IDENTIFYING PSYCHOSOCIAL ATTRIBUTES ASSOCIATED WITH DEPRESSIVE AFFECT AMONG CENTENARIANS

By

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Abstract: **Objective:** The current study examined psychosocial influences associated with depressive affect in centenarians. The identification of associations between subjective age, lifetime trauma exposure, social support, personality, perceived health, and depressive affect were explored. **Methods:** Participants consisted of (N = 154) community-dwelling centenarians (M = 101, SD = 1.71) residing in Oklahoma. **Results:** Results indicated lifetime trauma exposure and neuroticism were associated with depressive affect in centenarians. Post-hoc analyses revealed a difference between centenarians residing independently in private-dwelling versus those residing in long-term care facilities. **Conclusion:** Links between lifetime trauma exposure and depressive affect may be attributed to unresolved feelings of past life events. Furthermore, interplay between neuroticism and depressive affect may be attributed to stress-induced depletion.

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CHAPTER I

INTRODUCTION

Advances in modern medicine have contributed to a growing number of individuals living beyond the normative limits of human life expectancy. According to U.S. Census estimates (2010), persons 85 years and older represent the fast growing age-demographic in the United States. Within this population segment, the most rapid population growth has been among persons aged 90-94 years (U.S. Census, 2010). Biodemographers have forecast unprecedented population growth through 2050 among persons who will survive to 100 years of age or older (Olshanksy, Goldman, Zheng, & Rowe, 2009). In anticipation of this projection, longevity researchers have begun to ask: How can life quality be enhanced as person continue to live an extreme number of years? Many anti-aging experts have focused on efforts involving life extension, yet other longevity scientists have reported some indication that a longer than normal life is anything but happy (Gerstorf, 2008). In particular, emotional contentment appears to be compromised by diminished quality-of-life attributes once persons reach 100 years or beyond (Blazer et al., 1987). This is commonly attributed to accelerated age-associated declines in human biology (e.g., physical and functional health), psychological traits (e.g., perception, personality), and social resources (e.g., support) which tend to be key indicators of

positive and negative affect in late and very late life (Poon et al., 2010). Thus, an extended number of years is no promise for a happier life. It can be assumed that the longer one has managed to live, the more likely they will experience some degree of negative affective emotionality. Therefore, the purpose of this research study was to identify psychosocial factors that may be associated with depressive affect in extreme old age. Inquiry into depressive affect can eventually contribute to further exploration of new areas of research that can aid in the assurance of positive aging for long-lived adults.

Centenarians are individuals who live to be 100 or more years, many with minor to no emotional limitations (Evert et al., 2003; Adams, 2001; Blazer, 2003). Many persons manage to reach 100 because they survive, delay, or experience the near-absence of various age-associated conditions that may or may not diminish quality-of-life or result in early or late mortality (Evert et al., 2003; Sebastiani & Perls, 2012). Evert et al. (2003) noted a centenarian's ability to outlive age-related disease may be attributed to lifestyle practices, such as being health conscience, which may delay the onset of disease which further enhances an ability to cope with age-associated loss. Of the people who make it to 100, men are more likely to be in good health whereas women present with poorer health and greater need for long-term care assistance. Yet, women still continue to outlive men even after 100 years of age. Thus, longevity appears to create a gendered paradox relative to well-being.

There is little to no identification of key markers of positive versus negative affective mood among persons living 100 years or longer. Some centenarians may surpass the century mark without debilitating disablement or disease that may otherwise contribute to negative affective emotions (Evert et al., 2003; Sadler, 2006). It is more widely assumed

that outliving immediate and familiar familial or social ties contributes to increased affective symptoms indicative of depression as well as feelings of social isolation and loneliness (Hensley et al., 2012). Hypothetically, emotional discontentment may result in greater underlying feelings and expressions of negative affective emotions. Compared to younger age groups, old-old adults are better at effectively using strategies and psychosocial resources to regulate negative affective mood (Charles, 2010). Among centenarians, this is believed to potentially mask any underlying shifts in general mood status (Charles, 2010). In summary, centenarians may appear to be emotionally content by others despite actually feeling discontentment toward life. Thus, this study will be used to identify key indicators that are associated with increased or decreased likelihood of a positive or negative affective disposition among a sample persons who have lived 100 or more years.

The primary goal of the proposed study was to explore and examine psychosocial variables associated with a likely increase or decrease in positive or negative affect among a sample of centenarians. A specific aim of the study was to identify the association between subjective age, lifetime trauma, social support, personality and perceived health and depressive affect in the old-old. Results from this study had implications relative to filling in the knowledge gap in gerontological research literature, as well as providing evidence that can be used by geriatric and gerontological practitioners to help improve quality-of-life for persons living an exceptionally long time.

CHAPTER II

LITERATURE REVIEW

Are centenarians emotionally content? This is a frequent question often posed by various longevity researchers who study the origins of well-being among the oldest old (Poon et al., 2010). By most accounts, persons who have lived 100 years should experience a feeling of pride and accomplishment for living such a long time. Most centenarians have managed to survive a century of individual and family traumas, global conflict and warfare, periods of economic growth and recession, and other experiences that have differential consequences on emotional contentment in life (Martin & Martin, 2002). Some longevity investigators have argued that the qualitative experience of living rather than quantity of years alive, is a better predictor of emotional contentment in old-old aged individuals (Poon et al., 2010; Gerstorf, 2008). However, gaps in knowledge have persisted in regards to what precisely contributes to an increased probability of feeling emotionally content at a very old age. The purpose of this study was to examine the extent to which subjective and psychosocial attributes in quality-of-life among centenarians contribute to risk of depressive affect at 100 years of age and beyond. Results from this investigation will have implications relative to identifying key quality-

of-life characteristics that can be used by geriatric and gerontological practitioners to improve affect in later life and quality-of-life among old-old populations.

Theoretical Basis and Conceptualization

From a psychosocial development perspective, Joan Erikson (1997) noted that long-lived persons, 90 years of age and older, demonstrate differential behaviors perceptions, attitudes, and needs than their younger counterparts. In fact, persons of exceptional old age represented what Joan Erikson termed the "Ninth Stage" of development. In this stage, old-old adults experience a shift from an ego-centered and selfish perspective to a transcendent frame of reference. In other words, old-old adults are theorized to no longer focus on self-reliance or age-associated conditions of individual autonomy. Rather, they must adopt a selfless trust and acceptance toward others from whom they may receive care and support. This transition in behavior is what Joan Erikson termed as "Gerotranscendence" (1997) a concept, later re-examined by Tomstam (1997). Gerotranscendence is best defined as a developmental process of ego-acceptance among persons who survive beyond the normative limits of human life-expectancy yet continue to acknowledge living on "borrowed time." Thus, the gerotranscendent individual experiences a greater awareness of the end of life, which in turn transforms contentment toward life from a preference for materialistic pursuits into a personal search for existential understanding and meaning.

