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Extended Family Relationships: How They Impact the Mental Health of Young Adults

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EXTENDED FAMILY RELATIONSHIPS: HOW THEY IMPACT THE MENTAL
HEALTH OF YOUNG ADULTS

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in
Family Sciences in the College of Agriculture, Food,
and Environment at the University of Kentucky

By

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ABSTRACT OF THESIS

EXTENDED FAMILY RELATIONSHIPS: HOW THEY IMPACT THE MENTAL HEALTH OF YOUNG ADULTS

This study bridges the gap in literature about the impact of extended family relationships on young adult depression and self-esteem. A sample of 304 undergraduate students between the ages of 18 and 21 at the University of Kentucky was recruited to complete an online survey about their immediate and extended family relationships and their mental health. The largest predictor of self-esteem and depression in early young adults is perceived social support from the family of origin, which is also moderately correlated with perceived support from extended family members. This indicates that extended family support collaborates with family of origin support to benefit self-esteem and depression levels. Depression also decreases through more positive interactions with extended family members. Males benefited less than females from extended family relationships, as evidenced by the result that closer extended kin relationships were the second largest predictor of more depressive symptoms in males. These findings inform therapists about effective ways of conducting therapy with college students and support the use of Bowen family systems therapy.

KEYWORDS: Extended Family, Kin, Mental Health, Depression, Self-Esteem

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EXTENDED FAMILY RELATIONSHIPS: HOW THEY IMPACT THE MENTAL
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Chapter One: Introduction

Family is one of the most important influences in a person's life, especially because individuals learn by observing the behavior of the family members surrounding them (Ackerman et al., 2013). In family research, the family of origin is emphasized and studied a great deal, but extended family members are often overlooked. If family is essential to a person's development and life course trajectory, more research on the impacts of extended family relationships needs to be conducted. Based on the significance each person places on interaction with extended family, kin have different levels of involvement in people's lives. Although extended family members may live in different geographical locations, researchers posit that extended family networks continue to thrive across cultures, and many individuals foster strong connections with numerous extended kin (Georgas et al., 2001; Marsh & Cheng-Kuang, 1995; Walsh, 2012). Thus, extended family relationships remain relevant and should be studied more in-depth.

With a longer life expectancy, higher median age at first marriage, and various other sociodemographic changes, families are able to focus more of their time on activities other than caring for their children now than in the past (Arnett, 2014; McGoldrick, Carter, & Garcia-Preto, 2011). Along with these shifts in the family life cycle, the stages of individual development have also transformed. Young adults previously were defined as those 18 to 25 years of age (Arnett, 2014). Because people live longer, young adults can focus more time on developing their identities and obtaining an education while delaying the process of coupling and having children. Young adulthood has been expanded to encompass those 18 to 30 years of age, with early young adulthood including those 18 to 21 years of age and late young adulthood including those

22 to 30 years of age. People in their late teens and early twenties feel that they are not adolescents anymore, but they also do not feel that they have reached adult status (Arnett, 2014). One major factor that has caused this increase in length of time spent in the young adulthood phase is longer financial dependence on parents while pursuing post-secondary education (Arnett, 2014; McGoldrick et al., 2011), as evidenced by the roughly 75% of high school graduates who enroll in college (McGoldrick et al., 2011).

When people move from one developmental life cycle stage to the next, they are at a transition point (McGoldrick et al., 2011). College is a time of transition, and it is during transition points in life that people are most susceptible to developing symptoms of distress, which can lead to mental illness (McGoldrick et al., 2011). In the United States, the rates of people developing depression, anxiety, and other psychological symptoms are increasing (Twenge, 2015). Further, an increasing number of college students experience mental health problems (Levine & Dean, 2012; Mistler, Reetz, Krylowicz, & Barr, 2012). For example, 68% of community colleges and 90% of four-year colleges reported an increase in the number of incoming students with mental health issues from 2001 to 2008 (Levine & Dean, 2012). In addition, the severity of the psychological problems that college students experience has increased, such that more students are developing diagnosable mental disorders (Brunner, Wallace, Reymann, Sellers, & McCabe, 2014). Although a great deal of research indicates that extended family relationships can positively impact the mental health of adolescents and middle-aged adults (Ben-Eliyahu, Rhodes, & Scales, 2014; Campos, Ullman, Aguilera, & Dunkel Schetter, 2014; Crowell et al., 2014; Hamilton, 2005; Klever, 2016; Lamborn & Nguyen, 2004; Pallock & Lamborn, 2006; Scales & Gibbons, 1996; Silverstein & Ruiz,

2006), the connection between extended family relationships and mental health in early young adults remains unclear. The influence of extended family relationships on early young adults in college needs to be studied because this transitioning group is experiencing an increasing amount of mental health problems.

Researchers have found that higher self-esteem protects people from developing symptoms of depression (Dumont & Provost, 1999; Lakey, Hirsch, Nelson, & Nsamenang, 2014; Sowislo & Orth, 2013). In addition, the effect that changes in self-esteem have on a person's well-being is intensified during life transitions, such as adjusting to college (Lee, Dickson, Conley, & Holmbeck, 2014). Another protective factor for depression is social support, which has been shown to be especially important during the college transition process (Lee et al., 2014). Because self-esteem and perceived social support positively predict each other (Lee et al., 2014), it is important to measure both of these constructs. The purpose of this study is to examine the effects of extended family relationships on depression symptoms, self-esteem, and perceived social support of early young adults who are undergraduates in college.

Theoretical Perspectives

Family systems theory.

Family systems theory is useful for studying the extended family and its effect on individual well-being because it takes an intergenerational approach to families.

According to family systems theory, family members are defined as individuals who interact as part of a multigenerational family system (Bengtson, Acock, Allen, Dilworth-Anderson, & Klein, 2005). Individual actions affect the entire family, and those individual actions are influenced by the emotions and the family climate within the

system (Nichols, 2013), resulting in a cyclical process. Because the family is viewed as a system, the locus of pathology is not an individual person. In contrast, problems result from dysfunction in the family as a whole due to family interaction cycles (Smith & Hamon, 2012). In addition, patterns of behavior and interaction in families often repeat themselves in later generations. Family systems theory is the basis for Bowen family systems therapy, one type of family therapy (Nichols, 2013).

One of the basic assumptions of family systems theory is that the whole is greater than the sum of its parts. This means that each member of the family, though they have individual characteristics, is integrated into a whole that is the family system. One person's behaviors have the potential to create an interaction cycle that affects the whole family system. Pathological communication, such as a double bind, is an additional factor that leads to problems in the family. Another emphasis of family systems theory is circular causality, which is the idea that the way family members repeatedly interact is more important for change than the content of the interactions (Smith & Hamon, 2012).

Family systems theory posits that families develop their own unique rules that guide behavior, some of which are explicit and some of which are implicit. Because some rules are dysfunctional, altering these rules is an important step for change. Feedback loops are the mechanisms by which families maintain homeostasis within the context of their unique family rules. When a member does not follow a rule, they can either receive negative feedback or positive feedback, thus discouraging or encouraging change. Another important aspect of family systems theory is that all of the members of the family take on roles that define their behavior patterns and allow them to complete family functions. The whole family system and each person's role must change for one

person to change. Finally, family systems theory conceptualizes three types of family based on how rigid the family boundaries are. From low rigidity to high rigidity, the types of families are random, open, and closed (Smith & Hamon, 2012). Random families have few to no boundaries and are disengaged from each other, while closed families have strict boundaries and are enmeshed with each other. The healthiest type is the open family, in which there is an appropriate amount of boundaries that exhibit mutuality (Smith & Hamon, 2012).

