample consisted of 440 participants (172 males, 268 females).

The demographic characteristics of the sample are in Table 1. After completing the random stratification, groups were more equivalent on gender (males = 39%; females = 61%).

The age of the participants spanned from 18 to 25 years old with the mean age at 20.6 years. Slightly more than half of the sample was Caucasian (55.7%) and approximately 14.5% identified themselves as African American. Some participants identified themselves as Asian (10.5%) and 9.8% as Arabic. A few participants identified themselves as Hispanic or Latino (3.0%), American Indian (1.6%), Native Hawaiian (0.7%) and 4.3% did not provide their ethnicity. The majority of participants were undergraduate (94.5%) full-time (86.6%) students. Most participants were never married (54.3%) and 30.0% reported being in committed relationships. A few participants reported that they were married or cohabitating (4.5%), divorced or separated (0.4%) and 10.7% did not provide their marital status. The majority of participants were living with their immediate family (69.5%) and 17.5% were living with a roommate. A few participants reported that they were living with a spouse/significant other (17.5%), living alone (3.6%) and living with grandparents (1.1%). Most participants were working part-time (53.9%) as compared to 10.7% who reported working full-time. Of those who reported being unemployed, 18.2% were seeking employment, 15.0% were not looking for employment, 0.2% were on disability and 2.0% did not provide their employment status. An overwhelming majority of the participants reported religion/spirituality to be an important part of their lives (76.8%). The majority of participants also reported healthy psychological adjustment (82.0%).

Table 1

Demographic Information on the Original ($N = 604$) and Final ($N = 440$) Samples

Variables	N and n	%	N and n	%
<i>Gender</i>	<u>604</u>		<u>440</u>	
Male	176	29.1	172	39.1
Female	428	70.9	268	60.9

<i>Age</i>				
18 years	88	14.6	67	15.2
19 years	120	19.9	90	20.5
20 years	94	15.6	73	16.6
21 years	115	19.0	77	17.5
22 years	77	12.7	51	11.6
23 years	49	8.1	36	8.2
24 years	25	4.1	19	4.3
25 years	36	6.0	27	6.1
<i>University Status</i>				
Undergraduate	575	95.2	416	94.5
Graduate	16	2.6	12	2.7
Continuing Education	13	2.2	12	2.7
<i>Student Status</i>				
Part-Time	79	13.1	59	13.4
Full-Time	525	86.9	381	86.6
<i>Ethnicity</i>				
White/Caucasian	324	53.6	245	55.7
Black/African American	93	15.4	64	14.5
Asian	76	12.6	46	10.5
Arabic	57	9.4	43	9.8
Hispanic/Latino	17	2.8	13	3.0
American Indian	10	1.7	7	1.6
Native Hawaiian	4	.7	3	.7
No Answer	23	3.8	19	4.3
<i>Martial Status</i>				
Married or Cohabiting	31	5.1	20	4.5
Never Married	326	54.0	239	54.3
Divorced	3	.5	1	.2
Separated	1	.2	1	.2
Committed Relationship/Engaged	183	30.3	132	30.0

No Answer	60	9.9	47	10.7
<i>Living Arrangements</i>				
Living Alone	31	5.1	16	3.6
Living with Spouse/Significant Other	52	8.6	36	8.2
Living with Roommate	104	17.2	77	17.5
Living with Immediate Family	409	67.7	306	69.5
Living with Grandparents	7	1.2	5	1.1
Missing Data	1	.2		
<i>Employment Status</i>				
Unemployed but Looking for Employment	121	20.0	80	18.2
Working Full Time (35 hr or more)	63	10.4	47	10.7
Working Part Time (34 hr or less)	328	54.3	237	53.9
Unemployed and Not Looking for Employment	77	12.7	66	15.0
On Disability	1	.2	1	.2
No Answer	14	2.3	9	2.0
<i>Religion/Spirituality</i>				
Very Important	264	43.7	184	41.8
Somewhat Important	209	34.6	154	35.0
Not Important	117	19.4	92	20.9
No Answer	13	2.2	10	2.3
Missing Data	1	.2		
<i>Mental Health Status</i>				
Yes	100	16.6	74	16.8
No	493	81.6	361	82.0
No Answer	10	1.7	5	1.1
Missing Data	1	.2		

Measures

Demographic questionnaire. Participants were asked to respond to various personal questions, such as age, gender, university and student status, cultural background, spirituality,

marital status, current living arrangements and employment history. In addition, two specific questions pertaining to group involvement and social networking systems were included.

Group involvement rating. In order to understand participants' current levels of group involvement, participants were asked to check off the current social groups/clubs that they belong to including sports, school teams, religious groups, community volunteer, environmental club, political club and student parliament. In addition, they were asked to indicate the amount of time they spend engaging in these group activities per week (i.e., less than 2 hrs, 2-4 hrs, 5-7 hrs, 8-10 hrs and 10 hrs or more). The majority of participants reported being involved in some form of group weekly (54.1%), with the highest involvement being a community volunteer (45.5%) followed by involvement in religious groups (36.2%). The specific distributions for group involvement are presented in Table 2.

Social network rating. In order to assess the participants' current attitudes towards their relationships and how they maintain contact with their family, peers and romantic partners, participants were asked to check off which social networking systems they currently used including Facebook, text messaging, MSN messenger, twitter, MySpace, SKYPE, BLOGS, Online Gaming Playstation, and Online Gaming Smart. In addition, they were asked to indicate the amount of time they spend engaging in these systems per day (i.e, 20 min or less, 1-2 hrs, 2-4 hrs, 5-7 hrs and 8 hrs or more). The majority of participants reported engaging in some form of social networking daily (88.0%), with the highest time spent on text messaging (97%), followed by Facebook (85.3%) and then Online Gaming Smart (63.2%). The specific distributions for social networking are presented in Table 2.

Table 2**Frequency Distributions for the Group Involvement and Social Network Ratings ($N = 440$)**

Variable	<i>N</i> and <i>n</i>	%
Group Involvement	238	54.1
Sports	142	32.3
School Teams	146	33.1
Religious Groups	159	36.2
Community Volunteer	200	45.5
Environmental Club	67	15.2
Political Club	69	15.6
Student Parliament	69	15.6
Social Networking	387	88.0
Facebook	375	85.3
Text Messaging	427	97
MSN Messenger	195	44.4
Twitter	220	50.0
MySpace	102	23
SKYPE	193	43.9
BLOGS	148	33.7
Online Gaming Playstation	168	38.2
Online Gaming Smart	278	63.2

Early family relationships dimension (Adult Parental Acceptance Rejection Questionnaire, Short Form, PARQ; Rohner & Khaleque, 2005). The PARQ Short Form is a 24-item self-report measure, derived from the original 60-item PARQ, that assesses the participants' beliefs about how well they were treated by their mother and father when they were approximately 7-12-years-old. Example questions from both the mother and father questionnaires include my mother/father "was too busy to answer my questions", and my mother/father "treated me gently and with kindness." Participants were asked to quickly respond to the statements on a four-point Likert-type scale ("Almost True", "Sometimes True", "Rarely True" or "Almost Never True").

The PARQ yields four specific dimensions and a total score, which is computed by summing all four scales (entire warmth scale is reverse scored and subtracted from 40). The PARQ has a possible range of 24 (maximum perceived acceptance) to 96 (maximum perceived rejection) with a midpoint score of 56. Scores equal to or over 56 represent adults who experienced more rejection than acceptance in their home environment (Rohner & Cournoyer, 1994). The *warmth/affection* dimension measures the degree to which the adult experienced their relationship with their parents as highly loving and caring (e.g., my mother/father "said nice things about me"). The *hostility/aggression* dimension measures the degree to which the adult experienced their relationship with their parents as physically (e.g., hitting, pushing) and verbally (e.g., sarcastic, shouting, cursing) aggressive (e.g., my mother/father "hit me, even when I did not deserve it"). The *indifference/neglect* dimension measures the degree to which the adult experienced physical and psychological unavailability of the parent when they were children (e.g., my mother/father "paid no attention to me"). Finally, the *undifferentiated rejection* dimension measures the degree to which the adult felt unloved, unappreciated and uncared for when they were a child (e.g., my mother/father "saw me as a big nuisance"). In the present study,

the ranges for the subscales were as follows: 36.00-41.00 (total mother acceptance and rejection) and 42.00-58.00 (total father acceptance and rejection), thus indicating a slightly higher level of perceived acceptance from mothers and a slightly higher level of perceived rejection from fathers.

The reliability of the PARQ has been found to be remarkable in a variety of studies. For example, within their original sample of 58 Connecticut students, Rohner and Cournoyer (1975) revealed a median coefficient of .91 (range = .83 - .96) for the standard PARQ form. A subsequent study by Rohner and Chaki-Sircar (1987) reported Cronbach alphas ranging from .86 to .95, respectively. In addition, meta-analysis studies conducted by Khaleque and Rohner (2002) demonstrated that the PARQ is a reliable measure with Cronbach alpha coefficients equal to or exceeding the .80 criterion. Finally, Rohner and Khaleque (2005) reported a six month test-retest reliability coefficient of .93. For the current study, the following Cronbach's alpha coefficients were obtained for the mother: .91 (warmth/affection), .86 (hostility/aggression), .54 (indifference/neglect), .82 (undifferentiated rejection) and .80 (total acceptance and rejection – i.e., mother warmth scale). In addition, the following Cronbach's alpha coefficients were obtained for the father: .93 (warmth/affection), .88 (hostility/aggression), .61 (indifference/neglect), .87 (undifferentiated rejection) and .90 (total acceptance and rejection – i.e., father warmth scale).

Validity studies on the PARQ have also been conducted and demonstrate remarkable results. Convergent and discriminant validity was shown with the PARQ scales correlating significantly with its respective validation scale (e.g., “warmth/affection” was highly correlated with the “CRPBI and Acceptance” validation scales: $r = .90$; whereas the “parental indifference/neglect” correlated more highly with the “CRPBI perceived hostile detachment” validation scales: $r = .86$; Rohner & Khaleque, 2005). In addition, factor analyses of the PARQ provided additional support regarding the construct validity of the measure in that the first three

factors extracted from the scale accounted for approximately 76% of the variance (see Rohner & Khaleque, 2005, for additional discussion of the validity of the PARQ). Finally, the PARQ has been both utilized and cross-validated across several cultures, including “transgender women of color” (Koken, Bimbi, & Parsons, 2009), Korean American adolescents (Kim, 2008), Turkish adults (Varan et al., 2008) and adolescents from Bangladesh, Estonia, India, Kuwait, Turkey, and the United States (Rohner, 2010; Rohner, Khaleque, Shamsuddin Elais, & Sultana, 2010).

Current attachment relationship dimension (Experiences in Close Relationships Scale Revised, ECR-R; Fraley et al., 2000). The ECR-R questionnaire is a 36-item measure derived from Brennan et al.’s (1998) ECR questionnaire. This self-report measure assesses individuals’ orientations towards closeness and distance in their romantic relationships (Lopez & Hsu, 2002). It was designed specifically to assess individual differences with respect to attachment anxiety (i.e., preoccupation with relationships and anxiety about abandonment) and attachment avoidance (i.e., the extent to which individuals are uncomfortable in intimate relationships). Thus, it yields two scale scores: *attachment anxiety* (where high scores represent low anxiety) and *attachment avoidance* (where high scores represent low avoidance). An example of the anxiety subscale includes “I worry that romantic partners won’t care about me as much as I care about them”, and a sample of the avoidance subscale includes “I prefer not to be too close to romantic partners.” Each item of the questionnaire is rated on a seven-point Likert scale from 1 “*strongly disagree*” to 7 “*strongly agree*”. Thus, depending on the individuals’ endorsement of each item, total scores can range from 36 to 252, attachment anxiety scores can range from 18 to 126, and attachment avoidance scores can range from 18 to 126. Brennan and colleagues (1998) indicated that individuals who are low on the attachment anxiety and attachment avoidance dimensions are considered to have a secure attachment style. In the present

study, the ranges for the subscales were as follows: 18.00-120.96 (attachment avoidance) and 18.00-126.00 (attachment anxiety).

The reliability of the ECR-R has been found to be remarkable in a variety of studies. Original reliability coefficients were reported by Brennan and colleagues (1998), with .93 for attachment anxiety and .94 for attachment avoidance. Fraley and colleagues (2000) reported test-retest reliability to be remarkable with coefficients of .93 and .94 for the anxiety subscale and .95 and .95 for the avoidance subscale. A more recent study by Sibley and Liu (2004) found the subscales to be remarkably stable over a six-week assessment period, with the scales providing stable estimates of trait attachment without high levels of measurement error. They reported final Cronbach alpha coefficients of .93 for the attachment anxiety subscale and .91 for the attachment avoidance subscale. Similarly, Vogel and Wei (2005) reported coefficients of .93 for the attachment anxiety subscale and .94 for the attachment avoidance subscale. A longitudinal study by Sibley, Fischer, and Liu (2005) reported the ECR-R to provide a highly stable estimate over a three-week assessment period, with Cronbach alpha coefficients of .92 for the attachment anxiety subscale and .90 for the attachment avoidance subscale. In addition, Fairchild and Finney (2006) reported Cronbach alpha coefficients of .92 for the attachment anxiety subscale and .93 for the attachment avoidance subscale. Finally, a study using a college sample reported Cronbach's alpha coefficients of .92 for the attachment avoidance and .94 for the attachment anxiety subscales. Thus, the ECR-R appears to be a reliable estimate of adult attachment styles within the two-dimensional model. Within the current study, reliability coefficients were as follows: .94 (attachment avoidance) and .94 (attachment anxiety).

The validity and factor analysis of the ECR-R has also proved to be remarkable. Original evidence for validity was provided by Brennan and colleagues (1998), who reported the scales to be correlated with scores on aversion and postcoital emotions. Sibley and colleagues' (2005)

longitudinal study indicated that the ECR-R provided “suitable convergent and discriminant validity as a measure of attachment representations of the romantic relationship domain” (p. 1533); thus suggesting that the ECR-R is reflective of the variations in relationship-level interpersonal dispositions of attachment. In addition, they found the ECR-R to accurately “fit the hypothesized two-factor solution representing dimensions of attachment anxiety and avoidance” (p. 1529). Recently, Fairchild and Finney’s (2006) study indicated overall good construct validity, but the variance analyses suggested that some scale items may not be “efficiently representing the constructs of anxiety and avoidance” (p. 133). However, their analyses revealed moderate disattenuated correlations between the latent factors thus providing general support for a two-factor solution.

Loneliness (The Social and Emotional Loneliness Scale for Adults - Short Form, SELSA-S; DiTommaso, Brannen, & Best, 2004). The SELSA-S is a 15-item questionnaire that assesses three domains of loneliness in adults: family, social, and romantic. Each domain subscale consists of five statements about feelings of loneliness within the past year, and participants rate the extent of their agreement with these statements on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The *family loneliness* subscale assesses feelings toward family relationships (e.g., “In the last year I felt alone when I was with my family”). The *social loneliness* subscale measures feelings toward being part of a social group (e.g., “In the last year I didn’t have a friend(s) who understood me, but I wish I had”). The *romantic loneliness* subscale measures the degree to which participants feel they have significant others in their lives (e.g., “In the last year I had an unmet need for a close romantic relationship”). Mean scores were calculated for each subscale, with higher scores indicating greater feelings of loneliness in that domain. Within the current study, the ranges for the subscales were as follows: 1.00-7.00 (family loneliness), 1.00-7.00 (social loneliness), and 1.00-7.00 (romantic loneliness).

Beginning with the initial work of Letts (1997) to a more recent study by Bernardon and colleagues (2011), the reliability of the SELSA-S has been supported. Letts (1997) reported coefficients of .74 to .77 for her sample of older adults ranging from 55 to 88 years. An initial study by DiTommaso and colleagues (2003) reported Cronbach alpha coefficients ranging from .81 to .91 within their university sample. A second study conducted by DiTommaso and colleagues (2004) reported Cronbach's alpha coefficients ranging from .87 to .90 within their university, military and psychiatric patient samples. Another study by DiTommaso, Brannen, and Burgess (2005) reported Cronbach's alpha coefficients of .80 to .91 within their university Chinese and Canadian samples. A more recent study by Bernardon and colleagues (2011) reported Cronbach's alpha coefficients ranging from .77 to .89 within their university study. Finally, Lasgaard and colleagues (2011) found coefficients of .80 to .87 for their high school student sample. Within the current study, reliability coefficients were as follows: .88 (family loneliness), .84 (romantic loneliness), and .85 (social loneliness).

Strong validity evidence has also been demonstrated for the SELSA-S. For example, the work of DiTommaso and colleagues (2004) documented that each subscale on the SELSA-S was significantly correlated with the Revised UCLA Loneliness Scale (ranging from .34 to .73), as well as with their analogues on the full version of the SELSA (ranging from .78 to .85), thus supporting its concurrent validity. Evidence for discriminant validity was also found, such as negative associations between quality of parental relationships and family and social loneliness (ranging from .18 to .62), as well as no significant associations between quality of parental relationships and romantic loneliness. In addition, factor analysis on the SELSA-S yielded the predicted three-factor solution to fit the data and dimensions of family, social, and romantic loneliness. Moreover, DiTommaso and colleagues (2005) demonstrated support for the

universality of the SELSA-S among cultures and genders (see DiTommaso et al., 2004 and 2005, for additional discussion of the validity of the SELSA-S).

Sense of mattering (Interpersonal Mattering Scale; Elliott et al., 2004). The Interpersonal Mattering Scale is a 24-item questionnaire that assesses the participants' sense of belonging and the belief that others are aware of and care about their presence. The measure consists of three subscales and participants rate the extent of their agreement with these statements on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The *awareness* subscale assesses the participants' feelings that others are attending to them (e.g., "Sometimes when I am with others, I feel almost as if I were invisible"). The *importance* subscale measures the participants' feeling that they matter to others and are the object of others' interest (e.g., "If the truth be known, no one really needs me"). The *reliance* subscale measures the participants' feelings that others turn to them to meet their needs (e.g., "People count on me to be there in times of need"). Mean scores are calculated for each subscale, with higher scores indicating greater feelings of mattering in that domain. For the purpose of this study, the Interpersonal Mattering Scale was administered twice: once with wording regarding mattering within the immediate family environment (i.e., father, mother, guardian, siblings) and once with wording regarding mattering within the social environment (i.e., close friends). Mean scores were calculated for each subscale, with higher scores indicating a greater sense of mattering in that domain. The ranges for the subscales were as follows: 14.00-50.00 (family sense of awareness), 9.00-45.00 (family sense of importance), 5.00-25.00 (family sense of reliance), 15.00-50.00 (friends sense of awareness), 11.00-45.00 (friends sense of importance), and 5.00-25.00 (friends sense of reliance).

Elliott and colleagues (2004) have found very good internal consistency for the Interpersonal Mattering Scale with Cronbach's alpha coefficients ranging from .82 to .87 for the

awareness scale, .79 to .86 for the importance scale, .83 to .87 for the reliance scale, and .93 for an overall total. Another study by Elliott and colleagues (2005) reported an overall Cronbach alpha coefficient of .85. In addition, a recent study of emerging adults by Racque-Bogdan and colleagues (2011) reported Cronbach alpha coefficients of .87 for awareness, .84 for importance, .75 for reliance, and .93 for the overall score. For the current study, the following Cronbach's alpha coefficients were obtained for the family environment: .84 (sense of awareness), .87 (sense of importance), and .83 (sense of reliance). In addition, the following Cronbach's alpha coefficients were obtained for the social environment: .87 (sense of awareness), .87 (sense of importance), and .79 (sense of reliance).

The construct, content, and discriminant validity of the Interpersonal Mattering Scale was also demonstrated with the use of expert feedback, confirmatory factor analysis and pilot testing (see Elliott et al., 2004). The items in the index covered a great many facets for the awareness, importance, and reliance dimensions, thus supporting the content validity. In addition, the coefficients of the model were highly significant and of high magnitude, thus demonstrating the construct validity. Finally, the scale items did not tap other constructs that were theoretically significant correlates of mattering, thus supporting the discriminant validity of the measure (see Elliott et al., 2004, for additional information on the reliability and validity of the Interpersonal Mattering Scale).

Personality dimension (Adult Personality Assessment Questionnaire, PAQ; Rohner & Khaleque, 2005). The PAQ is a 63-item measure designed to assess participants' self-reports about seven personality dispositions most central to PARTheory. Participants respond to the items on a four-point Likert scale ranging from 1 "*almost never true of me*" to 4 "*almost always true of me.*" The PAQ yields seven separate dimensions (9-items per scale) and a total score which is computed by summing all separate dimension scores. The PAQ has a possible range of

63 (representing healthy psychological adjustment) to 252 (representing serious psychological maladjustment; Khaleque & Rohner, 2002). The *hostility/aggression* dimension assesses the participants' internal feeling of anger, resentment, and aggression (e.g., "I feel resentment against people"). The *dependency* dimension measures the participants' internal wish for emotional support and their actual behavioral bids to obtain such support (e.g., "I like my friends to feel sorry for me when I am ill"). The *negative self-esteem* dimension assesses the participants' level of disapproval for themselves including feeling worthless (e.g., "I get disgusted with myself"). The *negative self-adequacy* dimension measures the participants' feelings of incompetence and inability to meet daily demands successfully (e.g., "I think I am a failure"). The *emotional unresponsiveness* dimension assesses the participants' inability to express their emotions freely and candidly (e.g., "My relationship with others is spontaneous and warm"). The *emotional instability* dimension measures the participants' tendency to demonstrate unpredictable mood shifts (e.g., "I get upset easily when I meet difficult problems"). Finally, the *negative worldview* dimension assesses the participants' judgment of life as a hostile and threatening place (e.g., "I view the world as an anxious and insecure place"). Only the total scale score (total adjustment score) was used in the current study, which was the sum of all of the items. The range for the total score was 66.00-230.00, with lower scores representing healthy psychological adjustment.

Ample support has been provided for the reliability and validity of the PAQ for use in cross-cultural research. For example, the original use of the PAQ with an adult sample in West Bengal, India demonstrated a median reliability coefficient of .81 (Rohner & Chaki-Sircar, 1987). Rohner and Khaleque (2005) reported a median alpha coefficients of .63 (range = .46 to .74). Varan and colleagues (2008) reported a Cronbach alpha coefficient of .82 for their Turkish adult sample. In addition, a meta-analysis of 252 adults revealed an overall mean effect size

coefficient alpha of .86 (Khaleque & Rohner, 2002). A more recent study by Demetriou and Christodoulides (2011) revealed Cronbach's alpha coefficients of .60 to .78, respectively, for their Greek Cypriot adolescent sample. Another meta-analysis study conducted by Khaleque and Rohner (2002) demonstrated Cronbach's alpha coefficients of .75 for published studies and .85 for unpublished studies. Finally, test-retest reliability across time periods of 12 through 18 months was found to be .76 (Khaleque & Rohner, 2002). With respect to the validity of the PAQ, Rohner and Khaleque (2005) provided convergent and discriminant validity support (i.e., all scales were significantly related to their respective validation scales and the correlations showing convergent validity were higher than the correlations between the PAQ scale and a non-validated scale). Finally, initial factor analyses of the PAQ demonstrated that the first six factors extracted in the PAQ accounted for 58% of the variance (as reported in Rohner & Khaleque, 2005). In the present study, the Cronbach's alpha coefficient for the PAQ total score was .87.