Conceptualizing Depressive Affect

Among long-lived adults, depressive affect has been described as a naturally occurring process of aging involving underlying emotional feelings of sadness and diminished

social interest and vigor not indicative of normative clinical symptoms of major depression (Adams, 2001). Depressive affect in late and very late adulthood is defined as two or more reported common symptoms of major depression (e.g. mood disturbance; Blazer, 2003). Anda et al. (1993) noted that major depressive symptomology is more prevalent among persons during the middle and early later adult years. However, late-set depressive affect is commonly associated with increasing age-associated impairments (e.g. impaired physical functioning, poorer perceived health, low perceived social support; Blazer, 2003). Thus, depressive affect has a frequency of comorbidity with physical and psychiatric disturbances, most common in the oldest-old (Blazer, 2003). According to Adams (2001), depressive affect among the oldest-old resonates into a condition of "sadness without depression" (pg. 770). Some investigators have designated this phenomenon as the "depletion syndrome" (Adams, 2001, pg. 770). Depletion is often reported among the oldest old. In fact, centenarians have been reported to experience diminished interest in social engagement activities, drastic drops in physical or functional stamina, and decreased interest in participating in pleasurable life pursuits (Martin et al., 2006). Each of these factors are viewed as preliminary indicators of clinical depression. However, the uniqueness of centenarians in expressing depressive affect entail many facets (e.g. social support, personality, health, lifetime trauma) that simultaneously work together to create an overall mood or tone of an individual—best defining depressive affect (Matthews, Jones, & Chamberlain, 1990).

Much like Disengagement Theory (Cummings & Henry, 1961) depletion syndrome is an appropriate explanation for depression-like symptoms centenarians may report. Old-old adults are believed to naturally withdraw from everyday social roles and to derive a

preference for greater solitude in living (Cummings & Henry, 1961). It is plausible to argue that disengagement may reflect feelings of depletion. Depletion commonly involves a shift from actual symptoms of depression to symptomatic conditions of feeling old (Adams, 2001). Investigators also refer to dysthymic disorder in attempting to describe depressive symptomology in the oldest old. In particular, this is defined as long-lasting mood disturbances that are present for two or more years. However, mood disturbances must be less severe than those present in major depressive symptomology (Blazer, 2003). Each of these disorders resembles the "paradox of well-being" in late adulthood (Kunzmann et al., 2000). In other words, older adults seem to express positive affective emotions with increasing age, yet they develop underlying clinical affective symptoms or negative feelings based on quality-of-life attributes (e.g. physical health, social loss).

Such affective changes are what Diener referred to as the "hedonic treadmill of well-being" (Diener, Lucas, & Scollon, 2006). In other words, individuals continuously express emotional affect based on current subjective appraisals of life being "good" versus "bad." This implies that an individual's perceptions of health, life event stressors, and social losses, all operate in tandem and impact the extent to which one may express positive or negative affective emotions. Poon et al. (2010) proposed that living 100 years should be a time of optimal emotional contentment. It is commonly believed that reaching the milestone of 100 years may evoke a sense of accomplishment and consequently contribute to positive affective emotionality. However, evidence suggests that centenarians actually feel more depleted over time (Martin et al., 2006). Although evidence shows older adults presenting with depletion, factors such as personality, social

support, and perceived health have been found to moderate the effects of negative depressive affect in older adults (Canada et al., 2013; Jopp & Rott, 2006; Poon et al., 2010). Some individuals may perceive the prospect of living 100 years with a sense of fulfillment, whereas others may view life at 100 with displeasure (Poon et al., 2010). Therefore, the subjective nature of being 100 years of age has implications relative to feeling emotionally content with life.

Subjective Age

Subjective age is best defined as an individual's perception of how old they feel, in comparison to one's chronological age (Hubley & Russell, 2009; Poon et al., 2010). According to Canada et al. (2013), older adults who are able to disconnect from the negative stereotypes that come with age are more likely to feel younger and emotionally content. Perhaps a subjective sense of feeling younger than one's actual age may be a contributing factor of positive affect in very old age (Diener et al., 1985). Living to 100 is often seen as a rite of passage. Those who have lived a century are recognized as having done something right to age successfully. Not only do centenarians reach age 100, but many of them do so with few to no limitations or declines, which some argue is atypical to the aging process (Evert et. al., 2003). Subjective age may also contribute to more positive perceptions, depending on the degree to which the individual may have a lifetime experience of age-associated decline. Canada et al, (2013) reported that traits linked to openness, extraversion, and conscientiousness may determine the degree to which older adults may perceive age as a source of positive affect. Furthermore, personality is believed to play a crucial role in providing a perception of feeling younger and emotionally content than one's actual age.

Personality

Three main personality traits have been recognized as contributing to subjective evaluations of well-being in old age, including extraversion, conscientiousness, and neuroticism. Investigators have reported that these personality traits have a profound influence relative to self-reported emotional affect and well-being in old-old age (Canada et al., 2013; Bergland, Nicolaisen, & Thorsen, 2013). For instance, older individuals who have high levels of conscientiousness and extraversion, but low levels of neuroticism often present with lower negative affective disposition (Hubley & Russell, 2009; Canada et al., 2013). This tends to be especially true with self-reported depressive symptoms experienced later in life (Hubley & Russell, 2009; Canada et al., 2013). Some investigators (Yannick et al., 2011; Kato et al., 2012; Hubley & Russell, 2009) noted that individuals who exhibit high levels of conscientiousness may be more aware of their surroundings and attentive to changes in their own personal affective feelings. At the same time, older individuals exhibiting high levels of neuroticism also report greater depressive affective symptoms, despite varying levels of conscientiousness and extraversion (Pavot, Diener, & Fujita, 1990). Researchers concluded that high levels of neuroticism are associated with greater stress which in turn significantly reduces emotional contentment among older adults (Hubley & Russell, 2009; Kato et al., 2012; Jaconelli, Stephan, Canada, et al., 2013). Emotional instability is a source of vulnerability that may erode positive affective feelings.

