

**SELF-PERCEPTIONS OF AGING: WOMEN'S VIEWS OF THE AGING PROCESS**

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Eryn Nichole Jager

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### Title

SELF-PERCEPTIONS OF AGING: WOMEN'S VIEWS OF THE AGING  
PROCESS

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Eryn Nichole Jager

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The Supervisory Committee certifies that this ***disquisition*** complies with North Dakota State University's regulations and meets the accepted standards for the degree of

**MASTER OF SCIENCE**

SUPERVISORY COMMITTEE:

Gregory Sanders

Chair

James Deal

Elizabeth Blodgett-Salafia

Linda Langley

Approved:

April 15, 2014

Date

Gregory Sanders

Department Chair

## **ABSTRACT**

Society has generally taught women in a rather subliminal way they should remain young, thin, and beautiful (Horton, Baker, Cote, & Deakin, 2008; Mock & Eibach, 2011; Stark-Wroblewski, Edelbaum, & Bello, 2008). As the number of older adults increase, the driving forces that determine self-perceptions of aging are essential. Using a hierarchical regression analysis, the current study examined self-perceptions of aging among older adult women. For the study, 102 females (age 60 and older) in the Red River Valley area completed a survey on self-perceptions of aging. Sense of mastery was significantly related to negative self-perceptions of aging. The findings demonstrate that one's self-worth and ability to do things without needing help may play an important role in how an aging woman feels about herself and her own aging process.

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## **CHAPTER 1. INTRODUCTION**

### **Statement of the Problem**

How people view themselves is a major contributor to overall self-esteem and feelings of wellness (Mock & Eibach, 2011). Perceptions of aging also influence social roles and norms (Moody, 2010). Today, because of media sources and various cultural expectations, our society has developed conflicting viewpoints on what aging is like and what should be expected of older adults (Sherman, 2001). Conflicting messages create a schema to the individual, and as one ages, his or her self-perception of aging may reflect certain attitudes related to aging based on these self-perceptions.

The literature suggests women may be more likely than men to experience negative self-perceptions of aging, most likely due to expectations as to how women should look, act, and dress as they become older (McContha, Hayta, Rieser-Danner, & McContha, 2004). Society spends a great deal of time focusing on physical beauty and youthfulness as a main component of who women are (McContha et al., 2004). While this social normality of women needing to be aesthetically pleasing even as they become older is not necessarily new, the ramifications of it have become more visible due to various concerns of Baby Boomers. Health issues, such as eating disorders and increased use of cosmetic surgery, are not uncommon for older women who fight against the physical signs of aging (Gupta & Schork, 1993). Numerous types of anti-aging products also overwhelm the shelves in many stores, which strengthen social expectations for women to maintain a youthful appearance.

What separates women who develop negative self-perceptions of aging from women who are happy with how they have aged? Meaningful relationships with family and friends, subjective health, and sense of mastery have all been found to have a positive influence on how

women perceive themselves as they become older, affecting not only physical perceptions of age, but also aspects of psychological well-being (Huebner & Fredrickson, 1999; Jang, Poon, Kim, & Shin, 2004; Levy, Slade, & Kasl, 2002; Moser, Spagnoli, & Santos-Eggimann, 2011). Thus, the aging process may not be perceived as negative if an individual is surrounded with positive supports and outlooks on life. Recently, personality factors have been examined, and results indicated neuroticism influenced one's self-perception of aging and may have negative impacts on how people perceive this aging process (Jang et al., 2004).

While a prior study examined the relationship between self-perceptions of aging and neuroticism, the effects of self-perceptions of aging on women were left unexplored (Jang et al., 2004; Moor, Zimprich, Schmitt, & Kliegel, 2006). Literature has shown that women may be at a higher risk for developing negative self-perceptions, even in older age (Gupta & Schork, 1993; Pinquart & Sörensen, 2000; Ferraro et al., 2008; Altschuler & Katz, 2010), and because of this it is necessary to examine how women may be affected as they grow older. This thesis adds to the current research by studying women and self-perceptions of aging, and focusing on how self-perceptions of aging are influenced by neuroticism as well as other psychosocial variables.

### Purpose of Study

The purpose of this research was to explore women's self-perceptions of aging and how neuroticism may relate to these perceptions. Previous literature found that women were more likely to develop negative self-perceptions, so a female-only sample was used to gain further insight on self-perceptions of aging (Gupta & Schork, 1993; Pinquart & Sörensen, 2000; Ferraro et al., 2008; Altschuler & Katz, 2010). This study surveyed a convenience sample of women from the Red River Valley area to address how neuroticism correlates with self-perceptions of aging from the female perspective.

## Research Question

For this study the leading research question is:

- Does neuroticism relate negatively to women's self-perceptions of aging?

## Definition and Terms

Self-perception is considered to be an individual's own ability to assess his or her behavior and develop an attitude by this observation (Bem, 1972).

Self-perceptions of aging is a belief structure that one develops over time as to how he or she believes one should look and behave as one grows older (Moor et al., 2006). Aging self-perception is different for everyone, but it can be generalized into positive and negative aspects. Therefore, aging itself is defined through media and society and is constructed by the individual over time.

Sense of mastery is how one perceives success through life events and is based on a continuum. On one end of this continuum an individual may look at his or her self over time and determine how successful he or she has been with managing life events (Geis & Ross, 1998). At the opposite end, the individual may perceive that he or she is powerless and unable to control or shape one's own life (Geis & Ross, 1998).

Stereotypes are standardized and simplified conceptions of people based on prior assumptions (Moody, 2010). Another name that is typically used in conjunction with stereotype is bias, meaning that there is the possibility of turning these predetermined beliefs into discrimination (Moody, 2010).

Ageism is a type of stereotype that that can be either positive or negative in relationship to the individual or group of individuals based on age (Quadagno, 2008). It is a set of norms, beliefs, and attitudes that are developed within a society and are then used to justify the behavior

that isolates people within this group (Moody, 2010). Ageism consists of prejudicial attitudes toward people and the aging process, and can apply to both young and old individuals.

Personality is considered a variety of emotional, attitudinal, and behavioral response patterns an individual has (Papalia et al., 2007). While it is a psychological construct, it creates a physiological component that has an impact on an individual's behaviors and actions (Papalia et al., 2007). While personality is generally stable over time, as one grows and matures, it also flows and matures alongside the individual. It encompasses a variety of factors such as warmth, sensitivity, worry, anger, and enthusiasm, with individuals harnessing different levels of these factors (Papalia et al., 2007).

Neuroticism is defined as a fundamental personality trait in the field of psychology (Goldberg, 1990). This particular trait encompasses negative emotions such as anxiety, anger, guilt, and depressed mood. Individuals are found to have varying degrees of this personality trait, and other traits, but those who have a tendency to experience this type of trait on a regular basis tend to have a more negative outlook (Papalia et al., 2007).

Internalization is the process whereby an individual consolidates and embeds social beliefs, values, and attitudes over time in order to define who he or she is (Gupta & Schork, 1993). When these social influences are ingrained through experiences, the behavior or opinion becomes part of the individual's belief system (Gupta & Schork, 1993).

### Model for Research

One model in particular, Goldberg's Big Five Personality dimensions (Goldberg, 1990), served as the foundation for this study. This model of personality traits has gone through numerous transitions. Cattell (1965) created a short list of variables describing personality traits, i.e., agreeableness, extraversion, conscientiousness, neuroticism, and openness. These factors

later became known as the “Big Five”, a term coined by Goldberg, and were used to explain personality at a broad level, with each dimension more specific in regards to personality characteristics (Goldberg, 1981). Costa and McCrae’s research originally encompassed three of the five personality traits from Goldberg’s Big Five. After realizing how closely their inventory was to that of the Big Five factors, Costa and McCrae (1987) added both agreeableness and conscientiousness traits to their inventory, and later found these factors converged with the Big Five inventory.

These personality factors, or traits, were proposed to explain certain characteristics on a continuum showing people vary on these traits to different degrees (John, Naumann, & Soto, 2008). The Big Five is an empirically based phenomenon, and thus, is not a theory of personality, but is rather a model on which personality traits can be assessed (Papalia et al., 2007). These particular types of personality trait descriptions were discovered through factor analysis, and unlike its theoretical counterparts, incorporate learning and experience in the development of personality, allowing for changes throughout time (John, Naumann, & Soto, 2008).

### Delimitations

Delimitations of this study will include:

1. The study will be confined to individuals from North Dakota and Minnesota. Due to only choosing areas specifically in the Midwest, it is possible that replication of self-perceptions of aging outside of the Midwest may be difficult. Viewpoints of aging may be different in different social climates and are therefore unique to the area.
2. The participant’s responses in this study will be a reflection of how women perceive themselves in response to their own aging.

3. By using a quantitative method for obtaining information about self-perceptions of aging from participants, research will be restricted to numerical format in order to obtain a reflection of women's self-perceptions of aging.

### Limitations

The limitations of this study include:

1. In the effect that there is missing data, techniques will be used to appropriately manage this. Missing data will be examined to determine if there is a pattern or if it is only error. If multiple variables are missing from the responder, the participant will be removed from data set (Tabachnick & Fidell, 2007).

### Significance of the Study

This study may be significant in contributing to the research on personality and self-perceptions of aging. No previous studies have looked specifically at how women's aging self-perceptions may relate to the personality factor of neuroticism.