Depressive symptomatology (Center for Epidemiologic Studies Depression Scale, CES-D Scale; Radloff, 1977). The CES-D Scale is a short self-report measure designed to assess current levels of depressive symptomatology in the general population with a focus on the affective component of depression (i.e., depressed mood). Participants were asked to respond to 20 statements as they might have occurred during the past month on a four-point Likert scale from 1 as "*None or Rarely*" to 4 as "*Most or All of the time.*" A sample item from the CES-D Scale includes "I was bothered by things that usually don't bother me." A total score was obtained by summing the scores, with reversed scoring on the three positive items. The range for this sample was 2.50-55.00, with higher scores indicating a higher level of depressive symptomatology.

Reliability for the CES-D Scale has been reported to be well above the expected ranges. For example, initial internal consistency reports for the general population ranged from .85 in the

general population to .90 in the clinical sample (Radloff, 1977). In addition, Radloff (1977) reported test-retest correlations of .45 to .70 with larger correlations for the shorter time intervals (e.g., 2-week vs. 8-week and 3-months vs. 12-months). Another study by Taylor and Turner (2001) reported a Cronbach alpha coefficient of .90 with their adult sample. Examining emerging adults, Nelson and McNamara Barry (2005) reported high internal consistency (.87) and Galambos and colleagues (2006) reported Cronbach's alpha coefficients of .68 to .78 for their five waves of data collection. In addition, Patock-Peckham and Morgan-Lopez (2009) reported a Cronbach alpha coefficient of .89 for their emerging adulthood sample. Finally, a more recent study of emerging adults by Perttiti and colleagues (2011) reported Cronbach's alpha coefficients ranging from .91 to .92 across their assessment waves. Within the current study, the Cronbach's alpha coefficient for the CES-D Scale was .90.

The validity of the CES-D Scale has also been established by patterns of correlations with other self-report measures, correlations with clinical ratings of depression, and by relationships with other variables thus supporting its construct validity. For example, the correlations of the CES-D Scale with the Hamilton Clinician's Rating Scale and the Raskin Rating Scale were .44 to .54. After four weeks of treatment, the correlations increased to .69 and .75, respectively (Radloff, 1977). In addition, low negative correlations were found between the CES-D Scale and the Marlowe-Crowne scale of "social desirability". Moreover, the CES-D Scale was moderately correlated with the interview ratings of depression (Radloff, 1977). Factor analysis as reported in Radloff (1977) suggested strong evidence for the CES-D Scale in two samples from similar populations and across two tests for the same sample (coefficients were very low: $>.13$). In addition, the factor structure was also found to be similar across various demographic populations (see Radloff, 1977 for additional information on the validity of the CES-D Scale).

Coping used during relationships dimension (Brief Coping Orientations to Problems Experienced Scale, Brief-COPE; Carver, 1997). The Brief-COPE, which assesses people's dispositional as well as situational coping patterns when encountering stressful situations, was developed from Carver et al.'s (1989) COPE. The dispositional format, written in present tense, was used in this study to measure functional and dysfunctional trait-like responses that participants report using within their current family and social relationships. The 28-item questionnaire consists of 14 separate scales and statements are rated on a three-point Likert scale from 0 as "*I haven't been doing this at all*" to 3 as "*I've been doing this a lot.*" Four of the scales (active coping, planning, humor and use of instrumental support) measure problem-focused coping, five of the scales (turning to religion, use of emotional support, positive reframing, denial and acceptance) measure emotion-focused coping and five of the scales (venting, self-distraction, behavioral disengagement, substance use and self-blame) measure dysfunctional coping strategies.

Carver (1997) encourages researchers to adapt the measure to suit their specific needs. For the current study, the entire measure was administered to participants but only five specific scales were used to assess five types of coping styles. The *use of emotional support* scale measures participants' likelihood to seek comfort from others in stressful situations (e.g., "I've been getting comfort and understanding from someone"). The *use of instrumental support* scale measures participants' likelihood to seek advice in stressful situations (e.g., "I've been getting help and advice from other people"). The *self-blame* scale measures participants' likelihood to criticize and blame themselves for the stressor (e.g., "I've been criticizing myself"). The *behavioral disengagement* scale measures participants' likelihood to reduce their effort to deal with the stressor (e.g., "I've been giving up trying to deal with it"). Finally, the *self-distraction* scale assesses the participants' likelihood to mentally and physically remove themselves from the

stressor (e.g., “I’ve been turning to work or other activities to take my mind off things”). Scores for each type of coping were obtained by summing the scores for the items in each subscale, with higher scores indicating greater use of that type of coping. The ranges for the subscales were as follows: 2.00-8.00 (use of emotional support), 2.00-8.00 (use of instrumental support), 2.00-8.00 (self-blame), 2.00-8.00 (self-distraction), and 2.00-8.00 (behavioral disengagement).

Similar to the COPE Inventory, the internal reliability of the Brief-COPE for three administrations was reported to be adequate with Cronbach’s alpha reliability coefficients as follows: Emotional support scale, .71; instrumental support scale, .64; self-blame scale, .69; behavioral disengagement scale, .68; and self-distraction scale, .71 (Carver, 1997). A more recent study by Sud and Monga (2009) reported an overall Cronbach alpha coefficient of .74. In addition, factor analyses demonstrated that the nine factors accounted for 72.4% of the variance in responding (Carver et al., 1989). Finally, excellent convergent and discriminant validity has also been reported (see Carver et al., 1989 for an overview of the reliability and validity of the COPE and Brief-COPE). Within the current study, reliability coefficients were as follows: .72 (use of emotional support), .78 (use of instrumental support), .70 (self-blame), .53 (self-distraction), and .74 (behavioral disengagement).

Procedure

The 604 participants were recruited through notice/announcement flyers which were posted on WSU Pipeline and throughout the university campus. In addition, an announcement was posted on the Psychology Participant Pool (SONA System). The notice/announcement flyer indicated the online study website along with the purpose of the study. Within the SONA system, the announcement was made regarding the “Family, Peer, and Relationships Study” and directions for accessing the online survey were provided. The description of the study was as follows: “The purpose of this online research study is to examine your past and current

relationships with family and friends, and how you perceive these relationships to function in your life. This online study involves filling out a series of questionnaires pertaining to group involvement, social networks, your past and current relationships, personality, coping and well-being. It will take approximately 45 minutes of your time. Participation in this study is voluntary, anonymous, and you may withdraw at any time. You will be awarded 0.5 psychology bonus point for completion of this study.” Interested students were then able to access the study website (surveymonkey.com). The use of an online data collection protocol facilitated unified data collection across the university site and allowed for the survey to be administered to emerging adults in a confidential and time efficient manner.

Informed consent was obtained online via a checkmark box (Appendix C). Only after providing consent were the participants able to begin the questionnaires online and questions were presented one by one on the computer screen for participants to click on their answer. Each participant was asked to complete a package of 10 batteries (Appendix D; demographic questionnaire presented first; PARQ mother form; PARQ father form; CES-D Scale; Interpersonal Mattering Scale family form; Interpersonal Mattering Scale friends form; SELSA-S; ECR-R; PAQ; Brief-COPE). Sections of the survey addressed topic areas such as early parent-child interactions, current attachment styles, level of sense of mattering and belonging, personality traits, coping styles, loneliness levels and depressive symptomatology. The survey also assessed the emerging adults’ level of group involvement and social networking. Due to participation being voluntary and completely anonymous, upon completion of the questionnaires, participants were presented with the Closing Information Sheet concerning their emotional well-being (Appendix E). They were provided with a list of various telephone numbers, online sites and in-person counseling centers should they require any assistance. All participants were asked

to checkmark that they read the Closing Information Sheet and understood where to locate the available resources should they require them.

As an incentive for participation, each participant received a number on their closing information sheet which was entered in a draw for various monetary prizes (e.g., Starbucks, Nobles & Barns, Jimmy Johns, CVS, itunes, etc.). Three \$15 gift cards to various establishments were raffled at the end of each month until the maximum number of participants was recruited. At the end of each month, the winning numbers were announced on the Counseling Psychology website (<http://coe.wayne.edu/tbf/edp/counseling-psychology/>) along with the location, dates, and times when the prizes could be picked up. Participants were asked to print out their Closing Information Sheet to redeem their prize should they win the draw. In addition, participants enrolled in the SONA system also received their extra credit participation point (0.5) as stipulated by their professor's course syllabus in conjunction with the SONA system and university guidelines.

Analyses

Preliminary analyses. The number of participants required for this study was determined using G*Power, a power analysis program frequently used for social and behavioral research (Erdfelder, Faul, & Buchner, 1996). In order to determine the sample size, the F tests Linear multiple regression and a priori analysis was chosen with the effect size (f) = .15, the alpha level (α) = .05, power ($1 - \beta$ err prob) = .95, and the number of predictors = 13. A total sample size of 189 with a critical F 1.7764 was obtained. In order to establish greater significance, a total number of 440 participants were recruited for this research study. Missing data was excluded listwise so that only cases with valid variables were included in the analysis. Listwise deletion is the most common approach for dealing with data that is missing completely

at random. Although this reduces the sample size, it has the advantage of an unbiased parameter estimate (Howell, 2009).

The data collected from the participants was filtered into a spreadsheet on the internet that is commensurate with IBM® SPSS® Statistics software (Student Version 18.0 for Windows and Mac OS X; SPSS Inc., 2010). SPSS was then used to examine the data. An alpha level of 0.05 and 0.01 was established to examine statistical significance. Preliminary analyses of the data were performed to describe and determine adequacy of the data for the proposed analyses. The data were screened for skewness, kurtosis, and normal distributions. Scatterplots were generated between independent and dependent variables to check for the multiple regression assumption of linearity. The Variance Inflation Factor (VIF) was performed to assess for multicollinearity among variables and the Durbin-Watson was used to assess first order serial correlations. Scales were scored according to the scoring directions, and Cronbach's alpha coefficients were used to determine the reliability (internal consistency) of each scale score in this sample.

Frequencies, means, standard deviations, ranges, and proportions were calculated for the study variables. A Multivariate (MANOVA) and follow-up one-way ANOVA analyses were used to determine if various demographic variables (i.e., gender, marital status, living arrangements, level of education, ethnicity) were potential covariates. In addition, bivariate correlations were used to examine differences between perceptions of maternal and paternal acceptance and rejection.

Plan of analyses. MANOVA analyses were performed to determine if statistically significant differences or relationships existed between the independent and dependent variables. Results were considered significant at a 95% or higher confidence interval. Bivariate and partial correlations were conducted to examine the associations among all of the variables. Within-

subject differences in depressive symptomatology and loneliness were also examined using repeated-measures ANCOVAs and planned comparison analyses. Differences in loneliness by attachment style and gender were examined using one-way ANOVA and univariate ANCOVA analyses.

Four separate hierarchical multiple regression analyses were used to investigate the overarching questions and to understand depressive symptomatology and loneliness in emerging adulthood. The proposed models included constructs theorized to be related to depressive symptomatology and loneliness in emerging adulthood and involved the following constructs: (1) mother and father acceptance and rejection; (2) attachment style; (3) sense of mattering to family and friends; (4) personality dimensions (overall total adjustment score); and (5) coping styles (use of emotional support, use of instrumental support, use of self-blame, use of self-distraction and use of behavioral disengagement).

Within the first analyses, family loneliness served as the outcome variable. Gender was entered in step 1. In step 2, reports of mother and father acceptance and rejection were entered followed by sense of mattering to family in step 3. In step 4, psychological adjustment was entered followed by use of instrumental support coping, use of self-blame coping and use of behavioral disengagement. Within the second analyses, social loneliness served as the outcome variable. Gender was entered in step 1. In step 2, reports of mother and father acceptance and rejection were entered followed by sense of mattering to friends in step 3. In step 4, psychological adjustment was entered followed by use of instrumental support coping, use of self-blame coping and use of behavioral disengagement.

Romantic loneliness served as the outcome variable for the third analyses. Again, gender was entered in step 1. In step 2, current attachment relationship experiences were entered followed by reports of mother and father acceptance and rejection in step 3. In step 4,

psychological adjustment was entered followed by use of instrumental support, use of self-blame and use of emotional support. Finally, depressive symptomatology served as the outcome variable for the final analyses. Again, gender was entered in step 1. In step 2, reports of mother and father acceptance and rejection were entered followed by current attachment relationship experiences. In step 3, sense of mattering to family and friends (sense of awareness, sense of importance and sense of reliance) was entered. In step 4, psychological adjustment was entered followed by use of instrumental support coping and use of self-blame coping.

Finally, mediation analyses were conducted to determine if psychological adjustment and coping styles were potential mediators for early and current relationship experiences and family, social, and romantic loneliness. Baron and Kenny's (1986) procedure for identifying mediated relations was used including adjusting for Type 1 error (alpha criterion = .0253; Kenny, 2009), followed by the Sobel test (Sobel, 1982) to assess the significance of the indirect relations.

Final Summary

The methodology, research procedures, and statistical analyses used to describe the research sample and to test the six overarching questions has been presented in this chapter. The specific statistical analyses, hypotheses testing, and complete results are presented in Chapter 4.

CHAPTER 4

RESULTS

The data analyses of the proposed hypotheses are presented in this chapter. The purpose of this study was to offer increased awareness of the role of past (early maternal and paternal relationship context) and current attachment relationships (current relationship context), including a sense of mattering to family and friends and their influence on psychological adjustment (measured by loneliness and depressive symptomatology) during emerging adulthood. Specifically, the outcome variables for the current study were: (1) depressive symptomatology; (2) family loneliness; (3) social loneliness; and (4) romantic loneliness. The predictor variables for the current study were: (1) parental acceptance and rejection (mother vs. father); (2) attachment style (secure, attachment anxiety, and attachment avoidance); (3) gender (male vs. female); (4) sense of awareness (family vs. friends); (5) sense of importance (family vs. friends); (6) sense of reliance (family vs. friends); (7) psychological adjustment (total score), (8) coping styles (use of emotional support, use of instrumental support, use of self-distraction, use of self-blame, and use of behavioral disengagement); (9) group involvement (total time score); and (10) social networking rating (total time score). SPSS data analysis (SPSS 18.0) was used to describe the sample and to address the research questions. The chapter is divided into seven sections. Using descriptive statistics, the first section provides an overview of the sample and outcome variables. The remaining six sections outline each research question and the results for all of the hypotheses are outlined.

Preliminary Analyses

Skewness of dependent variables. The following dependent variables were assessed for skewness: family loneliness (SELSA-S), social loneliness (SELSA-S), romantic loneliness (SELSA-S), and depressive symptomatology (CES-D). All three types of loneliness and

depressive symptomatology showed a significant amount of positive skew with social and family loneliness showing the greatest degree of skewness. Following the guidelines of Tabachnick and Fidell (1996), depressive symptomatology and romantic loneliness were transformed using a square root transformation and this resulted in a significant reduction in skewness. Following the guidelines of Field (2005), both social and family loneliness were transformed using a log transformation and this resulted in a significant reduction in skewness (see Table 3 for the values).

Skewness of independent variables. The following independent variables were also assessed for skewness: total mother acceptance and rejection (PARQ Mother), total father acceptance and rejection (PARQ Father), secure attachment (ECR-R), attachment anxiety (ECR-R), attachment avoidance (ECR-R), sense of awareness to family (IMS FAMILY), sense of importance to family (IMS FAMILY), sense of reliance to family (IMS FAMILY), sense of awareness to friends (IMS FRIENDS), sense of importance to friends (IMS FRIENDS), sense of reliance to friends (IMS FRIENDS), psychological adjustment (PAQ total score), use of emotional support (Brief-COPE), use of instrumental support (Brief-COPE), use of self-distraction (Brief-COPE), use of self-blame (Brief-COPE), use of behavioral disengagement (Brief-COPE), group involvement rating (demographic measure) and social networking rating (demographic measure). Total mother acceptance and rejection, total father acceptance and rejection, attachment anxiety, and attachment avoidance showed a significant amount of positive skew. Following the guidelines of Tabachnick and Fidell (1996), these variables were transformed using a square root transformation and this resulted in a significant reduction in skewness (see Table 3 for the values). Although the social network rating variable showed a significant amount of positive skew, the decision was made to leave this variable untransformed in order to ensure ease of interpretation.

Table 3**Skewness Values for the Transformed Variables of Interest (N = 440)**

Variable	Skewness Value Before Transformations	Skewness Value After Transformations
Family Loneliness (SELSA-S)	.772	.056
Social Loneliness (SELSA-S)	.771	-.027
Romantic Loneliness (SELSA-S)	.279	-.106
Depressive Symptomatology (CES-D)	.386	-.155
Mother Acceptance and Rejection (PARQ MOTHER)	.738	.014
Father Acceptance and Rejection (PARQ FATHER)	.730	-.056
Attachment Anxiety (ECR-R)	.337	-.051
Attachment Avoidance (ECR-R)	.263	-.135

The distributions for all of the sense of mattering to family and friends variables (sense of awareness, sense of importance and sense of reliance), the psychological adjustment total score, use of emotional support, use of instrumental support, use of self-distraction, use of self-blame, use of behavioral disengagement and group involvement ratings were not significantly skewed; therefore, no transformations were warranted. The means and standard deviations for the original and transformed variables are presented in Table 4.

Table 4**Means and Standard Deviations for Variables of Interest (N = 440)**

Measure	Mean	SD	Mean for Transformed Variables	SD for Transformed Variables
Social and Emotional Loneliness Scale for Adults-Short Form (SELSA-S)				
Romantic Loneliness	3.46	1.78	1.79	0.50
Family Loneliness	2.53	1.42	.33	.25
Social Loneliness	2.76	1.42	.38	.23
Center for Epidemiologic Studies Depression Scale (CES-D)				
Total Score	21.70	10.77	4.50	1.21
Adult Parental Acceptance Rejection Questionnaire, Short Form (PARQ)				
Mother Acceptance and Rejection	12.88	4.81	3.53	.66
Father Acceptance and Rejection	12.08	6.12	3.41	.84
Experiences in Close Relationships Scale Revised (ECR-R)				
Attachment Avoidance	3.04	1.26	1.70	.37
Attachment Anxiety	3.14	1.38	1.73	.40

Adult Personality Assessment
Questionnaire (PAQ)

Total Score	156.07	18.33	n/a	n/a
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Interpersonal Mattering Scale for**Family (IMS FAMILY)**

Sense of Awareness	38.30	6.79	n/a	n/a
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Sense of Importance	34.86	6.43	n/a	n/a
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Sense of Reliance	19.82	4.14	n/a	n/a
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Interpersonal Mattering Scale for**Friends (IMS FRIENDS)**

Sense of Awareness	38.64	7.26	n/a	n/a
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Sense of Importance	34.11	6.52	n/a	n/a
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Sense of Reliance	19.63	4.00	n/a	n/a
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Coping Orientations to Problems**Experienced Scale Brief (Brief-COPE)**

Use of Instrumental Support	5.32	1.69	n/a	n/a
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Use of Emotional Support	5.29	1.67	n/a	n/a
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Use of Self-Blame	4.67	1.76	n/a	n/a
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Use of Self-Distraction	5.37	1.64	n/a	n/a
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Use of Behavioral Disengagement	3.40	1.59	n/a	n/a
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Attachment style. Using the guidelines by Fraley and colleagues (2000), a continuous attachment variable was created whereby three attachment styles (secure, attachment anxiety, and attachment avoidance) with varying degrees of attachment within each category were found.

The majority of participants were classified as insecure ($n = 372$), with fewer classified as secure ($n = 68$). Specifically, within this sample, 190 emerging adults identified themselves as having an insecure anxious attachment style and 182 identified themselves as having an insecure avoidant attachment style. These values are considered to be normal since the ECR-R was initially derived with the sole purpose to assess the varying degrees of insecure attachment style (i.e., anxious attachment vs. avoidant attachment).

Descriptive statistics of measures. A MANOVA was performed to determine if differences exist between the demographic variables and the dependent variables, instead of performing multiple t -tests, to control for Type 1 Error. The following demographic variables were categorized and served as independent variables in these analyses: gender (male = 1; female = 2), age (18 years = 1; 19 years = 2; 20 years = 3; 21 years = 4; 22 years = 5; 23 years = 6; 24 years = 7; 25 years = 8), student level (undergraduate = 1; graduate = 2; continuing education = 3), ethnicity (White/Caucasian = 1; Black/African American = 2; Asian = 3; Arabic = 4; Hispanic/Latino = 5; American Indian = 6; Native Hawaiian = 7; no answer = 8), marital status (married or cohabitating = 1; never married = 2; divorced = 3; separated = 4; widowed = 5; committed relationship/engaged = 6; no answer = 7), living arrangements (living alone = 1; living with spouse or significant other = 2; living with a roommate = 3; living with immediate family = 4; living with grandparents = 5), and employment status (unemployed but looking for employment = 1; working full-time = 2; working part-time = 3; unemployed and not looking for employment = 4; on disability = 5; no answer = 6). The following variables served as the dependent variables: depressive symptomatology (CES-D), family loneliness, social loneliness, and romantic loneliness (SELSA-S). The results of the MANOVA revealed a significant main effect for gender: Pillai's Trace = .021, $F(4, 435) = 2.388$, $p < .05$. A significant main effect for marital status was also found: Pillai's Trace = .34, $F(20, 1736) = 8.139$, $p < .001$. A significant

main effect for living arrangements was also found: Pillai's Trace = .97, $F(16, 1740) = 1.87439$, $p < .001$. Finally, the results revealed a significant main effect for employment status: Pillai's Trace = .063, $F(20, 1736) = 1.383$, $p < .001$. No other significant main effects were found.

Covariates for depressive symptomatology. In order to determine the specific differences between gender, marital status, employment status and living arrangements, a further review of the independent ANOVA analyses was conducted using depressive symptomatology as the dependent variable. A significant difference in gender was found for depressive symptomatology, $F(1, 438) = 4.588$, $p < .05$. On average, females reported higher levels of depressive symptomatology ($M = 4.60$, $SD = 1.15$) than males ($M = 4.35$, $SD = 1.29$) and it represented a small sized effect ($r = 0.11$). A significant difference in marital status was also found for depressive symptomatology, $F(5, 434) = 2.237$, $p < .05$. On average, those who were not married reported higher levels of depressive symptomatology ($M = 4.64$, $SD = 1.22$) than those who were in a committed relationship ($M = 4.22$, $SD = 1.15$) and it represented a small sized effect ($r = 0.16$). No other significant differences were found for any of the other variables. Thus, only gender and marital status were used as covariates for all further analyses on depressive symptomatology.

Covariates for family loneliness. In order to determine the specific differences between gender, marital status, employment status and living arrangements, a further review of the independent ANOVA analyses was conducted using family loneliness as the dependent variable. No significant differences were found for any of the variables. Thus, no variables were controlled for in further analyses on family loneliness.