It is important to note that conscientiousness has been acknowledged to have a unique influence on depressive affect in later life. In particular, higher conscientiousness helps to diminish the likelihood of depressive affective emotions (Martin, Bishop, Poon, et al.,

2006). In other words, older adults who tend to express conscious personality attributes (e.g., awareness, organization) also seem to be emotionally content. Interestingly, personality plays a crucial role in levels of depressive affect in older adults. Yet, empirical work linking personality traits to positive affect among the oldest old has remained relatively inconclusive in relation to identification of traits.

Lifetime Trauma

Despite a hardy personality, lifetime trauma, such as loss of a child or experiencing The Great Depression, has been reported to have a consequential impact on well-being in very old age. The literature defines trauma as the accumulation of negative events that contribute to poor emotional well-being over time (Martin & Martin, 2002; Hensley, Martin, MacDonald et al., 2012). Research conducted with centenarian populations indicated that lifetime trauma is a key determinant of whether an old-old individual maintains a high or low depressive affect (Martin & Martin, 2003). Old-old adults who report a greater number of recent negative traumatic stressors also experience significantly increased levels of negative affect (Hensley, Martin, MacDonald et al., 2012). These findings imply that trauma maintains a negative and contemporaneous association with negative emotionality. Thus, trauma has an immediate impact relative to increased experience of negative affective feelings in very old age.

Recent evidence suggests that trauma follows a U-shaped pattern across the lifetime of the individual. Initially there is high distress immediately following an event; however over time effects become smaller and less impactful. As persons reach an older age, residual feelings of the past may be re-experienced and result in increased report of

emotional discontentment (Brewin, Luckie, Davies & Hiskey, 2008). Schnurr, Lunney, Sengupta, and Spiro (2005) found that older veterans are exposed to the potential manifestation and exacerbation of symptoms of PTSD post retirement. Declines in physical health prior to and pos- retirement in these men were explained by three factors that accompany retirement: loss of status, increased triggers of stress, and decreased structure in life. However, these findings do not indicate that centenarians who lived through such experiences have impediments to their emotional well-being in later life; rather it introduces other factors that may increase negative depressive affect in late life.

Shmotkin (2003) introduced the idea of lingering effects of trauma. The phenomenon of "lingering effects" is described by past experiences that have not been fully resolved until the process of appraisal near the end of one's life. Thus, trauma lingers with a person through old-old age, which is known as a time of reassessment and appraisal of life as good or bad, happy or sad. Instances of trauma resiliency or disconnection from these events may explain why longevity is not hindered. Perhaps it is not the event that influences positive affective emotions, rather the memory of it that creates discontentment in late life. Research indicates remembering more negative lifetime traumas, whether proximal or distal, highly influences emotional contentment in later life. Even with exposure to negative lifetime traumas, many centenarians have high degrees of emotional contentment in later life and may be a result of the amount of social support a centenarian has in old age.

Social Support

Socially supportive resources provide older adults protection from the noxious impact of traumatic stressors (Krause & Shaw; 2004; Randall, Martin, McDonald, et al., 2010). Social support considerably reduces the overall level of negative affective feelings experienced among old and very old adults (Hensley et al., 2012; Pinquart & Sorensen, 2000; Jopp & Rott, 2006). Longevity researchers noted that centenarians often outlive close socio-emotional affiliations (Jopp & Rott, 2006), yet many retain a smaller yet emotionally available network of others who provide a heightened sense of affiliation and positive emotional security (Willcox, Willcox, Sokolovsky, et al., 2007). From a socio-emotional selectivity perspective, the size of one's social networks tend to shrink with age. However, the quality of remaining relationships tend to evolve over time into more personally fulfilling and emotionally gratifying social ties. These social affiliations represent a greater source of quality support by which the old-old adult comes to feel fulfilled or gratified in meeting the everyday challenges of life (Willcox, Willcox, Sokolovsky, et al., 2007).

Some investigators have acknowledged that various centenarians may still feel discontentment despite being surrounded by quality social ties (Carstensen, 1987; 1991; 1992). Carstensen (1987; 1991) introduced Socioemotional Selectivity Theory, which states older adults strategically minimize rates of interaction due to desire of maximizing social and emotional gains and minimizing risk. By minimizing their social networks (reducing quantity) and focusing on quality of relationships, older adults are at risk of becoming too isolated from lack of social ties. Hindering effects may be seen in older adults who minimize social networks due to over-involvement of the few social ties that

remain. This may be attributed to a loss of personal mastery or autonomy. Turning 100 years of age typically draws much attention from the outside world. In some cases, centenarians may receive an overwhelming amount of socio-emotional provisions (e.g., assistance, feelings of attachment, recognition of skills and abilities). Yet, depending on the nature of this support, too much socio-emotional assistance may potentially hinder proper adaptation and contribute to feelings of dissatisfaction with life (Rook, 1984). A definite answer of whether socially supportive provisions have a positive or negative association on emotional affect at a very old age has remained inconclusive (Hensley et al., 2012; Pinquart & Sorensen, 2000; Schlossberg, 1981). This proposed study considered whether social support provisions might increase the probability of experiencing positive and negative affective feelings, respectively, among persons who have lived 100 years or longer.

Perceived Health

In addition to social support, subjective health has unique implications for positive affect in old-old age. Subjective health is best defined as an individual's perceptions and appraisal of their health as being good or bad (Jang, Poon, & Martin, 2004; Poon et al., 2010; Duberstein et al., 2003). The power of perceived health in late and very late life has been reported to contribute to a reduced mortality and greater longevity (Poon, Martin, Bishop, et al., 2010). By offsetting the onset of early mortality through increased physical hardiness centenarians are able to overcome perceived interferences arising from normative age-associated declines in health (Evert et al., 2003; Jang, Poon & Martin, 2004).

Although perceived health has been positively associated with living longer, the prospect of living a long time does not guarantee a favorable view of health. However, centenarians may be an exception to the rule. Poon et al. (2010) argued that positive subjective health not only helps to extend years lived among centenarians, but also this reality is often due to a more favorable and prevailing view of individual health. For many centenarians, a positive view of health resonates into greater positive affect (Jang, Poon, & Martin, 2004). Thus, subjective health, has been reported as a key indicator of quality-of-life among centenarians. Those who hold more positive perceptions of their health result in higher quality-of-life, in turn increasing positive affective emotions in late life.