The research on self-perceptions of aging from a level of personality factors is significant for various aspects of the aging process (Huebner & Fredrickson, 1999; Gupta & Schork, 1993; Levy, Slade, & Kasl, 2002; Lewis & Cachelin, 2002; Moser, Spagnoli, & Santos-Eggimann, 2011; Wadsworth & Johnson, 2008; Schoemann & Branscombe, 2011). How people behave and interpret the information they receive is dependent on many factors, and personality is considered one of the core factors to explain these outcomes (Bem, 1972). Negative self-perceptions in any facet can create various harmful outcomes for individuals, such as poor physical and mental health, poor relationships with others, and an unhappy outlook on life (Abbey, Abramis, & Caplan, 1985; Lubben et al., 2006; Crooks et al., 2008). Understanding how certain factors, i.e., neuroticism, may be related to women's self-perceptions of aging might give

us insight as to who may or may not be more likely to have a negative or positive self-perception of aging as they grow older.

Since the goal of this study was to explain whether or not neuroticism impacts self-perceptions of aging, quantitative methods will be used. The following section will provide an overview for the basis and reasoning behind the research.

## **CHAPTER 2. LITERATURE REVIEW**

This literature review outlines the foundation for future research on self-perceptions of aging among women. Current thoughts of one's own aging (self-perceptions of aging) and impacts of neuroticism will be explored, as they have been found to relate to how individuals perceive their own aging (Jang, et al., 2004).

### **Current Self-Perceptions of Aging**

Due to modern medicine, cleaner living conditions, and access to better food, the average lifespan has continued to increase (Quadagno, 2008). Many older adults who are in good health report feeling much younger than their chronological age; in fact, the age most older adults tend to feel on average is twenty-percent younger than their actual age (Degges-White & Myers, 2006; Klienspehn-Ammerlahn, Kotter-Grühn, & Smith, 2008; Mock & Eibach, 2011).

The personality factor neuroticism has been found to have a significant impact on how people feel, perceive, and comprehend situations (Costa & McCrae, 1989; Jang, Mortimer, Haley, & Graves, 2002; Jang et al., 2004; Friedman, Kern, & Reynolds, 2010). When successful outlooks of aging were examined, good health, staying active (mentally and physically), and the ability to remain independent were most frequently described, but ultimately, those who were found to be high in neuroticism still viewed situations more negatively than others (Costa & McCrae, 1989; Phelan, Anderson, LaCroix, & Larson, 2004; Duay & Bryan, 2006; Klienspehn-Ammerlahn, Kotter-Grühn, & Smith, 2008; Moser, Spagnoli, & Santos-Eggimann, 2011).

Although the typical lifespan and quality of life have increased, negative messages about aging may alienate older adults from many opportunities, including social situations (McContha, et al., 2004). Various societal expectations regarding aging may sometimes make it difficult for older adults to accept the aging process if it is viewed negatively. Older adults may become

bitter, angry, or even fearful of what is happening to them (Pinquart & Sörensen, 2000).

According to Butler (1975), this process is known as ageism, and is defined as the discrimination against older adults as well as the fear of aging. This process of discrimination towards the elderly was typical of how society functioned for centuries (Fischer, 1977; Horton, Baker, Cote, & Deakin, 2008). Ageism also targets those who have become ‘old’ or aged by using behavioral stereotypes (e.g., incompetent, senile, wise), decline in physical appearance, and psychological states to reinforce negative attitudes towards aging (Horton et al., 2008; Horton, Baker, Cote, & Deakin, 2008; Levy, et al., 2002; Levy, Slade, & Kasl, 2002; Levy & Myers, 2004; McContha et al., 2004).

These stereotypes may have a profound effect on people’s self-perceptions at both a psychological and physiological level (Levy, Slade, Kunkel, & Kasl, 2002; Levy & Myers, 2004; Moch & Eibach, 2011). While stereotypes are different for men and women, the expectation of youthful aging has typically focused more on the female gender (Chrisler, 2011; Mock & Eibach, 2011; Richards, Warren, & Gott, 2012). The following subsection will outline literature that focuses on women, how they are viewed, and how self-perceptions of aging may develop as women become older.

### Women’s Self-Perceptions of Aging

Contemporary North American culture has painted a largely unflattering picture of the aging process (Horton, Baker, Cote, & Deakin, 2008; Stark-Wroblewski, Edelbaum, & Bello, 2008; Mock & Eibach, 2011). Women in particular are likely to be judged harshly (McContha et al., 2004; Chrisler, 2011; Grogan, 2011; Richards, Warren, & Gott, 2012). This is largely due to the socialization of placing more value on women’s appearances than men’s (McContha et al., 2004; Grogan, 2011). Television and other forms of mass media have contributed to the

continued socialization of perceptions of aging. Typically, women portrayed in Western media culture are young, attractive, and usually white, whereas older women are generally portrayed as asexual, lonely, and sad or depressed (Grogan, 2011).

With an emphasis on women to maintain their appearance, society has developed mixed feelings of aging, some of which can result in negative self-perceptions (Winterich, 2007; Mock & Eibach, 2011). Negative self-perceptions of aging have been related to the personality factor neuroticism, and may be attributed to decisions about medical procedures, use of anti-aging products, and eating disorders later in life (Gupta & Schork, 1993; Lewis & Cachelin, 2002; Wadsworth & Johnson, 2008; Schoemann & Branscombe, 2011; Winterich, 2007).

### Body Image and Aging

Body image can also be very influential on women's self-perceptions, and has been found to be a constant source of stress for many American women (Peat, Peyerl, Muehlenkamp, 2008). A study by Winterich (2007) found that as women aged, weight gain was viewed as unattractive, unhealthy, and perceived as a loss of youth. While older women were less inclined to be concerned with physical appearance (i.e., wrinkles, gray hair) than the younger population, body weight concerns were found to plague both young and older women as a constant source of dissatisfaction (Grogan, 2011). Interestingly, the majority of older women who had negative self-perceptions of aging also showed lack of self-control and reduced physical activity (Grogan, 2011). In other words, physical health was a major factor in how older women viewed themselves as they aged, and being overweight or unable to lose the weight increased these negative self-perceptions.

Although women may be exposed to social expectations and perceptions related to aging, not all women internalize the need to maintain one's youth as they grow older (Levy, 2003).

Current research has found that some older women may choose more realistic media sources based on their age, rather than focusing on youth-oriented ideals (Grogan, 2011). Many different thoughts and experiences go into the development of an individual, and how they eventually perceive themselves and the world around them (Shonkoff & Phillips, 2000). Relationships in particular have been found to have an influence on self-perceptions over time, and may have an important influence on women's self-perceptions as they become older (Ingersoll-Dayton, Morgan, & Antonucci, 1997).

### Social Networks and Social Support

Relationships can influence self-perceptions, and may have a lasting effect on how an individual feels over time (Lubben et al., 2006). These interactions with others can be both positive and negative throughout the relationship, help shape who we are as individuals, and can include both kin and non-kin (Crooks, Lubben, Petitti, Little & Chiu, 2008; Ingersoll-Dayton, Morgan, & Antonucci, 1997). Throughout the literature, aspects of positive and negative support in relationships have been examined in conjunction with self-perceptions (Abbey, Abramis, & Caplan, 1985; Ingersoll-Dayton, Morgan, & Antonucci, 1997).

While healthy and positive relationships generally promote an optimistic outlook on life for people, unhealthy relationships can similarly encourage a pessimistic or negative outlook (Abbey, Abramis, & Caplan, 1985). Networks and relationships are important for both genders, but women generally have a larger and more varied social network that includes closer relationships (Acitelli & Antonucci, 1994; Fuhrer & Stansfeld, 2002). These relationship experiences are carried with the person through the lifespan and have been found to affect self-perceptions later in life (Ingersoll-Dayton, Morgan, & Antonucci, 1997). While the amount of time spent with friends and relatives was important, positive exchanges in a relationship were

found to increase positive self-perceptions of aging (Abbey, Abramis, & Caplan, 1985; Crooks et al., 2008).

### Sense of Mastery and Aging

The ability to feel competent in what one can do is also important. Research has indicated accomplishments and ability to complete tasks may increase feelings of adequacy and positive self-perceptions of aging (Gadalla, 2009; Jang, Bergman, Schonfeld, & Molari, 2006; Janssen, Abma, & Regenmortel, 2012). Sense of mastery encompasses being able to complete tasks, ability to take care of one's self, and staying physically active. As a result of growing older, some may no longer be able to do what they once could. Unfortunately, not everyone is willing to accept growing older. For those who find changes due to aging stressful, negative self-perceptions of aging may occur (Schieman, 2008). When people no longer feel as though they are able to have control over their lives or become dependent on others, negative self-perceptions, resentment, and animosity towards aging may develop (Cairney et al., 2009).

### The Big Five Model, Neuroticism, and Self-Perceptions of Aging

The Big Five Personality Model was developed from extensive research and analyses of personality traits (Goldberg, 1981). McCrae and Costa (1987) also developed a questionnaire known as the Neuroticism-Extraversion-Openness (NEO) inventory in an effort to explain personality, which resulted in identifying similar aspects of the domains of personality. The original inventory was based on three factors: neuroticism, extraversion, and openness. These factors were closely related to Goldberg's Big Five model, pushing McCrae and Costa (1987) to review their current inventory and expand it, adding both agreeableness and conscientiousness. The categories of personality development have since been organized into what is more commonly known as the Five Factor Model (FFM) or The Big 5 personality model. While the

two models are quite similar, criticism due to theoretical formulations as opposed to empirical research resulted for the FFM, but it was later found both models were very reliable, inter-correlated with one another, and supported nationally (McCrae & Costa, 1987; Goldberg, 1990; De Raad & Szirmak, 1994; Hrebickova, Ostendorf, & Angleitner, 1995; Saucier & Goldberg, 1998).