Human ecology theory.

Human ecology theory is an additional model that applies to the study of extended family relationships because it also takes a systems perspective. This theory posits that human development is influenced by interactions over time between a person and the environment (Rosa & Tudge, 2013). Urie Bronfenbrenner describes the ecological environment as being composed of five systems: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem (Rosa & Tudge, 2013; Smith & Hamon, 2012). The first system is the microsystem, which is an individual's immediate environment, such as immediate and extended family, school, work, church, and their individual biology. The mesosystem represents the connections between two or more microsystems. For instance, the immediate family and the extended family may interact to provide benefits to a child. Third is the exosystem, which includes environments that the individual has indirect contact with, and these environments affect the person's development. Examples of exosystems are neighborhoods, media, and government. Fourth, the macrosystem is the broadest category and contains all of the systems, including social norms, laws, and values of a culture (Bengtson et al., 2005; Smith &

Hamon, 2012). Finally, the chronosystem is the dimension of time in interactions of the ecological environments over the life course (Bengtson et al., 2005).

One of the basic assumptions of human ecology theory is that individuals are affected by both their genetics and their environment (Smith & Hamon, 2012). In other words, nature and nurture interact during human development. Another assumption of ecology theory is that humans depend on their environment for biological needs, such as air, water, and food. Therefore, a person's quality of life depends on the quality of their environment. Human ecology theory also posits that humans are social beings who depend on other humans. This includes sharing the earth's resources and providing support in times of need. An additional assumption of the theory is that because humans eventually die, time acts as a limitation as well as a resource. This theory also states that people interact based on the spatial environment in which they are located (Smith & Hamon, 2012). For example, social norms in New York City and a rural Midwest town differ. The final assumption of human ecology theory is that the behavior of humans can be analyzed on an individual level and on a population level. Individual analysis addresses things like a person's ability to adapt to their environment, while population analysis focuses on things such as natural selection in a group of people (Smith & Hamon, 2012).

The effect of extended family relationships can be better understood with human ecology theory. Because extended family members share a large part of their genetic make-up, they may have similar physical and psychological issues with which they can help each other. In addition, extended family members make up part of an individual's environment, including the microsystem and the mesosystem, thus influencing the

nurture aspect of human development. For instance, having extended family members who are open and personal gives an individual an additional source of social support (Klever, 2016). This could even lead family members to help the person and provide resources when they are going through a hard time, such as the transition to college. The theory's concept of humans being dependent on others is also relevant with extended family relationships because extended kin can provide the care that humans are dependent on. Additionally, extended kin may even live together. Extended families are all different; the social norms in one family may be vastly different from the social norms in another family. Therefore, extended families teach individuals how to interact in their spatial environments.

Social support theory.

Social support theory is an additional model utilized in this study. It consists of three distinct perspectives: stress and coping, social constructionist, and relationship (Cohen, Underwood, & Gottlieb, 2000). The first perspective states that support from others helps negate the influence of stress on an individual and improves his or her ability to cope. Second, the social constructionist viewpoint indicates that support from others directly affects health because it increases an individual's self-esteem and self-regulation. Finally, the relationship stance states that support from others improves health because it also provides companionship and intimacy (Cohen, Underwood, & Gottlieb, 2000). These perspectives are useful for conceptualizing the social support that early young adults receive from extended family members.

The stress and coping perspective predicts that support from others fosters well-being by protecting individuals from the negative impacts of stress (Cohen, Underwood,

& Gottlieb, 2000). Because college is a transition point and thus a stressful time in the life cycle (McGoldrick et al., 2011), it is important for college students to have adequate coping skills and resilience toward stress. Therefore, having more sources of support in an early young adult's life, such as extended family members, could improve the student's ability to cope with stress and thus enhance well-being. Many methods of measuring social support from the stress and coping perspective involve self-report of the individual's perception of their availability and quality of support (Cohen, Underwood, & Gottlieb, 2000).

Social constructionist perspective posits that because people's perceptions about the world come from their own ideas and their social context, there is most likely no one, agreed-upon definition of support. In addition, a person's view of themselves is related to how their sources of support perceive them (Cohen, Underwood, & Gottlieb, 2000). This viewpoint also draws on the concept of social cognition. Under social cognition, people develop fixed beliefs about the supportiveness of other people, and these beliefs influence how a person views support in the future. For example, a person who perceives themselves to have a high amount of social support is more likely to interpret a behavior as supportive, and they are also more likely to remember instances of support (Cohen, Underwood, & Gottlieb, 2000). Perceived support is then related to health because negative views about social support are then connected to negative views about the self, which is related to emotional distress (Cohen, Underwood, & Gottlieb, 2000). In order to measure social support from this perspective, it is also recommended that a self-report of perception of availability and quality of support is utilized (Cohen, Underwood, & Gottlieb, 2000), which is what the present study does.

The relationship perspective states that social support is one part of relationships in general and that it might not be possible for people to discriminate between support and other characteristics of relationships, such as companionship, intimacy, low conflict, relationship skills, and attachment (Cohen, Underwood, & Gottlieb, 2000). Relationships that are positive, supportive, and secure are proposed to be essential for human evolution. Therefore, these relationships enhance well-being by fulfilling a biological need (Cohen, Underwood, & Gottlieb, 2000). Because this view is more general, there are not specific recommendations for measurement strategies (Cohen, Underwood, & Gottlieb, 2000).

Literature Review

Previous literature states that the supportive relationships characteristic of *familism* are correlated with resilience and mental health benefits (Campos, Ullman, Aguilera, & Dunkel Schetter, 2014; Walsh, 2012), including decreased depressive symptoms (Kline, Killoren, & Alfaro, 2016; Stein, Gonzalez, Cupito, Kiang, & Supple, 2015; Zeiders et al., 2013) and increased self-esteem (Kuhlberg, Peña, & Zayas, 2010). Familism is explained as a deep sense of closeness, belonging, and responsibility to one's family system, including nuclear and extended family members (Campos et al., 2014; Kapke, Grace, Gerdes, & Lawton, 2017). Under familism, people prioritize their families before themselves, thus emphasizing collective ideology over individualistic ideology (Kapke et al., 2017). In addition, familism describes family relationships that are kind and supportive (Campos et al., 2014). Important relationships with people who support and encourage the individual help to foster the individual's resilience (Walsh, 2012). These ideas align with family systems theory, human ecology theory, and social support theory perspectives, positing that extended kin are possible relationship and support

sources in a person's environment that can improve well-being. This idea is important for the use of family therapy because therapists can encourage clients to create or strengthen relationships with extended family members who support them.