This study determined how psychosocial variables are associated with positive affect in later life. In particular, logistic regression models were used to identify key indicators that contribute to a probability of emotional contentment, as well as risk of discontentment at 100 years of age and beyond. A key aim of this study will entail identification of key associated indicators that (a.) increase the probability of feeling emotionally content, as well as (b.) increase risk of negative affect among a sample of centenarians. Of particular interest will be the examination of self-reported subjective age, lifetime trauma, social support, personality, and perceived health relative to depressive affect. Based on the literature review, the following hypotheses are made:

H1: Greater trauma exposure will be associated with greater risk of negative affect;

H2: Greater subjective age will be associated with greater risk of negative affect;

H3: Greater social support will be associated with a greater probability of positive affect;

H4: Greater personality expressions of conscientiousness and extraversion will be associated with an increased probability of positive affect, whereas neuroticism will be associated with a greater risk of negative affect;

H5: Greater positive health status will be associated with a greater probability of positive affect

CHAPTER III

METHODS

Participants

Secondary data collected from 2008-2010 study funded by the Oklahoma Agricultural Experimentation Station were used for this study. Data collected from N = 154 community-dwelling centenarians (M = 101, SD = 1.71) residing in Oklahoma. Participants were recruited through convenience sampling across aging network affiliates (e.g. Oklahoma Centenarian Club; senior nutrition sites; local care facilities) and Family and Consumer Science Extension partnerships. All participants were cognitively screened prior to beginning interview survey for cognitive status using the Short Portable Mental Status Questionnaire, SPMSQ, (Pfeiffer, 1975).

Screening was conducted by an interviewer to assure participants were cognitively oriented in order to participate in the survey interview. A recommended cutoff score of 4 errors was used to select participants (Pfeiffer, 1975). The participant pool consisted of centenarian women (114) and centenarian men (40) with racial composition of final sample consisting of Caucasian (87%), African-American (3.9%), American Indian (1.9%) and those who identified as other (7.1%), with a majority being widowed. The

sample is consistent with gender composition of other centenarian studies (Poon, Clayton, Martin, et al., 1992).

Procedure

After participants passed preliminary screening procedure, the informed consent was addressed and signed. If the participant agreed to participate, the study continued. Data was collected by using a face-to-face interview method. Participants were administered a range of questionnaires. Participants were asked to answer each question based on a Likert-scale rating or open ended format. After protocol was completed a debriefing was held, and at this time any unanswered questions were addressed. The interview was recorded and given to participants as compensation for participation.

Measures

For the purpose of this study, the following measurements were evaluated (See Appendix A). Due to the vast majority of the sample who indicated being widowed and White/Caucasian, marriage and race were not included in the analysis of the data.

Socio-demographics. Gender, education and residential status served as key socio-demographic indicators. Gender was coded as using a dichotomous variable, where 0= Male, 1= Female. Residential status was also coded dichotomously, where 0=Private-home, 1=Care facility. Finally, educational attainment was measured using a self-reported summation of total years of education completed.

Subjective Age. Participants were asked five questions related to subjective age. Four of the five questions were rated 1-3, 1 being "a lot younger than my age," 2 being "the age

that I am" and 3 being "A lot older than my age." The final question asked the participant an open-ended question. The question permitted and encouraged reflection over the lifespan. The scale used was compiled by combination of many literatures; however, a single-item to assess subjective age was derived by targeted work by Westerhof (Westerhof & Barrett, 2005). A single item indicator was used to measure subjective age "Most of the time, I feel… 1 = A lot younger than my age; 2 = The age I am; or 3 = A lot older than my age". Due to the specific criteria of age, no other age comparison groups were used. The subjective age score for this study represented a single-item. A high single-item score represented a high subjective age, whereas a low single-item score represented low subjective age.

Cumulative Lifetime Trauma. The Brief Trauma Interview (Schnurr et al., 2002) was utilized to measure cumulative lifetime trauma and served as a 10-item index. Participants were asked about specific lifetime events. For example, "Have you ever been in a major natural or technological disaster (e.g., fire, tornado, hurricane, flood, earthquake, chemical spill, etc)?" Lifetime trauma was measured on a dichotomous scale (1 = participants had experienced a specific lifetime event; 0 = participant had not experienced a specific lifetime event). Participants reported an average of M = 2.07, SD = 1.39 lifetime traumatic events. Further inspection of this 10-item index reveaed that at least 30% or more of centenarias in the present sample had experienced a serious accident (n = 56), natural disaster (n = 67), life-threatening illness (n = 54), or the violent death of a family member or friend (n = 55). Therefore, a cumulative summary score across these four specified trauma items were used within the final analysis. An overall score was calculated by summing across these four items in which a high score represented high

lifetime trauma experience and a low score indicated low lifetime trauma experience.

Social Support. Social Provisions Scale (SPS; Cutrona & Russell, 1987) was used to measure degree of social support felt by an individual. Original alpha reliability (α=.93) was calculated. The SPS is a 24-item scale that assesses six subscale categories indicative of social and emotional attachment attributes of support. Participants were asked to indicate their level of agreement using a 4-point Likert scale, where 1= strongly disagree and 4= strongly agree. Sample items included "There are people I can depend on to help me if I really need it," "I have close personal relationships that provide me with a sense of emotional security and well-being". Negatively worded items were reverse coded in order to gain a final positive score of social support. A cumulative score of support was calculated by summing across all item scores. Higher scores indicated greater perceived social support, while lower scores indicated less social support felt by the individual. Alpha reliability for the full SPS in this study was α = .76.

Personality. The 60-item NEO-FFI-short-form (Costa & McCrae, 1992; 1994) was used to measure conscientiousness, extraversion, and neuroticism. Each of these NEO-FFI traits were measured as 12-item subscales. Participants were asked to indicate level of agreement to each statement on a 5-point Likert scale, where 1= strongly disagree and 5= strongly agree. Based on previous centenarian research, three traits were the primary focus--extraversion, conscientiousness and neuroticism (Martin & Poon, 2006; 1996; 1992). Overall scores were calculated by summing the item scores. Higher scores represented stronger degrees of a trait, while lower scores indicated lower degrees of a trait. Cronbach's alpha for the neuroticism, extraversion, and conscientiousness subscales of the NEO-FFI short-form in this study were .77, .72, and .69 respectively.

Perceived Health. Older Americans Resources and Services procedures, OARS, were used to assess perceived health in centenarians (Fillenbaum, 1988). A single-item was used to measure perceived health. Participants were asked "How would you rate your overall health at the present time?" This item was scored on a 4-point Likert scale where 1= poor to 4= excellent, indicating level of agreement. Higher scores indicated greater perceptions of health, while lower scores represented lower perceptions of health.