Personality is defined as characteristics within the person that make him or her unique (Friedman & Schustack, 2003), and neuroticism is described as one's tendency to experience emotions as negative (Harris & Dollinger, 2003). Over time, research has found the personality factor neuroticism to be related to higher incidences of reporting negative symptoms, poorer health, and increased visits to the doctor (Gilhooly, Hanlon, MacDonald, & Whyte, 2007). Individuals with high levels of neuroticism were also at a much higher risk for experiencing negative emotions such as depression, anxiety, and anger (McCrae & Costa, 1987; Jang et al., 2004; Wilson, Mendes de Leon, Bienias, Evans, & Bennett, 2004). Women in particular were found to be at a higher risk for developing negative emotions as adults, which may put them at risk for poor health and negative self-perceptions of aging (Wilson, Mendes de Leon, Bennett, Bienias, & Evans, 2004).

Women's current self-perceptions of aging and neuroticism, along with the limited research available on this issue, provide an ample opportunity for further research. One possibility is through looking at women's self-perceptions of aging and how neuroticism may relate to how women feel and view their own aging. Research completed by Jang et al. (2004), explored this concept by looking at self-perceptions of aging (with no respect to gender) and its relationship to neuroticism. The present study focuses exclusively on women because of their

likelihood to experience higher levels of neuroticism. It is hypothesized that women with high traits of neuroticism will have a more negative self-perception of aging.

## **CHAPTER 3. SELF-PERCEPTIONS: AGING AMONG OLDER ADULT WOMEN**

### **Abstract**

This study used a multilevel regression to examine the personality factor neuroticism and its influence on women's self-perceptions of aging. For this study, 102 older adult women 60 years or older who lived in the Red River Valley area participated. It was hypothesized that women who were higher in neuroticism would exhibit more negative self-perceptions of aging than those who were less neurotic. Results indicated sense of mastery, not neuroticism, as a significant predictor of self-perceptions of aging. Implications and future research on women, neuroticism, and self-perceptions of aging were discussed.

### **Introduction**

Western society predominantly presents women as young and attractive (Grogan, 2011). In contrast, older women are less likely to be portrayed in a positive light, often presented as lonely and even depressed (Grogan, 2011). While media and society may have an effect on self-perceptions of aging, personality is also believed to play a vital role in the development of self-perceptions. Neuroticism in particular is believed to influence self-perceptions of aging (Jang et al., 2004; Wilson, Mendes de Leon, Bennett, Bienias, & Evans, 2004).

#### *Effects of Neuroticism*

Neuroticism is of interest because of its association related to the impact on relationships, physical health, anxiety, depression, and anger (Jang et al., 2004; Wilson, Mendes de Leon, Bienias, Evans, & Bennett, 2004). Research has found neuroticism to be associated with emotional outcomes of individuals, including older adults (Ready, Akerstedt, & Mroczek, 2012). Since the factor neuroticism is known for one's tendency to experience negative emotions such as anxiety, depression, and anger (Jang et al., 2004; Wilson, Mendes de Leon, Bienias, Evans, &

Bennett, 2004), it would stand to reason that this factor may also influence self-perceptions of aging. Specifically, women who are found to be high in neuroticism have been found to experience more negative self-perceptions (Weiss, Costa, Karuza, Duberstein, Friedman, & McCrae, 2005).

While neuroticism is thought to decrease in old age, elderly individuals who are high in neuroticism and highly critical of self were more likely to have negative experiences and increased chances of negative self-perceptions of aging (Besser & Priel, 2005; Henriques-Calado, Duarte-Silva, Campos, Sacoto, Keong, & Junqueria, 2013). Lower life satisfaction, shorter lifespan, decreased health, and increased mental health issues were also found among older adults who were high in neuroticism (Jackson, Bogg, Walton, Wood, Harms, Lodi-Smith, et al., 2009; Ready & Robinson, 2008).

### *Impacts of Relationships and Social Support*

While research has shown that women generally have a larger and more varied social network, the quality of relationships is just as important (Acitelli & Antonucci, 1994; Fuhrer & Stansfeld, 2002). Throughout life people surround themselves with others who provide them with positive or negative relationships that influence and develop self-perceptions (Lubben, Blozik, Gillmann, Iliffe, Von-Renteln-Kruse, Beek, & Stuck, 2006). Positive relationships have been found to promote happy and optimistic outlooks on life, whereas negative relationships have been found to foster unhappy and negative outlooks on self and life (Abby, Abramis, & Caplan, 1985).

Since women generally have more complex and intimate relationships with others (Lubben et al., 2006), women who possess less positive relationships over time would be more likely to have negative self-perceptions of aging as they grow older than women with more

positive relationships. Overall, people who had negative and unhealthy relationships with friends and family were found to be less able to cope with life's changes, including growing older (Lubben et al., 2006). A social support system that provides a nurturing atmosphere may mean the difference of enjoying old age or fighting against it.

### *Aging and Self-Efficacy*

As individuals grow older, maintaining the ability to take care of one's self is quite important. Many people prefer to not be dependent on others for accomplishing daily activities (Gadalla, 2009; Jang, Bergman, Schonfeld, & Molari, 2006; Janssen, Abma, & Regenmortel, 2012). Lack of sense of mastery may cause feelings of inadequacy and incompetency that have been found to surface in individuals who were unable to manage day-to-day activities, or complete simple tasks without the help of others (Janssen, Abma, & Regenmortel, 2012). Fear of what could happen may create stress, anxiety, depression, and anger as people age (Schieman, 2008). The loss of control over being able to manage daily activities may be detrimental to some, and feelings of animosity and resentment towards others and one's self may develop (Cairney, Faulkner, Velduizen, & Wade, 2009). While not everyone develops negative self-perceptions, the aging process can illuminate a variety of feelings and emotions because of the varying views of what should be expected as people age.

### *Health Factors in Aging*

The development of a disease or physical impairment can create physical, social, and psychological consequences (Sutin, Costa Jr., Chan, Milaneschi, Eaton, Zonderman, Ferrucci, & Terracciano, 2013). The development of a chronic disease could potentially alter current self-perceptions of an individual (Sutin et al., 2013). Studies have shown that long-term diseases can

lead to negative lifestyle impacts on individuals, such as withdrawal from social situations, depression, and anger (Lubben et al., 2006).

Women in particular seem to have the disadvantage in respect to aging (Low, Molzahn, & Schopflocher, 2013). While society helps to frame self-perceptions over time, physical and mental decline, along with a withdrawal from social situations, is seen more often among women. Specifically, weight is a prime concern with women in regards to health and aging, (Grogan, 2011). While physical appearance (i.e., wrinkles and gray hair), may be disliked, it is often of less concern than physical body weight (Grogan, 2011). Physical decline due to disease or injury, along with decreased physical activity seem to be some of the prime culprits of increased weight gain among women and the main instigators of inability to shed the unwanted weight, leading to continued withdrawal from social situations, health concerns, and negative self-perceptions (Grogan, 2011).

In summary, there has been little research relating to neuroticism and self-perceptions of aging. Jang et al., (2006) found that individuals who were high in neuroticism had negative self-perceptions of aging. While neuroticism can increase the chance of depression, anxiety, anger, and health problems, the relationship between these factors and neuroticism in regards to self-perceptions of aging has yet to be completely understood. This study examined women and their self-perceptions of aging in hopes to help encourage a more positive and healthy outlook for the future of female aging.

## Methods

### *Participants*

A convenience, nonclinical sample of 112 older adult women in the Red River Valley area completed a questionnaire regarding self-perceptions of aging. Their age ranged from 60 to

90 years old. Participants were recruited through a senior services dining options and a senior newsletter. For this study, 120 surveys were distributed. Of the 112 surveys that were returned, 10 participants had significant amount of missing data, and were not used in the final analyses. The total sample of women who had complete information for this study was 102, with a completion rate of 85%. Descriptive information of the sample is shown in Table 1.

## Measures

### *Neuroticism*

Neuroticism was measured with 20-items from Goldberg's International Personality Inventory Pool (IPIP; Goldberg, 1999; Goldberg, et al., 2006). Participants were asked to indicate how they agreed with statements, such as "I feel threatened easily" and "I am not easily frustrated". A five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) was used, and responses were recoded and summed so the higher scores represented higher neuroticism. Reliability was shown to be high in this sample ( $\alpha = .95$ ).

### *Sense of mastery*

In order to assess mastery, Pearlin and Schooler's (1978) six-item Mastery Scale was used. Participants described whether or not they agreed with the statements, such as "I have little control about things that happen to me" and "What will happen in the future considerably depends on me". A five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) was used. All items negatively worded were reverse coded, and all items were then summed for the total mastery score. The reliability for the sample in this study was found to be high ( $\alpha = .75$ ).

### *Social network*

Social network of friends and family was assessed individually with Lubben's Social Network Scale (Lubben, 2006). Participants indicated how many friends or relatives were seen

on a monthly basis (0 to 9 or more), how often participants were in contact with those friends or relatives, with a range of less than monthly to daily, and how many friends or relatives the participants felt close to (0 to 9 or more). On average, participants felt close with three to four relatives and two of their friends, and also saw or heard from family members three to four times each month, and friends at least twice each month. Statements such as “How much do family members/friends really care about you?” and “How much does family members/your friend understand the way your feel about things?” were used on a scale ranging from 1 (*a lot*) to 5 (*not at all*). Social network with family was an eight-item scale, and social network with friends was a four-item scale. Cronbach’s  $\alpha$  was .51 for family and .35 for friends.