Findings indicate that familism establishes close family relationships as well as the perception of social support (Campos et al., 2014). In turn, these variables lead to an increase in psychological health in people of Latino, European, and Asian descent (Campos et al., 2014). Additionally, children are less likely to inherit depression from their mothers if the children have a strong relationship with their grandparents (Silverstein & Ruiz, 2006). In contrast, children who have weak relationships with their grandparents are more likely to inherit a similar severity of depression symptoms as their mothers (Silverstein & Ruiz, 2006). Clinicians could utilize this knowledge when treating adolescents and young adults with depression. Developing solid relationships with grandparents could be especially beneficial if the individual's mother suffers from depression.

Because gender norms are constructed by society, men and women may place different value on extended family relationships. Female adolescents have more frequent communication with non-parental adults than do male adolescents (Scales & Gibbons, 1996). This phenomenon may be due to the fact that females are socialized to be more relational (Landman-Peeters et al., 2005). Accordingly, female adolescents indicated having fewer depressive symptoms than male adolescents when their perceived social support was higher, indicating that the resilience of females is enhanced by social support more than the resilience of males (Landman-Peeters et al., 2005).

Various levels of interaction with extended family members exist, including no contact, occasional in-person contact, and living in the same household. Scales and Gibbons (1996) address the type of interaction that is in the middle of the scale and consists of occasional or frequent in-person contact. A common perception among those who study adolescent development is that the participation of extended family members and other mentors in an adolescent's life will positively influence the adolescent's well-being (Scales & Gibbons, 1996). This perception is evidenced by programs such as Big Brothers Big Sisters, College Mentors for Kids, and many other similar mentoring programs. Programs like these are created with the intent to positively influence young adolescents' lives through interaction with mentors who set good examples. Scales and Gibbons (1996) attempted to determine the truth of this popular notion and found that relationships with extended family members are the most essential for promoting healthy development other than relationships with parents for non-European adolescents of lower-income families. In addition, children typically interact with nonrelated adults, such as teachers, neighbors, and religious leaders, more often than extended family. Therefore, these two groups of adults take on different roles in children's lives (Scales & Gibbons, 1996), which indicates that extended family members have a unique place in the family system. While both extended kin and nonrelated adults are important in children's lives, extended family members have the potential to impact adolescents more positively (Scales & Gibbons, 1996).

In addition to programs and situations that allow mentors to interact with adolescents, extended family members can encourage the adolescent's participation in their own extracurricular activities to help develop independence and a sense of identity.

This also involves a moderate level of interaction with extended family members. Ben-Eliyahu, Rhodes, and Scales (2014) created the concept of *sparks*, which are strong interests of adolescents. Sparks typically involve activities such as sports, music, drama, and volunteer work, and they correspond with positive outcomes and higher well-being among adolescents at age 15 (Ben-Eliyahu et al.). Additionally, the intensity of an adolescent's spark corresponds with the level of positive social, academic, and affective outcomes (Ben-Eliyahu et al.). Adolescents who had stronger passions for their sparks also had more support from others, including extended family members, for participating in the activity (Ben-Eliyahu et al.). Support includes encouragement, providing transportation for the adolescent to the activity, and financing the interest (Ben-Eliyahu et al.). All in all, extended kin can help adolescents develop sparks, which in turn lead to positive developmental and mental health outcomes.

The closest type of interaction that adolescents can have with extended family members is living in the same household as one or more extended family members. Living in a household with parents and a grandparent was found to be correlated with less deviant behavior in all participants, and with less depression in African American adolescents (Hamilton, 2005). In contrast, living with parents and an extended family member other than a grandparent, such as an aunt or uncle, is associated with more symptoms of depression, but less deviance when living in a household with many siblings (Hamilton, 2005). Less deviance in adolescents who have more siblings may be a result of the negative effects of the presence of the other extended family member being reduced when more siblings are present but magnified when fewer siblings are present (Hamilton, 2005). An additional explanation of this phenomenon is that the extended

family member plays more of a parental or supportive role in a family with greater numbers of children, thus helping to teach the children about proper behavior and disciplining them when necessary (Hamilton, 2005). These contrasting results indicate that the quality of an extended family member's relationship with the adolescent affects their influence on the adolescent's well-being (Hamilton, 2005). This suggests that both the quality and the amount of time spent with extended family members need to be evaluated.

Extended family also impacts people during middle and late adulthood. In another study, researchers examined the relationship between mental health at midlife and the quality of relationships with partners and extended family (Crowell et al., 2014). Results showed that close relationships with extended family decreased symptoms of anxiety and depression (Crowell et al., 2014). A major implication of this study is that extended family relationships are important even in later adult years.

Another study of extended family member relationships by Klever (2016) was based on Bowen's version of family systems theory. One of the main ideas from Bowen is that "viable emotional contact," which is defined as open, personal contact, with the previous family generations helps the nuclear family remain asymptomatic (Klever, 2016). In a mixed quantitative and qualitative study of 10 couples, five of which were high symptom and five of which were low symptom, Klever found support for Bowen's idea. The high symptom families had more geographical distance and fewer open relationships with extended family members. In contrast, the low symptom families reported more open extended family relationships and closer geographic distance. Additionally, the couples with fewer close extended family relationships had more

physical and mental health problems (Klever, 2016). This study supports the idea that extended family members act as part of the family system and the person's environment.

Older adults have also been found to be impacted by extended family members. Johnson and Troll (1996) looked at the physical health of people at ages 70 to 103. They found that most people had health problems at age 85 that caused them to need assistance. However, of these individuals who were childless, only 36% had a family caregiver or some relative who was potentially available to help care for them (Johnson & Troll, 1996). In contrast, among the elderly individuals who were parents, 88% had an available caregiver (Johnson & Troll, 1996). If aging people have extended family members to help care for them, this could alter their trajectory of well-being for the remainder of their lives, especially if they have financial struggles that prevent them from paying for the quality of help they require. Additionally, this extended family aid could even be significant for improving mental health because seeing extended family members would provide more adequate social support than seeing medical staff with whom the person may not have a close relationship.

Purpose

For this study, *extended family* is defined as any person related by blood or law who is outside of the family of origin and is not a primary caregiver or legal guardian. Therefore, extended family members can include grandparents, aunts, uncles, and cousins. *Early young adults* are defined in this study as people ages 18 to 21. Evaluation of extended family relationships is divided into two categories: *quantity*, which is frequency of contact, and *quality*, which is the participant's perception of the degree of positivity or negativity of the interactions.

Based on past studies, there is scholarly evidence that suggests that extended family involvement is associated with better well-being (Crowell et al., 2014; Hamilton, 2005; Lamborn & Nguyen, 2004; Pallock & Lamborn, 2006; Scales & Gibbons, 1996; Silverstein & Ruiz, 2006). The first hypothesis of the current study is that a higher quantity and quality of interaction with extended family members is correlated with higher levels of well-being in early young adults, such that their self-esteem is high and their depression level is low. A secondary hypothesis is that because females are socialized to value relationships more, female young adults benefit more from extended family member involvement than do male young adults (Landman-Peeters et al., 2005).

Chapter Two: Method

Sampling

A sample of undergraduate students at the University of Kentucky was recruited to complete an online survey through Qualtrics. Participants were recruited using the Dillman approach, which emphasizes the use of repeated contact in order to increase the response rate (Dillman, 2007). First, the e-mail addresses of all undergraduate students were obtained by sending an open records request to ukopenrecords@uky.edu. Then a random probability sample of 2,255 e-mail addresses of undergraduate students was generated. Next, an e-mail that introduced the study and provided the Qualtrics survey link was sent to the sample (see Appendix A). Reminder e-mails (Dillman, 2007) were sent both one and four weeks after the initial e-mail to individuals who had not yet completed the survey.