Depressive Affect. Depressive affect was used as the primary outcome variable of interest. The Geriatric Depression Scale (Yesavage et al., 1983; D'ath, P. et al., 1994) short form was used to measure depression in later life. A 10-item dichotomous scale was used. Sample item includes "Do you feel that your life is empty?" Based on yes or no responses, overall scores were calculated by frequency of negative responses. D'ath et al. (1994) suggested cutoff scores of at least 3 endorsed items on the GDS 10 were indicative of depressive affect. Therefore, depression was represented by participants who answered 3 or more endorsed items; those with 2 or less endorsed items were considered as having depressive affect. Cronbach's alpha for the GDS in this study was $\alpha = .69$.

Data Analysis. Using SPSS software, initial descriptive analyses, such as frequencies, means and standard deviations were computed. Correlations were conducted to assess the inter-variable relationships (Refer to Table 2 in appendices). Logistic regression modeling was conducted, followed by hierarchical regression modeling. Model 1 examined the demographic attributes of the sample. Model 2 examined individual and experiential attributes of depressive affect. Model 3 entailed further addition of psychosocial factors and the association on positive affect above and beyond experiential

and demographic characteristics (refer to Table 3 in appendices). Secondary analysis examined moderation effects and how these variables differ across the board. A post-hoc analysis was done to determine differences in residential status to determine differences between centenarians residing privately/independently versus those residing within care facilities (refer to Table 4 in appendices). Significance level across the logistic regression analyses was set at $p \leq .05$.

CHAPTER IV

RESULTS

Bi-variate Analysis. Bi-variate correlations between study variables were examined (See Table 2). Gender and perceived health had significant positive associations with neuroticism ($r = .20$, $p < .05$; $r = .19$, $p < .05$). Cumulative lifetime trauma, perceived health, and neuroticism were positively correlated with depressive affect ($r = .26$, $p < .01$; $r = .23$; $p < .01$; $r = .45$; $p < .01$); whereas conscientiousness, and social support were negatively correlated with depressive affect ($r = -.16$, $p < .05$; $r = -.20$; $p < .05$). Subjective age and perceived health shared a significant negative correlation with extraversion ($r = -.30$; $p < .01$; $r = -.18$, $p < .05$). Perceived health and neuroticism were negatively correlated with social support ($r = -.16$, $p < .05$; $r = -.20$, $p < .01$). However, extraversion and conscientiousness were positively correlated with social support ($r = .56$, $p < .01$; $r = .38$; $p < .01$).Neuroticism and conscientiousness were negatively correlated ($r = -.31$; $p < .01$), but extraversion and conscientiousness were positively correlated ($r = .31$; $p < .01$). Lastly, subjective age and perceived health were positively correlated ($r = .25$; $p < .01$).

Logistic Regression Analysis. Logistic regression models were used to examine predictors of depressive affect across the entire participant sample of centenarians (See Table 2). An alpha of ($p \leq .05$) was used as a cutoff to determine significant associations. Lifetime trauma (OR= 1.87, $p < .05$, 95% CI = 1.19 - 2.95) and neuroticism (OR= 1.15, $p < .05$, 95% CI = 1.07 – 1.23) were identified as key predictors of depressive affect among centenarians. In fact, centenarian participants who reported lifetime traumas exposure had an 88% increased likelihood of depressive affect. In addition, centenarian participants who reported high scores of neuroticism had a 15% increased likelihood of depressive affect.

Post-Hoc Analysis. Differences in reported depressive affect between centenarians residing independently within private dwelling versus those residing in long-term care nursing home facilities were considered. Post-hoc analyses were conducted to further explore key predictors of depressive affect across two groups. Relative to centenarians residing in long-term care/nursing home facilities, neuroticism (OR = 1.10, $p < .05$, 95% CI = 1.00-1.20), and lifetime trauma (OR = 2.50, $p < .05$, 95% CI = 1.26-4.96) emerged as predictors of depressive affect. This suggests that centenarians who reside in long-term care/nursing home facilities have a 10% increased likelihood of depressive affect. In addition, perceived health (OR = 2.27, $p = .05$, 95%, CI =1.01-5.12) was a positively and significantly associated with depressive affect among centenarians who reported residing independently. In other words, greater perceived health was associated with a 127% greater likelihood among centenarians who live independently to report depressive affect. Furthermore, neuroticism (OR = 1.25, $p < .05$, 95%, CI = 1.09-1.42) was the only independent and significant predictor of depressive affect in centenarians who reside

independently in private dwellings. In particular, centenarians who reside independently and report feeling more emotionally instable had a 25% increased likelihood of depressive affect.

Results from this study resemble previous empirical findings. Implication from this study will provide information that will assist in filling the knowledge gap in gerontological research.

CHAPTER V

DISCUSSION

The purpose of this study was to examine the extent to which subjective and psychosocial attributes in quality-of-life among centenarians contribute to risk of depressive affect at 100 years of age and beyond. Of primary interest was determining how such risks are associated with depressive affect among a participant sample of persons aged 100 years of age and older. It was originally hypothesized that greater trauma exposure will be associated with greater risk of negative affect and neuroticism will be associated with a greater risk of negative affect. Results from the study provide support for these hypotheses.

In particular, among centenarians residing in long-term care/nursing home facilities—neuroticism and lifetime trauma exposure appear to increase risk of experiencing depressive affect. Post-hoc analysis revealed additional differences in risk of depressive affect among centenarians who reside privately and independently at home versus those living in long-term care facilities. For those residing in long-term care/nursing home facilities, neuroticism and lifetime trauma exposure appeared to significantly increase risk of depressive affect. However, only neuroticism emerged as a key associated risk of

depressive affect for centenarians residing privately and independently in their own homes.

Depressive Affect. Susceptibility to experiencing depressive affect tends to increase with age (Blazer, Hughes, & George, 1987). Variables including social support, personality, and lifetime trauma exposure have been reported as vital risk factors in the epidemiology of depressive affect late and very late life (Blazer, Hughes, & George, 1987). Results from this study supported previous empirical findings. Two key psychosocial variables appear to put centenarians significantly at risk for experiencing depressive affect: greater lifetime trauma exposure and neuroticism. This seems to be particularly true among centenarians who reside in long-term care centers. Plausible explanations for this may be linked to an underlying contextual effect, such as environmental triggers. Furthermore, centenarians in long-term care facilities experiencing depressive affect should be assessed to consider whether depressive affect among centenarians residing in long-term care facilities reflects neuroticism or the aftermath of traumatic events. In this study, centenarians residing within long-term care facilities who reported high exposure to lifetime traumas and who maintained a high degree of emotional instability were also more likely to experience depressive affect.