#### *Self-perception of health*

Self-perception of health was assessed by using three items from the OARS (Fillenbaum, 1988). Participants were asked to indicate how they felt about these items, and were to respond on a scale that ranged from 1 (*Poor*) to 7 (*Excellent*). The items assessed, included “How would you rate your overall health at the present time?”, “How is your present health compared to five years ago?”, and “How much do your health problems stand in the way of your doing the things you want to do?”. The reliability for this sample based on these items was found to be acceptable ( $\alpha = .64$ ).

#### *Self-perception of aging*

Self-perception of aging among participants was measured with five items from the Attitude Toward Own Aging in the Philadelphia Geriatric Center Morale Scale (PGCMS, Lawton, 1975). Participants were asked to respond in a yes or no format to the five self-perceptions of aging questions. Items for this scale included “Do things keep getting worse as you get older?”, “Do you have as much pep as you had last year?”, “Do you feel that as you get

older you are less useful?", "As you get older, are things better than you thought?", and "Are you as happy now as you were when you were younger?". Scores for items were recoded to indicate more positive self-perceptions. The reliability for this sample was found to be acceptable ( $\alpha = .69$ ).

#### *Demographic variables*

The demographic variables for this study included age (60-90+) grouped into categories, marital status (married, single, divorced/separated, widowed, never married), education (elementary school, some high school, completed high school, some college, two year college degree, four year college degree, some graduate work, completed Master's or professional degree, advanced graduate or Ph.D.), economic status (below \$25,000 to over \$125,000), and employment (employed full-time, employed part-time, unemployed, homemaker, retired).

#### *Analytic Strategy*

To determine the significance of self-perceptions of health and aging, two hierarchical regressions were conducted by entering independent blocks of predictors with (1) demographic variables, (2) sense of mastery, (3) neuroticism, and (4) social variables. For the self-perception of aging hierarchical regression, self-perception of health was also added as a final predictor in the second block of items. Intercorrelations among the variables were also assessed among the variables and variance inflation factors (VIF) to assess multicollinearity.

## Results

#### *Descriptive information of the study variables*

As shown in Table 1, in the sample of 102 women, Over half (52.9%) of women were between 80-89 years old, 52.9% were widowed, with 34.3% still married. A total of 37.7% had completed high school and 29.7% of participants had completed college. Almost half (45.2%) of

women had an economic status of \$49,000 or less per year and 86.3% were retired. In Table 3 the mean scores for neuroticism, sense of mastery, network with family, and network with friends were 45.93 (S.D. = 1.89), 24.58 (S.D. = 4.84), 24.67 (S.D. = 3.58), and 18.14 (S.D. = 3.29). Mean scores for self-perception of health and self-perception of aging were 13.01 (S.D. = 3.50) and 2.81 (S.D. = 1.63).

#### *Correlations among study variables*

Correlations were conducted to better understand the underlying associations among variables (see Table 2). The higher the education a person received coincided with a much higher income than other women who did not have a college degree or beyond. Women who believed their health to be better were found to be more likely to perceive their aging positively. While a positive family network was found to be associated with more positive relationships with friends, there was no association with self-perceptions of health or aging.

Older age was found to have a more positive relationship on self-perception of health. Women with higher levels of neuroticism and lower sense of mastery were more likely to experience negative self-perceptions of aging. Overall, the correlations suggest that having high levels of neuroticism may be indicative of negative self-perceptions of aging among women. While the regression model itself did not provide evidence of significance towards neuroticism and negative self-perceptions of aging, it suggests that it could possibly be a contributing factor under other circumstances.

#### *Regression model of self-perception of health and aging*

Hierarchical regression models of self-perception of health and aging are summarized in Table 4. The initial model was found to have explained no variance in self-perception of health. In the second model, while sense of mastery was shown to be significant, demographic variables

did not explain any of the variance in relation to the model. A total of 15% of the variance was accounted for by sense of mastery for self-perceptions of aging.

Table 1. Percentages of the sample and study variables (N = 102).

	%
<b>Age</b>	
60-69	10.8
70-79	26.5
80-89	52.9
90+	9.8
<b>Marital Status</b>	
Married	34.3
Single	2.9
Divorced/Separated	7.8
Widowed	52.9
Never Married	2.0
<b>Education</b>	
Elementary school	3.0
Some high school	5.0
Completed high school	27.7
Some college	29.7
Two year college degree	5.0
Four year college degree	14.9
Some graduate work	5.0
Completed Master's or professional degree	5.9
Advanced graduate work or Ph.D.	4.0
<b>Economic Status</b>	
Below \$25,000	26.9
\$25,000-\$49,000	45.2
\$50,000-\$74,000	12.9
\$75,000-\$99,000	6.5
\$100,000-\$124,000	4.3
\$125,000 and above	4.3
<b>Employment</b>	
Employed full-time	1.0
Employed part-time	6.9
Unemployed	3.9
Homemaker	2.0
Retired	86.3

Table 2. Correlations among study variables (N = 102).

	1	2	3	4	5	6	7	8	9
(1) Age	—	-0.13	-0.19	-0.11	-0.14	0.13	0.08	.32**	0.08
(2) Education		—	.46**	-0.18	0.05	0.04	-0.01	0.12	0.07
(3) Income			—	-0.15	0.08	0.15	-0.1	0.11	0.00
(4) Neuroticism				—	-.54**	0.04	-0.08	-0.13	-.47**
(5) Mastery					—	-0.19	0.09	0.1	.41**
(6) Network with family						—	.27*	0.12	-0.21
(7) Network with friends							—	0.04	0.09
(8) Self-Perception of health								—	.33**
(9) Self-Perception of aging									—

\*P< .05.

\*\*P< .01.

Table 3. Means, standard deviations, and alphas of study variables (N = 102).

	M	S.D.	$\alpha$
Neuroticism	45.93	1.89	.95
Mastery	24.58	4.84	.75
Network with family	24.67	3.58	.51
Network with friends	18.14	3.29	.35
Self-perception of health	13.01	3.50	.64
Self-perception of aging	2.81	1.63	.69

Table 4. Regression models of self-perception of health and aging.

Predictor	Self-perception of health			Self-perception of aging		
	$\beta$	R <sup>2</sup>	$\Delta R^2$	$\beta$	R <sup>2</sup>	$\Delta R^2$
<u>Step 1</u>						
Age	.13	.05	-.02	-.12	.02	-.05
Education	-.02			.05		
Income	.22			-.10		
<u>Step 2</u>						
Age	.17	.07	-.02	.02	.23*	.15*
Education	-.02			.08		
Income	.25			-.03		
Mastery	.15			.48*		
<u>Step 3</u>						
Age	.18	.07	-.04	-.02	.26	.16
Education	-.00			.03		
Income	.25			-.05		
Mastery	.17			.37*		
Neuroticism	.04			-.20		
<u>Step 4</u>						
Age	.18	.09	-.08	-.03	.30	.15
Education	.01			.02		
Income	.25			-.06		
Mastery	.19			.31		
Neuroticism	.05			-.22		
Network with Family	.11			-.17		
Network with Friends	.06			.03		
Self-perception of Health				.18		

\*P< .05

## Discussion

The current study of 102 older adult women focused on self-perceptions of aging, and how personality and demographic factors relate to how women view themselves as they grow older. In the hierarchical regression model of self-perception of aging and health, age, education, and economic status were not significant in the prediction of self-perception of aging. While previous research found that people with low economic status had a more negative self-perception (Jang, et al., 2004; Malka & Miller, 2007), this was not the case for the current study. After controlling for demographic variables, sense of mastery was found to be a significant predictor of self-perceptions of aging.

While the original article this research expanded on took place in Korea, there may be some cultural expectations and outcomes at play in regards to neuroticism and self-perceptions of aging since this current piece of research looked at women who lived in the Midwestern area of the United States. Although the main hypothesis of this research was to look at neuroticism and its influence on self-perceptions of aging, it was found through the hierarchical regression analysis that neuroticism was not significant in terms of negative self-perceptions of aging among women. Even though the statistical analysis showed no significance of neuroticism influencing self-perceptions of aging, it remains an intriguing part of discussion. While the initial correlation showed there was the potential for neuroticism to influence self-perceptions of aging, other factors seemed to take precedence over neuroticism when it came to influencing self-perceptions of aging for this particular group and are discussed below.

One of the interesting aspects of this research was that the self-perception items of aging did not take into account the physical aspects of aging and how this may affect aging self-perceptions. The body has become increasingly important in today's society, as this has become

a way we evaluate our self-worth (Slevin, 2010). While there seems to have been a blurring of age boundaries in regards to physical appearance and body image, many consumer messages suggest an overall importance to maintain our physical appearance through diet and exercise even as we become older (Slevin, 2010).

New research has come to light suggesting that as people grow older they may redirect their social schema of how one should look and feel as he or she ages (Grogan, 2011), which may explain the lack of negative self-perceptions of aging among women in this study. Also, the proportion of older adults who are portrayed in media has increased, which may explain how self-perceptions of aging may have shifted over time. Instead of women becoming upset at their aging bodies no longer looking like many of the youthful individuals society portrays as attractive, older adult women may instead begin to identify with women closer to their own age, and develop new and more positive self-perceptions of aging (Grogan, 2011).

The current study found sense of mastery to be significant on women's self-perceptions of aging, previous research has also found that sense of mastery may have an effect on women's attitudes and emotional states (Jang, et al., 2004; Lachman & Weaver, 1998). Those who do exhibit low sense of mastery may choose to withdraw from society, thus being more at risk for psychological problems such as depression and anxiety (Jang et al., 2004). In particular, older adults may be more likely to dwell on what they cannot do, and these feelings of inadequacy or ability to complete certain tasks may influence self-perceptions of aging (Jang, et al., 2004).