In order to incentivize participation in the study, a drawing for four \$50 checks was offered for every 100 people who completed the survey. Therefore, students were informed in the recruitment e-mail that they had a 1 in 25 chance of winning \$50 for completing the survey. Laguilles, Williams, and Saunders (2011) found that lottery incentives are successful at increasing college students' response rates on Internet surveys. To randomize the selection of the \$50 check recipients, each participant was assigned a number and then Microsoft Excel was used to generate random numbers, which corresponded to the winning participants. These recruitment procedures resulted in a 19.5% completion rate.

Participants

Inclusion criteria required that participants be English-speaking United States citizens and be early young adults (i.e., between 18 and 21 years of age). International students were excluded from the study because their families live farther away, causing these students to have fewer opportunities to visit their families in person. Culture and language could also be confounding, leading the study to have excluded students who were not U.S. citizens. Although 439 people responded to the survey, only 355 participants met the inclusion criteria.

Due to incomplete data, a total of 304 students were used in the analysis. Participants ranged from 18 to 21 years of age, with 19-year-olds being the largest group (29.9%), followed by 20-year-olds (27.0%), 21-year-olds (24.0%), and 18-year-olds (19.1%). The majority of respondents were females (76.3%) rather than males (23.7%), and were straight or heterosexual (91.8%). Most participants were non-Hispanic Whites (87.5%), followed by Blacks (7.6%), Hispanics or Latinos (4.6%), and Asians (3.6%). Participants were asked to select all racial categories that applied to them, and 7.9% ($n = 24$) identified as multiracial. In addition, the majority of participants had at least one sibling (92.8%), with one sibling (43.1%) and two siblings (26.3%) being most common. The sample consisted of participants from all four class levels: freshmen (32.2%), sophomores (24.0%), juniors (27.6%), and seniors (16.1%). Respondents' total family household income last year was primarily \$100,000 or more (50.0%), with less than \$25,000 being the smallest group (5.9%). Parents of the students lived in 28 U.S. states, with Kentucky being the most prevalent (55.3%). Therefore, although the sample was

taken from the University of Kentucky, participants were from more geographically diverse states than just Kentucky.

Procedure

Research procedures followed a protocol approved by the University of Kentucky's Institutional Review Board (see Appendix B). The welcome page of the survey included boxes that were required to be checked in order to verify that participants were eligible before starting the survey. The online survey began with an informed consent page which required participants to read and agree to its terms (see Appendix C). Participants were asked to complete all parts of the survey, but it was emphasized that it was voluntary and that they could leave parts blank if they did not wish to answer them.

Measures

Quality and quantity of extended family relationships.

The survey inquired about the quantity of time the participant spends with extended family members as well as the quality of the relationship between the participant and their extended family members through the Quality and Quantity of Extended Family Relationships Scale (QQEFR; see Appendix D). This 30-item instrument was developed specifically for this study to measure what type of extended family members participants interact with and in what capacity. The assessment is divided into six subscales: frequency, closeness, quality of interactions, type of contact, proximity, and number of relatives. Example items are "How often do you interact with your cousin?" and "What is your most frequent type of interaction with your aunt?" Response options and average scores vary for each subscale. The average scores from each subsection, except for number, are calculated to get total subscale scores. Total

subscale score ranges vary, with higher scores representing a higher quantity and quality relationship. The number of each type of extended family member was used as qualitative data. A reliability analysis of the scale was tested with SPSS using intraclass correlations. A high degree of reliability was found between the scale items. All of the items contributed to the scale because every time an item was deleted, the Chronbach's alpha was reduced. The average measure ICC was good, $\alpha = .86$, $F(169, 4056) = 6.88$, $p < .001$, 95% CI [.82, .88].

Perceived social support – family of origin.

Another part of the survey was the Perceived Social Support Family Scale (PSS-Fa; Procidano & Heller, 1983), which is a 20-item instrument designed to measure the amount of perceived social support from one's family of origin, or immediate family members (see Appendix E). Examples of items include "I rely on my family for emotional support" and "Most other people are closer to their family than I am." Response options for each declarative statement are "yes," "no," and "don't know." Items answered with a response that indicates the presence of perceived social support are given a score of 1 and items answered with a response that indicates the absence of perceived social support are assigned a score of 0. "Don't know" responses are also given a score of 0. Finally, the scores of all items are added to obtain the total score. The minimum total score is 0, which represents no perceived social support from family, and the maximum total score is 20, which represents maximum perceived social support from family. The internal consistency of the PSS-Fa, represented by Cronbach's alpha, is very good, $\alpha = .90$ (Procidano & Heller, 1983). Including this scale helped to differentiate the effects of immediate family members and extended family members on mental health.

Perceived social support – extended family.

A version of the Perceived Social Support Family Scale that was adapted for this study (PSS-ExtFa; Procidano & Heller, 1983) was also used. This 20-item instrument is designed to measure the amount of perceived social support from one's extended family members (see Appendix F). Examples of adapted items include "I rely on my extended family for emotional support" and "Most other people are closer to their extended family than I am." Response options for each declarative statement are "yes," "no," and "*don't know*." Items answered with a response that indicates the presence of perceived social support are given a score of 1 and items answered with a response that indicates the absence of perceived social support are assigned a score of 0. "*Don't know*" responses are also given a score of 0. Finally, the scores of all items are added to obtain the total score. The minimum total score is 0, which represents no perceived social support from extended family, and the maximum total score is 20, which represents maximum perceived social support from extended family. The internal consistency of the original instrument, represented by Cronbach's alpha, is very good, $\alpha = .90$ (Procidano & Heller, 1983). Because perceived support from one's family is inversely related to signs of mental disorders (Procidano & Heller, 1983), the PSS-Fa Scale helped to predict participants' responses on the mental health evaluation aspects of the survey.

Self-esteem.

Additionally, the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was used to assess participants' levels of self-esteem (see Appendix G). This assessment consists of 10 four-point Likert-type items that measure global self-esteem, which is the overall positive or negative value that a person places on the self, unrelated to specific

attributes or abilities (Robins, Hendin, & Trzesniewski, 2001; Suls & Krizan, 2005). The RSES measures a person's current state of global self-esteem with items such as "On the whole, I am satisfied with myself" and "I wish I could have more respect for myself." Response options range from *Strongly Agree* (3) to *Strongly Disagree* (0). Items that are negatively phrased are reverse-scored, and all response numbers are added to obtain the total score. The total score can range from 0 to 30. Total scores between 15 and 25 are within the normal range, but total scores below 15 indicate the presence of low self-esteem. Various studies have reported the internal consistency for the RSES ranging from acceptable to very good, $\alpha = .72-.90$ (Robins et al., 2001).

Depressive symptoms.