Covariates for social loneliness. In order to determine the specific differences between gender, marital status, employment status and living arrangements, a further review of the independent ANOVA analyses was conducted using social loneliness as the dependent variable.

No significant differences were found for any of the variables. Thus, no variables were controlled for in further analyses on social loneliness.

Covariates for romantic loneliness. In order to determine the specific differences between gender, marital status, employment status and living arrangements, a further review of the independent ANOVA analyses was conducted using romantic loneliness as the dependent variable. A significant difference in marital status was found for romantic loneliness, $F(5, 434) = 37.606, p < .001$. On average, those who were not married reported higher levels of romantic loneliness ($M = 2.01, SD = .44$) than those who were in a committed relationship ($M = 1.41, SD = .39$) and it represented a large sized effect ($r = 0.56$). A significant difference in employment status was also found for romantic loneliness, $F(5, 434) = 2.764, p < .05$. On average, those who were currently unemployed but looking for employment reported higher levels of romantic loneliness ($M = 1.90, SD = .48$) than those who were working part-time ($M = 1.74, SD = .49$) and it represented a small sized effect ($r = 0.14$). Finally, a significant difference in living arrangements was also found for romantic loneliness, $F(4, 435) = 3.748, p < .001$. On average, those who were living with immediate family members reported higher levels of romantic loneliness ($M = 1.83, SD = .50$) than those who were living with a significant other ($M = 1.50, SD = .51$) and it represented a small sized effect ($r = 0.20$). No other significant differences were found for any of the other variables. Thus, only marital status, employment status and living arrangements were used as covariates for all further analyses on romantic loneliness.

Correlations between demographic and outcome variables. Bivariate and partial correlations were used to explore the associations between the demographic variables and depressive symptomatology, family loneliness, social loneliness, and romantic loneliness. As shown in Table 5, a positive and significant correlation was found for social loneliness and social networking, thus indicating that emerging adults who engaged in lower levels of social

networking also reported higher levels of social loneliness. A positive and significant association was also found for family loneliness and group involvement. Emerging adults who reported reduced group involvement also reported higher levels of family loneliness. A negative and significant correlation was found for age and depressive symptomatology, with younger adults reporting higher levels of depressive symptomatology. Finally, negative and significant associations were found between gender and age and gender and social networking. Men were more likely to report lower levels of social networking.

TABLE 5**Partial and Bivariate Correlation Matrix of Demographic and Outcome Variables ($N = 440$)**

Variable	1	2	3	4	5	6	7	8
1. CES-D Total Score	_____	.48**	.38**	.20**	_____	-.09*	.04	.08
2. Family Loneliness	.48**	_____	.53**	.15**	.04	-.01	.03	.12**
3. Social Loneliness	.38**	.53**	_____	.18**	-.02	.00	.14**	.08
4. Romantic Loneliness	.20**	.15**	.18**	_____	-.07	-.05	.04	-.01
5. Gender	_____	.04	-.02	-.07	_____	-.08*	-.14**	.05
6. Age	-.09*	-.01	.00	-.05	-.08*	_____	.03	.00
7. Social Networking	.04	.03	.14**	.04	-.14**	.03	_____	.00
8. Group Involvement	.08	.12**	.08	-.01	.05	.00	.00	_____

Note. The numbers reflect the transformed CES-D and SELSA-S.

^aGender and marital status were controlled for in the partial correlations for depressive symptomatology (CES-D).

^aMarital status, employment status, and living arrangements were controlled for in the partial correlations for romantic loneliness (SELSA-S).

^aThe demographic variables include gender, age, the social networking rating, and the group involvement rating.

^aThe outcome variables include depressive symptomatology (CES-D Total Score), family loneliness (SELSA-S), social loneliness (SELSA-S), and romantic loneliness (SELSA-S).

* $p < .05$; ** $p < .001$.

Correlations between the family environment and outcome variables. Bivariate and partial correlations were used to explore the associations between the family environment and depressive symptomatology, family loneliness, social loneliness, and romantic loneliness. As shown in Table 6, significant negative correlations were found between sense of awareness to family and depressive symptomatology, sense of importance to family and depressive symptomatology, and sense of reliance to family and depressive symptomatology. Significant negative correlations were also found between sense of awareness to family and family loneliness, sense of importance to family and family loneliness, and sense of reliance to family and family loneliness. In addition, significant and negative correlations were found between sense of awareness to family and social loneliness, sense of importance to family and social loneliness, and sense of reliance to family and social loneliness. Finally, significant and negative correlations were found between sense of awareness to family and romantic loneliness, sense of importance to family and romantic loneliness, and sense of reliance to family and romantic loneliness. Therefore, emerging adults reporting lower levels of mattering to family also reported higher levels of depressive symptomatology and loneliness.

Significant positive relations were found for mother acceptance and rejection and social loneliness. Those reporting higher levels of maternal rejection also reported higher levels of social loneliness. In addition, father acceptance and rejection was positively correlated with depressive symptomatology, family loneliness, and social loneliness. Thus, emerging adults with higher levels of paternal rejection also reported higher levels of depressive symptomatology and family and social loneliness. These correlations are also displayed below in Table 6.

TABLE 6**Partial and Bivariate Correlation Matrix of Family and Outcome Variables (N = 440)**

Variable	1	2	3	4	5	6	7	8	9
1. CES-D Total Score	_____	.48**	.38**	.20**	.04	.13**	-.45**	-.33**	-.34**
2. Family Loneliness	.48**	_____	.53**	.15**	.08*	.17**	-.38**	-.42**	-.33**
3. Social Loneliness	.38**	.53**	_____	.18**	.12**	.12**	-.39**	-.40**	-.35**
4. Romantic Loneliness	.20**	.15**	.18**	_____	.01	.05	-.11**	-.13**	-.09*
5. PARQ Mother	.04	.08	.12**	.01	_____	.45**	-.02	-.02	-.06
6. PARQ Father	.13**	.17**	.12**	.05	.45**	_____	-.08	-.06	-.05
7. Family Awareness	-.45**	-.38**	-.39**	-.11**	-.02	-.08	_____	.75**	.73**
8. Family Importance	-.33**	-.42**	-.40**	-.13**	-.02	-.06	.75**	_____	.75**
9. Family Reliance	-.34**	-.33**	-.35**	-.09*	-.06	-.05	.73**	.75**	_____

Note. The numbers reflect the transformed CES-D, SELSA-S, and PARQ mother and father.

^aGender and marital status were controlled for in the partial correlations for depressive symptomatology (CES-D).

^aMarital status, employment status, and living arrangements were controlled for in the partial correlations for romantic loneliness (SELSA-S).

^aThe family variables include mother acceptance and rejection (PARQ Mother), father acceptance and rejection (PARQ Father), IMS sense of awareness to family (Family Awareness), IMS sense of importance (Family Importance), and IMS sense of reliance (Family Reliance).

^aThe outcome variables include depressive symptomatology (CES-D Total Score), family loneliness (SELSA-S), social loneliness (SELSA-S), and romantic loneliness (SELSA-S).

* $p < .05$; ** $p < .001$.

Correlations between the social environment and outcome variables. Bivariate and partial correlations were used to explore the associations between the social environment and depressive symptomatology, family loneliness, social loneliness, and romantic loneliness. As shown in Table 7, significant and negative correlations were found between sense of awareness to friends and depressive symptomatology, sense of importance to friends and depressive symptomatology, and sense of reliance to friends and depressive symptomatology. Significant and negative correlations were also found between family loneliness and sense of awareness to friends, sense of importance to friends, and sense of reliance to friends. In addition, significant and negative correlations were found between sense of awareness to friends and social loneliness, sense of importance to friends and social loneliness, and sense of reliance to friends and social loneliness. Romantic loneliness was only significantly and negatively correlated with sense of awareness to friends and sense of reliance to friends. Those who reported higher levels of awareness, importance, and reliance to friends also reported lower levels of depressive symptomatology and family and social loneliness whereas those who reported lower levels of romantic loneliness only reported higher levels of awareness and reliance to friends.

Positive correlations emerged between depressive symptomatology and attachment anxiety and attachment avoidance. Positive correlations also emerged between family loneliness and attachment anxiety and attachment avoidance. Positive and significant correlations were also found between social loneliness and attachment anxiety and attachment avoidance. Finally, significant and positive correlations emerged between romantic loneliness and attachment anxiety and attachment avoidance. Therefore, emerging adults who reported higher levels of attachment insecurity also reported higher levels of depressive symptomatology and loneliness. These correlations are also shown below in Table 7.

TABLE 7**Partial and Bivariate Correlation Matrix of Social and Outcome Variables (N = 440)**

Variable	1	2	3	4	5	6	7	8	9
1. CES-D Total Score	_____	.48**	.38**	.20**	.53**	.30**	-.40**	-.34**	-.30**
2. Family Loneliness	.48**	_____	.53**	.15**	.43**	.30**	-.33**	-.33**	-.26**
3. Social Loneliness	.38**	.53**	_____	.18**	.33**	.30**	-.48**	-.47**	-.37**
4. Romantic Loneliness	.20**	.15**	.18**	_____	.38**	.50**	-.10*	-.07	-.09*
5. ECR-R Anxiety	.53**	.43**	.33**	.38**	_____	.45**	-.33**	-.28**	-.24**
6. ECR-R Avoidance	.30**	.30**	.30**	.50**	.45**	_____	-.29**	-.29**	-.27**
7. Friends Awareness	-.40**	-.33**	-.48**	-.10*	-.33**	-.29**	_____	.79**	.75**
8. Friends Importance	-.34**	-.33**	-.47**	-.07	-.28**	-.29**	.79**	_____	.79**
9. Friends Reliance	-.30**	-.26**	-.37**	-.09*	-.24**	-.27**	.75**	.79**	_____

Note. The numbers reflect the transformed CES-D, SELSA-S, and PARQ mother and father.

^aGender and marital status were controlled for in the partial correlations for depressive symptomatology (CES-D).

^aMarital status, employment status, and living arrangements were controlled for in the partial correlations for romantic loneliness (SELSA-S).

^aThe social variables include attachment anxiety (ECR-R Anxiety), attachment avoidance (ECR-R Avoidance), IMS sense of awareness to friends (Friends Awareness), IMS sense of importance to friends (Friends Importance), and IMS sense of reliance to friends (Friends Reliance).

^aThe outcome variables include depressive symptomatology (CES-D Total Score), family loneliness (SELSA-S), social loneliness (SELSA-S), and romantic loneliness (SELSA-S).

* $p < .05$; ** $p < .001$.

Correlations between the potential meditators and outcome variables. Bivariate and partial correlations were used to explore the associations between depressive symptomatology, loneliness, and the potential meditators of psychological adjustment and use of coping (use of instrumental support, use of emotional support, use of self-blame, use of self-distraction, and use of behavioral disengagement). As shown in Table 8, significant positive relations were found between psychological adjustment and depressive symptomatology, family loneliness, social loneliness and romantic loneliness. Thus, those reporting higher levels of psychological maladjustment also reported higher levels of depressive symptomatology and loneliness.

Significant positive correlations also emerged between psychological adjustment and use of self-blame, use of self-distraction, and use of behavioral disengagement. Emerging adults who reported higher levels of psychological maladjustment also reported using higher levels of self-blame, self-distraction, and behavioral disengagement when coping within their relationships. Use of emotional support was significantly and negatively associated with family loneliness, social loneliness, and romantic loneliness. Those who reported using lower levels of emotional support also reported higher levels of loneliness. Use of instrumental support was significantly and negatively correlated with family loneliness and social loneliness. Those reporting reduced instrumental support also reported increased loneliness in the family and social domain. Use of self-blame was positively associated with depressive symptomatology, family loneliness, social loneliness, and romantic loneliness, thus indicating that those reporting higher use of self-blame also reported higher depressive symptomatology and loneliness. A positive correlation was found between use of self-distraction and depressive symptomatology. Those who reported using self-distraction within their current relationships also reported more depressive symptomatology. Finally, use of behavioral disengagement was significantly and positively correlated with depressive symptomatology, family loneliness, social loneliness, and romantic loneliness.

Emerging adults who reported higher use of behavioral disengagement within their relationships also reported higher levels of depressive symptomatology and loneliness.

TABLE 8

Partial and Bivariate Correlation Matrix of Psychological Adjustment, Coping Styles, and Outcome Variables (N = 440)

	1	2	3	4	5	6	7	8	9	10
1. D.S	___	.48**	.38**	.20**	.46**	.01	.00	.53**	.30**	.52**
2. F.L	.48**	___	.53**	.15**	.30**	-.15**	-.13**	.21**	.04	.35**
3. S.L	.38**	.53**	___	.18**	.29**	-.25**	-.25**	.22**	.03	.31**
4. R.L	.20**	.15**	.18**	___	.17**	-.12**	-.05	.11**	.07	.12**
5. PAQ	.46**	.30**	.29**	.17**	___	.06	.05	.42**	.22**	.35**
6. ES	.01	-.15**	-.25**	-.12**	.06	___	.70**	.10*	.24**	-.02
7. IS	.00	-.13**	-.25**	-.05	.05	.70**	___	-.01	.20**	-.04
8. SB	.53**	.21**	.22**	.11**	.42**	.10*	-.01	___	.34**	.43**
9. SD	.30**	.04	.03	.07	.22**	.24**	.20**	.34**	___	.13**
10. BD	.52**	.35**	.31**	.12**	.35**	-.02	-.04	.43**	.13**	___

Note. The numbers reflect the transformed CES-D and SELSA-S.

^aGender and marital status were controlled for in the partial correlations for depressive symptomatology (CES-D).

^aMarital status, employment status, and living arrangements were controlled for in the partial correlations for romantic loneliness (SELSA-S).

^aThe psychological adjustment and coping style variables include the psychological adjustment total score (PAQ), use of emotional support (ES), use of instrumental support (IS), use of self-blame (SB), use of self-distraction (SD), and behavioral disengagement (BD; Brief-COPE).

^aThe outcome variables include depressive symptomatology (D.S; CES-D), family loneliness (F.L; SELSA-S), social loneliness (S.L; SELSA-S), and romantic loneliness (R.L; SELSA-S).

* $p < .05$; ** $p < .001$.

Hypotheses Testing

In the following section, the hypotheses, as outlined in Chapter 2, were investigated. Each hypothesis is outlined below along with the analysis and outcome.

Research Question One

This study examined whether early relationship context, current relationship context, sense of mattering to family and friends, coping styles, and psychological adjustment were unique predictors of emerging adults' reports of depressive symptomatology and family, social, and romantic loneliness.

Hypothesis 1a. Perceptions of maternal and paternal acceptance and rejection, sense of mattering to family, psychological adjustment, use of instrumental support and use of self-blame were hypothesized to be unique predictors of family loneliness in emerging adulthood. Because behavioral disengagement was found to be significantly associated with family loneliness, it was also included as a coping variable in the model. A hierarchical multiple regression analysis was used to investigate this hypothesis. The predictors were entered in four blocks. As in prior research on loneliness (e.g., Bernardon et al., 2011; DiTommaso et al., 2003), gender was entered in the first block. Because total mother and total father acceptance and rejection were relatively new concepts and were proposed to have the most significance on family loneliness, they were entered in the second block followed by sense of mattering to family (sense of awareness, importance, and reliance) in the third block. Finally, psychological adjustment, use of instrumental support, use of self-blame, and use of behavioral disengagement were entered in the fourth block. F change after the first block was not significant. The entry of total mother and total father acceptance and rejection in the second block was significant [F change (1, 428) = 6.171, $p < .01$]. Father acceptance and rejection was found to be a unique predictor of family loneliness ($B = .161, p < .05$). F change after the third [F change (3, 425) = 32.149, $p < .001$] and

fourth [F change (4, 421) = 7.378, $p < .001$] blocks were also significant. Sense of awareness to family ($B = -.143$, $p < .05$) and sense of importance to family ($B = -.333$, $p < .001$) were both found to make a significant contribution to family loneliness. Within block four, psychological adjustment ($B = .164$, $p < .001$) and use of behavioral disengagement ($B = .125$, $p < .05$) each made a unique contribution to the prediction of family loneliness in emerging adults. Table 9 demonstrates the Standardized Beta Coefficients, R^2 change, t values, and final ANOVA results for the prediction of family loneliness.

Table 9

Hierarchical Multiple Regression Analyses for Variables Predicting Family Loneliness in Emerging Adults ($N = 440$)

Predictors	Standardized β	R^2 Change	t	P	ANOVA Results
Step 1		.002			$F(1, 430) = .755,$
Gender	.042		.869	ns	$R^2 = .00, p = ns$
Step 2 (PARQ)		.028			$F(3, 428) = 4.372,$
Mother Accept and Reject	.014		.255	ns	$R^2 = .03, p < .01$
Father Accept and Reject	.161		3.021	.05	
Step 3 (IMS FAMILY)		.179			$F(6, 425) = 18.738,$
Family Sense of Awareness	-.143		-2.015	.05	$R^2 = .21, p < .001$
Family Sense of Importance	-.333		-4.561	.001	
Family Sense of Reliance	.031		.433	ns	
Step 4 (PAQ, Brief-COPE)		.052			$F(10, 421) = 14.869$
Total Adjustment Score	.164		3.329	.001	$R^2 = .26, p < .001$
Use of Instrumental Support	-.068		-1.544	ns	
Use of Self-Blame	.029		.578	ns	
Use of Behavioral Disengagement	.125		2.374	.05	

Hypothesis 1b. A hierarchical multiple regression analysis was used to investigate the hypothesis that perceptions of maternal and paternal acceptance and rejection, sense of mattering to friends, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors of social loneliness in emerging adulthood. Because behavioral disengagement was found to be significantly associated with social loneliness, it was also included as a coping variable in the model. The predictors were entered in four blocks. As in prior research on loneliness (e.g., Bernardon et al., 2011; DiTommaso et al., 2003), gender was entered in the first block. Because total mother and total father acceptance and rejection were relatively new concepts and were proposed to have the most significance on social loneliness, they were entered in the second block followed by sense of mattering to friends (sense of awareness, importance, and reliance) in the third block. Finally, psychological adjustment, use of instrumental support, use of self-blame, and use of behavioral disengagement were entered in the fourth block. F change after the first block was not significant. The entry of total mother and total father acceptance and rejection in the second block was significant [F change (2, 428) = 4.443, $p < .01$]. F change after the third [F change (3, 425) = 44.540, $p < .001$] and fourth [F change (4, 421) = 8.150, $p < .001$] blocks were also significant. Sense of awareness to friends ($B = -.325$, $p < .001$) and sense of importance to friends ($B = -.270$, $p < .001$) were both found to make a significant contribution to social loneliness. Within the fourth block, psychological adjustment ($B = .153$, $p < .001$), use of instrumental support ($B = -.156$, $p < .001$), and use of behavioral disengagement ($B = .085$, $p < .05$) each made a unique contribution to the prediction of social loneliness in emerging adults. Table 10 demonstrates the Standardized Beta Coefficients, R^2 change, t values, and final ANOVA results for the prediction of social loneliness.

Table 10

Hierarchical Multiple Regression Analyses for Variables Predicting Social Loneliness in Emerging Adults ($N = 440$)

Predictors	Standardized β	R^2 Change	t	p	ANOVA Results
Step 1		.000			$F(1, 430) = .025,$
Gender	-.008		-1.57	ns	$R^2 = .00, p = ns$
Step 2 (PARQ)		.020			$F(3, 428) = 2.970,$
Mother Accept and Reject	.064		1.359	ns	$R^2 = .02, p = ns$
Father Accept and Reject	.014		.300	ns	
Step 3 (IMS FRIENDS)		.234			$F(6, 425) = 24.208,$
Friends Sense of Awareness	-.325		-4.466	.001	$R^2 = .26, p < .001$
Friends Sense of Importance	-.270		-3.451	.001	
Friends Sense of Reliance	.092		1.255	ns	
Step 4 (PAQ, Brief-COPE)		.054			$F(10, 421) = 18.762,$
Total Adjustment Score	.153		3.227	.001	$R^2 = .31, p < .001$
Use of Instrumental Support	-.156		-3.599	.001	
Use of Self-Blame	.034		.700	ns	
Use of Behavior	.085		1.743	.05	
Disengagement					

Hypothesis 1c. The third hypothesis stated that perceptions of maternal and paternal acceptance and rejection, current attachment experiences in close relationships, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors of the emerging adults' reported levels of romantic loneliness. Because use of emotional support was found to be significantly associated with romantic loneliness, it was also included as a coping variable in the model. A hierarchical multiple regression analysis was used to investigate this hypothesis. The predictors were entered in four blocks. As in prior research on loneliness (e.g., Bernardon et al., 2011; DiTommaso et al., 2003), gender was entered in the first block. Current attachment style (1 = Secure, 2 = Attachment Anxiety, 3 = Attachment Avoidance) was entered in the second block as it was proposed to have the most significant impact on romantic loneliness. Because total mother and total father acceptance and rejection are relatively new concepts researched with respect to romantic loneliness, they were entered in the third block. Finally, psychological adjustment, use of instrumental support, use of self-blame and use of emotional support were entered in the fourth block. *F* change after the first block was not significant. The entry of attachment in the second block was significant [*F* change (1, 429) = 58.369, $p < .001$]. Attachment style ($B = .346$, $p < .001$) was found to be a unique predictor of romantic loneliness in emerging adults. *F* change after the third block was significant [*F* change (2, 429) = 30.311, $p < .001$]. The entry of psychological adjustment and coping styles in the fourth block was also significant [*F* change (4, 423) = 4.213, $p < .01$]. Psychological adjustment ($B = .113$, $p < .05$) and use of emotional support ($B = -.167$, $p < .05$) were both found to make a significant contribution to romantic loneliness in emerging adulthood. Table 11 demonstrates the Standardized Beta Coefficients, R^2 change, *t* values, and final ANOVA results for the prediction of romantic loneliness.