Physical appearance and health seem to have such a large impact on self-perceptions of aging. This may explain why sense of mastery, or sense of control, played such an important role in women's self-perceptions of aging. Although the current study did not focus on physical aging and how this may impact self-perceptions, it is worth noting, as other research has found this

may play a larger role than previously thought in aging self-perceptions (Gadalla, 2009; Pudrovska, Schieman, Pearlin, & Nguyen, 2005).

While the self-perception of aging items used in the survey can give a quick view of how an individual may feel about their age, none of the items relate to physical changes that happen as one becomes older. Since research indicated that weight gain and other physical changes may be correlated to negative self-perceptions of aging, it is suggested that a body image scale be incorporated into future research to better examine the relationship between self-perceptions of aging and psychosocial factors.

If men and women were to be examined in terms of self-perceptions of aging, sense of mastery, and body image, the results may be different, as women seem to be more concerned than men about their physical appearances (Slevin, 2010). While this does not mean that appearances are not important to men, they seem to be less important, as men tend to be socialized to objectify their bodies in terms of functionality (Cash, 2000). With that, we may find that women may have more negative self-perceptions of aging when negative body image is involved, and men may experience more negative self-perceptions of aging if there is low sense of mastery.

Since this study was a convenience sample of older adult women in the Red River Valley area, the findings cannot be generalized to the older adult female population as a whole. Recruitment of female participants was also a limitation, as the sample was recruited only from senior living facilities, community-dining programs located in the Red River Valley area, and older women who subscribed to a newsletter for older adults. Future research should expand outside of these connections in order to encompass a more generalizable sample.

While this study was not the first to examine self-perceptions of aging and personality factors, it was the first study of its kind to specifically look at how women in the United States, and specifically older adult women in the Red River Valley area, perceive the aging process, and how certain factors may affect self-perceptions of aging. The findings contribute to the body of knowledge about women and self-perceptions of aging and address the possibility of older women choosing to identify with other women their own age. Despite the limitations, the older adult population will continue to grow, and continuous examination of self-perceptions of aging is important. Research on sense of mastery and even gender differences on self-perception of aging warrants further exploration in relation to psychosocial factors of older adults' self-perception of aging.

#### References

- Abbey, A., Abramis, D. J., & Caplan, R. D. (1985). Effects of different sources of social support and social conflict on emotional well-being. *Basic and Applied Social Psychology, 6*(2), 111-129.
- Acitelli, L. K., & Antonucci, T. C. (1994). Gender differences in the link between marital support and satisfaction in older couples. *Journal of Personality and Social Psychology, 67*(4), 688-698.
- Besser, A., & Priel, B. (2005). Interpersonal relatedness and self-definition in late adulthood depression: Personality predispositions, and protective factors. *Social Behavior and Personality, 33*, 351–382.
- Cairney, J., Faulkner, G., Veldhuizen, S., & Wade, T. J. (2009). Changes over time in physical activity and psychological distress among older adults. *The Canadian Journal of Psychiatry, 54*(3), 160-169.

Fillenbaum, G. (1988). *Multidimensional functional assessment: The Duke older American resources and services procedure*. Hillsdale, NJ: Erlbaum.

Fuhrer, R., & Stansfeld, S. A. (2002). How gender affects patterns of social relations and their impact on health: A comparison of one or multiple sources of support from “close persons”. *Social Science and Medicine*, 54, 811-825.

Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory Measuring the lower-level facets of several five-factor models. In I. Mervielde, I Deary, F De Fruyt, & F. Ostendorf (Eds.), *Personality Psychology in Europe*, Vol 7 (pp. 7-28). Tilburg, The Netherlands: Tilburg University Press.

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. C. (2006). The International Personality Item Pool and the future of public-domain personality measures. *Journal of Research in Personality*, 40, 84-96.

Grogan, S. (2011). Body image development in adulthood. In T. Cash & L. Smolak (Eds.), *Body image* (pp. 93-99). New York, NY: The Guilford Press.

Henriques-Calado, J., Duarte-Silva, M. E., Campos, R. C., Sacoto, C., Keong, A. M., & Junqueria, D. (2013). Predicting relatedness and self-definition depressive experiences in aging women based on personality traits: A preliminary study. *Bulletin of the Menninger Clinic*, 77(3), 269-88. doi: 10.1521/bumc.2013.77.3.269

Jackson, J. J., Bogg, T., Walton, K. E., Wood, D., Harms, P. D., Lodi-Smith, J., et al. (2009). Not all conscientiousness scales are alike: A multi-method, multisample study of age differences in the facets of conscientiousness. *Journal of Personality and Social Psychology*, 96(2), 446-459. doi: 10.1037/a0014156

- Janssen, B. M., Abma, T. A., & Regenmortel, T. V. (2012). Maintaining mastery despite age related losses. The resilience narratives of two older women in need of long-term community care. *Journal of Aging Studies*, 26(3), 343-354.
- Jang, Y., Poon, L. W., Kim, S., & Shin, B. (2004). Self-perceptions of aging and health among older adults in Korea. *Journal of Aging Studies*, 18, 485-496.
- Lawton, A. H. (1965). The historical developments in the biological aspects of aging and the aged. *The Gerontologist* 5(1 Part 2), 25-32. doi: 10.1093/geront/5.1\_Part\_2.25
- Low, G., Molzahn, A. E., & Schopflocher, D. (2013). Attitudes to aging mediate the relationship between older peoples' subjective health and quality of life in 20 countries. *Health and Quality of Life Outcomes*, 11(146), 1-10.
- Lubben, J., Blozik, E., Gillmann, G., Iliffe, S., von Renteln Kruse, W., Beck, J. C., & Stuck, A. E. (2006). Performance of an abbreviated version of the Lubben Social Network scale among three European community-dwelling older adult populations. *The Gerontologist*, 45(4), 503-513.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, 24, 2–15.
- Pudroska, T., Schieman, S., Pearlin, L. I., & Nguyen, K (2005). The sense of mastery as a mediator in the association between economic hardship and health in late life. *Journal of Aging and Health*, 17(5), 634-660.
- Ready, R. E., Akerstedt, A. M., & Mroczek, D. K. (2012). Emotional complexity and emotional well-being in older adults: Risks of high neuroticism. *Aging & Mental Health*, 16(1), 17-26.

- Ready, R. E., & Robinson, M. D. (2008). Do older individuals adapt to their traits?: Personality-emotion relations among younger and older adults. *Journal of Research in Personality*, 42(4), 1020-1030. doi: 10.1016/j.jrp.2008.02.004
- Schieman, S. (2008). The education-contingent association between religiosity and health: The differential effects of self-esteem and the sense of mastery. *Journal for the Scientific Study of Religion*, 47(4), 710-724.
- Slevin, K. F. (2010). "If I had lots of money I'd have a body makeover": Managing the aging body. *Social Forces*, 88(3), 1003-1020.
- Sutin, A. R., Costa Jr., P. T., Chan, W., Milaneschi, Y., Eaton, W. W., Zonderman, A. B., Ferrucci, L., & Terracciano, A. (2013). I know not to, but I can't help it: Weight gain and changes in impulsivity-related personality traits. *Psychological Science*, 24(7), 1323-1328. doi: 10.1177/0956797612469212
- Weiss, A., Costa, P. T., Karuza, J., Duberstein, P. R., Friedman, B., & McCrae, R. R. (2005). Cross-sectional age differences in personality among medicare patients aged 65 to 100. *Psychology and Aging*, 20(1), 182-5.
- Wilson, R. S., Mendes De Leon, C. F., Bennett, D. A., Bienias, J. L., Evans, D. A. (2004). Depressive symptoms and cognitive decline in a community of older persons. *Journal of Neurological Neurosurgery and Psychiatry*, 75(1), 126-129.

## **CHAPTER 4. GENERAL CONCLUSIONS**

This thesis examined research on older adult women in the Red River Valley area and their self-perceptions of aging. Research on self-perceptions in the past has focused on topics such as eating disorders, body image distortion, aging stereotypes, and physical functioning (Gagne, et al., 2012; Levy, 2008; Sargent-Cox, Anstey, & Luszcz, 2012). Other current research has attempted to look at both health and psychosocial factors and their impacts on self-perceptions of aging (Jang et al., 2004). These factors include neuroticism, sense of mastery, network with family, network with friends, self-perception of health, number of sick days, chronic conditions, and disability.

The research was completed by 102 female participants who were part of a senior services community dining program, or received a monthly senior newsletter. The focus of this research was to inspect (a) women's self-perceptions of aging and (b) the personality factor, neuroticism, and its impact on self-perception of aging.

Findings of the research are offered in Chapter 3. The findings were presented in article format and will be submitted to a professional journal for potential publication. Chapter 3 included the overall outcome of neuroticism and self-perceptions of aging, and a focus on sense of mastery, as it was found to be more instrumental in directing women's self-perceptions of aging. Chapter 3 will be submitted to *Journal of Aging Studies* or *The Journal of Women and Aging*.

### **Key Findings**

While Jang et al. (2004) examined self-perceptions of aging in older adults in Korea, this study was the first to explore self-perceptions of aging in the United States, and more specifically, to highlight women's self-perceptions of aging in relation to psychosocial factors,

relationships with family and friends, sense of mastery, and self-perception of health. An analysis of the 102 older adult women resulted in a key finding regarding the affect neuroticism had on self-perception of aging is examined.