The depression subscale of the Brief Symptom Inventory (BSI-DEP; Derogatis & Melisaratos, 1983) was included in the survey to assess participants' depression levels (see Appendix H). This instrument contains six items with response options on a five-point scale. Depression level is assessed by asking participants how much various symptoms have affected them over the past two weeks. For example, items include "Feeling no interest in things" and "Feeling hopeless about the future." Response options range from *Extremely* (4) to *Not at all* (0). Item scores are summed and then divided by six, the total number of items, to obtain a raw score. The raw score is converted to a standardized t-score. T-scores equal to or greater than 63 are considered clinically significant. Internal consistency for the depression subscale is good, $\alpha = .85$, and test-retest reliability is good, $\alpha = .84$ (BSI-DEP; Derogatis & Melisaratos, 1983).

Demographics.

The last portion of the survey contained demographic questions, including academic major, race, gender, age, sexual orientation, number of siblings, home state, class level, and family income level (see Appendix I). These personal questions were asked at the end of the survey so that the participants were already invested in the survey and would be more willing to answer the demographic items (Dillman, 2007). According to Stoutenbough (2008), other benefits of putting demographic questions at the end of the survey include attracting interest and creating rapport with the participants, thereby reducing the number of incomplete surveys due to perceiving the demographic questions as invasive, and preventing primacy effects.

Analytical Approach

The main hypothesis of the study is that a higher quantity and quality of interaction with extended family members is correlated with higher levels of well-being in early young adults, such that their self-esteem is high and their depression level is low. A secondary hypothesis is that female young adults benefit more from extended family member involvement than do male young adults because females are socialized to value relationships more (Landman-Peeters et al., 2005). In order to test these hypotheses, six regression equations were created, two for all participants, two for males, and two for females. The predictor variables are the six subscales of the QQEFR and the PSS-ExtFa. Outcome variables include the RSES and the BSI-DEP. The six subscales of the QQEFR and the PSS-ExtFa were regressed on the RSES separately for all participants, women, and men. Then, the six subscales of the QQEFR and the PSS-ExtFa were regressed on

the BSI-DEP separately for all participants, women, and men. Correlations were also completed to examine the relationship between all of the variables.

Chapter Three: Results

Preliminary analyses showed that the mean BSI-DEP and RSES scores were in the normal, nonclinical ranges, indicating that participants overall did not have concerning depression or self-esteem levels. Gender differences were another focus of statistical analyses. No statistically significant gender differences were found on depressive symptoms (BSI-DEP) or self-esteem (RSES) when using an independent samples *t*-test. Stepwise linear regression of the RSES indicated that perceived social support from the immediate family (PSS-Fa) was the only predictor of self-esteem level for the total sample ($B = 0.39, p < .001$), females ($B = 0.35, p < .001$), and males ($B = 0.60, p < .001$). The RSES and PSS-Fa exhibited a positive relationship, with self-esteem increasing as perceived immediate family support increased (see Table 3.1).

A stepwise linear regression for the entire sample with the outcome variable BSI-DEP resulted in perceived social support from the immediate family (PSS-Fa) being the largest predictor of depressive symptoms, with depression symptoms decreasing as perceived support increased, $B = -.34, p < .001$. The second statistically significant predictor of depressive symptoms was quality of interactions with extended family members (QQEFR-Quality), which was the degree of positivity or negativity of these interactions. As quality increased and became more positive, depression level decreased, $B = -1.33, p < .05$. Variables that did not affect the BSI-DEP in the regression were perceived social support from extended family, number of relatives, frequency of interactions, closeness of relationship, type of contact, and geographical proximity (see Table 3.2). Utilizing a stepwise linear regression for females with the BSI-DEP gave similar results, but the quality of interactions with extended family members was

statistically significant to a higher degree, $B = -2.00$, $p < .01$ (see Table 3.3). In contrast, a stepwise linear regression analyzing the BSI-DEP for males showed a different second predictor of depressive symptoms, closeness of the relationships with extended family members (QQEFR-Closeness), $B = 1.77$, $p < .05$ (see Table 3.4). As closeness of extended family member relationships increased, depressive symptoms for males also increased.

In order to determine the relationships between the variables, Pearson correlations were conducted and examined (see Table 3.5). As predicted by the literature, depressive symptoms (BSI-DEP) were negatively correlated with self-esteem level (RSES), $r = -.63$, $p < .01$. This meant that as self-esteem increased, depression level decreased. In addition, immediate family and extended family perceived social support were negatively correlated with depression ($r = -.37$, $p < .01$; $r = -.27$, $p < .01$) and positively correlated with self-esteem ($r = .33$, $p < .01$; $r = .20$, $p < .01$).

Feelings of being supported by immediate family members was moderately correlated with feeling supported by extended family members, $r = .50$, $p < .01$. The frequency of interactions with extended family had a small, positive correlation with perceived social support from immediate family ($r = .31$, $p < .01$) and a moderate, positive correlation with perceived social support from extended family ($r = .53$, $p < .01$). Perceived social support from immediate and extended family were also positively correlated with closeness of extended family relationships, with extended family support having a larger impact ($r = .37$, $p < .01$; $r = .58$, $p < .01$).

As expected, the frequency of interactions with extended family members had a moderate, positive correlation with closeness of the extended family relationships ($r =$

.62, $p < .01$) and a small, positive correlation with geographical proximity to extended family members ($r = .32, p < .01$). Quality (level of positivity or negativity) of interactions with extended family members had a strong, positive correlation with the type of contact with these members, $r = .87, p < .01$. Another variable that was correlated with quality was geographical proximity, $r = .27, p < .01$. Geographical proximity to extended family also had a small, positive correlation with the most frequent type of contact, $r = .29, p < .01$.

Table 3.1
Stepwise Linear Regression Coefficients for Self-Esteem

Variable	Self-esteem		
	Total Sample <i>B</i>	Females <i>B</i>	Males <i>B</i>
Constant	14.94***	15.55***	12.32***
Perceived social support – Immediate family	0.39***	0.35***	0.60***
Perceived social support – Extended family	0.06	0.10	-0.15
Quality of interactions	-0.03	-0.05	0.05
Number of relatives	-0.02	0.01	-0.12
Frequency of interactions	-0.00	0.03	-0.05
Closeness of relationship	-0.02	0.04	-0.17
Type of contact	0.01	-0.03	0.15
Geographical proximity	0.02	0.05	-0.06
Adjusted R^2	.10	.08	.17
<i>F</i>	34.06***	21.00***	15.47***

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

Table 3.2
Stepwise Linear Regression Coefficients for Depressive Symptoms with Total Sample

Variable	Depressive symptoms	
	Model 1 <i>B</i>	Model 2 <i>B</i>
Constant	17.06***	21.01***
Perceived social support – Immediate family	-0.37***	-0.34***
Perceived social support – Extended family	-0.13*	-0.09
Quality of interactions	-0.13*	-1.3*
Number of relatives	-0.06	-0.05
Frequency of interactions	-0.03	0.01
Closeness of relationship	-0.08	-0.02
Type of contact	-0.03	-0.03
Geographical proximity	0.01	0.02
Adjusted R^2	.13	.15
<i>F</i>	46.51***	26.52***

Note. $N = 294$.