Table 11

Hierarchical Multiple Regression Analyses for Variables Predicting Romantic Loneliness in Emerging Adults ($N = 440$)

Predictors	Standardized β	R^2 Change	t	p	ANOVA Results
Step 1		.005			$F(1, 430) = 1.988,$
Gender	-.068		-1.410	ns	$R^2 = .01,$ $p = ns$
Step 2 (ECR-R)		.127			$F(4, 427) =$
Total Attachment Style	.346		7.640	.001	15.462, $R^2 = .13,$ $p < .001$
Step 3 (PARQ)		.124			$F(2, 429) =$
Mother Accept and Reject	-.057		-.128	ns	30.311, $R^2 = .12,$
Father Accept and Reject	.055		1.080	ns	$p < .001$
Step 4 (PAQ, Brief-COPE)		.160			$F(8, 423) =$
Total Adjustment Score	.113		2.217	.05	10.070, $R^2 = .16,$
Use of Instrumental Support	.095		1.485	ns	$p < .001$
Use of Self-Blame	.070		1.413	ns	
Use of Emotional Support	-.167		-2.570	.05	

Hypothesis 1d. A hierarchical multiple regression analysis was used to investigate the hypothesis that perceptions of maternal and paternal acceptance and rejection, current attachment experiences in close relationships, sense of mattering to family and friends, psychological adjustment, use of instrumental support and use of self-blame would be unique predictors for

emerging adults' reports of depressive symptomatology. The predictors were entered in four blocks. Because gender was found to influence depressive symptomatology, it was entered in the first block as a control variable. Because total mother and total father acceptance and rejection were relatively new concepts in relation to depressive symptomatology in emerging adulthood and were proposed to have the most significance on depressive symptomatology, along with current attachment style (1 = Secure, 2 = Attachment Anxiety, 3 = Attachment Avoidance), they were entered in the second block. Sense of mattering to both family (sense of awareness, importance, and reliance) and friends (sense of awareness, importance, and reliance) were entered in the third block followed by psychological adjustment, use of instrumental support and use of self-blame in the fourth block. F change after the first block was significant [F change (1, 430) = 4.698, $p < .05$]. Gender was found to make a significant contribution to depressive symptomatology ($B = .104$, $p < .05$). The entry of parental acceptance and rejection and attachment style in the second block was significant (F change (3, 427) = 5.494, $p < .001$). Father acceptance and rejection ($B = .140$, $p < .05$) and attachment style ($B = .137$, $p < .05$) were both found to be unique predictors of depressive symptomatology. F change was significant after the third [F change (6, 421) = 17.428, $p < .001$] and fourth [F change (3, 418) = 53.297, $p < .001$] blocks. Sense of awareness to family ($B = -.371$, $p < .001$) was found to make a significant contribution to depressive symptomatology. Within the fourth block, psychological adjustment ($B = .199$, $p < .001$) and use of self-blame ($B = .361$, $p < .001$) were both found to make a unique contribution in the prediction of depressive symptomatology in emerging adulthood. Table 12 demonstrates the Standardized Beta Coefficients, R^2 change, t values, and final ANOVA results for the prediction of depressive symptomatology.

Table 12**Hierarchical Multiple Regression Analyses for Variables Predicting Depressive Symptomatology in Emerging Adults ($N = 440$)**

Predictors	Standardized <i>B</i>	R^2 <i>Change</i>	<i>t</i>	<i>p</i>	ANOVA Results
Step 1		.011			$F(1, 430) =$
Gender	.104		2.168	.05	4.698, $R^2 = .01, p < .05$
Step 2 (PARQ, ECR-R)		.037			$F(4, 427) =$
Mother Accept and Reject	-.021		-.400	ns	5.332,
Father Accept and Reject	.140		2.635	.05	$R^2 = .05,$
Total Attachment Style	.137		2.909	.05	$p < .001$
Step 3 (IMS FAMILY/FRIENDS)		.189			$F(10, 421) =$
Family Sense of Awareness	-.371		-4.578	.001	13.082,
Family Sense of Importance	.035		.444	ns	$R^2 = .23,$
Family Sense of Reliance	-.022		-.272	ns	$p < .001$
Friends Sense of Awareness	-.113		-1.314	ns	
Friends Sense of Importance	-.041		-.468	ns	
Friends Sense of Reliance	.056		.683	ns	
Step 4 (PAQ, Brief-COPE)		.211			$F(13, 418) =$
Total Adjustment Score	.199		4.683	.001	26.112,
Use of Instrumental Support	.060		1.528	ns	$R^2 = .45,$
Use of Self-Blame	.361		8.739	.001	$p < .001$

Hypothesis 1e. Partial and bivariate correlations along with one-way ANOVA analyses were used to explore the fifth hypothesis that maternal and paternal acceptance and rejection would be associated with lower levels of family, social, and romantic loneliness. Total mother acceptance and rejection was positively correlated with social loneliness: $r(440) = .08, p < .05$, thus indicating that those who felt more maternal rejection also reported higher levels of social loneliness. Results from the follow-up one-way ANOVA analyses indicated a significant linear trend, $F(29, 409) = 4.988, p < .05$. As the total mother rejection score increased, reports of social loneliness also increased proportionately. Total mother acceptance was not associated with family or romantic loneliness.

Total father acceptance and rejection was positively correlated with family loneliness: $r(440) = .16, p < .001$ and social loneliness: $r(440) = .12, p < .001$. Those who reported higher paternal rejection also reported higher levels of family and social loneliness. Results from the follow-up one-way ANOVA analyses indicated a significant linear trend for family loneliness, $F(33, 400) = 2.895, p < .001$. As the total father rejection score increased, reports of family loneliness also increased proportionately. Results from the one-way ANOVA analyses indicated a significant linear trend for social loneliness, $F(33, 400) = 1.496, p < .05$. As the total father rejection score increased, reports of social loneliness also increased proportionately. No relationship was found for total father acceptance and rejection and romantic loneliness.

Hypothesis 1f. Partial and bivariate correlations were used to test the final hypothesis that lower psychological maladjustment would be related to higher levels of sense of mattering to friends and family and lower levels of family, social, and romantic loneliness. With respect to mattering to family, psychological adjustment was significantly and negatively correlated with all of the sense of mattering to family variables: sense of awareness: $r(440) = -.25, p < .001$, sense of importance: $r(440) = -.18, p < .001$, and sense of reliance: $r(440) = -.15, p < .001$. Thus,

emerging adults who reported lower levels of psychological maladjustment also reported a higher sense of mattering to family. With respect to mattering to friends, psychological adjustment was significantly and negatively correlated with all of the sense of mattering to friend variables: sense of awareness: $r(440) = -.26, p < .001$, sense of importance: $r(440) = -.22, p < .001$, and sense of reliance: $r(440) = -.19, p < .001$. Thus, emerging adults who reported lower levels of psychological maladjustment also reported a higher sense of mattering to friends. Finally, psychological adjustment was significantly and positively correlated with depressive symptomatology: $r(440) = .46, p < .001$, family loneliness: $r(440) = .30, p < .001$, social loneliness: $r(440) = .29, p < .001$, and romantic loneliness: $r(440) = .17, p < .001$. Thus, those who reported higher levels of psychological maladjustment also reported higher levels of depressive symptomatology and family, social, and romantic loneliness.

Research Question Two

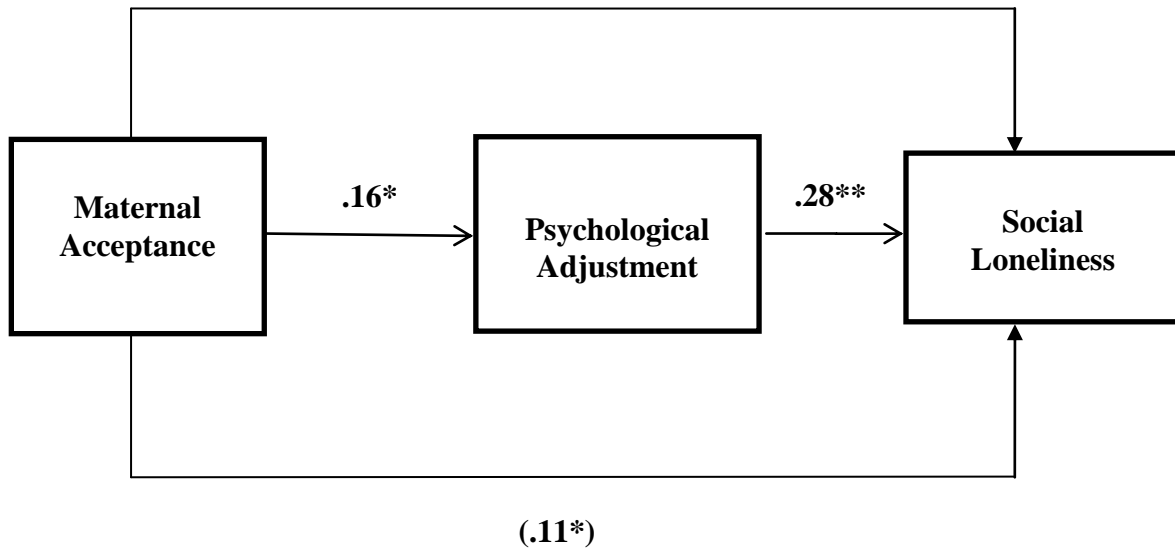
This study investigated whether psychological adjustment mediated the relation between perceptions of early parent-child relationship experiences (mother and father acceptance and rejection) and family, social, and romantic loneliness. Specifically, it was hypothesized that the relation between perceptions of early parent-child relationship experiences and current reports of family, social, and romantic loneliness would be mediated by the emerging adults' overall psychological adjustment.

Using Baron and Kenny's (1986) procedure for identifying mediated relations and adjusting for Type I error (alpha criterion = .0253; Kenny, 2009), six mediational models were tested. In the first set of regression analyses, the predictor was the total mother acceptance and rejection variable. For the analyses examining the relation between the predictor and outcome variables, greater maternal acceptance was found to be associated with less social loneliness (β

= .11, $t = 2.212$, $p < .05$). No associations were found for maternal acceptance and family loneliness or maternal acceptance and romantic loneliness.

Analyses examining the relation between the predictor and proposed mediator indicated that greater maternal rejection was associated with higher levels of psychological maladjustment ($\beta = .16$, $t = 3.336$, $p < .01$). To test for a mediation effect, the proposed mediator was added to the regression analyses already containing maternal acceptance and rejection. When the variable of psychological adjustment was added to the regression, results indicated that healthy psychological adjustment was associated with less social loneliness ($\beta = .28$, $t = 5.947$, $p < .001$). The associations between maternal acceptance and rejection and social loneliness became insignificant. Therefore, complete mediation was found. Figure 6 shows the path model using the standardized regression coefficients of the analyses in which psychological adjustment mediated the relation between maternal acceptance and social loneliness. Participants with higher maternal acceptance reported lower social loneliness and this in turn was mediated by their healthier psychological adjustment.

Figure 6: Pathway Regression Model of Maternal Acceptance, Psychological Adjustment, and Social Loneliness in Emerging Adulthood



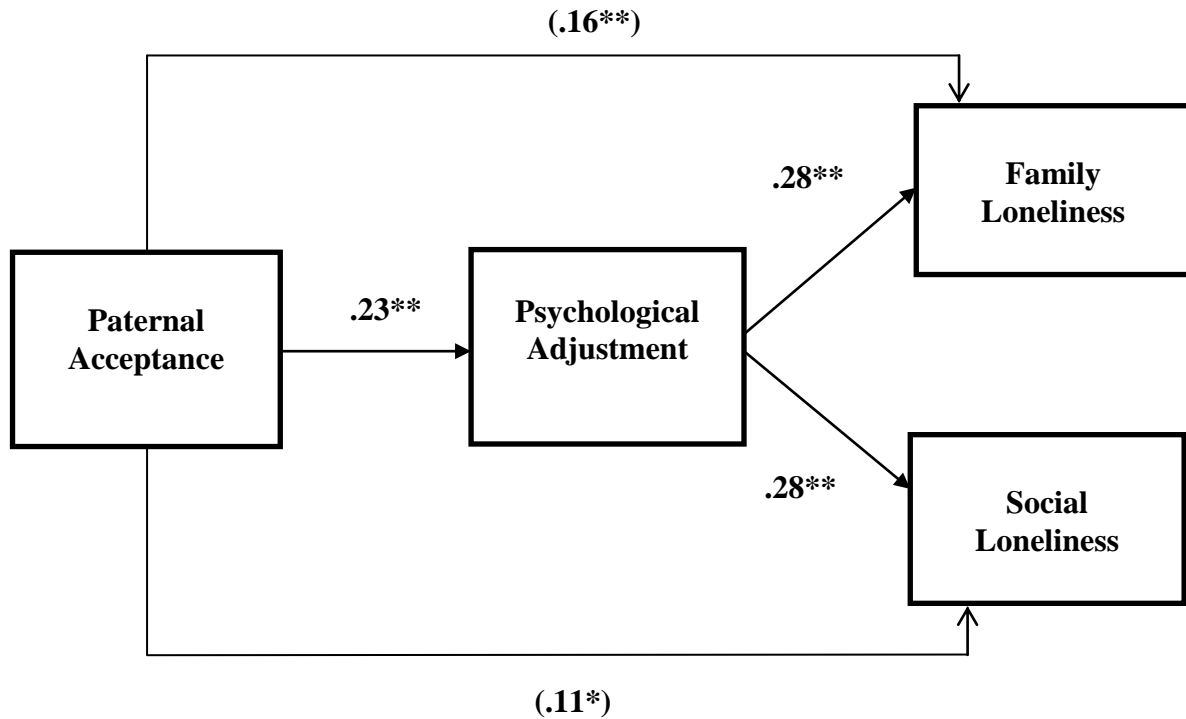
Note. Values in parentheses represent the coefficients for the unmediated (direct) relation between the predictor and outcome variables. * $p < .05$; ** $p < .001$.

In the second set of regression analyses, the predictor was the total father acceptance and rejection variable. For the analyses examining the relation between the predictor and outcome variables, greater paternal acceptance was found to be associated with less family loneliness ($\beta = .16, t = 3.343, p < .001$) and less social loneliness ($\beta = .11, t = 2.393, p < .01$). No associations were found for paternal acceptance and romantic loneliness.

Analyses examining the relation between the predictor and proposed mediator indicated that greater paternal rejection was associated with higher levels of psychological maladjustment ($\beta = .23, t = 4.975, p < .001$). To test for a mediation effect, the proposed mediator was added to the regression analyses already containing paternal acceptance and rejection. When the variable of psychological adjustment was added to the regression, results indicated that healthy psychological adjustment was associated with less family loneliness ($\beta = .28, t = 5.947, p < .001$)

and less social loneliness ($\beta = .28, t = 5.854, p < .001$). The associations between paternal acceptance and rejection and social loneliness became insignificant. Therefore, complete mediation was found. The associations between paternal acceptance and rejection and family loneliness remained significant. Therefore, complete mediation was not found. To assess whether these indirect relations indicated partial mediation, the Sobel test (Sobel, 1982) was conducted. The Sobel test (Sobel, 1982) was significant for family loneliness ($z = 3.12, SE = 0.01, p < .001$). Thus, the lower reported levels of family loneliness by participants who reported more paternal acceptance were partially mediated by their healthier psychological adjustment. Figure 7 shows the path model using the standardized regression coefficients of the analyses in which psychological adjustment mediated the relation between paternal acceptance and rejection and family loneliness and paternal acceptance and rejection and social loneliness. Participants with higher paternal acceptance reported lower family and social loneliness and this in turn was mediated by their healthier psychological adjustment.

Figure 7: Pathway Regression Model of Paternal Acceptance, Psychological Adjustment, and Family and Social Loneliness in Emerging Adulthood



Note. Values in parentheses represent the coefficients for the unmediated (direct) relation between the predictor and outcome variables. $*p < .05$; $**p < .001$.

Research Question Three

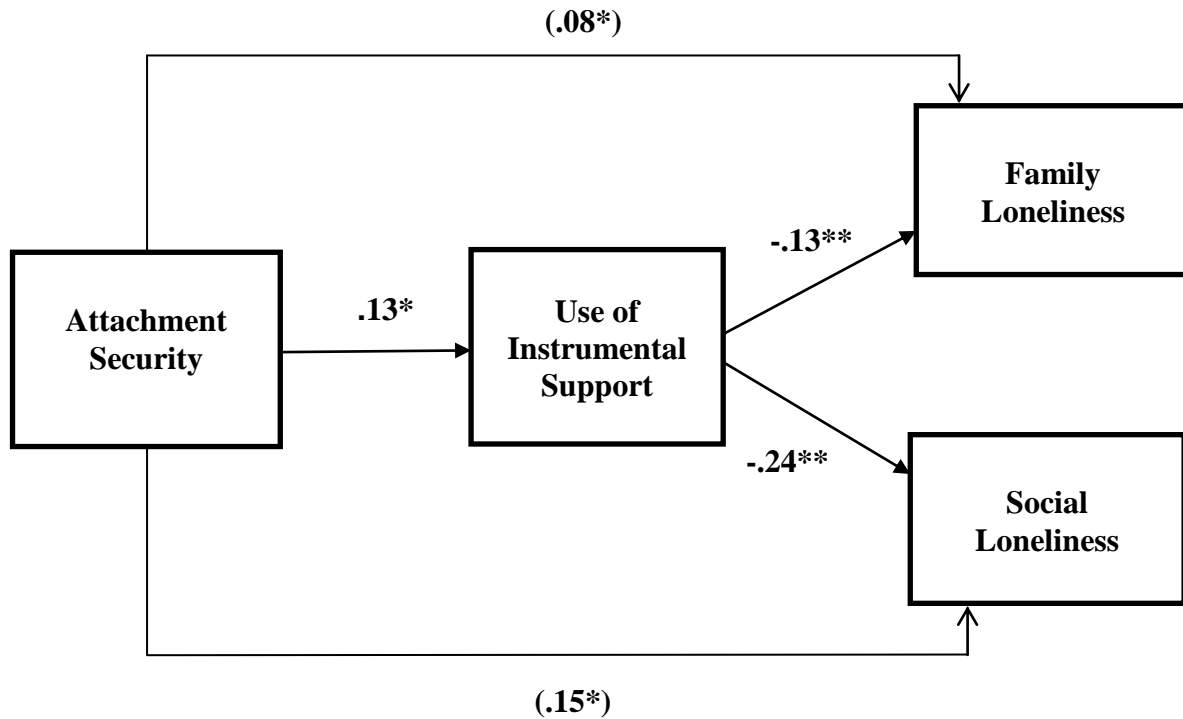
This study was conducted to investigate whether coping styles mediated the relation between current attachment relationship experiences (attachment security) and family, social, and romantic loneliness. Specifically, it was hypothesized that the relation between current attachment relationship experiences and family, social, and romantic loneliness would be mediated by use of instrumental support and use of self-blame as coping strategies.

Using Baron and Kenny's (1986) procedure followed by Sobel's test (Sobel, 1982), six mediation models were tested. In the regression analyses, the predictor was the dichotomous attachment security variable (1 = Secure, 2 = Attachment Anxiety, 3 = Attachment Avoidance).

For the analyses examining the relation between the predictor and outcome variables, greater attachment security was found to be associated with less family loneliness ($\beta = .08$, $t = 1.437$, $p < .01$), less social loneliness ($\beta = .15$, $t = 3.088$, $p < .05$), and less romantic loneliness ($\beta = .34$, $t = 7.604$, $p < .001$). Analyses examining the relation between the predictor and proposed mediators indicated that greater attachment security was associated with higher levels of instrumental coping ($\beta = .13$, $t = -2.684$, $p < .05$) but not use of self-blame.

Hypothesis 3a. To test for a mediation effect, each of the proposed mediators was added to the regression analyses already containing attachment security. When the variable of use of instrumental support was added to the regressions, results indicated that use of instrumental support was associated with less family loneliness ($\beta = -.13$, $t = -2.665$, $p < .05$) and social loneliness ($\beta = -.24$, $t = -5.118$, $p < .001$). No significance was found for romantic loneliness. The associations between attachment security and family loneliness became insignificant. Therefore, complete mediation was found. The associations between attachment security and social loneliness remained significant. Therefore, complete mediation was not found. To assess whether these indirect relations indicated partial mediation, the Sobel test (Sobel, 1982) was conducted. The Sobel test (Sobel, 1982) was significant for social loneliness ($z = 2.40$, $SE = 0.00$, $p < .05$). Thus, the lower reported levels of social loneliness by participants who were securely attached were partially mediated by their use of instrumental support. Figure 8 shows the path model using the standardized regression coefficients of the analyses in which use of instrumental support mediated the relation between attachment security and family loneliness and attachment security and social loneliness. Participants who were securely attached reported lower family and social loneliness and this in turn was mediated by their use of instrumental support.

Figure 8: Pathway Regression Model of Attachment, Use of Instrumental Support, and Family and Social Loneliness in Emerging Adulthood

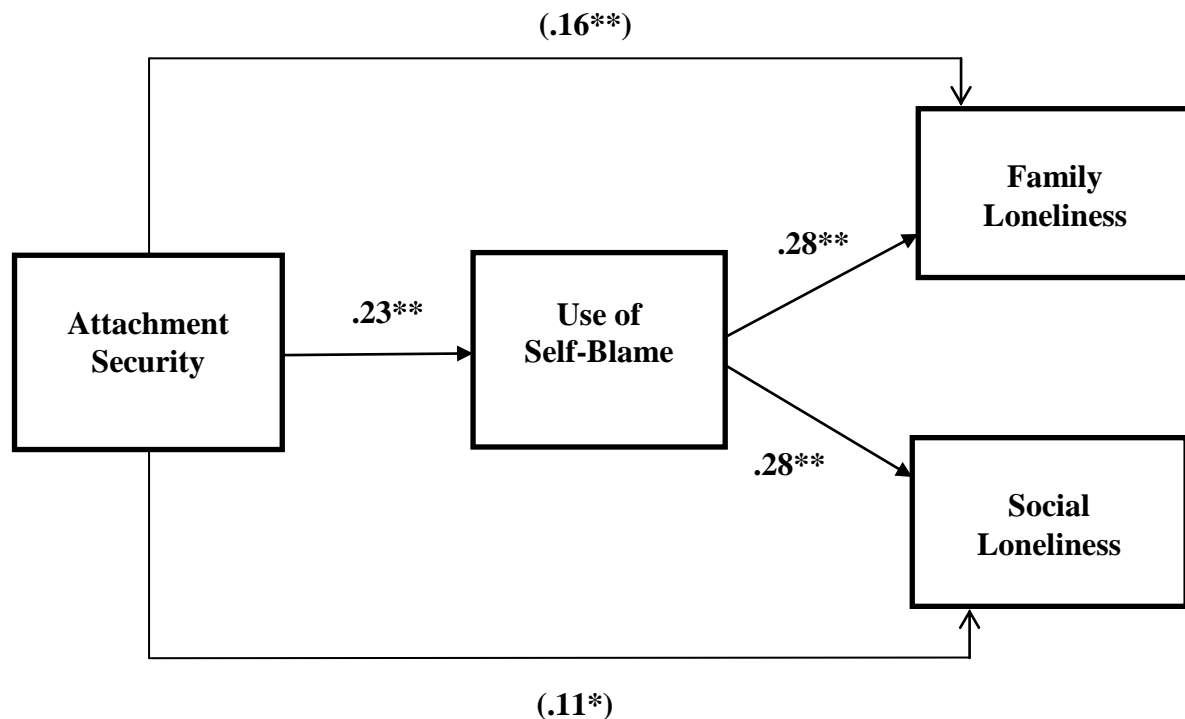


Note. Values in parentheses represent the coefficients for the unmediated (direct) relation between the predictor and outcome variables. $*p < .05$; $**p < .001$.