Lifetime Trauma Exposure. Results from this study further confirm the link between lifetime trauma and depressive affect in extreme late life. Krause (2004) reported that among differential age-cohorts or older adults, lifetime trauma exposure has a significant deleterious impact on one's perceived quality-of-life. There is some indication that the association between lifetime trauma and risk of depressive affect may be attributed to the

recurrence of unresolved feelings involving past life experience. Erikson (1987) theorized that some individuals postpone resolution of traumatic life events until they have reached late adulthood. Postponement of resolution may increase depressive affect due to the reliving of the negative emotionality linked to the trauma itself (Krause, 2004; Krause, Shaw, & Cairney, 2004). Contributions from lifetime trauma exposure to depressive affect in late-life have provided an emphasis to further clarify how centenarians may effectively resolve trauma relative to depressive affect.

It is important to note that centenarians represent unique individuals who have witnessed or survived a century of various non-normative events or lifetime traumas. Some of these events are specific to shared cohort-related historical experiences. For instance, it is plausible that participants in this study collectively experienced events such as The Great Depression, the Dust Bowl, or World War II. Aside from historical timing of events, it is certainly possible that centenarians also experience individually-specific trauma (e.g., personal disaster or loss). Despite the occurrence of traumatic events, many centenarians find peace or avoid the experience of the effects of the trauma shortly after the occurrence (Brewin et. al, 2008). Shmotkin (2003) hypothesized the adverse impact of trauma as a "lingering effect." The theory describes the process older adults experience in late life due to the reappraisal of the life span. If an older adult finds themselves reminiscing about events that were traumatic or caused a change in lifestyle, the detrimental effects may be seen in late life as discontentment or depressive affect (Shmotkin, 2003). This U-shaped pattern of trauma is typically seen in late life because of the appraisal of the life span. Results from this study lend some support to these empirical findings. However, further longitudinal research evidence is needed to address

whether specific traumatic events may be or not be associated with a U-shaped curve in depressive affect among persons who reach 100 years of age.

Neuroticism. Based on results from this study, centenarians who possess a greater degree of emotionally instable personality traits or feelings of anxiety appear to be more at-risk for feeling depleted relative to their current mood status. Results from this study further confirm the important interplay between the neurotic personality and depressive affect. Explanations for this association may be due to stress-induced depletion. For instance, Martin and colleagues (2006) explored the adverse effects of mental depletion and fatigue among the oldest-old. They reported that old-old adults who remain emotionally instable over time also report greater mental depletion or fatigue. Some investigators have reported such phenomena as reflecting the "depletion syndrome" or depression without sadness (Gallo, Rabins, Anthony, 1999; Adams, 2001). Depletion often involves an overall lack of interest in engaging in daily activities accompanied by a perception that daily life activities require too much effort to complete (Gallo, Rabins, Anthony, 1999). Feelings of depletion may also further induce stress and heighten feelings of anxiety in late and very late life (Adams, 2001). Centenarians who are overrun by anxiety and stress greatly increase the likelihood of negative depressive affect in late life. Further exploration of the interplay between neuroticism, depressive affect and depletion is warranted.

Perceived Health. Results from this study also indicated a significant association between perceived health ($p = .05$) and depressive affect. It appears that greater perceived health is associated with greater depressive affect among centenarians. A link between

depressive affect and greater perceived health can be explained by a mental acceptance of mortality (Tornstam, 2005). The loss of desire to continue on plus the realization that the body is in good health could contribute to negative emotionality. It is plausible to assume that many centenarians have accepted death and may feel "ready to go." The idea that centenarians are living well into old age, yet feeling negatively because of this exceptional longevity, can be linked to the Theory of Gerotranscendence (Tornstam, 2005), which states that the acceptance of one's mortality is developmentally appropriate for very old adults. Perhaps social comparison, lack of independence, lack of vigor in life, or completing the process of Gerotranscendence are possible explanations to the phenomenon of "outliving life." Results support the literature which indicated the sample is a very gerotranscendent group.

It is important to note that social comparison may explain the link between perceived health and depressive affect. Centenarians often appraise quality-of life based on interpersonal and peer interactions (Poon et al., 2010). When compared to other older adults around them, centenarians may come to perceive themselves as either in better or worse health than their peers. It is plausible that centenarians who compare their health as better to those around them may become discontent due to an anticipation and acceptance of mortality. Remembering one's past vitality in life may induce negative emotionality. However, an opposite effect may be associated with depressive affect. In other words, centenarians may be in good health but they have depleted desire to continue living much longer. Future research should consider whether depressive affect in long-term care centenarians reflects neuroticism or the aftermath of a traumatic event.

Limitations. Several limitations should be addressed relative to this study. One key limitation involves a convenience sampling methodology. Convenience sampling methodology can contribute to sample selectivity. It is very possible that a selective sample of centenarians participated in this study. These centenarians were possibly better educated, or in better overall health and thus more likely to have participated in this study. Random sampling might have offered a better alternative relative to reducing sample selection. In turn, the results should be interpreted with caution and should not be generalized to other centenarian samples. Next, a cross-sectional study design was used. A cross-sectional research design does not allow for examination of long-term change in risk factors of depression. Cross-sectional designs also do not allow for interpretations of causation. Therefore, results from this study should be used as evidence of association only rather than causal outcomes. A final limitation is the absence of age comparison group. The sample used in this study consisted only of centenarians. The addition of an age comparison group would have allowed for greater generalizability across differential age groups of older adults. It is important that caution be used when interpreting results. Results from this study may not generalize across other age groups or other centenarian populations who reside across differential geographical contextual settings.

Future directions. Examination of the interchangeable use of the words "happiness" and "depressive affect" should be explored; many literatures allude to the similarities of these two items. Further clarification and conceptualization of depressive affect versus unhappiness in very old age should be explored. Researchers should also consider use of greater longitudinal research to examine the link between trauma, neuroticism, and depressive affect among the oldest-old. Longitudinal examinations of depressive affect

will allow for greater understanding of how depressive affect changes over time in exceptional old age. Such advancements in the knowledge of depressive affect in centenarians will help practitioners and gerontologists better evaluate the mental health needs of centenarians.

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APPENDIX A

SUBJECTIVE AGE

Read first: To begin, I want to ask you about what it feels like to be 100 years old.