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

Table 3.3
Stepwise Linear Regression Coefficients for Female Depressive Symptoms

Variable	Depressive symptoms	
	Model 1 <i>B</i>	Model 2 <i>B</i>
Constant	17.22***	23.25***
Perceived social support – Immediate family	-0.38***	-0.33***
Perceived social support – Extended family	-0.18*	-0.09
Quality of interactions	-0.22***	-2.00***
Number of relatives	-0.12	-0.09
Frequency of interactions	-0.12	-0.05
Closeness of relationship	-0.20**	-0.12
Type of contact	0.00	0.01
Geographical proximity	-0.06	-0.05
Adjusted R^2	.14	.18
<i>F</i>	37.21***	25.46***

Note. $n = 224$.

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

Table 3.4
Stepwise Linear Regression Coefficients for Male Depressive Symptoms

Variable	Depressive symptoms	
	Model 1 <i>B</i>	Model 2 <i>B</i>
Constant	16.94***	13.43***
Perceived social support – Immediate family	-0.39**	-0.48***
Perceived social support – Extended family	0.05	-0.16
Quality of interactions	0.19	0.10
Number of relatives	0.13	0.11
Frequency of interactions	0.17	0.03
Closeness of relationship	0.27*	1.77*
Type of contact	-0.13	-0.07
Geographical proximity	0.20	0.13
Adjusted R^2	.11	.17
<i>F</i>	9.59**	7.85***

Note. $n = 70$.

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

Table 3.5
Pearson Correlations between All Variables for Total Sample

	Depressive symptoms	Self-esteem	Social support – Immediate	Social support – Extended	Number of relatives	Frequency of interactions	Closeness of relationship	Quality of interactions	Type of contact	Geographical proximity
Depressive symptoms	–									
Self-esteem	-.63**	–								
Social support – Immediate	-.37**	.33**	–							
Social support – Extended	-.27**	.20**	.50**	–						
Number of relatives	-.04	.00	.05	.03	–					
Frequency of interactions	-.12*	.10	.31**	.53**	.05	–				
Closeness of relationship	-.18**	.10	.37**	.58**	.05	.62**	–			
Quality of interactions	-.06	.01	.12*	-.01	-.11	.08	.07	–		
Type of contact	-.04	.02	.05	-.11	-.07	-.03	-.07	.87**	–	
Geographical proximity	.00	.03	.04	.04	-.07	.32**	.16**	.27**	.29**	–

Note. *p < .05. **p < .01.

Chapter Four: Discussion

The purpose of the present study was to examine the impact of extended family relationships on the mental health of early young adults in college. Extended family relationships were divided into the components of frequency of interactions, closeness of relationship, quality of interactions, type of contact, geographical proximity, and number of relatives.

The first hypothesis of the current study is that a higher quantity and quality of interaction with extended family members is correlated with higher levels of well-being in early young adults, such that their self-esteem is high and their depression level is low. This hypothesis was partially supported by the data. Although perceived support from the immediate family was the strongest predictor of self-esteem and depression as expected, various extended family variables also played a role in mental health. For the total sample and for females, positive quality of interactions with relatives also decreased depressive symptoms, which is consistent with previous studies (Crowell et al., 2014; Hamilton, 2005; Silverstein & Ruiz, 2006). Additionally, the correlation between immediate and extended family perceived social support could indicate that extended family support works together with family of origin support to impact mental health. This is similar to the concept of familism, and previous literature concludes that familism leads to mental health benefits, including decreased depression and increased self-esteem (Campos et al., 2014; Kline et al., 2016; Kuhlberg et al., 2010; Stein et al., 2015; Zeiders et al., 2013). Other variables have the potential to indirectly affect mental health as well, such as the type of contact being related to quality of interactions, which in turn impacts depressive symptoms.

The second hypothesis is that because females are socialized to value relationships more, female young adults benefit more from extended family member involvement than do male young adults (Landman-Peeters et al., 2005). This hypothesis was supported by the data. As expected, results demonstrated that perceived social support from the family of origin was the strongest predictor of depressive symptoms and self-esteem level for both men and women. However, the second strongest predictor of depression varied between the sexes. Females' mental health benefited from positive extended family relationships. Although this next finding supported the hypothesis, it was surprising that males' depressive symptoms were increased by closer extended family relationships. One possible explanation for this result is that because males are socialized to value relationships less than females (Landman-Peeters et al., 2005), males who develop close extended family relationships already have depressive symptoms, which are also partially genetic.

Implications

Analyzing people on the family of origin level excludes a large, essential portion of the picture because people are greatly influenced by their environment, which often includes extended family members (McGoldrick et al., 2011). It is evident from the lack of research and the potential benefits to well-being that family researchers need to spend more time studying the effects of extended family relationships on all ages of people, but especially people over age 18 and early young adults in college. Understanding the impacts on both physical and mental health is valuable for researchers and professionals alike. In addition, it is important to differentiate the influence of extended kin versus the influence of the family of origin and other nonrelated people in the participants' lives.

Another direction for future research is to examine if relationships with different extended family members, such as grandparents, aunts, uncles, and cousins, have different effects on well-being.

Research about the effects of extended family relationships on individual well-being provides support for the use of Bowen family systems therapy, which is based on family systems theory (Nichols, 2013). Therapists can examine extended family relationships in order to get a better picture of overall family functioning. One way to begin developing this picture is to ask questions about extended family members during the assessment stage of therapy. Another method of gathering family history and determining the quality of extended family relationships is by creating genograms during the assessment phase through genogram interviews with clients. A genogram is a diagram that depicts a person's family members and includes important information about each individual, such as psychological characteristics, medical history, and relationship dynamics. Genograms can provide a key to understanding a family's patterns of interaction with each other.

With family systems theory and this body of research in mind, therapists on college campuses may even try to involve extended family members in treatment, or encourage clients to develop strong relationships with their extended kin. Because extended family can positively affect individuals at all stages of life, these relatives could be beneficial in treating clients with issues such as mental disorders. Bowenian family therapy can be utilized along with other styles of therapy for an eclectic approach. The efficacy of incorporating extended family relationships into the therapy process could then be studied with clinical research. Another way to help reduce the potential of

college students developing mental health problems is to educate parents about the benefits of extended family relationships. If students come to college with these relationships already formed, they have a better chance of being able to use that social support to buffer the effects of stress from the transition.

Limitations

Although this study presents new findings on the connections between extended family member relationships and early young adult well-being, the results should be interpreted with caution due to limitations. The present study was conducted at the University of Kentucky, which means the results are not generalizable to the general population or to all college students who are early young adults. Future research would benefit from studying people in various geographic locations, including outside of the United States. In addition, the sample was relatively homogeneous in regards to race and sexual orientation, with most respondents being white and heterosexual. Future research would benefit from including a more diverse sample, including racial and ethnic diversity as well as diversity of sexual orientation. Because culture varies across groups of people, the importance of extended family members could change based on such demographic variables. Additionally, the majority of the respondents were females, so future studies should target more male participants. Finally, the present study used a cross-sectional design and only asked about participants' current perceptions of extended family relationships, which could vary over time. Therefore, future studies could utilize a longitudinal design and ask about the quality and quantity of extended family relationships at various points across the life course.

Conclusion

The present study aimed to fill the gaps in the literature about the influence of extended family relationships on young adult mental health. Overall, the largest predictor of self-esteem and depression in early young adults enrolled in college was perceived social support from family of origin, which is consistent with previous literature.