### *Neuroticism and Self-Perception of Aging*

The most intriguing part of this study was the results pertaining to neuroticism and self-perception of aging. While many previous studies have found that the personality factor, neuroticism, is responsible for many of the negative thought processes and feelings (Jang et. al, 2004), for this particular group of women, neuroticism was found to have no impact on self-perception of aging. In this particular sample, very few women were found to have high levels of neuroticism and most had a positive outlook on aging.

While there could be a multitude of reasons as to why this particular group of women defied the norm of research relating to neuroticism, a couple of possibilities include: (1) This particular group of women was extremely well-adjusted; (2) Neuroticism may not be the mitigating factor that influences self-perceptions of aging. In fact, it was found that sense of mastery was trending towards significance and may play a larger role in women's self-perceptions of aging. Lastly, (3) There may be some cultural barriers as to why people in Korea were found to have neuroticism influence self-perceptions of aging whereas women in the United States were not found to have this as an influencing factor in self-perceptions of aging.

### **Limitations of the Study**

A limitation of the study was that the responses from the survey were purely based on self-perceptions of the individual. Since this was a quantitative study of women residing in the Red River Valley area, the overall findings cannot be generalized to the entire population of older adult women. The convenience sample consisted of 102 older adult women who were 60

years of age or older. The recruitment phase was limited to those who were part of the senior service dining program, or senior monthly newsletter. One retirement complex was suggested for this study, and they were also included. While the majority of the participants completed the survey in full, several participants chose to only disclose responses on a few of the items within the survey, which resulted in not being able to use some women's survey responses.

### Implications for Future Research

Several implications for future research were determined as a result of this study. This study was an attempt to understand women's self-perceptions of aging and how psychosocial factors may contribute to either negative or positive outcomes of self-perceptions and it is suggested that further research look at (a) Self-perceptions of aging between both older adult men and women; (b) A more in-depth look at sense of mastery and its impact on self-perception of aging; (c) The recruitment of a more generalizable sample of men and women; (d) the use of body image items for assessing self-perceptions of aging; and (e) A qualitative study to capture a more in-depth view of how one thinks and feels about his or her aging process and how certain factors throughout the lifespan may have contributed to this self-perception of aging.

### Summary

Self-perceptions of aging among older adult women provided a unique and interesting perspective of the women in the Red River Valley area. As the population of older adults is growing, it is important to gain an understanding of what they are going through. Self-perceptions of aging can be explained as involving both psychosocial and physiological aspects of the individual and how these various factors contribute to self-perceptions of aging.

While the research found neuroticism not to be significant in relation to women's self-perceptions of aging, this is not consistent with the literature, and should be examined more

closely with a second sample of individuals. Overall, the majority of women indicated that being able to take care of one's self and not always having to rely on others was an important part of who they were.

## REFERENCES

- Abbey, A., Abramis, D. J., & Caplan, R. D. (1985). Effects of different sources of social support and social conflict on emotional well-being. *Basic and Applied Social Psychology, 6*(2), 111-129.
- Acitelli, L. K., & Antonucci, T. C. (1994). Gender differences in the link between marital support and satisfaction in older couples. *Journal of Personality and Social Psychology, 67*(4), 688-698.
- Aiken, L. S., & West, S. G. (1991). Multiple Regression: Testing and interpreting interactions . Newbury Park, CA: Sage.
- Allport, G. W., & Odbert, H. S. (1936). Trait-names: A psycho-lexical study. *Psychological Monographs, 47*, 211.
- Altschuler, J., & Katz, A. D. (2010). Keeping your eye on the process: Body image, older women, and countertransferrance. *Journal of Gerontological Social Work, 53*, 200-214.
- Bem, D. J. (1972). Self-perception theory. *Advances in Experimental Social Psychology, 6*, 1-62.
- Borzumato-Gainey, C., Kennedy, A., McCabe, B., Degges-White, S. (2009). Life satisfaction, self-esteem, and subjective age in women across the life span. *Adultspan Journal, 8*(1), 29-42.
- Cairney, J., Faulkner, G., Veldhuizen, S., & Wade, T. J. (2009). Changes over time in physical activity and psychological distress among older adults. *The Canadian Journal of Psychiatry, 54*(3), 160-169.
- Chrisler, J. C. (2011). Leaks, lumps, and lines: Stigmas and women's bodies. *Psychology of Women Quarterly, 35*(2), 202-214.

- Courville, T., & Thompson, B. (2001). Use of structure coefficients in published multiple regression articles:  $\beta$  is not enough. *Educational and Psychological Measurement, 61*(2), 229-248.
- Covey, H. C. (1989). Old age portrayed by the ages-of-life models from the middle ages to the 16<sup>th</sup> century. *The Gerontologist, 29*(5), 692-698. doi:10.1093/geront/29.5.692
- Crooks, V. C., Lubben, J., Petitti, D. B., Little, D., & Chiu, V. (2008). Social network, cognitive function, and dementia incidence among elderly women. *American Journal of Public Health, 98*(7), 1221-1227.
- Degges-White, S., & Myers, J. E. (2006). Transitions, wellness, and life-satisfaction: Implications for counseling midlife women. *Journal of Mental Health Counseling, 28*(2), 133-150.
- De Raad, B., & Szirmak, Z. (1994). The search for the “Big Five” in a non-Indo-European language: The Hungarian trait structure and its relationship to the EPQ and the PTS. *European Review of Applied Psychology, 44*, 17-26.
- Duay, D. L., & Bryan, V. C. (2006). Senior adults’ perceptions of successful aging. *Educational Gerontology, 32*, 423-445. doi: 10.1080/03601270600685636
- Ferraro, F. R., Muehlenkamp, J. J., Paintner, A., Wasson, K., Hager, T., & Hoverson, F. (2008). Aging, body image, and body shape. *The Journal of General Psychology, 135*(4), 379-392.
- Fillenbaum, G. (1988). *Multidimensional functional assessment: The Duke older American resources and services procedure*. Hillsdale, NJ: Erlbaum.
- Fischer, D. H. (1977). *Growing old in America*. New York: Oxford University Press.

- Freeman, J. T. (1965). Medical perspectives in aging (12<sup>th</sup>-19<sup>th</sup> century). *The Gerontologist*, 5(1 Part 2), 1-24. doi:10.1093/geront/5.1\_Part\_2.1
- Friedman, H. S., & Schustack, M. W. (2003). *Personality. Classic theories and modern research* (2<sup>nd</sup> ed.). Boston: Allyn and Bacon.
- Fuhrer, R., & Stansfeld, S. A. (2002). How gender affects patterns of social relations and their impact on health: A comparison of one or multiple sources of support from “close persons”. *Social Science and Medicine*, 54, 811-825.
- Gadalla, T. M. (2009). Sense of mastery, social support, and health in elderly Canadians. *Journal of Aging and Health*, 21(4), 581-595.
- Geis, K. J. and C. E. Ross (1998). .A New Look at Urban Alienation: the Effect of Neighborhood Disorder on Perceived Powerlessness. *Social Psychology Quarterly*, 61(3), 232-46.
- Gilhooly, M. and Hanlon, P.W. and Cullen, B. and Macdonald, S. and Whyte, B.W. (2007) Successful ageing in an area of deprivation: Part 2 - A quantitative exploration of the role of personality and beliefs in good health in old age. *Public Health*, 121(11), 814-821.
- Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of personality and social psychology*, (Vol. 2, pp. 141-165). Beverly Hills, CA: Sage.
- Goldberg, L. R. (1990). An alternative “description of personality”: The Big-Five factor structure. *Journal of Personality and Social Psychology*, 59, 1216-1229.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4(1), 26-42.

- Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory Measuring the lower-level facets of several five-factor models. In I. Mervielde, I Deary, F De Fruyt, & F. Ostendorf (Eds.), *Personality Psychology in Europe*, Vol 7 (pp. 7-28). Tilburg, The Netherlands: Tilburg University Press.
- Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. C. (2006). The International Personality Item Pool and the future of public-domain personality measures. *Journal of Research in Personality*, 40, 84-96.
- Gow, A. J., Whiteman, M. C., Pattie, A., & Deary, I. J. (2005). Goldberg's 'IPIP' Big-Five Factor markers: Internal consistency and concurrent validation in Scotland. *Personality and Individual Differences*, 39, 317-329.
- Guenole, N., & Chernyshenko, O. S. (2005). The suitability of Goldberg's Big Five 'IPIP' personality markers in New Zealand: A dimensionality, bias, and criterion validity evaluation. *New Zealand Journal of Psychology*, 34(2), 86-96.
- Gupta, M. A., & Schork, N. J. (1993). Aging-related concerns and body image: Possible future implications for eating disorders. *International Journal of Eating Disorders*, 14(4), 481-486.
- Harris, L. A., & Clancy Dollinger, S. M. (2003). Individual differences in personality traits and anxiety about aging. *Personality and Individual Differences*, 34, 187-194.
- Havighurst, R. J. (1961). Successful aging. *The Gerontologist*, 1(1), 8-13.  
doi:10.1093/geront/1.1.8
- Hildingh, C., Fridlund, B., & Baigi, A. (2008). Sense of coherence and experiences of social support and mastery in the early discharge period after an acute cardiac event. *Journal of Clinical Nursing*, 17(10), 1303-11.