Hypothesis 3b. Again, to test for a mediation effect, each of the proposed mediators was added to the regression analyses already containing attachment security. When the variable of use of self-blame was added to the regressions, results indicated that use of self-blame was associated with higher levels of family loneliness ($\beta = .21$, $t = 4.464$, $p < .001$), social loneliness ($\beta = .23$, $t = 4.932$, $p < .001$), and romantic loneliness ($\beta = .11$, $t = 2.497$, $p < .05$). The associations between attachment security and family loneliness became insignificant. Thus, complete mediation was found. The associations between attachment security and social and romantic loneliness remained significant. Therefore, complete mediation was not found. To assess whether these indirect relations indicated partial mediation, the Sobel test (Sobel, 1982)

was conducted. For social loneliness, the Sobel test (Sobel, 1982) was significant ($z = 1.03$, $SE = 0.00$, $p < .05$). Thus, the higher reported levels of social loneliness by participants who were insecurely attached were partially mediated by their use of self-blame as a coping strategy. For romantic loneliness, the nonsignificant Sobel test (Sobel, 1982; $z = 0.10$, $SE = 0.00$, $p > .05$) indicated that use of self-blame was neither a complete nor a partial mediator of the association between attachment security and romantic loneliness. Figure 9 shows the path model using the standardized regression coefficients of the analyses in which use of self-blame mediated the relation between attachment security and family loneliness and attachment security and social loneliness. Participants who were securely attached reported lower family and social loneliness and this in turn was mediated by their minimal use of self-blame as a coping strategy.

Figure 9: Pathway Regression Model of Attachment, Use of Self-Blame, and Family and Social Loneliness in Emerging Adulthood



Note. Values in parentheses represent the coefficients for the unmediated (direct) relation between the predictor and outcome variables. $*p < .05$; $**p < .001$.

Research Question Four

This study proposed that attachment style differences would exist among emerging adults with respect to sense of mattering, coping styles and loneliness.

Hypothesis 4a. Bivariate correlations and one-way ANOVA analyses were used to investigate the first hypothesis which stated that emerging adults with secure attachment styles would report higher levels of sense of mattering while those with insecure attachment styles would report lower levels of sense of mattering. As shown in Table 13, significant and negative correlations emerged between attachment anxiety and sense of mattering to family (i.e., sense of awareness, sense of importance, and sense of reliance). Negative and significant correlations were also found between attachment avoidance and sense of mattering to family (i.e., sense of awareness, sense of importance, and sense of reliance). Finally, significant and negative correlations emerged between total attachment style and sense of mattering to family (i.e., sense of awareness, sense of importance, and sense of reliance). Thus, those reporting higher levels of insecure attachment also reported lower levels of mattering to their family.

Significant and negative correlations also emerged between attachment anxiety and sense of mattering to friends (i.e., sense of awareness, sense of importance, and sense of reliance). Negative and significant correlations were also found between attachment avoidance and sense of mattering to friends (i.e., sense of awareness, sense of importance, and sense of reliance). Finally, significant and negative correlations emerged between total attachment style and sense of mattering to friends (i.e., sense of awareness, sense of importance, and sense of reliance). Thus, those reporting higher levels of insecure attachment also reported lower levels of mattering to their friends. These correlations are also displayed below in Table 13.

TABLE 13**Correlation Matrix of Sense of Mattering and Attachment Variables ($N = 440$)**

Variable	Attachment	Attachment	Total Attachment
	Anxiety	Avoidance	Style
1. Family Awareness	-.33**	-.31**	-.16**
2. Family Importance	-.27**	-.28**	-.15**
3. Family Reliance	-.25**	-.29**	-.17**
4. Friends Awareness	-.34**	-.29**	-.17**
5. Friends Importance	-.28**	-.28**	-.18**
6. Friends Reliance	-.25**	-.45**	-.16**

Note. The numbers reflect the transformed ECR-R (attachment anxiety and avoidance).

^aThe sense of mattering variables include IMS sense of awareness to family (Family Awareness), IMS sense of importance to family (Family Importance), IMS sense of reliance to family (Family Reliance), IMS sense of awareness to friends (Friends Awareness), IMS sense of importance to friends (Friends Importance), and IMS sense of reliance to friends (Friends Reliance).

^aThe total attachment style consists of 1 = Secure Attachment, 2 = Attachment Anxiety, and 3 = Attachment Avoidance.

* $p < .05$; ** $p < .001$.

With respect to sense of mattering to family, follow-up one-way ANOVAs and post-hoc tests using the Bonferroni correction indicated a significant linear trend for attachment security and family awareness, $F(2, 437) = 11.055, p < .001$, attachment security and family importance, $F(2, 437) = 8.470, p < .001$, and attachment security and family reliance, $F(2, 437) = 9.900, p < .001$. As the level of attachment security increased, reports of sense of mattering to family (i.e., sense of awareness, sense of importance, and sense of reliance) also increased proportionately. In addition, a significant difference was found between attachment security ($M = 47.78, SD = 6.08, p < .001$) and attachment anxiety ($M = 37.60, SD = 6.81, p < .001$) and between attachment

security ($M = 47.78$, $SD = 6.08$, $p < .001$) and attachment avoidance ($M = 37.73$, $SD = 6.67$, $p < .001$).

With respect to sense of mattering to friends, follow-up one-way ANOVAs and post-hoc tests using the Bonferroni correction indicated a significant linear trend for attachment security and friends awareness, $F(2, 437) = 13.563$, $p < .001$, attachment security and friends importance, $F(2, 437) = 12.646$, $p < .001$, and attachment security and friends reliance, $F(2, 437) = 10.250$, $p < .001$. As the level of attachment security increased, reports of sense of mattering to friends (i.e., sense of awareness, sense of importance, and sense of reliance) also increased proportionately. In addition, a significant difference was found between attachment security ($M = 47.78$, $SD = 6.08$, $p < .001$) and attachment anxiety ($M = 37.60$, $SD = 6.81$, $p < .001$) and between attachment security ($M = 47.78$, $SD = 6.08$, $p < .001$) and attachment avoidance ($M = 37.73$, $SD = 6.67$, $p < .001$).

Hypothesis 4b. Bivariate correlations and one-way ANOVA analyses were conducted to test the hypothesis that emerging adults scoring high on attachment security would report higher levels of use of emotional support coping and use of instrumental support coping and lower levels of use of behavioral disengagement, use of self-distraction and use of self-blame. Attachment style was significantly and negatively correlated with use of instrumental support: $r(440) = -.13$, $p < .001$ and use of emotional support: $r(440) = -.14$, $p < .001$. Thus, emerging adults with insecure attachment styles were less likely to use emotional and instrumental support when coping within their relationships. Attachment style was also significantly and positively associated with use of behavioral disengagement: $r(440) = .10$, $p < .001$. Thus, emerging adults with an insecure attachment style were more likely to use behavioral disengagement when coping within their relationships. Use of self-blame was significantly and positively correlated with attachment anxiety: $r(440) = .24$, $p < .001$ and attachment avoidance: $r(440) = .10$, $p < .05$.

Finally, use of self-distraction was significantly and positively correlated with attachment anxiety: $r(440) = .37, p < .001$ and attachment avoidance: $r(440) = .22, p < .05$. Thus, emerging adults with an insecure attachment style were more likely to use self-blame and self-distraction when coping within their current relationships.

Follow-up one-way ANOVAs and post hoc tests using the Bonferroni correction indicated a significant linear trend for attachment security and use of emotional support, $F(2, 437) = 4.943, p < .05$. As the level of attachment security increased, reports of use of emotional support also increased proportionately. In addition, a significant difference was found between attachment security ($M = 5.56, SD = 1.74, p < .05$) and attachment avoidance ($M = 4.99, SD = 1.72, p < .05$) and between attachment anxiety ($M = 5.47, SD = 1.57, p < .05$) and attachment avoidance ($M = 4.99, SD = 1.72, p < .05$). A significant linear trend was also found for use of instrumental support, $F(2, 437) = 5.739, p < .05$. As the level of attachment security increased, reports of use of instrumental support also increased proportionately. In addition, a significant difference was found between attachment anxiety ($M = 5.58, SD = 1.64, p < .05$) and attachment avoidance ($M = 5.01, SD = 1.68, p < .05$).

A significant linear trend was also found for use of behavioral disengagement, $F(2, 437) = 9.274, p < .001$. As the level of attachment security decreased, reports of use of behavioral disengagement increased proportionately. In addition, a significant difference was found between attachment anxiety ($M = 3.67, SD = 1.61, p < .001$) and attachment security ($M = 2.72, SD = 1.35, p < .001$) and between attachment avoidance ($M = 3.39, SD = 1.58, p < .05$) and attachment security ($M = 2.72, SD = 1.35, p < .05$).

A significant linear trend was also found for attachment security and use of self-blame, $F(2, 437) = 18.783, p < .001$. As the level of attachment security decreased, reports of use of self-blame increased proportionately. In addition, post hoc tests using the Bonferroni correction

indicated a significant difference between attachment anxiety ($M = 5.17, SD = 1.65, p < .001$) and attachment security ($M = 3.78, SD = 1.67, p < .001$) and between attachment anxiety ($M = 5.17, SD = 1.65, p < .001$) and attachment avoidance ($M = 4.49, SD = 1.73, p < .001$).

Finally, a significant linear trend was found for attachment security and use of self-distraction, $F(2, 437) = 17.634, p < .001$. As the level of attachment security decreased, reports of use of self-distraction increased proportionately. In addition, post hoc tests using the Bonferroni correction indicated a significant difference between attachment anxiety ($M = 5.83, SD = 1.53, p < .001$) and attachment security ($M = 4.59, SD = 1.62, p < .001$) and between attachment anxiety ($M = 5.83, SD = 1.53, p < .001$) and attachment avoidance ($M = 5.18, SD = 1.62, p < .001$).

Hypothesis 4c. Partial and bivariate correlations along with one-way ANOVA and univariate ANCOVA analyses were conducted to test the hypothesis that attachment security would be associated with lower depressive symptomatology and family, social, and romantic loneliness. Significant and positive correlations were found between total attachment style and depressive symptomatology: $r(440) = .14, p < .001$, total attachment style and social loneliness: $r(440) = .15, p < .001$ and total attachment style and romantic loneliness: $r(440) = .30, p < .001$. No significant correlations were found between total attachment style and family loneliness.

Results from the follow-up univariate ANCOVA analysis and planned simple comparisons indicated that attachment style was significantly related to depressive symptomatology after controlling for the covariates, gender and marital status, $F(4, 435) = 37.237, p < .001$. As the level of attachment security decreased, reports of depressive symptomatology increased proportionately. In addition, a significant difference was found between attachment anxiety ($M = 4.90, SD = 1.13, p < .001$) and attachment security ($M = 3.55, SD = 1.10, p < .001$) and between attachment anxiety ($M = 4.90, SD = 1.13, p < .001$) and

attachment avoidance ($M = 4.44$, $SD = 1.12$, $p < .001$).

Results from the one-way ANOVA analysis also indicated a significant linear trend for social loneliness, $F(2, 437) = 13.251$, $p < .001$. As the level of attachment security decreased, reports of social loneliness increased proportionately. In addition, post hoc tests using the Bonferroni correction indicated a significant difference between attachment anxiety ($M = .42$, $SD = .23$, $p < .001$) and attachment security ($M = .26$, $SD = .22$, $p < .001$) and between attachment anxiety ($M = .42$, $SD = .23$, $p < .001$) and attachment avoidance ($M = .39$, $SD = .22$, $p < .001$).

Results from the follow-up univariate ANCOVA analysis and planned simple comparisons indicated that attachment style was significantly related to romantic loneliness after controlling for the covariates, marital status, employment status, and living arrangements, $F(2, 434) = 35.476$, $p < .001$. As the level of attachment security decreased, reports of romantic loneliness increased proportionately. In addition, a significant difference was found between attachment avoidance ($M = 1.91$, $SD = .46$, $p < .001$) and attachment security ($M = 1.32$, $SD = .45$, $p < .001$).

Finally, although no significant correlations were found between total attachment style and family loneliness, results from the one-way ANOVA analysis indicated that attachment style was significantly related to family loneliness, $F(2, 437) = 15.521$, $p < .001$. As the level of attachment security decreased, reports of family loneliness increased proportionately. In addition, a significant difference was found between attachment anxiety ($M = .40$, $SD = .25$, $p < .001$) and attachment security ($M = .21$, $SD = .23$, $p < .001$), between attachment avoidance ($M = .32$, $SD = .24$, $p < .05$) and attachment security ($M = .21$, $SD = .23$, $p < .05$), and between attachment anxiety ($M = .40$, $SD = .25$, $p < .05$) and attachment avoidance ($M = .32$, $SD = .24$, $p < .05$).

Research Question Five

This study was conducted to investigate whether gender differences in loneliness, sense of mattering, and coping styles existed among emerging adults.

Hypothesis 5a. The first hypothesis stated that females would report higher levels of sense of mattering, depressive symptomatology, and loneliness. A repeated-measures ANCOVA, controlling for gender, living arrangements, marital status and employment status, was conducted to test whether gender differences existed with respect to depressive symptomatology and loneliness. A significant effect was found = Pillai's Trace = .45, $F(3, 433) = 120.212, p < .001$. Post hoc analyses using the Bonferroni correction indicated that females reported significantly higher levels of depressive symptomatology ($M = 4.60, SD = 1.15, p < .001$) than males ($M = 4.35, SD = 1.29, p < .001$). Males were also found to report significantly higher levels of romantic loneliness ($M = 1.83, SD = .49, p < .001$) than females ($M = 1.76, SD = .51, p < .001$). No significant gender differences were found for family and social loneliness.

Partial and bivariate correlations were used to examine whether gender differences in sense of mattering existed among emerging adults. Significant and positive correlations emerged between gender and family sense of importance: $r(440) = .09, p < .05$, and gender and family sense of reliance: $r(440) = .10, p < .05$. In addition, a significant and positive association was found for gender and sense of reliance to friends: $r(440) = .13, p < .001$.

Follow-up one-way ANOVA analyses and planned simple comparisons indicated a significant linear trend for gender and sense of family importance, $F(1, 438) = 3.872, p < .05$. Females ($M = 35.34, SD = 6.19, p < .001$) reported significantly higher levels of importance to family than males ($M = 34.11, SD = 6.75, p < .001$). A significant linear trend for gender and sense of reliance to family, $F(1, 438) = 4.779, p < .05$, and gender and sense of reliance to friends, $F(1, 438) = 7.256, p < .05$ was also found. Females ($M = 20.16, SD = 3.98, p < .001$)

reported significantly higher levels of reliance to family than males ($M = 19.27$, $SD = 4.34$, $p < .001$). Females ($M = 20.03$, $SD = 3.88$, $p < .001$) also reported significantly higher levels of reliance to friends than males ($M = 18.99$, $SD = 4.11$, $p < .001$).

Hypothesis 5b and 5c. It was hypothesized that females would report higher levels of use of emotional support and use of self-blame whereas males were hypothesized to report higher levels of use of instrumental support and use of behavioral disengagement. Partial and bivariate correlations, followed by one-way ANOVA analyses, were used to examine these gender differences in coping styles hypotheses. As shown in Table 14, positive and significant associations emerged between gender and use of emotional support, gender and use of instrumental support, and gender and use of self-distraction.

Follow-up one-way ANOVA analyses and planned simple comparisons indicated a significant linear trend for gender and use of emotional support, $F(1, 438) = 26.430$, $p < .001$. Females ($M = 5.61$, $SD = 1.67$, $p < .001$) reported significantly higher levels of use of emotional support than males ($M = 4.79$, $SD = 1.56$, $p < .001$). A significant linear trend for gender and use of instrumental support was also found $F(1, 438) = 14.373$, $p < .001$. Females ($M = 5.56$, $SD = 1.70$, $p < .001$) reported significantly higher levels of use of instrumental support than males ($M = 4.95$, $SD = 1.61$, $p < .001$). Finally, a significant linear trend for gender and use of self-distraction was found, $F(1, 438) = 6.642$, $p < .05$. Females ($M = 5.53$, $SD = 1.64$, $p < .001$) reported significantly higher levels of use of self-distraction than males ($M = 5.12$, $SD = 1.61$, $p < .001$). No significant gender differences were found for use of self-blame and use of behavioral disengagement.

TABLE 14**Correlation Matrix of Gender and Coping Variables ($N = 440$)**

	1	2	3	4	5	6
1. Gender	_____	.24**	.18**	-.02	.12**	.02
2. Use of Emotional Support	.24**	_____	.71**	.08*	.26**	-.02
3. Use of Instrumental Support	.18**	.71**	_____	-.02	.20**	-.04
4. Use of Self-Blame	-.02	.08*	-.02	_____	.34**	.44**
5. Use of Self-Distraction	.12**	.26**	.20**	.34**	_____	.14**
6. Use of Behavioral Disengagement	.02	-.02	-.04	.44**	.14**	_____

Note. * $p < .05$; ** $p < .001$.

Research Question Six

This study sought to investigate whether the amount of time spent engaging in social networking systems and groups influenced subsequent reports of family, social, and romantic loneliness in emerging adults.

Hypothesis 6a. It was hypothesized that emerging adults reporting higher use of social networking would report lower family, social, and romantic loneliness. Bivariate and partial correlations along with follow-up one-way ANOVA analyses were used to investigate this hypothesis. A positive correlation was found between social networking and social loneliness: $r(440) = .14, p < .001$. No significant correlations were found between social networking and family loneliness and social networking and romantic loneliness. Results of the follow-up one-way ANOVA analyses indicated a significant linear trend for social loneliness, $F(3, 436) = 3.075, p < .05$. As one's level of social networking decreased, reports of social loneliness also increased proportionately. Post hoc analyses using the Bonferroni correction indicated that those

who engaged in lower levels of social networking reported significantly higher levels of social loneliness ($M = .46$, $SD = .22$, $p < .001$) than those who engaged in higher levels of social networking ($M = .97$, $SD = .23$, $p < .001$).

Hypothesis 6b. It was hypothesized that emerging adults reporting higher levels of group involvement would report lower levels of family, social, and romantic loneliness. Bivariate and partial correlations along with follow-up one-way ANOVA analyses were used to investigate this hypothesis. A positive correlation was found between group involvement and family loneliness: $r(440) = .12$, $p < .001$. No significant correlations were found between group involvement and social loneliness and group involvement and romantic loneliness. Results of the follow-up ANOVA analyses revealed a significant effect of group involvement on family loneliness, $F(2, 437) = 3.995$, $p < .05$. As one's level of group involvement decreased, reports of family loneliness also increased proportionately. Post hoc analyses using the Bonferroni correction indicated that those who reported lower levels of group involvement also reported significantly higher levels of family loneliness ($M = .36$, $SD = .25$, $p < .001$) than those who reported higher levels of group involvement ($M = .31$, $SD = .25$, $p < .001$).

CHAPTER 5

DISCUSSION

The purpose of this study was to examine the impact of early relationship experiences (i.e., mother acceptance and rejection; father acceptance and rejection), current attachment experiences (i.e., secure attachment; attachment anxiety; attachment avoidance), sense of mattering to family and friends (i.e., sense of awareness; sense of importance; sense of reliance), psychological adjustment, and coping styles (i.e., use of instrumental support; use of emotional support; use of self-blame; use of self-distraction; use of behavioral disengagement) on emerging adults' reports of depressive symptomatology, family loneliness, social loneliness and romantic loneliness. Analyses revealed that various associations exist between and among the above variables. In addition, associations were also found to be different with regard to gender and amount of time spent engaging in social networking and group involvement. The results of each proposed goal and hypotheses are discussed below in light of past research and the implications for clinical work and future research.

Predictors of Loneliness and Depressive Symptomatology

In 1990, Larson proposed that although “periods of solitude have a range of functions and meanings in the human cycle” (p. 155), too much solitude can result in loneliness. Because loneliness is a multidimensional and universal experience, it is often affected by a wide range of factors including one's personality, history, background, social support, and resources (Rokach & Brock, 1997; Weiss, 1974). When examining family loneliness, as predicted in the initial hypothesis, total father acceptance and rejection, sense of awareness to family, sense of importance to family, and psychological adjustment were unique predictors in emerging adulthood. Contrary to expectation, gender, total mother acceptance and rejection, sense of reliance to family, use of instrumental support and use of self-blame were not predictors of

family loneliness. Rather, coping through behavioral disengagement was found to predict family loneliness. Rook (1988) highlighted the notion that considerable diversity exists among lonely individuals and the painful experience often results in the denial and separation from the experience of loneliness itself. Consequently, the individual may withdraw from the situation or relinquish their coping control. Considering this notion and the fact that family relationships are increasingly important in emerging adulthood (e.g., Paradis et al., 2011), perhaps emerging adults within this sample did not rely on self-blame because they were attempting to protect themselves from the feared loneliness stigma (Moustakes, 1972). Thus, they may have denied and removed themselves from the experience, thereby causing them to rely more heavily on behavioral disengagement when coping with their feelings of family loneliness.

When examining social loneliness, as predicted in hypothesis 1b, sense of awareness to friends, sense of importance to friends, psychological adjustment and use of instrumental support were unique predictors in emerging adulthood. Weiss (1974) proposed that an optimal social support system includes a wide range of relationship factors, such as attachment, social integration and opportunities for nurturance, reassurance, and guidance from others. Consequently, a sense of mattering to friends would influence subsequent feelings of loneliness within the social domain. Contrary to expectation, gender, total mother and father acceptance and rejection, sense of reliance to friends, and use of self-blame were not predictors of social loneliness. Interestingly, once again coping through behavioral disengagement was found to predict social loneliness. This finding is in line with Fickova's (2000) study which found that high school girls relied more heavily on behavioral disengagement when coping with their body dissatisfaction and social loneliness.

When examining romantic loneliness, as predicted in the initial hypothesis, attachment security and psychological adjustment were unique predictors in this sample of emerging adults.

Contrary to expectation, gender, total mother and father acceptance and rejection, use of instrumental support and use of self-blame were not found to be unique predictors of romantic loneliness. Rather, use of emotional support predicted romantic loneliness in the emerging adults. This finding is in line with a study examining loneliness among high risk adolescents. Specifically, McWhirter, Bessett-Alesch, Horibata, and Gat (2002) found emotional coping contributed to intimate loneliness, such that emotional coping enabled a greater range of emotional responses within one-to-one interpersonal relationships (i.e., romantic networks) but not within larger social relationships (i.e., peer networks). Because romantic relationships become increasingly important during emerging adulthood (Lasgaard et al., 2011), emerging adults may rely more on attachment bonds within their relationships as opposed to their initial parental relationships.

Finally, when examining depressive symptomatology, as predicted in hypothesis 1d, gender, total father acceptance and rejection, attachment security, sense of awareness to family, psychological adjustment and use of self-blame were unique predictors in emerging adulthood. Contrary to expectation, total mother acceptance and rejection, sense of importance to family, sense of reliance to family, sense of awareness to friends, sense of importance to friends, sense of reliance to friends and use of instrumental support did not predict depressive symptomatology in this sample of emerging adults. High levels of loneliness are often associated with high levels of depression (Anderson & Harvey, 1988), lending support to the finding that individuals with higher loneliness and depression levels tend to use less effective coping strategies, such as self-blame rather than more problem-focused coping styles, such as use of instrumental support and support seeking behaviors (Cecen, 2008). Furthermore, individuals with higher levels of depression tend to adopt negative and distorted views of themselves and the world around them

which might have resulted in the non-significant findings for sense of mattering to their family and friends.