Perceived support from the family of origin is also connected with perceived support from extended family members, indicating that extended family support collaborates with family of origin support to benefit self-esteem and depression levels. In addition, depression was decreased by having more positive interactions with extended family members, which is a specific aspect of extended family relationships. Males benefited less than females from extended family relationships, as shown by the evidence that closer extended kin relationships predicted more depressive symptoms in males.

These findings are an important contribution to the research on extended family relationships because the current literature is very limited. Knowing that a perception of support from extended family members influences self-esteem and depression leads to future research suggestions and clinical implications, particularly when working in therapy with students who are transitioning to college. Encouragement of the formation and strengthening of extended family relationships seems valuable for early young adults. Therefore, this study emphasizes the power of perception in the context of relationships with extended family members and can be utilized to begin further research that improves the understanding of these perceptual processes, as well as inform clinical work with young adult college students who are struggling with mental health issues.

Appendix A

Participant Recruitment E-mails

Dear Student,

Because you are enrolled in undergraduate studies at the University of Kentucky, we would appreciate it if you will take roughly 10-15 minutes to complete a survey designed to assess your experiences with extended family members. If you are currently 18 to 21 years old, enrolled in undergraduate classes, and are a U.S. citizen, then you are eligible to participate in this research study. By completing the survey, you have the option to enter a drawing that gives you a 1 in 25 chance of winning a \$50 check.

To begin the survey, go to: tinyurl.com/extendedfamilyresearch

If you have any questions regarding this survey, please e-mail Kayla Jansen at Kayla.jansen@uky.edu

Respectfully,

Kayla Jansen and Dr. Ronald Werner-Wilson

Appendix B

IRB Approval Letter



Office of Research Integrity
IRB, RDRC

Initial Review

Approval Ends
November 27, 2017

IRB Number
16-0954-P4S

TO: Kayla Jansen,
Unassigned
Family Science

FROM: Chairperson/Vice Chairperson
Non-medical Institutional Review Board (IRB)

SUBJECT: Approval of Protocol Number 16-0954-P4S

DATE: November 28, 2016

On November 28, 2016, the Non-medical Institutional Review Board approved your protocol entitled:
Effect of Extended Family Member Involvement on Early Young Adult Well-Being

Approval is effective from November 28, 2016 until November 27, 2017 and extends to any consent/assent form, cover letter, and/or phone script. If applicable, attached is the IRB approved consent/assent document(s) to be used when enrolling subjects. Prior to the end of this period, you will be sent a Continuation Review Report Form which must be completed and returned to the Office of Research Integrity so that the protocol can be reviewed and approved for the next period.

In implementing the research activities, you are responsible for complying with IRB decisions, conditions and requirements. The research procedures should be implemented as approved in the IRB protocol. It is the principal investigators responsibility to ensure any changes planned for the research are submitted for review and approval by the IRB prior to implementation. Protocol changes made without prior IRB approval to eliminate apparent hazards to the subject(s) should be reported in writing immediately to the IRB. Furthermore, discontinuing a study or completion of a study is considered a change in the protocol's status and therefore the IRB should be promptly notified in writing.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" from the Office of Research Integrity's IRB Survival Handbook web page [<http://www.research.uky.edu/ori/IRB-Survival-Handbook.html#PIresponsibilities>]. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site [<http://www.research.uky.edu/ori>]. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at (859) 257- 9428.

Norm Van Tubergen, PhD/TH
Chair/Vice Chairperson

seeblue.

315 Kinkead Hall | Lexington, KY 40506-0057 | P: 859-257-9428 | F: 859-257-8995 | www.research.uky.edu/ori/

An Equal Opportunity University

Appendix C

Welcome Page

Please answer the following questions to verify your eligibility for the survey.

What is your age?

- Under 18
- 18-21
- Over 21

Are you enrolled in undergraduate studies?

- Yes
- No

Are you a United States citizen?

- Yes
- No

Participant Consent Form

You are being invited to take part in a research study about extended family relationships. You are being invited to this study because you are enrolled in an undergraduate program. Your response is highly valued and will contribute to research that may greatly improve the understanding of the effects of extended family relationships on college students. International students are not eligible to participate in the survey due to being farther away from family.

Although you will not get immediate personal benefit from taking part in this research study, your responses may help us understand more about our needs as current and future professionals when working with college students.

We hope to receive completed questionnaires from about 100 people, so your answers are important to us. Of course, you have a choice about whether or not to complete the questionnaire, but if you do participate, you are free to skip any questions or discontinue at any time. The survey can only be taken once, so please respond to the best of your ability. The questionnaire will take about 10-15 minutes to complete.

By completing the online survey, you have the option to provide your e-mail address in order to enter a drawing that gives you a 1 in 25 chance of winning a \$50 check.

Your response to the survey is confidential, which means no names or e-mail addresses will appear or be used on research documents, or be used in presentations or publications. The research team will not know that any information you provided came from you.

Please be aware, while we make every effort to safeguard your data once received from the online survey/data gathering company, given the nature of online surveys, as with anything involving the Internet, we can never guarantee the confidentiality of the data while still on the survey/data gathering company's servers, or while en route to either them or us. It is also possible the raw data collected for research purposes may be used for marketing or reporting purposes by the survey/data gathering company after the research is concluded, depending on the company's Terms of Service and Privacy policies.

Questions of a personal nature are included in the survey. Although we have tried to minimize this, some questions may make you upset or feel uncomfortable, and you may choose not to answer them. If some questions do upset you, we can tell you about some people who may be able to help you with these feelings at the end of the survey.

If you have questions about this study, please contact me, the graduate student researcher, at kayla.jansen@uky.edu or my academic advisor Ronald Werner-Wilson, Ph.D. at ronald.werner-wilson@uky.edu. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Thank you in advance for your assistance with this important research study.

Sincerely,

Kayla Jansen
Department of Family Sciences, University of Kentucky
E-mail: Kayla.jansen@uky.edu

Appendix D

Quality and Quantity of Extended Family Relationships Scale

The following questions pertain to your relationships with various extended family members. For each question, please choose the family member in that group with whom you have the closest relationship, and answer as best as you can. Please do not answer the questions about an extended family member who is your primary caregiver or legal guardian. For example, for the questions about cousins, choose the cousin with whom you are closest, and answer all questions about cousins with them in mind.

Frequency

Response options:

- a. N/A (0)
- b. Less than once a year (1)
- c. Once a year (2)
- d. Once every 6 months (3)
- e. Once every 3 months (4)
- f. Once a month (5)
- g. Once a week (6)
- h. More than once a week (7)

1. How often do you interact with your cousin?
2. How often do you interact with your aunt?
3. How often do you interact with your uncle?
4. How often do you interact with your grandmother?
5. How often do you interact with your grandfather?

Closeness

Response Options:

- a. N/A (0)
- b. Not close at all (1)
- c. A little close (2)
- d. Close (3)
- e. Very Close (4)

6. How close of a relationship do you have with your cousin?
7. How close of a relationship do you have with your aunt?
8. How close of a relationship do you have with your uncle?
9. How close of a relationship do you have with your grandmother?
10. How close of a relationship do you have with your grandfather?