- Horton, S., Baker, J., Cote, J., & Deakin, J. M. (2008). Understanding seniors' perceptions and stereotypes of aging. *Educational Gerontology, 34*, 997-1017.
- Hrebickova, M., Ostendorf, F., & Angleitner, A. (1995). *Basic dimensions of personality description in the Czech language*. Poster presented at the Seventh Meeting of the International Society for Study of Individual Differences, Warsaw, Poland.
- Huebner, D. M., & Fredrickson, B. L. (1999). Gender differences in memory perspectives: Evidence for self-objectification in women. *Sex Roles, 41*, 459-467.
- Ingersoll-Dayton, B., Morgan, D., & Antonucci, T. (1997). The effects of positive and Negative social exchanges on aging adults. *Journal of Gerontology, Series B Social Sciences, 52B*, S190-S199.
- Jang, Y., Bergman, E., Schonfeld, L., & Molinari, V. (2006). Depressive symptoms among older residents in assisted living facilities. *The International Journal of Aging and Human Development, 63(4)*, 299-315.
- Jang, Y., Poon, L. W., Kim, S., & Shin, B. (2004). Self-perceptions of aging and health among older adults in Korea. *Journal of Aging Studies, 18*, 485-496.
- Janssen, B. M., Abma, T. A., & Regenmortel, T. V. (2012). Maintaining mastery despite age related losses. The resilience narratives of two older women in need of long-term community care. *Journal of Aging Studies, 26(3)*, 343-354.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm Shift to the Integrative Big-Five Trait Taxonomy: History, Measurement, and Conceptual Issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press.
- Klages, L. (1926). The science of character (Translated 1932). London: Allen and Unwin.

- Kleinspehn-Ammerlahn, A., Kotter-Grühn, D., & Smith, J. (2008). Self-perceptions of aging: Do subjective age and satisfaction with aging change during old age? *Journal of Gerontology, Series B: Psychological Sciences*, 63, P377-P385.
- Knofczynski, G. T., & Mundrom, D. (2008). Sample sizes when using multiple linear regression for prediction. *Educational and Psychological Measurement*, 68 (3), 431-442.
- Lachman, M. E., & Weaver, S. L. (1998). The sense of control as a moderator of social class differences in health and well-being. *Journal of Personality and Social Psychology*, 74(3), 763-773. doi: 10.1037/0022-3514.74.3.763
- Lawton, A. H. (1965). The historical developments in the biological aspects of aging and the aged. *The Gerontologist* 5(1 Part 2), 25-32. doi: 10.1093/geront/5.1\_Part\_2.25
- Levy, B. R. (2003). Mind matters: Cognitive and physical effects of aging self-stereotypes. *Journal of Gerontology*, 58B(4), P203-P211.
- Levy, B. R., & Myers, L. M. (2004). Preventive health behaviors influenced by self-perceptions of aging. *Preventive Medicine*, 39, 625-629. doi: 10.1016/j.ypmed.2004.02.029
- Levy, B. R., Slade, M. D., Kunkel, S. R., & Kasl, S. V. (2002). Longevity increased by positive self-perceptions of aging. *Journal of Personality and Social Psychology*, 83(2), 261-270.
- Levy, B. R., Slade, M. D., & Kasl, S. V. (2002). Longitudinal benefit of positive self-perceptions of aging on functional health. *Journal of Gerontology, Series B: Psychological Sciences*, 57, P409-P417.

- Lewis, D. M., & Cachelin, F. M. (2001). Body image, body dissatisfaction, and eating attitudes in midlife and elderly women. *Eating Disorders*, 9, 29-39.
- Lubben, J., Blozik, E., Gillmann, G., Iliffe, S., von Renteln Kruse, W., Beck, J. C., & Stuck, A. E. (2006). Performance of an abbreviated version of the Lubben Social Network scale among three European community-dwelling older adult populations. *The Gerontologist*, 45(4), 503-513.
- Malka, A., & Miller, D. T. (2007). Political-economic values and the relationship between socioeconomic status and self-esteem. *Journal of Personality*, 75(1), 25-42. doi: 10.1111/j.1467-6494.2006.00431.x
- Martin P., Long M. V., Poon L. W. (2002) Age changes and differences in personality traits and states of the old and very old. *Journal of Gerontology, Series B: Psychological Sciences* 57(2):P144–P152.
- McContha, J. T., Hayta, V., Reiser-Danner, L., & McContha, D. (2004). Turkish and U.S. attitudes toward aging. *Educational Gerontology*, 30, 169-183. doi: 10.1080/03601270490272106
- McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52(1), 81-90.
- Miller, D. E., & Kunce, J. T. (1973). Prediction and statistical overkill revisited. *Measurement and Evaluation in Guidance*, 6, 157-163.
- Mock, S. E., & Eibach, R. P. (2011). Aging attitudes moderate the affect of subjective age on psychological well-being: Evidence from a 10-year longitudinal study. *Psychology and Aging*, 26(4), 979-986. doi: 10.1037/a0023877

- Moody, H. R. (2010). Aging: Concepts and controversies (6<sup>th</sup> ed.). Thousand Oaks, CA: Pine Forge Press.
- Moor, C., Zimprich, D., Schmitt, M., & Kliegel, M. (2006). Personality, aging self-perceptions, and subjective health: A mediation model. *International Journal of Aging and Human Development*, 63(3), 241-257.
- Moser, C., Spagnoli, J., & Santos-Eggimann, B. (2011). Self-perception of aging and vulnerability to adverse outcomes at the age of 65-70 years. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 66(6), 675-680.  
doi: 10.1093/geronb/gbr052
- Murray, G., Judd, F., Jackson, H., Fraser, C., Komiti, A., Pattison, P., Wearing, A., & Robins, G. (2007). Ceremonies of the whole: Does social participation moderate the mood consequences of neuroticism? *Social Psychiatry and Psychiatric Epidemiology*, 42, 173-180.
- Ode, S., Hilmert, C. J., Zielke, D. J., & Robinson, M. D. (2010). Neuroticism's importance in understanding the daily life correlates of heart rate variability. *Emotion*, 10(4), 536-543.
- Papalia, D. E., Sterns, H. L., Feldman, R. D., & Camp, C. J. (2007). Adult development and aging (3<sup>rd</sup> ed.). New York: McGraw-Hill.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, 24, 2-15.
- Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillside, NJ: Lawrence Erlbaum.

- Phelan, E. A., Anderson, L. A., LaCroix, A. A., & Larson, E. B. (2004). Older adults' views of "successful aging": How do they compare with researchers' definitions? *Journal of the American Geriatrics Society*, 52, 211-216.
- Pinquart, M. (2002). Creating and maintaining purpose in life in old age: A meta-analysis. *Ageing International*, 27(2), 91-114.
- Pinquart, M., & Sorensen, S. (2000). Influences of socioeconomic status, social network, and competence on subjective well-being in later life: A meta-analysis. *Psychology and Aging*, 15(2), 187-224.
- Pinquart, M., & Sorensen, S. (2001). Gender differences in self-concept and psychological well-being in old age: A meta-analysis. *The Journals of Gerontology*, 56B(4), P195-P213.
- Quadagno, J. (2008). Aging and the life course: An introduction to social gerontology (4<sup>th</sup> ed.). New York: McGraw-Hill.
- Richards, N., Warren, L., & Gott, M. (2012). The challenge of creating 'alternative' images of ageing: Lessons from a project with older women. *Journal of Aging Studies*, 26, 65-78.
- Robinson, M. D., Moeller, S. K., & Fetterman, A. K. (2010). Neuroticism and responsiveness to error feedback: Adaptive self-regulation versus affect reactivity. *Journal of Personality*, 78(5), 1469-1496.
- Saucier, G., & Goldberg, L. R. (1996). Evidence for the Big-Five in analysis of familiar English personality adjectives. *European Journal of Personality*, 10, 61-77.

- Schieman, S. (2008). The education-contingent association between religiosity and health: The differential effects of self-esteem and the sense of mastery. *Journal for the Scientific Study of Religion*, 47(4), 710-724.
- Schoemann, A. M., & Branscombe, N. R. (2011). Looking young for your age: Perceptions of anti-aging actions. *European Journal of Social Psychology*, 41, 86-95.
- Schroots, J. F. (1996). Theoretical developments in the psychology of aging. *The Gerontologist*, 36(6), 742-748. doi:10.1093/geront/36.6.742
- Sherman, S. R. (2001). Images of middle-aged and older women: Historical, cultural, and personal. In J. M. Coyle (Ed.), *Handbook on women and aging* (pp. 14-28). Westport, CT: Praeger Publishers.
- Shonkoff, J. P., & Phillips, D. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.
- Stark-Wroblewski, K., Edelbaum, J. K., & Bello, T. O. (2008). Perceptions of aging among rural midwestern senior citizens: Signs of women's resiliency. *Journal of Women & Aging*, 20(3/4), 361-373.
- Sukamolson, S. (n.d.). Fundamentals of quantitative research. Language Institute: Chulalongkorn University
- Surjadi, F. F., Lorenz, F. O., Wickrama, K. A. S., & Conger, R. D. (2011). Parental support, partner support, and the trajectories of mastery from adolescence to early adulthood. *Journal of Adolescence*, 34, 619-628.
- Tabachnick, B. G., and Fidell, L. S. (2007). *Using Multivariate Statistics* (5<sup>th</sup> ed.). Boston: Allyn and Bacon.