1. **Most of the time, I feel. . .**

1	2	3
A lot younger than my age	The age I am	A lot older than my age

SOCIODEMOGRAPHIC PROFILE

Read this first: I would now like to ask you some of your social and demographic background.

Gender: _____Male _____Female

Education

_____ Grade school (K-8)

_____ Some high school
_____ High school diploma
_____ Trade school or vocational degree
_____ Some college
_____ Associate Arts degree
_____ College degree
_____ Some post graduate education
_____ Graduate degree
_____ Professional degree/certificate

Total years of education: _____

Residence

a.) Place of residence:
_____

b.) How long have you lived in your current place of residence:_____

c.) Do you currently live alone? _____**Yes** ____**No**

If "No," with whom do you live:_____

LIFE EVENTS

Read this first: I would now like to ask you a few brief questions about life events.

1. **Have you ever been in a serious car accident, or a serious accident at work or somewhere else?**

☐ YES ☐ NO

0-10	11-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110+

b.) Did you think your life was in danger or your might be seriously injured? ☐ YES ☐ NO

c.) Were you seriously injured? ☐ YES ☐ NO

d.) How much has this affected your life in the past year? ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Not at all **Some** **Extremely**

2. Have you ever been in a major natural or technological disaster (e.g., fire, tornado, hurricane, flood, earthquake, chemical spill, etc.)?

☐ YES ☐ NO

a.) How old were you when this happened?

0-10	11-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110+

b.) Did you think your life was in danger or you might be seriously injured? ☐ YES ☐ NO

c.) Were you seriously injured? ☐ YES ☐ NO

d.) How much has this affected your life in the past year? ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Not at all **Some** **Extremely**

4. Have you ever had a life-threatening illness such as cancer, a heart attack, leukemia, AIDS, multiple sclerosis, etc?

☐ YES ☐ NO

a.) How old were you when this happened?

0-10	11-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110+

b.) Did you think your life was in danger or you might be seriously injured? ☐ YES ☐ NO

c.) Were you seriously injured? ☐ YES ☐ NO

d.) How much has this affected your life in the past year? ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Not at all **Some** **Extremely**

HEALTH

PERCEIVED HEALTH STATUS

Read First: Now, I want to ask you a few questions regarding your current state of health

1. How would you rate your overall health at the present time?

____Excellent ____Good ____Fair ____Poor

2. How is your health compared to what it was like five years ago?

____Better ____About the same ____Worse

3. How much do your health troubles stand in the way of doing the things you want to do?

____Not at all ____A little or some ____A great deal

4. In comparison with other people your age, how would you consider your health status?

____Not as good ____Don't know ____As good ____Better

SOCIAL PROVISIONS

Read First: Next, I want to talk to you about social resources. Please indicate to what extent each statement describes your current social relationships.

Strongly Disagree	Disagree	Agree	Strongly Agree

1. There are people I can depend on to help me if I really need it.

   1 2 3 4

2. I feel that I do not have close personal relationships with other people.

   1 2 3 4

3. There is no one I can turn to for guidance in times of stress

   1 2 3 4

4. There are people who depend on me for help.

   1 2 3 4

5. There are people who enjoy the same activities I do.

   1 2 3 4

6. Other people do not view me as competent.

   1 2 3 4

7. I feel personally responsible for the well-being of another person.

   1 2 3 4

8. I feel part of a group who share my attitudes and beliefs.

1 2 3 4

9. I do not think other people respect my skills and abilities.

1 2 3 4

10. If something went wrong, no one would come to my assistance.

1 2 3 4

11. I have close personal relationships that provide me with a sense of emotional security and well-being.

1 2 3 4

12. There is someone I could talk to about important decisions in my life.

1 2 3 4

13. I have relationships where my competence and skill are recognized.

1 2 3 4

14. There is no one who shares my interests and concerns.

1 2 3 4

15. There is no one who really relies on me for their well-being.

1 2 3 4

16. There is a trustworthy person I could turn to for advice if I were having problems.

1 2 3 4

17. I feel a strong emotional bond with at least one other person.

1 2 3 4

18. There is no one I can depend on for aid if I really need it.

1 2 3 4

19. There is no one I feel comfortable talking about problems with.

1 2 3 4

20. There are people who admire my talents and abilities.

1 2 3 4

21. I lack a feeling of intimacy with another person.

1 2 3 4

22. There is no one who likes to do the things I do.

1 2 3 4

23. There are people who I can count on in an emergency.

1 2 3 4

24. No one needs me to care for them.

1 2 3 4

MOOD

Read first: For these next questions, please indicate **Yes** or **No.**

	YES	NO
1. Do you feel that your life is empty?		
2. Do you often get bored?		
3. Are you bothered by thoughts you can't get out of your head?		
4. Do you feel helpless?		
5. Do you frequently worry about the future?		
6. Do you often feel downhearted and blue?		
7. Do you feel pretty worthless the way you are now?		
8. Do you worry a lot about the past?		
9. Do you feel that your situation is hopeless?		
10. Do you frequently feel like crying?		

NEO-FFI USED TO ASSESS BIG 5 PERAONALITY TRAITS

Please read each of the following statements carefully. Circle the response that best represents your opinion.

SD = if you **STRONGLY DISAGREE** or the statement is false

D = if you **DISAGREE** or the statement is mostly false

N = if you are in-between on the statement, you cannot decide, or the statement is about equally true and false

A = if you **AGREE** or the statement is mostly true

SA = if you **STRONGLY AGREE** or the statement is true

Please fill in only one response for each statement and respond to all statements.

		SD	**D**	**N**	**A**	**SA**
1.	I am not a worrier.	SD	D	N	A	SA
2.	I like to have a lot people around me.	SD	D	N	A	SA
3.	I keep my belongings clean and neat.	SD	D	N	A	SA
4.	I often feel inferior to others	SD	D	N	A	SA
5.	I laugh easily	SD	D	N	A	SA
6.	I am pretty good about pacing myself so as to get things done on time.	SD	D	N	A	SA

7.	When I'm under a great deal of stress, sometimes I feel like I'm going to pieces	SD	D	N	A	SA
8.	I don't consider myself especially "light-hearted"	SD	D	N	A	SA
9.	I am not a very methodical person.	SD	D	N	A	SA
10.	I rarely feel lonely or blue	SD	D	N	A	SA