Quality of Interactions

Response Options:

- a. N/A (0)
- b. Very Negative (1)
- c. Negative (2)
- d. Positive (3)
- e. Very Positive (4)

- 11. Overall, how would you describe your interactions with your cousin?
- 12. Overall, how would you describe your interactions with your aunt?
- 13. Overall, how would you describe your interactions with your uncle?
- 14. Overall, how would you describe your interactions with your grandmother?
- 15. Overall, how would you describe your interactions with your grandfather?

Type of Contact

Response Options:

- a. N/A (0)
- b. Social media (1)
- c. Text message (1)
- d. E-mail (1)
- e. Phone call (2)
- f. Video call (3)
- g. In person (4)

- 16. What is your most frequent type of interaction with your cousin?
- 17. What is your most frequent type of interaction with your aunt?
- 18. What is your most frequent type of interaction with your uncle?
- 19. What is your most frequent type of interaction with your grandmother?
- 20. What is your most frequent type of interaction with your grandfather?

Proximity

Response Options:

- a. N/A (0)
- b. 15 minute drive or less (8)
- c. 16-30 minute drive (7)
- d. 31-45 minute drive (6)
- e. 46-59 minute drive (5)
- f. 1-3 hour drive (4)
- g. More than 3 but less than 6 hour drive (3)
- h. 6-9 hour drive (2)
- i. More than 9 hour drive (1)

- 21. How long would it take to drive from your campus address to your cousin?

22. How long would it take to drive from your campus address to your aunt?
23. How long would it take to drive from your campus address to your uncle?
24. How long would it take to drive from your campus address to your grandmother?
25. How long would it take to drive from your campus address to your grandfather?

Number

26. How many living cousins do you have?
27. How many living aunts do you have?
28. How many living uncles do you have?
29. How many living grandmothers do you have?
30. How many living grandfathers do you have?

Appendix E

Perceived Social Support Family Scale

The statements that follow refer to feelings and experiences that occur to most people at one time or another in their relationships with their families. For each statement there are three possible answers: Yes, No, or Don't know. Please choose the answer that most accurately reflects your experiences with your immediate family, which includes parents (or other primary caregivers) and siblings.

1. My family gives me the moral support I need.
2. I get good ideas about how to do things or make things from my family.
3. Most other people are closer to their family than I am.
4. When I confide in the members of my family who are closest to me, I get the idea that it makes them uncomfortable.
5. My family enjoys hearing about what I think.
6. Members of my family share many of my interests.
7. Certain members of my family come to me when they have problems or need advice.
8. I rely on my family for emotional support.
9. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later.
10. My family and I are very open about what we think about things.
11. My family is sensitive to my personal needs.
12. Members of my family come to me for emotional support.
13. Members of my family are good at helping me solve problems.
14. I have a deep sharing relationship with a number of members of my family.
15. Members of my family get good ideas about how to do things or make things from me.
16. When I confide in members of my family, it makes me uncomfortable.
17. Members of my family seek me out for companionship.
18. I think that my family feels that I'm good at helping them solve problems.
19. I don't have a relationship with a member of my family that is as close as other people's relationships with family members.
20. I wish my family were much different.

Appendix F

Perceived Social Support Family Scale (Adapted)

The statements that follow refer to feelings and experiences that occur to most people at one time or another in their relationships with their extended families. Extended family includes grandparents, aunts, uncles, and cousins. For each statement there are three possible answers: Yes, No, or Don't know. Please choose the answer that most accurately reflects your experiences.

1. My extended family gives me the moral support I need.
2. I get good ideas about how to do things or make things from my extended family.
3. Most other people are closer to their extended family than I am.
4. When I confide in the members of my extended family who are closest to me, I get the idea that it makes them uncomfortable.
5. My extended family enjoys hearing about what I think.
6. Members of my extended family share many of my interests.
7. Certain members of my extended family come to me when they have problems or need advice.
8. I rely on my extended family for emotional support.
9. There is a member of my extended family I could go to if I were just feeling down, without feeling funny about it later.
10. My extended family and I are very open about what we think about things.
11. My extended family is sensitive to my personal needs.
12. Members of my extended family come to me for emotional support.
13. Members of my extended family are good at helping me solve problems.
14. I have a deep sharing relationship with a number of members of my extended family.
15. Members of my extended family get good ideas about how to do things or make things from me.
16. When I confide in members of my extended family, it makes me uncomfortable.
17. Members of my extended family seek me out for companionship.
18. I think that my extended family feels that I'm good at helping them solve problems.
19. I don't have a relationship with a member of my extended family that is as close as other people's relationships with extended family members.
20. I wish my extended family were much different.

Appendix G

Rosenberg Self-Esteem Scale

Please indicate how much you agree or disagree with each statement by selecting one of the following options: Strongly disagree, Disagree, Agree, or Strongly agree.

1. I feel that I am a person of worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times I think I am no good at all.

Appendix H

Brief Symptom Inventory: Depression Subscale

Below is a list of problems and complaints that people sometimes have. Please answer each item as carefully and accurately as you can by placing a number by each one which shows how much discomfort that problem has caused you during the last two weeks. Please be sure to answer all the questions using the following scale:

- 0 = Not at all
- 1 = A little bit
- 2 = Moderately
- 3 = Quite a bit
- 4 = Extremely

How much were you distressed by:

- _____ 1. Thoughts of ending your life
- _____ 2. Feeling lonely
- _____ 3. Feeling blue
- _____ 4. Feeling no interest in things
- _____ 5. Feeling hopeless about the future
- _____ 6. Feelings of worthlessness

Appendix I

Demographic Characteristics

1. What is your age?
 - a. 18
 - b. 19
 - c. 20
 - d. 21

2. What sex were you assigned at birth?
 - a. Male
 - b. Female

3. How do you describe your current gender identity?
 - a. Male
 - b. Female
 - c. Transgender
 - d. Do not identify as male, female, or transgender

4. What sexual orientation listed below do you most identify with?
 - a. Straight or heterosexual
 - b. Gay
 - c. Lesbian
 - d. Bisexual
 - e. Pansexual
 - f. Asexual
 - g. Queer
 - h. Questioning

5. Which of the following best describes your racial or ethnic identity? (Select all that apply)
 - a. American Indian or Native Alaskan
 - b. Asian or Asian American
 - c. Black or African American
 - d. Caucasian (non-Hispanic)
 - e. Latino or Hispanic
 - f. Middle Eastern or Arab American
 - g. Native Hawaiian or other Pacific Islander
 - h. None of the above

6. How many siblings do you have?

7. What is your academic major(s)?

8. Which class/level most closely describes you?
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior

9. What U.S. state do you live in?

10. What U.S. state(s) do your parents live in?

11. What was your family's total household income last year?
 - a. Less than \$25,000
 - b. \$25,000 to \$49,999
 - c. \$50,000 to \$74,999
 - d. \$75,000 to \$99,999
 - e. \$100,000 to \$149,999
 - f. \$150,000 or more

12. Who are your primary caregivers or legal guardians? (Select all that apply)
 - a. Mother
 - b. Father
 - c. Stepmother
 - d. Stepfather
 - e. Grandmother
 - f. Grandfather
 - g. Aunt
 - h. Uncle
 - i. Other (Please specify)

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