- Wadsworth, L. A., & Johnson, C. P. (2008). Mass media and health aging. *Journal of Nutrition for the Elderly*, 27(3/4), 319-331.
- Walen, H. R., & Lachman, M. E. (2000). Social support and strain from partner, family, and friends: Costs and benefits for men and women in adulthood. *Journal of Social and Personal Relationships*, 17(1), 5-30.
- Wilson, R. S., Mendes De Leon, C. F., Bennett, D. A., Bienias, J. L., Evans, D. A. (2004). Depressive symptoms and cognitive decline in a community of older persons. *Journal of Neurological Neurosurgery and Psychiatry*, 75(1), 126-129.
- Winterich, J. A. (2007). Aging, femininity, and the body: What appearance changes mean to women with age. *Gender Issues*, 24, 51-69.
- Yun, R. J., & Lachman, M. E. (2006). Perceptions of aging in two cultures: Korea and American views on old age. *Journal of Cross Cultural Gerontology*, 21, 55-70.  
doi: 10.1007/s10823-006-9018-y

## **APPENDIX A. PARTICIPANT RECRUITMENT FLYER<sup>1</sup>**

### **How do You Feel About Your Age?**

Participants are needed for a research study being conducted by Eryn DeBuhr at North Dakota State University through December. The purpose of this study is to learn more about women's self-perceptions of aging in North Dakota and Minnesota. The study will require a time commitment of approximately 15-20 minutes for a one-time survey. The survey can be completed either in paper form or can be accessed online. Female participants are needed who are at least 60 years of age or older.

If you are interested in participating in this study, a survey can be found online at [www.surveymonkey.com](http://www.surveymonkey.com). If you would rather complete a paper survey or would like to know more about this study, please contact Eryn DeBuhr at (701) 280-9545 (work) or (701) 471-6046 (cell). Please feel free to share this information with your female friends and/or family members who are 60 years of age and older! Participants who participate in this study will have the opportunity to win a coffee gift certificate.

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<sup>1</sup> This flyer was distributed to the Fargo Senior Commission as an advertisement in their monthly county senior newsletter. It is mailed to over 2,800 adults who are age 60 and older in the Cass County area. This flyer was also distributed to several churches surrounding the Fargo-Moorhead area, where it will be published in their Sunday bulletin.

## APPENDIX B. INFORMED CONSENT

May 11, 2012

### **Self-Perceptions of Aging**

Study is being conducted by:      **NDSU letterhead**

Gregory Sanders, Ph.D.	Eryn DeBuhr
NDSU Human Development and Education	1112 Nodak Drive
Department	Suite 105
255 EML Hall	Fargo, ND 58103
Fargo, ND 58105	701-280-9545
701-231-8272	

**Why am I being asked to take part in this research study?** This study is designed to increase the understanding of women's self-perceptions of aging. Outcomes may include an increased understanding of the individual's personality and attitudes about aging. This study may further gain understanding of the variables related to self-perceptions of aging and how women perceive their own aging process.

**How long will it take?** The survey will take approximately 15-20 minutes. The total amount of time you will be asked to complete this study is once.

**What will I be asked to do?** Participants in this study will be asked to complete a questionnaire regarding their age, demographics, and self-perceptions of aging. All of the tasks should take no longer than 20 minutes to complete.

**What are the risks and discomfort?** Significant effort will be made to ensure and protect participant confidentiality. However, potential loss of confidentiality exists in any exchange of information. It is not possible to identify all potential risks in research procedures, but the researchers have taken reasonable safeguards to minimize any known risk to the participant.

**What are the benefits to me?** Research participants may benefit from learning about their self-perceptions of aging. However, there may not be any benefit from being in this research study.

**Do I have to take part in this study?** No, you are freely able to decide to decline participation at any point during the completion of this study. There will be no penalty if you should change your mind.

**What will it cost me to participate?** There is no cost to participate in this study.

**Who will see the information that I give?** Information will be organized, written, and distributed to various groups of the aging profession. Participants will have any identifying

information removed and those seeing information about this study will not be able to identify the participants involved. A coding system will be utilized by the researcher so that the participants identifying information will not be located directly on any questionnaire.

**Will you receive any compensation for taking part in this study?** There will be a drawing for three (3) \$10 gift cards to a coffee shop (i.e., Caribou, Starbucks) once the survey is closed. If you would like to be part of the drawing, an option to do so will be available at the end of the questionnaire.

**What if I have questions?** Before you decide to take part in this research study, please ask any question that you may have. If you should have questions at a later date, you may contact the researcher, Eryn DeBuhr at 701-280-9545 or Dr. Greg Sanders at 701-231-8272.

**What are my rights as a research participant?** You have rights as a participant in research. If you have questions about your rights, or complaints about this research, you may talk to the researcher or contact the NDSU Human Research Protection Program by:

- Telephone: 701-231-8908
  - Email: [ndsu.irb@ndsu.edu](mailto:ndsu.irb@ndsu.edu)
  - Mail NDSU HRPP Office, NDSU Dept. 4000 PO Box 6050, Fargo, ND 58108-6050
- The role of the IRB is to see that your rights are protected in this research; more information about your rights can be found at: [www.ndsu.edu/research/irb](http://www.ndsu.edu/research/irb).

**Documentation of Informed Consent:** You are freely making a decision whether to be in this research study. By completing this survey:

1. You have read and understood this consent form
2. You have decided to be in the study

## APPENDIX C. SELF-PERCEPTION SURVEY

Please answer the following background questions to the best of your ability. Responses to the questions are completely voluntary and you may choose not to answer certain questions. All responses provided will be kept confidential and you will not be identified by name in any research or publications resulting from this study. If you have any questions, please contact the researcher at any time.

What is your gender?

- Male  
 Female

What category best describes your age?

- 60-69  
 70-79  
 80-89  
 90+

What is your current marital status?

- Married  
 Single  
 Divorced/Separated  
 Widowed  
 Never Married  
 Other

What is your current employment status?

- Employed full-time  
 Employed part-time  
 Unemployed  
 Homemaker  
 Retired

What is the highest level of education you have completed?

- Elementary school only  
 Some high school  
 Completed high school  
 Some college  
 Two-year college degree/ A.A/ A.S  
 Four-year college degree/ B.A/ B.S  
 Some graduate work  
 Completed Masters or professional degree  
 Advanced graduate work or Ph.D.

What is your race/ethnicity?

- African-American  
 Asian-American/Pacific Islander  
 Hispanic  
 Native American/American Indian  
 White/Caucasian  
 Other (specify) \_\_\_\_\_

What category best describes your annual household income?

- Below \$25,000  
 \$25,000-\$49,000  
 \$50,000-\$74,000  
 \$75,000-\$99,000  
 \$100,000-\$124,999  
 \$125,000 and above

What is your current state of residence?

- North Dakota  
 South Dakota  
 Minnesota  
 Other (specify) \_\_\_\_\_

For the following questions, please choose the option that best fits.

How many relatives do you see or hear from at least once a month?

- 0
- 1
- 2
- 3-4
- 5-8
- $\geq 9$

How many relatives do you feel close to?

- 0
- 1
- 2
- 3-4
- 5-8
- $\geq 9$

How many of these friends do you see or hear from at least once a month?

- 0
- 1
- 2
- 3-4
- 5-8
- $\geq 9$

How often do you see or hear from the relative with whom you have the most contact with?

- less than monthly
- monthly
- a few times a month
- weekly
- a few times a week
- daily

How many close friends (friends with whom you feel at ease with and can talk to about private matters or can call on for help) do you have?

- 0
- 1
- 2
- 3-4
- 5-8
- $\geq 9$

Considering the friend with whom you have the most contact, how often do you see or hear from that person?

- less than monthly
- monthly
- a few times a month
- weekly
- a few days a week
- daily

For the following questions about family, friends, spouse/partner, please choose the option that best fits.

	A lot	Some	Little	Not at all
How much do family members understand the way you feel about things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much do family members really care about you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much can you rely on family members for help if you have a serious problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much can you open up to family members if you need to talk about your worries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	A lot	Some	Little	Not at all
How much does your spouse/partner understand the way you feel about things?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much does your spouse/partner really care about you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	A lot	Some	Little	Not at all
How much can you rely on your spouse/partner for help if you have a serious problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much can you open up to your spouse/partner if you need to talk about your worries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	A lot	Some	Little	Not at all
How much does your friend understand the way you feel about things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much does your friend really care about you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much can you rely on your friend for help if you have a serious problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much can you open up to your friend if you need to talk about your worries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For the following questions on personality please choose the option that best fits.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
Often feel blue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dislike myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Am often down in the dumps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have frequent mood swings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Panic easily	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Am filled with doubts about things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feel threatened easily	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Get stressed out easily	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fear for the worst	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worry about things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
Seldom feel blue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feel comfortable with myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rarely get irritated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Am not easily bothered by things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Am very pleased with myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Am relaxed most of the time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seldom get mad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Am not easily frustrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remain calm under pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rarely lose my composure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate which option best fits the following questions.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
I have little control about things that happen to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some of my problems I can't seem to solve at all.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is not much that I can do to change important things in my life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often feel helpless dealing with the problems of life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sometimes I feel like a play ball of life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can do almost anything, if I want to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What will happen in the future considerably depends on me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please choose which option best fits the following questions.

	<b>Excellent</b>	<b>Above Average</b>	<b>Good</b>	<b>Average</b>	<b>Fair</b>	<b>Below Average</b>	<b>Poor</b>
How would you rate your overall health at the present time?	<input type="checkbox"/>						
How is your present health compared to 5 years ago?	<input type="checkbox"/>						
How much do your health problems stand in the way of your doing the things you want to do?	<input type="checkbox"/>						

Please choose which option best fits the following questions.

	<b>Yes</b>	<b>No</b>
Do things keep getting worse as you get older?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have as much pep as you had last year?	<input type="checkbox"/>	<input type="checkbox"/>
Do you feel that as you get older you are less useful?	<input type="checkbox"/>	<input type="checkbox"/>
As you get older, are things better than you thought?	<input type="checkbox"/>	<input type="checkbox"/>
Are you as happy now as you were when you were younger?	<input type="checkbox"/>	<input type="checkbox"/>

Thank you for taking the time to complete this survey!