Overall, to the best of my knowledge, this is the first study conducted of PARTheory with generalized symptoms of depression and associated behavioral-social outcomes, such as loneliness within the developmental period of emerging adulthood. Although PARTheory has been studied in relation to overall depression levels (Rohner & Khaleque, 2005), no other study to date has examined the associations between parental acceptance and rejection and reported symptoms of depression and loneliness. It may be that PARTheory is more predictive of chronic anxiety, a construct coined by Murray Bowen (1966), and therefore more descriptive of the process of individuation and enmeshment within the family system. According to Bowen (1974), individuals have both a “pseudo self” (i.e., the part of self that is sensitive to needing love and approval from a significant other) and a “people pleasing self” (i.e., the part of self that will give into others in order to make them happy). In order to reduce the anxiety associated with their ‘true self’ and their self in relation to others, individuals are often found to fluctuate between two extreme outcomes: they either become over involved with their family (i.e., enmeshment/dependency/vulnerability) or they sever ties with their family members (i.e., family cut-offs). Based on theories of attachment, it was proposed that PARTheory could explain depressive symptomology and loneliness, which are subjective experiences, as they relate to issues of parental warmth (i.e., acceptance and rejection). However, this study could not confirm such an association. Future studies may include an examination of Bowen's construct of chronic anxiety, differentiation, and PARTheory to examine ways in which those transitioning to early adulthood seek and form social and romantic relationships and the impact of these relationships on subsequent well-being.

Psychological Adjustment as a Mediator for Parental Acceptance and Rejection and Loneliness

Within PARTheory, the dimension of warmth (i.e., acceptance and rejection) is proposed to continue to be activated for young adults, whether or not they are currently residing with their parents to the point that unconsciously young adults may be attempting to remain connected with their parents despite simultaneously striving for autonomy (Aquilino, 1997; Kasser et al., 2002). A key premise of PARTheory then is that a powerful human motivator is one's need for positive responses from attachment figures, such that failure to have this need satisfied results in feelings of insecure attachment and possibly psychological disorders, such as depression, substance abuse, and anxiety (Demetriou & Christodoulides, 2011; Rohner & Khaleque, 2005).

Because psychological adjustment is thought to begin early in life and impact upon one's overall well-being, it was tested as a potential mediator for the relation between early parental acceptance and rejection and loneliness in emerging adulthood. With respect to maternal acceptance and rejection, partial support was found for the mediator hypothesis, in that psychological adjustment mediated the relation between maternal acceptance and social loneliness. Emerging adults who reported higher maternal acceptance also reported lower social loneliness and this was mediated by their reports of healthier psychological adjustment. Contrary to expectation, no mediation was found for family and romantic loneliness. Urani, Miller, Johnson, and Petzel (2003) found that social support from family members was positively related to social support received in college. They proposed that strong family relationships result in the students' ability to establish similar relationships within their peer networks, which in turn might result in better psychological adjustment. In addition, two major developmental tasks for emerging adults are to gain autonomy from family and develop romantic intimacy. As the participants in the current study were mostly single, it is likely that their limited experience with

romantic relationships is reflected in the current findings. The path between maternal acceptance and rejection, psychological adjustment, and romantic loneliness may not yet be fully developed to produce mediated effects. However, the non-significant findings of maternal acceptance and rejection and family loneliness raise important intriguing future research questions.

With respect to paternal acceptance and rejection, partial support was found for the mediation hypothesis, in that psychological adjustment completely mediated the relation between paternal acceptance and social loneliness and partially mediated the relation between paternal acceptance and family loneliness. Emerging adults who reported higher paternal acceptance also reported feeling less family and social loneliness and this was mediated by their reported healthier psychological adjustment. Contrary to expectation, no mediation was found for romantic loneliness. Again, the current sample consisted of primarily single adults which could play a role in the non-significant findings for romantic loneliness. As there is minimal research on PARTheory in relation to different dimensions of loneliness, more research is warranted to determine the precise directionality of the relations between these variables.

Use of Instrumental Support and Self-Blame as Mediators for Attachment Security and Loneliness

The transition into adulthood is of paramount importance since cortical maturation is incomplete until the early 30's (Crittenden, 2006). The attachment bond which begins early in life and continues on into adulthood through one's internal working models of self and others is thought to be activated under times of stress (Bowlby, 1980; Fuendeling, 1998), one such being the transition into adulthood. Consequently, emerging adults who have not integrated a positive view of themselves and others are at an increased risk for developing depression and problems within their interpersonal relationships as they hold distorted beliefs about themselves and the world around them (Crittenden, 2006). In addition, the way the emerging adults cope with their

perceived problem(s) further impacts their overall well-being, such that those who rely on more maladaptive forms of coping report higher levels of loneliness and depression (Cecen, 2008).

Two forms of coping – use of instrumental support and use of self-blame – were tested as potential mediators for the association between attachment security and loneliness in emerging adulthood. With respect to use of instrumental support, partial support was found for the mediation hypothesis, in that use of instrumental support completely mediated the relation between attachment security and family loneliness and partially mediated the relation between attachment security and social loneliness. Emerging adults who reported having secure attachments within their current relationships also reported lower levels of family and social loneliness and this was mediated by their higher use of instrumental support as a form of coping within their current relationships. Contrary to expectation, no mediation was found for romantic loneliness. Problem-focused coping occurs more often when the person feels that he or she can effectively address the stressor, whereas emotion-focused coping occurs when the person feels that he or she lacks control over the problem (Folkman & Lazarus, 1980). Perhaps within the current sample, emerging adults felt they had greater control over their family and peer relationships, but lacked control within their intimate relationships, which only begin to flourish in emerging adulthood (e.g., Erikson, 1968; Lasgaard et al., 2011). As such, they may have been more apt to use emotion-focused coping (e.g., use of emotional support as a coping strategy) which then may have resulted in a mediation effect. Future research into this intriguing question is thus warranted.

With respect to use of self-blame, partial support was found for the mediation hypothesis, in that use of self-blame mediated the relation between attachment security and family loneliness and partially mediated the relation between attachment security and social loneliness. Emerging adults who reported having a secure attachment within their current relationships also reported

lower levels of family and social loneliness and this was mediated by their minimal usage of self-blame as a coping strategy. Contrary to expectation, use of self-blame was neither a complete nor a partial mediator for the association between attachment security and romantic loneliness. Carstensen, Fung, and Charles (2003) proposed that problem-focused coping strategies, such as actively managing the stressor, are more adaptive than emotion-focused coping strategies, such as regulating one's emotions. Thoits (1995) indicated that individuals who are equipped with more resources use higher levels of problem-focused coping whereas those with minimal resources use more emotion-focused coping strategies. Perhaps, students within the current sample had more resources available to them within their romantic relationships since they were establishing these relationships, and therefore self-blame, which is often viewed as an emotion-focused coping strategy (Carver, 1997), was not required as a method of coping. Because of the maladaptive outcomes of self-blame (e.g., Bolger, 1990), future research into this dysfunctional coping style is warranted to determine the extent to which attachment style and romantic loneliness are influenced by this coping style.

Differences in Sense of Mattering, Coping Styles, Depressive Symptomatology and Loneliness by Attachment Constructs: Secure, Anxious and Avoidant

Consistent with this study's hypotheses and prior research (e.g., Bernardon et al., 2011; DiTommaso et al., 2003), those with secure attachment styles reported lower levels of depressive symptomatology, family loneliness, social loneliness, and romantic loneliness. In addition, support was found for the hypothesis that security of attachment would be related to higher levels of sense of mattering to family and friends. Specifically, those with secure attachment styles reported a higher sense of mattering (sense of awareness, sense of importance, and sense of reliance) to family and friends. Attachment which begins early in life plays an important role in the quality of peer relationships (Markiewicz, Doyle, & Brendgen, 2001), such that

individuals with avoidant attachment styles report higher levels of relationship conflict and lower levels of companionship within their friendships (Saferstein, Neimeyer, & Hagans, 2005). When one feels a sense of mattering to their family, they are more likely to feel hopeful, sociable, loved and develop secure attachments, thereby reducing their risk of developing loneliness and depression (Elliott, 2009). Consequently, the results of this study support the view that individuals require healthy attachment bonds early in life in order to develop positive interpersonal interactions, a greater sense of awareness, importance, and reliance within their relationships with family and friends (Marshall, 2001; Marshall et al., 2011), and lower levels of loneliness and depression (Elliott, 2009).

Finally, consistent with prior research (e.g., Bernardon et al., 2011; Mikulincer et al., 1993), support was found for the hypotheses that secure attachment would result in higher levels of use of instrumental support and use of emotional support as coping strategies within the emerging adults' current relationships. Individuals with avoidant attachment styles present as egocentric and emotionally distant, and avoid the distress of relationships by rejecting others (Lussier et al., 1997). Previous research has established the negative impact of insecure attachment on one's ability to seek help when experiencing stressful periods (e.g., Lopez, Mauricio, Gormley, Simko, & Berger, 2001). Social support networks are thus diminished by attachment styles. Secure attachment was also found to be related to lower levels of behavioral disengagement, use of self-blame and use of self-distraction when coping within one's current relationships. Avoidant attachment is characterized by the tendency to divert negative emotions from one's awareness, and thus these individuals rely more on distancing as a coping mechanism (Mikulincer et al., 1993). Overall, the results of this study support the notion that security of attachment can facilitate and promote healthier resources and psychological adjustment. These

findings thus have important implications for future research on potential negative coping strategies and their impact on overall well-being, such as depression, anxiety and burnout.

Gender Differences in Sense of Mattering, Coping Styles, Depressive Symptomatology and Loneliness

Beginning early in childhood, children develop appropriate gender roles which often include being socialized to cope with their feelings and problems in specific ways. Males are often socialized to use more problem-focused and active coping strategies whereas females are taught to use more emotion-focused and passive coping styles (Ptacek, Smith, & Kanas, 1992). In general, research demonstrates that females are often found to seek more social support (Eaton & Bradley, 2008), be more influenced by perceptions of mattering (Marshall, 2001; Rayle, 2005), and therefore be more prone to experiencing loneliness and depression (Dwairy, 2011).

Within the current study, partial support was found for the hypothesis that females would report higher levels of mattering to family and friends. Specifically, within the current study, females were found to report a greater sense of importance and reliance to family. Females also reported a higher sense of reliance to friends. Interestingly, gender differences were not found for sense of awareness to family or for sense of awareness and sense of importance to friends. Emerging adulthood is characterized by a feeling of being “in between” (Arnett, 2004). Emerging adults often feel as if others do not care about them as they attempt to gain independence in a stressful world (Arnett, 2004). These feelings could therefore play a role in the non-significant findings for sense of awareness and sense of importance in the current study, both of which are characterized by feelings of being cared for and valued within one’s interpersonal relationships. Thus, these considerations are important as a sense of mattering to others is related to overall attachment development and maintenance as well as optimal functioning.

In addition, partial support was found for the proposed gender and coping style hypotheses. Consistent with prior research (e.g., Bernardon et al., 2011; Compas et al., 1993; Eaton & Bradley, 2008), females were found to report higher levels of use of emotional support. Contrary to expectations, no support was found for the hypothesis that females would report higher levels of self-blame. This is surprising given previous findings that suggest that females rely more on ruminative methods of emotion-focused coping while males rely more on distraction and distancing from emotions (Compas et al., 1993). Given that the sample used in the current research consisted of students enrolled in undergraduate Psychology courses and in graduate Education courses, this finding may be due to the specific characteristics of the sample used in this research. As there is limited research on gender differences in the use of self-blame, future research into this area is imperative to clarify the current findings.

Within this sample, females reported using higher levels of instrumental support. Within the coping literature, mixed results have been found with regards to gender and emotion-focused and problem-focused coping. The findings for gender and instrumental support within the current study are in line with Eaton and Bradley's (2008) findings. Also, interestingly within the current sample, females were found to report higher levels of self-distraction. This differed from Compas and colleagues' (1993) findings that suggested that males relied more heavily on distraction. However, this finding was in line with Fickova's (2000) results which found adolescent girls to use higher levels of denial, avoidance, disengagement and distraction when coping with their social loneliness. As coping is a multidimensional experience, it is understandable that differences in research findings continue to result. As such, continued research within this area is warranted to thoroughly understand the unique and multifaceted experience of coping.

Finally, partial support was found for the hypothesis that females would report higher levels of depressive symptomatology and loneliness. Consistent with prior research (e.g., Dwairy, 2011), females reported higher levels of depressive symptomatology. In addition, consistent with prior research by DiTommaso and colleagues (2003), males were found to report higher levels of romantic loneliness and no gender differences were found for family and social loneliness. Overall, the importance of gender in relation to depressive symptomatology and loneliness cannot be underscored and continued research with diverse populations is warranted to more fully understand the complexity of these experiences.

Social Networking, Group Involvement and Loneliness

According to Dr. Larry Rosen, Ph.D., Professor and Past Chair of Psychology at California State University, daily overuse of social media (e.g., Facebook) and technology has been found to have a negative impact on the health of preteens, adolescents and emerging adults, contributing to their increased levels of psychological disorders, such as anxiety, obsessive compulsive disorder, narcissism, hypochondria and depression (Kuznia, 2012). In addition, it has been stated that the North American culture magnifies and even encourages social alienation and loneliness by promoting increased internet usage and consequently limited contact with family, peers, and other individuals (Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay, & Scherlis, 1998; Schneider, Younger, Smith, & Freeman, 1998). Gross, Juvonen, and Gable (2000) found that lonelier college students communicated more frequently online with individuals they did not know and this communication was found to be more dishonest and negative (Leung, 2002).

Interestingly, when examining the associations between social networking and loneliness, only social loneliness was impacted by time spent engaging in social networking. Emerging adults who reported spending more time on social networking systems, such as Facebook, text messaging, Twitter and so forth, reported lower levels of social loneliness. Within the current

study, social networking was not associated with family or romantic loneliness. According to Kraut and colleagues' (1998) notion, one would have assumed that increased social networking usage would have resulted in higher levels of loneliness. de Jong Gierveld (1987) and Kraus, Davis, Bazzini, Church, and Kirchman (1993) emphasized the fact that the objective features of one's social network system (i.e., quantity) is in fact mediated through the individual's subjective evaluation of the system (i.e., quality). A recent study by Manago, Taylor, and Greenfield (2012) demonstrated that individuals with larger social networks (i.e., quantity of interactions) also reported higher levels of perceived social support and life satisfaction, including higher self-esteem and positive psychological adjustment. They found that Facebook social networks were primarily comprised of friends from the past (i.e., high school friends). It could be that the lower levels of social loneliness within this study were due to the fact that the current participants viewed their social networking systems as favorable and thus relied more heavily on them to maintain their peer relationships rather than for maintaining connections with their family and romantic partners. As such, the results of this study are more in line with Seepersad's (2004) proposal that the internet can be both a tool that facilitates social disclosure and social isolation.

With respect to group involvement, interestingly only family loneliness was influenced by the emerging adults' reported levels of group involvement. Those who reported being highly involved in various groups, such as sports/school teams, religious groups, community volunteer, environmental/political club and student parliament, also reported lower levels of family loneliness but not social or romantic loneliness. This finding was surprising considering one would assume that group involvement facilitates a higher sense of social belonging which in turn would result in lower levels of social loneliness. As limited research is available on group involvement and the different dimensions of loneliness, only speculations can be made as to why group involvement only influenced family loneliness. DeNeui (2003) found group

participation/involvement to play a vital role in enhancing college students' sense of community. Specifically, they found that in addition to the total amount of group involvement (i.e., quantity), perceived quality of involvement also predicted the students' overall perceived sense of community. Future research examining both the quantity and quality of emerging adults' group involvement is thus required to more fully understand its association with family, social, and romantic loneliness.

Strengths and Limitations

The most significant limitation of this study was that it relied exclusively on the emerging adults' self-reports. Self-report measures assume that individuals are motivated and completely honest and forthcoming with all information and they do not always enable a comprehensive picture of the various differences experienced by individuals. Watson and Pennebaker (1969) noted that when interpreting self-report measures, one must always consider the fact that a statistical relationship could result due to 'shared method variance', whereby "reflections of a similar construct in the same individual across various measures" exists (McWhirter et al., 2002, p. 81). Nevertheless, the operational definition of the measures within the current study helped to reduce the variations in response differences. In addition, the use of self-report measures offered an opportunity to explore the perceptions of the individual which are often found to be more important than actual reality (Baumeister & Leary, 1995; Kraus et al., 1993). Future research employing a longitudinal and interview-format design would help with the observance of any fluctuations in attachment, coping style choices, and loneliness over time.

Another potential limitation could be the university sample, which was derived of younger, single, undergraduate students. Thus, the generalizability of the results is limited to younger adults within the university population. However, the current sample was considered to be culturally diverse for this urban university setting and because PARTheory has been used with

cross-cultural research, this theory adequately addressed the cultural diversity of the current sample. In addition, the use of specific age ranges (i.e., 18 to 25 years) and the equal gender ratio represented a strength as it allowed for a more representative sample of emerging adulthood. The findings regarding attachment styles were consistent with past research and thus are not necessarily unique. However, the homogeneity of the sample (i.e., single, living with family) prompts the need for future research with more diverse populations. Specifically, replications of this study utilizing a more culturally diverse population would be beneficial to the literature on emerging adulthood and psychological adjustment.

The cross-sectional nature of the present study also represents a limitation as cause and effect relationships cannot be determined. Longitudinal research is required to thoroughly understand the directionality of the associations between parent, peer, and romantic relationships, coping styles, and depressive symptomology and loneliness.

Finally, the current sample sizes were too small to conduct structural equation modeling (SEM) analyses, which is the preferred approach for testing mediation (Hoyle & Robinson, 2003). Thus, future research should replicate the current study with larger samples of university students within multiple regions, which would then permit more sophisticated mediation testing to determine the extent to which parental acceptance and rejection and attachment have direct relations with loneliness, and the effects of psychological adjustment and coping styles on these relations.

Future Research Directions

The continuity between perceptions of maternal and paternal acceptance and rejection and attachment are considered to pave the way for subsequent interpersonal relationships and psychological well-being (Rohner & Khaleque, 2005). Given the strong evidence in this study for the impact of PARTheory on subsequent well-being in emerging adulthood, future studies

would benefit from exploring longitudinally the specific developmental periods where parental acceptance and rejection are more important in facilitating a positive view of self and others (i.e., secure attachment). Although PARTheory acknowledges levels of parental acceptance and rejection, it does not assess parenting style which also might have potential implications in the development of depressive symptomatology and loneliness. As such, future studies would benefit from including a measure of parenting style, such as the Parental Authority Questionnaire (PAQ; Buri, 1991) which assesses Baumrind's (1971) permissive, authoritarian, and authoritative parenting styles from the young adults' perception.

There were many differences in the factors that predicted different dimensions of loneliness in university students. Thus, the current study provided support for DiTommaso and colleagues' (2003) claim for the need to study loneliness from a multidimensional approach. Furthermore, this study lends support to the notion that attachment is important in facilitating and establishing social support networks which will ultimately decrease loneliness. Because of the lack of literature on attachment as a predictor of romantic loneliness, future research should examine this area by using a measure, which taps into both peer and family attachment, such as the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). Future studies could investigate the multidimensional nature of loneliness by using samples from various international universities and comparing results to the current study. Because satisfaction with social support is important in decreasing loneliness (e.g., Jones & Moore, 1989), the participants' interpretation of the variables (i.e., gender, living arrangements, attachment style, sense of mattering, and use of social support) examined in this study in relation to loneliness could provide a better understanding of the unique meaning of loneliness.

In addition, the multiple aspects of loneliness could also be studied through qualitative research methods by conducting attachment interviews with university students, which would

add an abundance of information to the loneliness database. As loneliness has been found to fluctuate greatly in individuals (Perlman, 1988), such interviews could be implemented at various times during the university school year. A longitudinal study of the fluctuations of loneliness as well as the individuals' history of attachment as it pertains to future loneliness could prove to be beneficial in helping to prevent subsequent loneliness in university students. Overall, the current study provided evidence for the need to carefully examine various factors that contribute to several dimensions of loneliness in university students. However, this study only examined a few of these unique factors and thus future research into other factors (e.g., self-esteem, self-efficacy) would greatly increase our overall understanding of the multiple dimensions of loneliness in university students. Furthermore, this study only examined two potential negative outcomes within emerging adulthood (i.e., depressive symptomatology and loneliness). It would be beneficial for future studies to explore other psychological outcomes, such as anxiety which is often comorbid with depression and loneliness. Examining the associations between social anxiety and social loneliness might prove to be an interesting direction, one which could shed further light on the complexity of emerging adulthood.

Clinical Implications

First and foremost, the implications of the current study highlight the need to assess loneliness from a multidimensional approach. The current research findings suggested that early parental and current attachment relationships are important in preventing family, social, and romantic loneliness in emerging adults, thus suggesting a developmental approach to studying loneliness. A developmental perspective within the therapeutic context enables maladaptive behavior to be viewed as meaningful, thereby facilitating a greater degree of communication between therapists and clients (Crittenden, 2006). The implications of this study also provide support to Weiss' (1973) belief that understanding loneliness will assist with decreasing

students' feelings of doubt, anxiety, and confusion. Decreasing such feelings can provide students with a positive outlook on life, which may translate into future success. In order to combat loneliness, interventions should thus include both short-term (e.g., helping lonely individuals to develop more realistic expectations of their social relationships) and long-term (e.g., helping lonely individuals to develop a higher quality social relationship network) goals (Schoenmakers, van Tilburg, & Fokkema, 2012). This could include educating students on the value of setting specific friendship goals to both initiate and maintain friendships.

In addition, the implications of this study provide support for Bowlby's (1980) view that attachment styles provide the basis for the selection of coping styles during stressful life events, with security of attachment resulting in more adaptive coping styles, regardless of individual differences. An important target for preventive interventions may therefore be to target attachment styles and cognitive dysfunctional coping styles. Programs designed to enhance secure attachment behaviors, such as support seeking, self-esteem enhancement, self-efficacy, and so forth, could be implemented to enhance functioning. In addition, clinicians should be aware of the individual differences in attachment styles and the implications for the behavioral differences when dealing with stressful situations. The goal of therapy should be assisting the client to achieve psychological balance rather than complete security since the former goal is possible for everyone whereas complete security might be unachievable (Crittenden, 2006). Moreover, programs designed to enhance both problem-focused and emotion-focused coping could be established at both the individual and group level. By facilitating more adaptive coping styles, individuals would learn the negative implications of relying on dysfunctional coping styles.