11.	I really enjoy talking to people	SD	D	N	A	SA
12.	I try to perform all the tasks assigned to me conscientiously.	SD	D	N	A	SA
13.	I often feel tense and jittery.	SD	D	N	A	SA
14.	I like to be where the action is.	SD	D	N	A	SA
15.	I have a clear set of goals and work toward them in an orderly fashion.	SD	D	N	A	SA
16.	Sometimes I feel completely worthless	SD	D	N	A	SA
17.	I usually prefer to do things alone.	SD	D	N	A	SA
18.	I waste a lot of time before settling down to work.	SD	D	N	A	SA
19.	I rarely feel fearful or anxious	SD	D	N	A	SA
20.	I often feel as if I'm bursting with energy	SD	D	N	A	SA
21.	I work hard to accomplish my goals.	SD	D	N	A	SA
22.	I often get angry at the way people treat me	SD	D	N	A	SA
23.	I am a cheerful, high-spirited person	SD	D	N	A	SA
24.	When I make a commitment, I can always be counted on to follow through.	SD	D	N	A	SA

25.	Too often, when things go wrong, I get discouraged and feel like giving up	SD	D	N	A	SA
26.	I am not a cheerful optimist	SD	D	N	A	SA
27.	Sometimes I'm not as dependable or reliable as I should be.	SD	D	N	A	SA
28.	I am seldom sad or depressed	SD	D	N	A	SA
29.	My life is fast-paced	SD	D	N	A	SA
30.	I am a productive person who always gets the job done.	SD	D	N	A	SA
31.	I often feel helpless and want someone else to solve my problems	SD	D	N	A	SA
32.	I am a very active person	SD	D	N	A	SA
33.	I never seem to be able to get organized.	SD	D	N	A	SA
34.	At times I have been so ashamed I just wanted to hide	SD	D	N	A	SA
35.	I would rather go my own way than be a leader of others	SD	D	N	A	SA
36.	I strive for excellence in everything I do.	SD	D	N	A	SA

Table 1. Socio-demographics of Sample

Variable		N	Percentage
Age			
	99	8	5.2%
	100	76	49.4%
	101	31	20.1%
	102	16	10.4%
	103	11	7.1%
	104	4	2.6%
	105	4	2.6%
	106	1	.6%
	108	2	1.3%
	109	1	.6%
Gender			
	Male	40	26%
	Female	114	74%
Race			
	White	134	87%
	Black	6	3.9%
	American Indian	3	1.9%
	Multi-Racial	11	7.1%
Marital Status			
	Never Married	4	2.6%
	Married	11	7.1%
	Divorce	7	4.5%
	Widowed	132	85.7%
Education			
	Grade School	40	26%
	Some High School	15	9.7%
	High School Diploma	20	13%
	Trade School/Vocational	9	5.8%
	Some College	32	20.8%
	Associates Degree	2	1.3%
	College Degree	20	13%
	Some Post Graduate Work	4	2.6%
	Graduate Level	12	7.8%

Table 2. Correlation Analysis for Inter-variable Relationships

Descriptive Statistics (N= 154)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Subjective Age	-												
2. Residence	.07	-											
3. Accident	-.03	-.01	-										
4. Natural disaster	-.03	-.09	-.15	-									
5. Life threatening illness	-.02	.18*	.10	-.04	-								
6. Family/friend loss	-.02	.10	.14	.14	.11	-							
7. Social Support	-.23**	.07	.16	-.13	.04	-.01	-						
8. Extraversion	-.30**	-.07	.21**	-.13	.06	-.09	.56**	-					
9. Openness	-.22**	-.09	-.07	.01	.04	-.15	.27**	.30**	-				
10. Conscientiousness	-.07	.00	.05	-.16	.01	.03	.38**	.31**	.08	-			
11. Neuroticism	.11	-.10	-.02	.12	.04	.13	-.20*	-.12	.11	-.30**	-		
12. Depressive Affect	.12	-.15	.03	.28**	.10	.12	-.23**	-.15	.02	-.20*	.57**	-	
13. Life Satisfaction	-.03	.11	-.05	-.18*	-.09	.03	.32**	.26**	.00	.28**	-.34**	-.55**	-
M	1.6	2.3	.36	.44	.35	.35	80.3	40.07	35.93	46.43	24.67	1.5	27.76
SD	*.63*	*.76*	*.48*	*.50*	*.48*	*.48*	*7.2*	*7.3*	*6.0*	*6.5*	*7.8*	*1.8*	*6.13*

Table 3. Logistic Regression Analysis for Predictors of Depressive Affect in Centenarians

Variables	Model 1				Model 2				Model 3			
	B	S.E.	OR	CI	B	S.E.	OR	CI	B	S.E.	OR	CI
Gender	-.12	.41	-.89	.40- 1.99	-.05	.44	.95	.40- 2.24	-.64	.50	.53	.20- 1.41
Education	-.39*	.18	-.03	.48 - .96	-.43*	.19	.65	.45- .95	-.41	.22	.67	.43- 1.03
Residential Status	-.32	.36	-.38	.36 - 1.48	-.55	.40	.58	.27- 1.25	-.39	.45	.68	.28- 1.61
Subjective Age					-.05	.31	.95	.52- 1.75	-.31	.36	.74	.36- 1.50
Lifetime Trauma					.67*	.20	1.95	1.31- 2.91	.63*	.23	1.88	1.19- 2.95
Perceived Health					.35	.19	1.41	.98- 2.05	.23	.23	1.26	.81- 1.96
Neuroticism									.14*	.03	1.15	1.07- 1.23
Extraversion									- .03	.04	.98	.91- 1.05
Conscientiousness									.01	.04	1.01	.93- 1.09
Social Support									- .04	.04	.96	.89- 1.03

Note: Significant results at $p < .05$

Table 4.1 Post-Hoc Analyses for Centenarians Residing In Nursing Care Facilities and Assisted Living

Variable	**OR**	**CI**	**P Value**
Neuroticism	1.10	1.00-1.20	$p < .05$
Lifetime Trauma Exposure	2.50	1.26-4.96	$p < .05$

Note: Results displayed represent significant variables only ($p < .05$)

Table 4.2 Post-Hoc Analyses for Centenarians Residing Independently

Variable	**OR**	**CI**	**P Value**
Neuroticism	2.27	1.01-5.12	$p < .05$
Perceived Health	1.25	1.09-1.42	$p = .05$

Note: Results displayed represent significant variables only ($p < .05$)

VITA

Jamye M. Taylor

Candidate for the Degree of

Master of Science

Thesis: IDENTIFYING PSYCHOSOCIAL INFLUENCES ASSOCIATED WITH DEPRESSIVE AFFECT IN LATE-LIFE

Major Field: Human Development and Family Sciences

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