There were many differences in the factors that predicted different coping styles in university students. Thus, the current study provides support for the need to study coping styles

from a multidimensional approach. In addition, colleges and universities should also focus their efforts on increasing students' access to social activities in order to promote optimal social adjustment. An important stress reduction intervention would thus be to target social support networks of university students. This could be achieved by holding educational seminars on the importance of building and accessing social support in times of relationship stress. The clinician's assessment of the client's perception of both the quantity and quality of his or her social networks could also provide insight into the client's current beliefs about support, as well as help to build support networks on the campus environment. Interventions aimed at educating others on the importance of taking time to provide someone with undivided attention (e.g., using active listening during conversations), investing one's resources in another individual (e.g., really listen to someone who requires emotional support), and providing a safe foundation for exploration of individual choices and future directions (e.g., allowing students access to reliable mentors to assist with dilemmas) would assist greatly in promoting young adults' sense of awareness, importance and reliance. Furthermore, educating students on the available social media resources would assist students in developing more appropriate self-disclosure, which could possibly enhance their social encounters and reduce depressive symptomatology and loneliness. One such promising intervention is the "You Matter Campaign" for young adults in emotional distress (Hyde, 2012). This social media website and blog was designed with the intent to provide positive messages to young adults, specifically emphasizing that they matter, even when they are facing difficult situations in life (Hyde, 2012). Positive social media sites such as this one offer a glimpse into the importance of mattering and the need to communicate such mattering to at-risk individuals.

Summary and Conclusions

In conclusion, the results of this study have demonstrated that family, social, and romantic loneliness are distinct dimensions which are impacted differently by early family experiences, current attachment experiences, sense of mattering to family and friends, psychological adjustment, and current coping styles. In addition, the results of this study have demonstrated that mattering to family and friends is also multidimensional, in that one can feel a sense of awareness, importance, and/or reliance rather than on overall sense of mattering which could be deceiving. Finally, this study demonstrated that coping is better studied from a multidimensional approach since various forms of coping exist and have varying degrees of influence on overall development and well-being. Therefore, studying family relationships, sense of mattering, coping styles, and loneliness from multidimensional approaches, rather than single constructs, helps us to understand the complex developmental period called “emerging adulthood” and leads to a wide array of future research directions and possible programs to help reduce negative outcomes during this sensitive developmental period.

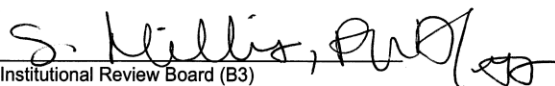
APPENDIX A: HIC APPROVAL

**WAYNE STATE
UNIVERSITY**

IRB Administration Office
87 East Canfield, Second Floor
Detroit, Michigan 48201
Phone: (313) 577-1628
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NOTICE OF EXPEDITED APPROVAL

To: Stephanie Bernardon
College of Education
1853 St. Luke Road

From: Dr. Scott Millis 
Chairperson, Behavioral Institutional Review Board (B3)

Date: February 21, 2012

RE: IRB #: 012712B3E

Protocol Title: An Examination of Relationship Experiences in Relation to Loneliness and Depressive Symptomatology in Emerging Adulthood

Funding Source:

Protocol #: 1201010500

Expiration Date: February 20, 2013

Risk Level / Category: Research not involving greater than minimal risk

The above-referenced protocol and items listed below (if applicable) were **APPROVED** following *Expedited Review Category (#7)** by the Chairperson/designee for the Wayne State University Institutional Review Board (B3) for the period of 02/21/2012 through 02/20/2013. This approval does not replace any departmental or other approvals that may be required.

- Revised Protocol Summary Form (received in the IRB Office 02/13/2012)
- Protocol (received in the IRB Office 01/03/2012)
- Receipt of letter of support from SONA participant pool (dated 02/01/2012)
- Receipt of letter of support from WSU Dean of Students (dated 02/12/2012)
- The request for a waiver of the requirement for written documentation of informed consent has been granted according to 45 CFR 46.117(1)(2). Justification for this request has been provided by the PI in the Protocol Summary Form. The waiver satisfies the following criteria: (i) The only record linking the participant and the research would be the consent document, (ii) the principal risk would be potential harm resulting from a breach of confidentiality, (iii) each participant will be asked whether he or she wants documentation linking the participant with the research, and the participant's wishes will govern, (iv) the consent process is appropriate, (v) when used requested by the participants consent documentation will be appropriate, (vi) the research is not subject to FDA regulations, and (vii) an information sheet disclosing the required and appropriate additional elements of consent disclosure will be provided to participants not requesting documentation of consent.
- Research Information Sheet (dated 02/08/2012)
- Research Closing Information Sheet (dated 02/08/2012)
- Advertisement for SONA system
- Study Flyer
- Data collection tools: Demographic Questionnaire, Adult PARQ: Mother, Adult PARQ: Father, SELSA-S, ECR-R, Adult PAQ: Personality Assessment Questionnaire, IMS for Family, IMS for Friends, Brief COPE, CES-D, and DSI

* Federal regulations require that all research be reviewed at least annually. You may receive a "Continuation Renewal Reminder" approximately two months prior to the expiration date; however, it is the Principal Investigator's responsibility to obtain review and continued approval **before** the expiration date. Data collected during a period of lapsed approval is unapproved research and can never be reported or published as research data.

APPENDIX C: RESEARCH INFORMATION SHEET

Research Information Sheet

Title of Study: Family, Peer, and Relationships Study

Principal Investigator (PI): Stephanie Bernardon, M.A.
Educational Psychology
519-944-2704

Purpose:

You are being asked to be in a research study of close relationships, personality dispositions/psychological adjustment, and coping styles, because you are an undergraduate or graduate-level student at Wayne State University between the ages of 18 and 25 years, and you may be registered with the SONA psychology participant pool. This study is being conducted with students at Wayne State University via use of the internet website “zoomerang.”

Study Procedures:

If you take part in this online study, you will be asked to complete the following tasks, which will take approximately 40-45 minutes of your time on one occasion:

1. Answer some demographic questions about yourself, such as age, gender, university affiliation, ethnicity, family and living arrangements, extra-curricular activities, and use of social-networking systems.
2. Complete a package of nine questionnaires.
 - a. Two questionnaires will address your perceptions of your early parent-child relationships (e.g., my mother/father “said nice things about me”);
 - b. One questionnaire will address your current attachment relationship experiences (e.g., “I worry that romantic partners won’t care about me as much as I care about them”);
 - c. One questionnaire will address your use of coping styles (e.g., “I’ve been getting help and advice from other people”);
 - d. One questionnaire will address your feelings towards your current family, social, and romantic relationships (e.g., “In the last year I didn’t have a friend(s) who understood me, but I wish I had”);
 - e. One questionnaire will address your current mood (e.g., “I was bothered by things that usually don’t bother me”);
 - f. One questionnaire will address your sense of belonging to family and friends (e.g., “People count on me to be there in times of need”);
 - g. One questionnaire will address your personality (e.g., “I get upset easily when I meet difficult problems”);
 - h. One questionnaire will address your feelings within your current family unit (e.g., “I tend to remain pretty calm even under stress”).
3. Read through the closing information sheet which will provide you with information (e.g., when and where study results will be available; when and where prizes can be picked up; telephone numbers, online sites, and in person counseling centers should you require any assistance) should you wish to utilize it.

Please note that each survey (questions) will be presented on the computer screen and you will be required to click on your answer. If you do not want to respond, you will be able to skip questions simply by clicking the skip box.

Benefits

- As a participant in this research, there may be no direct benefit to you; however information from this study may benefit other people now or in the future.

Risks

- By taking part in this study, you may experience the following risks:
- Emotional risks, such as increased thoughts regarding your past parent-child relationships (likely) and current social and romantic relationships (likely), increased thoughts regarding your current mood (likely), as well as ongoing critical thinking regarding your current coping levels (less likely) and personality dispositions (less likely).
- Aside from these possible feelings, there are no other potential risks or discomforts known to the researcher.

Costs

- There will be no costs to you for participation in this research study.

Compensation

- After completion of this study, you will receive a number on your Closing Information Sheet which will be entered in a draw for various monetary prizes (e.g., Starbucks, Noble & Barnes, Jimmy Johns, CVS, McDonalds, itunes, etc). Specifically, three gift cards will be raffled at the end of each month until the maximum number of participants has been recruited. The winning numbers will be announced on the Counseling Psychology website (<http://coe.wayne.edu/tbf/edp/counseling-psychology/>) at the end of each month, along with the place, dates, and times that prizes can be picked up.
- Also, if you are registered with the SONA system, you may be eligible to receive 0.5 bonus mark for participation in this study if your course instructors offer it as an option in your course syllabus.

Confidentiality:

- You will be identified in the research records by a code name or number. **There will be no list that links your identity with this code.** You will use this code to redeem your prize if you are a winner in the draw.
- Please note that as this is an online study, you as the participant are responsible for the security of your own computers when completing the questionnaires.

Voluntary Participation /Withdrawal:

- Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or its affiliates.
- Please note that if you do choose to withdraw during the study, you will be unable to discard your data as this is an online survey. However, the already completed data will eventually be discarded.

Questions:

If you have any questions about this study now or in the future, you may contact Stephanie Bernardon or one of her research team members at the following phone number (519) 944-2704. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation:

- Please click below that you have read this information sheet and agree to participate in this study.
 - The package of questionnaires will then appear for you to complete.
- I have read the information and agree to participate in the study. Please present me with the first questionnaire.

APPENDIX D: DEMOGRAPHICS QUESTIONNAIREDemographic Questionnaire Form

AGE01. What is your age?

- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

GENDER02. What is your gender?

- 1) Male
- 2) Female

STUD03. The next set of questions will be asking about your student background information.

STUD03a. Are you currently registered as a ...

- 1) Undergraduate student
- 2) Graduate student
- 3) Continuing education

STUD03b. Please indicate your CURRENT student status with the university.

- 1) Part Time
- 2) Full Time

STUD03c. What is your employment status?

- 1) Currently unemployed, but looking for employment
- 2) Working full time (35 hrs or more a week)
- 3) Working part-time (34 hours or less per week)
- 4) Currently unemployed and not looking for employment
- 5) On disability
- 6) Skip

The next set of questions will be asking about your personal background information.

MAR04. Please indicate your current marital/relationship status (check only one option):

- 1) Married or Cohabiting
- 2) Never Married
- 3) Divorced
- 4) Separated
- 5) Widowed
- 6) Committed Relationship/Engaged

7) Skip

ETH05. Which ethnic or cultural reference group do you identify with?

Ethnic or Cultural Reference group: Select one Primary Code; Secondary
Code is optional

	Primary	Secondary
American Indian or Alaska Native	<input type="checkbox"/>	<input type="checkbox"/>
Asian American	<input type="checkbox"/>	<input type="checkbox"/>
Black or African American	<input type="checkbox"/>	<input type="checkbox"/>
Native Hawaiian or Other Pacific Islander	<input type="checkbox"/>	<input type="checkbox"/>
White	<input type="checkbox"/>	<input type="checkbox"/>
Hispanic or Latina	<input type="checkbox"/>	<input type="checkbox"/>
Arabic-speaking	<input type="checkbox"/>	<input type="checkbox"/>
Skip <input type="checkbox"/>		

ETH06. Language Information: Please indicate your native Language: _____

REL07. How important is religion OR spirituality to you? **OPTIONAL**

- 1) Very Important
- 2) Somewhat Important
- 3) Not Important
- 4) Skip

HEA08. Have you ever been diagnosed or received counselling for a mental health issue (e.g., *depression, anxiety*)?

- 1) Yes
- 2) No
- 3) Skip

The next section will be asking about your family background.

FAM08. Do you have parents or parental figures in your life?

- 1) Yes
- 2) No
- 3) N/A

FAM09. Are your parents or parental figure(s) currently living?

- 1) Yes
- 2) No
- 3) N/A

FAM10. Please indicate your current living arrangements:

- 1) Living alone
- 2) Living with spouse/significant other
- 3) Living with roommate(s)
 - If yes, then: Do you consider your roommate(s) a close friend?

- 4) Living with immediate family members/parental figures (e.g., parents, siblings)
If yes, please indicate who is living in the household with you. Check all that apply

- Mother (birth or adoptive)
 Father (birth or adoptive)
 Sister(s)
 Brother(s)
 Grandparent(s)
 Other family members over the age of 18
 Other family members under the age of 18

- 5) Living with grandparents/grandparent figures

FAM11. Do you have any children?

- 1) Yes
 2) No
 3) N/A

FAM12. How many children under the age of 18 do you have?

- 0
 1
 2
 3
 4 or more

FAM13. Are these children living with you?

- 1) Yes
 2) No
 3) N/A

SN14. This section pertains to social networking.

SN14a. Do you CURRENTLY use social networking?

- 1) Yes
 2) No
 3) Skip

SN14b. For the following questions, please think about the various computer and internet programs and applications that you may use on a daily basis to connect with others. Provide an estimate of the number of HOURS PER DAY you may connect with others using these applications. Check all that apply.

Social Media	20 minutes or less per day	1-2 hours per day	2-4 hours per day	5-7 hours per day	8 hours or more per day
Facebook					
Text Messaging					
Messenger System (IChat, AIM etc)					
Twitter					
My Space					
SKYPE					
BLOGS					
ONLINE GAMING INTERACTIVE PROGRAMS via Play Station					
Online interactive games via smart phone applications (e.g., scramble, WORD, etc)					

GRIN15. This section pertains to your current group/club involvement.

GRIN15a. Are you CURRENTLY involved in any group organizations or clubs (e.g., sports, volunteer, fraternity, religious organizations, etc)?

- 1) Yes
- 2) No
- 3) Skip

GRIN15b. For the following questions, please think about the various groups, clubs, and extra-curricular activities you are currently involved in. Provide an estimate of the number of hours you engage in these clubs/groups/activities PER WEEK. Check all that apply.

Social Group/Club	Less than 2 hours per week	2-4 hours per week	5-7 hours per week	8-10 hours per week	10 hours or more per week
Sports teams					
School Clubs					
Religious/Spiritual Organizations					
Community Volunteer					
Fraternities					
Environmental Club					
Political Club					
Student Parliament					

If a group or club that you belong to was not included in the above list, please specify the activity below with the number of hours per week:

APPENDIX E: MEASURES

Adult PARQ: Mother (Short Form; Rohner, 2004)

The following pages contain a number of statements describing the way mothers (mother caregivers) sometimes act toward their children. Read each statement carefully and think how well it describes the way your mother treated you when you were about 7-12 years old. Work quickly. Give your first impression and move on to the next item. Do not dwell on any item. Four boxes are drawn after each sentence. If the statement is *basically* true about the way your mother treated you, ask yourself “Was it almost *always* true?” or “Was it only *sometimes* true?” If you think your mother almost always treated you that way, put an X in the box ALMOST ALWAYS TRUE; if the statement was sometimes true about the way your mother treated you then mark SOMETIMES TRUE. If you feel the statement is basically *untrue* about the way your mother treated you then ask yourself, “Was it *rarely* true?” or “Was it almost *never* true?” If it is rarely true about the way your mother treated you put an X in the box RARELY TRUE; if you feel the statement is almost never true then mark ALMOST NEVER TRUE.

Remember, there is no right or wrong answer to any statement, so be as honest as you can. Respond to each statement the way you feel your mother really was rather than the way you might have liked her to be.

Are you answering this questionnaire for your:

- 1) Mother
- 2) Mother Caregiver
 - Step-mother
 - Grandmother
 - Aunt
 - Sister
 - Other

[PROGRAMMER: PRESENT CHART OF QUESTIONS]

MY MOTHER	ALMOST ALWAYS TRUE OF MY MOTHER	SOMETIMES TRUE OF MY MOTHER	RARELY TRUE OF MY MOTHER	ALMOST NEVER TRUE OF MY MOTHER
1. Said nice things about me.				
2. Paid no attention to me.				
3. Made it easy for me to tell her things that were important to me.				
4. Hit me, even when I did not deserve it.				
5. Saw me as a big nuisance.				
6. Punished me severely when she was angry.				
7. Was too busy to answer my questions.				
8. Seemed to dislike me.				
9. Was really interested in what I did.				
10. Said many unkind things to me.				
11. Paid no attention when I asked for help.				
12. Made me feel wanted and needed.				
13. Paid a lot of attention to me.				
14. Went out of her way to hurt my feelings.				
15. Forgot important things I thought she should remember.				
16. Made me feel unloved if I misbehaved.				
17. Made me feel what I did was important.				
18. Frightened or threatened me when I did something wrong.				
19. Cared about what I thought, and liked me to talk about it.				
20. Felt other children were better than I was no matter what I did.				
21. Let me know I was not wanted.				
22. Let me know she loved me.				
23. Paid no attention to me as long as I did nothing to bother her.				
24. Treated me gently and with kindness.				

Questionnaire completed. Please present the next set of questions.

[PROGRAMMER: PRESENT PARQFather]

Adult PARQ: Father (Short Form; Rohner, 2004)

The following pages contain a number of statements describing the way fathers (father caregivers) sometimes act toward their children. Read each statement carefully and think how well it describes the way your father treated you when you were about 7-12 years old. Work quickly. Give your first impression and move on to the next item. Do not dwell on any item. Four boxes are drawn after each sentence. If the statement is *basically* true about the way your father treated you, ask yourself “Was it almost *always* true?” or “Was it only *sometimes* true?” If you think your father almost always treated you that way, put an X in the box ALMOST ALWAYS TRUE; if the statement was sometimes true about the way your father treated you then mark SOMETIMES TRUE. If you feel the statement is basically *untrue* about the way your father treated you then ask yourself, “Was it *rarely* true?” or “Was it almost *never* true?” If it is rarely true about the way your father treated you put an X in the box RARELY TRUE; if you feel the statement is almost never true then mark ALMOST NEVER TRUE.

Remember, there is no right or wrong answer to any statement, so be as honest as you can. Respond to each statement the way you feel your father really was rather than the way you might have liked her to be.

Are you answering this questionnaire for your:

- 1) Father
- 2) Father Caregiver
 - Step-father
 - Grandfather
 - Uncle
 - Brother
 - Other

[PROGRAMMER: PRESENT CHART OF QUESTIONS]

MY FATHER	ALMOST ALWAYS TRUE OF MY FATHER	SOMETIMES TRUE OF MY FATHER	RARELY TRUE OF MY FATHER	ALMOST NEVER TRUE OF MY FATHER
1. Said nice things about me.				
2. Paid no attention to me.				
3. Made it easy for me to tell him things that were important to me.				
4. Hit me, even when I did not deserve it.				
5. Saw me as a big nuisance.				
6. Punished me severely when he was angry.				
7. Was too busy to answer my questions.				
8. Seemed to dislike me.				
9. Was really interested in what I did.				
10. Said many unkind things to me.				
11. Paid no attention when I asked for help.				
12. Made me feel wanted and needed.				
13. Paid a lot of attention to me.				
14. Went out of his way to hurt my feelings.				
15. Forgot important things I thought he should remember.				
16. Made me feel unloved if I misbehaved.				
17. Made me feel what I did was important.				
18. Frightened or threatened me when I did something wrong.				
19. Cared about what I thought, and liked me to talk about it.				
20. Felt other children were better than I was no matter what I did.				
21. Let me know I was not wanted.				
22. Let me know he loved me.				
23. Paid no attention to me as long as I did nothing to bother him.				
24. Treated me gently and with kindness.				

Questionnaire completed. Please present the next set of questions.

[PROGRAMMER: PRESENT SELSA-S]

SELSA-S; (DiTommaso, Brannen, & Best, 2004)

On this page you will find a number of statements that an individual might make about his/her social relationships. Please read these statements carefully and indicate the extent to which you agree or disagree with each one as a statement about you, using the 7-point rating provided to the right of each question.

Please take a moment to think about your relationships with your partner, your family and your friends over the *past year*. Please circle the number that best reflects the degree to which each of the following statements describes your thoughts and feelings during the PAST YEAR. Please try to respond to each statement.

[PROGRAMMER: PRESENT CHART OF QUESTIONS]

In the past year:

		Disagree Strongly					Agree Strongly	
1.	In the last year I felt alone when I was with my family.	1	2	3	4	5	6	7
2.	In the last year I felt part of a group of friends.	1	2	3	4	5	6	7
3.	In the last year I had a romantic partner with whom I shared my most intimate thoughts and feelings.	1	2	3	4	5	6	7
4.	In the last year there was no one in my family I could depend upon for support and encouragement, but I wish there had been.	1	2	3	4	5	6	7
5.	In the last year my friends understood my motives and reasoning.	1	2	3	4	5	6	7
6.	In the last year I had a romantic or marital partner who gave me the support and encouragement I needed.	1	2	3	4	5	6	7
7.	In the last year I didn't have a friend(s) who shared my views, but I wish I had.	1	2	3	4	5	6	7
8.	In the last year I felt close to my family.	1	2	3	4	5	6	7
9.	In the last year I was able to depend on my friends for help.	1	2	3	4	5	6	7
10.	In the last year I wished I had a more satisfying romantic relationship.	1	2	3	4	5	6	7
11.	In the last year I felt a part of my family.	1	2	3	4	5	6	7
12.	In the last year my family really cared about me.	1	2	3	4	5	6	7

13.	In the last year I didn't have a friend(s) who understood me, but I wish I had.	1	2	3	4	5	6	7
14.	In the last year I had a romantic partner to whose happiness I contributed.	1	2	3	4	5	6	7
15.	In the last year I had an unmet need for a close romantic relationship.	1	2	3	4	5	6	7

Questionnaire completed. Please present the next set of questions.

[PROGRAMMER: PRESENT ECR-R]

ECR-R; (Fraley, Waller, & Brennan, 2000)

The statements below concern how you generally feel in your relationship with your romantic partner (i.e., a girlfriend, boyfriend, spouse). We are interested in how you *generally* experience relationships, not just in what is happening in a current relationship. Respond to each statement by circling the number to indicate how much you agree or disagree with the statement.

[PROGRAMMER: PRESENT CHART OF QUESTIONS]

	Strongly Disagree	Moderate Disagree	Slightly Disagree	Agree	Slightly Agree	Moderate Agree	Strongly Agree
1. I'm afraid that I will lose my partner's love.	1	2	3	4	5	6	7
2. I often worry that my partner will not want to stay with me.	1	2	3	4	5	6	7
3. I often worry that my partner doesn't really love me.	1	2	3	4	5	6	7
4. I worry that romantic partners won't care about me as much as I care about them.	1	2	3	4	5	6	7
5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.	1	2	3	4	5	6	7
6. I worry a lot about my relationships.	1	2	3	4	5	6	7
7. When my partner is out of sight, I worry that he or she might become interested in someone else.	1	2	3	4	5	6	7
8. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.	1	2	3	4	5	6	7
9. I rarely worry about my partner leaving me.	1	2	3	4	5	6	7

10. My romantic partner makes me doubt myself.	1	2	3	4	5	6	7
11. I do not often worry about being abandoned.	1	2	3	4	5	6	7
12. I find that my partner(s) don't want to get as close as I would like.	1	2	3	4	5	6	7
13. Sometimes romantic partners change their feelings about me for no apparent reason.	1	2	3	4	5	6	7
14. My desire to be very close sometimes scares people away.	1	2	3	4	5	6	7
15. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.	1	2	3	4	5	6	7
16. It makes me mad that I don't get the affection and support I need from my partner.	1	2	3	4	5	6	7
17. I worry that I won't measure up to other people.	1	2	3	4	5	6	7
18. My partner only seems to notice me when I'm angry.	1	2	3	4	5	6	7
19. I prefer not to show a partner how I feel deep down.	1	2	3	4	5	6	7
20. I feel comfortable sharing my private thoughts and feelings with my partner.	1	2	3	4	5	6	7
21. I find it difficult to allow myself to depend on romantic partners.	1	2	3	4	5	6	7

22. I am very comfortable being close to romantic partners.	1	2	3	4	5	6	7
23. I don't feel comfortable opening up to romantic partners.	1	2	3	4	5	6	7
24. I prefer not to be too close to romantic partners.	1	2	3	4	5	6	7
25. I get uncomfortable when a romantic partner wants to be very close.	1	2	3	4	5	6	7
26. I find it relatively easy to get close to my partner.	1	2	3	4	5	6	7
27. It's not difficult for me to get close to my partner.	1	2	3	4	5	6	7
28. I usually discuss my problems and concerns with my partner.	1	2	3	4	5	6	7
29. It helps to turn to my romantic partner in times of need.	1	2	3	4	5	6	7
30. I tell my partner just about everything.	1	2	3	4	5	6	7
31. I talk things over with my partner.	1	2	3	4	5	6	7
32. I am nervous when partners get too close to me.	1	2	3	4	5	6	7
33. I feel comfortable depending on romantic partners.	1	2	3	4	5	6	7
34. I find it easy to depend on romantic partners.	1	2	3	4	5	6	7
35. It's easy for me to be affectionate with my partner.	1	2	3	4	5	6	7
36. My partner really understands me and my needs.	1	2	3	4	5	6	7

Questionnaire completed. Please present the next set of questions.

[PROGRAMMER: PRESENT PAQ]

Adult PAQ: Personality Assessment Questionnaire (Short Form; Rohner, 2004)

The following pages contain a number of statements describing the way people feel about themselves. Read each statement carefully and think how well it describes you. Work quickly; give your first impression and move on to the next item. Do not dwell on any item. Four boxes are drawn after each sentence. If the statement is basically true about you then ask yourself, “Is it almost always true?” or “Is it only sometimes true?” If you think the statement is almost always true put an X in the box ALMOST ALWAYS TRUE; if the statement is only sometimes true mark SOMETIMES TRUE. If you feel the statement is basically untrue about you then ask yourself, “Is it rarely true?” or “Is it almost never true?” If it is rarely true then put an X in the box RARELY TRUE; if you feel the statement is almost never true then mark ALMOST NEVER TRUE.

Remember, there is no right or wrong answer to any statement, so be as honest as you can. Respond to each statement the way you think you really are rather than the way you would like to be.

[PROGRAMMER: PRESENT CHART OF QUESTIONS]

	ALMOST ALWAYS TRUE OF ME	SOMETIMES TRUE OF ME	RARELY TRUE OF ME	ALMOST NEVER TRUE ME
1. I feel resentment against people.				
2. I like to be given encouragement when I have trouble with something.				
3. I get disgusted with myself.				
4. I think I am a failure.				
5. I feel I have trouble making and keeping close, intimate friends.				
6. I get upset easily when I meet difficult problems.				
7. I view the universe as a threatening, dangerous place.				
8. I have trouble controlling my temper.				
9. I like my friends to feel sorry for me when I am ill.				
10. I felt I am a good person and worthy of the respect of others.				
11. I can compete successfully for the thing I want.				
12. It is hard for me to be emotionally spontaneous around people.				

13. I get upset when things go wrong.				
14. Overall, life—the very nature of the universe—is for me good, friendly, and secure.				
15. I find myself pouting or sulking when I get angry.				
16. I would rather keep my problems to myself than seek sympathy or comfort.				
17. I certainly feel worthless.				
18. I am overcome by feelings of inadequacy.				
19. My relationship with others is spontaneous and warm.				
20. My mood is fairly constant throughout the day.				
21. I see life, by its very nature, as being insecure and threatening.				
22. I make fun of people who do stupid things.				
23. I like friends to make a fuss over me when I am hurt or sick.				
24. I feel pretty good about myself.				
25. I feel I am successful in the things I do.				
26. I feel distant and detached from most people.				
27. I am cross and grumpy without any good reason.				
28. Life for me is a good thing.				
29. I like being sarcastic.				
30. I like my friends to sympathize with me and to cheer me up when I am depressed.				
31. When I meet a stranger I think that (s)he is better than I am.				
32. I feel depressed by my inability to handle situations.				
33. It is easy for me to be affectionate with people I care about.				
34. Some things get on my nerves unbearably even though I know they are unimportant.				

35. I view the world as an anxious and insecure place.				
36. I get so angry I throw and break things.				
37. I like to be given encouragement when I have failed.				
38. I like myself.				
39. I am pretty satisfied with my ability to meet daily demands as they arise.				
40. I have trouble expressing my true feelings.				
41. I can take a lot of frustration without getting angry or upset.				
42. In my view the world is basically a good, happy place.				
43. I get revenge when someone insults me or hurts my feelings.				
44. I prefer to work out problems on my own rather than ask for reassurance or encouragement.				
45. I feel that I am no good and never will be any good.				
46. I am dissatisfied with myself, feeling that I am not as capable as most people I know.				
47. I feel uncomfortable and awkward when I try to show the way I really feel to someone I like.				
48. Small setbacks upset me a lot.				
49. I see life as full of dangers.				
50. I want to hit something or someone.				
51. I like my friends to be sympathetic when I have problems.				
52. I feel I am inferior to others in most respects.				
53. I feel I am as capable as most people around me.				
54. I am warm and affectionate toward the people I really like.				
55. I am cheerful and happy one minute and gloomy or unhappy the next.				
56. I feel that life is pleasant.				

57. I think about fighting or being unkind.				
58. I like my friends to show a lot of affection toward me.				
59. I wish I could have more respect for myself.				
60. I feel inept in many of the things I try to do.				
61. I avoid close interpersonal relationships.				
62. I can keep my composure when I am under minor emotional stress.				
63. I see the world as basically a secure and pleasant place in which to live.				

Questionnaire completed. Please present the next set of questions.

[PROGRAMMER: PRESENT IMS FAMILY]

IMS for Family; (Elliott, Kao, & Grant, 2004)

Each person has ideas or feelings about how other people see them. I am interested in how you think people think about you. I would like you to think about others in your life. Consider each statement within the context of your **immediate family environment** (e.g., mother, father, guardian, siblings) Choose the rating (e.g., 1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree) you feel best describes how you think others (family) see you and circle the number in the box provided.

If you do not have any of these family members, please check here

[PROGRAMMER: PRESENT CHART OF QUESTIONS. IF NO, SKIP TO IMS FOR FRIENDS]

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Most people do not seem to notice when I come or when I go.	1	2	3	4	5
2. In a social gathering, no one recognizes me.	1	2	3	4	5
3. Sometimes when I am with others, I feel almost as if I were invisible.	1	2	3	4	5
4. People are usually aware of my presence.	1	2	3	4	5
5. For whatever reason, it is hard for me to get other people's attention.	1	2	3	4	5
6. Whatever else may happen, people do not ignore me.	1	2	3	4	5
7. For better or worse, people generally know when I am around.	1	2	3	4	5
8. People tend not to remember my name.	1	2	3	4	5
9. People do not care what happens to me.	1	2	3	4	5
10. There are people in my life who react to what happens to me in the same way they would if it had happened to them.	1	2	3	4	5
11. My successes are a source of pride to people in my life.	1	2	3	4	5

12. I have noticed that people will sometimes inconvenience themselves to help me.	1	2	3	4	5
13. When I have a problem, people usually don't want to hear about it.	1	2	3	4	5
14. Much of the time, other people are indifferent to my needs.	1	2	3	4	5
15. There are people in my life who care enough about me to criticize me when I need it.	1	2	3	4	5
16. There is no one who really takes pride in my accomplishments.	1	2	3	4	5
17. No one would notice if one day I disappeared.	1	2	3	4	5
18. If the truth be known, no one really needs me.	1	2	3	4	5
19. Quite a few people look to me for advice on issues of importance.	1	2	3	4	5
20. I am not someone people turn to when they need something.	1	2	3	4	5
21. People tend to rely on me for support.	1	2	3	4	5
22. When people need help, they come to me.	1	2	3	4	5
23. People count on me to be there in times of need.	1	2	3	4	5
24. Often people trust me with things that are important to them.	1	2	3	4	5

Questionnaire completed. Please present the next set of questions.

[PROGRAMMER: PRESENT IMS FRIENDS]

IMS for Friends; (Elliott, Kao, & Grant, 2004)

Each person has ideas or feelings about how other people see them. I am interested in how you think people think about you. I would like you to think about others in your life. Consider each statement within the context of your **social environment** (e.g., friends) Choose the rating (e.g., 1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree) you feel best describes how you think others (close friends) see you and circle the number in the box provided.

If you do not have any close friends, please check here

[PROGRAMMER: PRESENT CHART OF QUESTIONS. IF NO, SKIP TO Brief-COPE]

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Most people do not seem to notice when I come or when I go.	1	2	3	4	5
2. In a social gathering, no one recognizes me.	1	2	3	4	5
3. Sometimes when I am with others, I feel almost as if I were invisible.	1	2	3	4	5
4. People are usually aware of my presence.	1	2	3	4	5
5. For whatever reason, it is hard for me to get other people's attention.	1	2	3	4	5
6. Whatever else may happen, people do not ignore me.	1	2	3	4	5
7. For better or worse, people generally know when I am round.	1	2	3	4	5
8. People tend not to remember my name.	1	2	3	4	5
9. People do not care what happens to me.	1	2	3	4	5
10. There are people in my life who react to what happens to me in the same way they would if it had happened to them.	1	2	3	4	5

11. My successes are a source of pride to people in my life.	1	2	3	4	5
12. I have noticed that people will sometimes inconvenience themselves to help me.	1	2	3	4	5
13. When I have a problem, people usually don't want to hear about it.	1	2	3	4	5
14. Much of the time, other people are indifferent to my needs.	1	2	3	4	5
15. There are people in my life who care enough about me to criticize me when I need it.	1	2	3	4	5
16. There is no one who really takes pride in my accomplishments.	1	2	3	4	5
17. No one would notice if one day I disappeared.	1	2	3	4	5
18. If the truth be known, no one really needs me.	1	2	3	4	5
19. Quite a few people look to me for advice on issues of importance.	1	2	3	4	5
20. I am not someone people turn to when they need something.	1	2	3	4	5
21. People tend to rely on me for support.	1	2	3	4	5
22. When people need help, they come to me.	1	2	3	4	5
23. People count on me to be there in times of need.	1	2	3	4	5
24. Often people trust me with things that are important to them.	1	2	3	4	5

Questionnaire completed. Please present the next set of questions.

[PROGRAMMER: PRESENT Brief-COPE]

Brief COPE; (Carver, C. S., 1997)

These items deal with ways YOU use to cope with situations that are occurring within your family (e.g., relationships with parents, siblings) and social (e.g., relationships with peers and romantic partners) environments. There are many ways to try to deal with problems. These items ask what YOU'VE been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how YOU'VE tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

[PROGRAMMER: PRESENT CHART OF QUESTIONS]

	I haven't been doing this at all	I've been doing this a little bit	I've been doing this a medium amount	I've been doing this a lot
1. I've been turning to work or other activities to take my mind off things.	1	2	3	4
2. I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
3. I've been saying to myself "this isn't real".	1	2	3	4
4. I've been using alcohol or other drugs to make myself feel better.	1	2	3	4
5. I've been getting emotional support from others.	1	2	3	4
6. I've been giving up trying to deal with it.	1	2	3	4
7. I've been taking action to try to make the situation better.	1	2	3	4
8. I've been refusing to believe that it has happened.	1	2	3	4
9. I've been saying things to let my unpleasant feelings escape.	1	2	3	4
10. I've been getting help and advice from other people.	1	2	3	4
11. I've been using alcohol or other drugs to help me get through it.	1	2	3	4
12. I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4

	I haven't been doing this at all	I've been doing this a little bit	I've been doing this a medium amount	I've been doing this a lot
13. I've been criticizing myself.	1	2	3	4
14. I've been trying to come up with a strategy about what to do.	1	2	3	4
15. I've been getting comfort and understanding from someone	1	2	3	4
16. I've been giving up the attempt to cope.	1	2	3	4
17. I've been looking for something good in what is happening.	1	2	3	4
18. I've been making jokes about it.	1	2	3	4
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
20. I've been accepting the reality of the fact that it has happened.	1	2	3	4
21. I've been expressing my negative feelings.	1	2	3	4
22. I've been trying to find comfort in my religion or spiritual beliefs.	1	2	3	4
23. I've been trying to get advice or help from other people about what to do.	1	2	3	4
24. I've been learning to live with it.	1	2	3	4
25. I've been thinking hard about what steps to take.	1	2	3	4
26. I've been blaming myself for things that happened.	1	2	3	4
27. I've been praying or meditating.	1	2	3	4
28. I've been making fun of the situation.	1	2	3	4

Questionnaire completed. Please present the next set of questions.
[PROGRAMMER: PRESENT CES-D]

CES-D; (Radloff, 1977)

Using the scale below, circle the number which best describes how often you felt or behaved this way DURING THE PAST MONTH.

[PROGRAMMER: PRESENT CHART OF QUESTIONS]

STATEMENT	NONE OR RARELY	SOME OR A LITTLE	OCCASIONALLY	MOST OR ALL
1. I was bothered by things that usually don't bother me.	1	2	3	4
2. I did not feel like eating; my appetite was poor.	1	2	3	4
3. I felt that I could not shake off the blues even with help from my family or friends.	1	2	3	4
4. I felt that I was just as good as other people.	1	2	3	4
5. I had trouble keeping my mind on what I was doing.	1	2	3	4
6. I felt depressed.	1	2	3	4
7. I felt that everything I did was an effort.	1	2	3	4
8. I felt hopeful about the future.	1	2	3	4
9. I thought my life had been a failure.	1	2	3	4
10. I felt fearful.	1	2	3	4
11. My sleep was restless.	1	2	3	4
12. I was happy.	1	2	3	4
13. I talked less than usual.	1	2	3	4
14. I felt lonely.	1	2	3	4
15. People were unfriendly.	1	2	3	4
16. I enjoyed life.	1	2	3	4

17. I had crying spells.	1	2	3	4
18. I felt sad.	1	2	3	4
19. I felt that people disliked me.	1	2	3	4
20. I could not get "going."	1	2	3	4

Questionnaire completed. Please present the next set of questions.

[PROGRAMMER: PRESENT CLOSING INFO]

APPENDIX F

Research Closing Information Sheet

Title of Study: Family, Peer, and Relationships Study

Principal Investigator (PI): Stephanie Bernardon, M.A.
Educational Psychology
519-944-2704

Additional Information:

- You just completed the online research study of close relationships, personality dispositions/psychological adjustment, and coping styles.
- As you read in the information sheet, sometimes individuals may experience emotional risks, such as increased thoughts regarding their past parent-child relationships (likely) and current social and romantic relationships (likely), increased thoughts regarding their current mood (likely), as well as ongoing critical thinking regarding their current coping levels (less likely) and personality dispositions/psychological adjustment (less likely).
- Due to participation being voluntary and completely anonymous, you are being presented with this information sheet concerning your emotional well-being after completing the questionnaires.
- If you feel that you have experienced the above risks or any other risks, please find below a list of various telephone numbers, online sites, and in person counseling centers should you require any assistance.

List of Services:

In-Person Counseling Centers:

- Counseling and Psychological Services (CAPS) – Wayne State University
552 Student Center Building
Detroit, MI, 48202
313-577-3398
- Wayne State University – Psychology Clinic
60 Farnsworth
Detroit, MI 48202
313-577-2840

- Wayne State University – College of Education
Counseling Center & Testing Center
5425 Gullen Mall, 306 Education Building
Detroit, MI 48202
313-577-1681
- Oakland University - School of Education and Human Services (SEHS) Counseling Center
Pawley Hall Room 250A Rochester, MI, 48309-4494
248-370-2633
Email: dunham@oakland.edu
- Gateway Counseling Center
1463 E 12 Mile Rd
Madison Heights, MI 48071
248-414-3382
- Southwest Counseling Solutions-Drop In Center
2640 W Vernor Highway
Detroit, MI 48216
313-961-0677
- Pam's Place Counseling Center
2441 W Grand Blvd
Detroit, MI 48208
313-894-8088

Telephone Counseling Services:

- Detroit-Wayne County Community Mental Health Agency [DWCCMHA] – 24-hour crisis hotline 313-224-7000
- Michigan Suicide & Crisis Hotlines – USA Suicide Hotlines, Toll-Free/24 hrs/7 days a week
1-800-SUICIDE
1-800-784-2433
1-800-273-TALK
1-800-273-8255
- Detroit Suicide Prevention Center – NSO Emergency Telephone Services
313-224-7000
- Help Finding a Therapist
1-800-THERAPIST (1-800-843-7274)
- Mental Health InfoSource
1-800-447-4474

Online Counseling Services:

- Online Counseling and Medical Services
<http://www.asktheinternettherapist.com/>

Questions:

Again, if you have any questions about this study, you may contact Stephanie Bernardon or one of her research team members at the following phone number (519) 944-2704. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Final Comment:

- **Please print this sheet of your confirmation number which is required to obtain your prize.**
- **YOUR CONFIRMATION NUMBER IS THE MONTH, DATE, YEAR, AND TIME (HOUR AND MINUTE) THAT YOU COMPLETED THE SURVEY. FOR EXAMPLE: 03/20/2012 (12:22).**
- There will be three draws completed at the end of each month until the maximum number of participants has been recruited.
- Winners of the draw will be announced on the Counseling Psychology website (<http://coe.wayne.edu/tbf/edp/counseling-psychology/>) at the end of each month. The place, dates, and times that prizes can be picked up will also be announced at this time. **YOU MUST BRING IN YOUR PRINTED SHEET WITH YOUR CONFIRMATION NUMBER (SEE EXAMPLE ABOVE) TO OBTAIN YOUR PRIZE IF IT IS LISTED ON THE WEBSITE.**
- Please click below that you have read this information sheet and understand where available resources are located should you require them.

I have read the information. (mm/dd/yyyy) (hh:mm)

PLEASE PRINT THIS SHEET BEFORE SUBMITTING IT FOR YOUR CONFIRMATION NUMBER.

SUBMIT

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ABSTRACT**AN EXAMINATION OF RELATIONSHIP EXPERIENCES IN RELATION TO LONELINESS AND DEPRESSIVE SYMPTOMATOLOGY IN EMERGING ADULTHOOD**

by

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Emerging adulthood is a complex, multifaceted, unique and systems-oriented developmental period whereby individuals encounter a wide range of factors, each of which influence their subsequent adulthood outcomes (i.e., adaptive and maladaptive pathways). Given the importance of studying psychological adjustment and different types of loneliness in emerging adulthood, the purpose of the present study was to assess depressive symptomatology and family, social, and romantic loneliness in emerging adulthood. Specifically, the present study examined the impact of PARTheory (i.e., early relationship context), current attachment experiences in close relationships (i.e., current relationship context) and sense of mattering to family and friends (sense of awareness, sense of importance, and sense of reliance) on emerging adults' overall reports of family, social, and romantic loneliness and depressive symptomatology. In addition, this study explored whether coping styles (i.e., behavioral and cognitive context) and psychological adjustment (i.e., personality context) mediated the role between early family and current attachment relationship experiences and the emerging adults' reports of family, social, and romantic loneliness.

Emerging adults ($N = 440$) from Wayne State University were assessed using the Adult Parental Acceptance Rejection Questionnaire, Short Form (PARQ), Experiences in Close Relationships Scale Revised (ECR-R), Social and Emotional Loneliness Scale for Adults - Short Form (SELSA-S), Interpersonal Mattering Scale (IMS), Adult Personality Assessment Questionnaire (PAQ), Center for Epidemiologic Studies Depression Scale (CES-D Scale), and Brief Coping Orientations to Problems Experienced Scale (Brief-COPE), along with several demographic variables (e.g., age, gender, grade level, employment status, marital status, social networking rating, group involvement rating, etc.).

Hierarchical multiple regression analyses revealed that family loneliness was best predicted by total father acceptance and rejection, sense of awareness to family, sense of importance to family, psychological adjustment, and use of behavioral disengagement. Social loneliness was best predicted by sense of awareness to friends, sense of importance to friends, psychological adjustment, use of instrumental support, and use of behavioral disengagement. Romantic loneliness was found to be influenced by attachment security, psychological adjustment, and use of emotional support. Depressive symptomatology was best predicted by gender, total father acceptance and rejection, attachment security, sense of awareness to family, psychological adjustment, and use of self-blame. In addition, results from the mediation analyses indicated that psychological adjustment mediated the relation between maternal acceptance and social loneliness, whereas psychological adjustment mediated the relation between paternal acceptance and social loneliness and between paternal acceptance and family loneliness. Use of instrumental support was found to mediate the relation between attachment security and family loneliness and between attachment security and social loneliness. Use of self-blame was also found to mediate the relation between attachment security and family loneliness and between attachment security and social loneliness.

With result to attachment styles within emerging adulthood, results from the correlational and ANOVA analyses revealed that emerging adults with secure attachment styles reported a higher sense of mattering to family and friends and lower levels of depressive symptomatology, family loneliness, social loneliness, and romantic loneliness. In addition, security of attachment resulted in higher levels of use of instrumental support and use of emotional support and lower levels of behavioral disengagement, use of self-blame and use of self-distraction when coping within one's current relationships. With respect to gender, results from the correlational and ANOVA analyses revealed that females reported a greater sense of importance and reliance to family, a greater sense of reliance to friends, and higher levels of depressive symptomatology, family loneliness, and social loneliness whereas males reported higher levels of romantic loneliness. In addition, females reported higher levels of use of emotional support, use of instrumental support, and use of self-distraction. Finally, emerging adults who reported spending more time on social networking systems also reported higher levels of social loneliness whereas those who reported being highly involved in various groups reported lower levels of family loneliness. The results are discussed in light of past research and the implications for clinical work and future research.

AUTOBIOGRAPHICAL STATEMENT

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EDUCATION

- 2009-2012 **Doctor of Philosophy – Educational Psychology: Clinical Track**
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- 2007-2010 **Masters of Arts – School and Community: Marriage and Family Psychology**
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PROFESSIONAL EXPERIENCE

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- 2011 – 2012 **Psychometrist – Learning Disability Association (Windsor, Ontario)**
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- 2011 – 2012 **Doctoral Intern – Dr. Melissa C. Hobbs, C. Psych. (Windsor, Ontario)**
- Comprehensive assessments and treatment of adults and couples presenting with a variety of difficulties.
- 2009 – 2010 **Psychometrist and Therapist – Greater Essex County District School Board Psychological Services (Windsor, Ontario)**
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SELECTED PEER REVIEWED PUBLICATIONS

Bernardon, S., & Pernice-Duca, F. (2012). Integrating Recovery and the Narrative Attachment Systems Perspective to Working through Borderline Personality Disorder. *The Family Journal: Counseling and Therapy for Couples and Families*, 20, 239-248.

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