DEPRESSION, ANXIETY, AND ATTITUDE TOWARD RETIREMENT AS PREDICTORS OF WELLNESS FOR WORKERS NEARING RETIREMENT

A dissertation submitted to the Kent State University College and Graduate School of Education, Health, and Human Services in partial fulfillment of the requirements for the degree of Doctor of Philosophy

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The current study examined the predictive value depression, anxiety, and attitude toward retirement have on wellness for workers nearing the time of retirement. Participants ($N = 168$) were sampled from the community through local businesses, churches, mailing lists, and schools. Participants had to still be working within their primary career and had to be planning to retire within the next five years to qualify for this study. Hierarchical multiple regression analysis was used to determine the predictive relationships between the above variables and wellness. Specifically, the Beck Depression Inventory-II, Beck Anxiety Inventory, Attitude Toward Retirement Scale, and Perceived Wellness Survey were used to measure these variables.

Results indicated that depression, anxiety, attitude toward retirement, and wellness were all significantly related. Results also showed that depression was the largest predictor of wellness, with attitude toward retirement being the second largest predictor. Overall, depression and attitude accounted for 38% of the variance of wellness scores. Additionally, income level was found to be related to the predictor and criterion variables; however, income only accounted for 1% of the variance.

Factor analysis was conducted on the Perceived Wellness Survey to determine the discreteness of the subscales. Results indicated that only two subscales loaded perfectly
on specific factors, whereas the remaining four subscales did not load on any specific factor.
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>x</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Bridgework</td>
<td>2</td>
</tr>
<tr>
<td>Housing</td>
<td>2</td>
</tr>
<tr>
<td>Physical Health</td>
<td>3</td>
</tr>
<tr>
<td>Psychological Variables</td>
<td>4</td>
</tr>
<tr>
<td>Wellness</td>
<td>5</td>
</tr>
<tr>
<td>Review of the Literature</td>
<td>5</td>
</tr>
<tr>
<td>Bridgework</td>
<td>6</td>
</tr>
<tr>
<td>Definition and Description</td>
<td>6</td>
</tr>
<tr>
<td>Why People Work During Retirement</td>
<td>7</td>
</tr>
<tr>
<td>Variables Associated With Bridgework</td>
<td>9</td>
</tr>
<tr>
<td>Housing</td>
<td>10</td>
</tr>
<tr>
<td>Housing Characteristics</td>
<td>10</td>
</tr>
<tr>
<td>Decisions Where to Live</td>
<td>12</td>
</tr>
<tr>
<td>Physical Health</td>
<td>14</td>
</tr>
<tr>
<td>Preserving Health</td>
<td>14</td>
</tr>
</tbody>
</table>
Health and Psychosocial Variables.......................................................... 16

Psychological Variables.................................................................................. 21
  Anxiety and Depression ........................................................................ 21
  Attitude Toward Retirement ................................................................. 25

Wellness.............................................................................................................. 29

Rationale................................................................................................................. 32

II. METHOD........................................................................................................... 34

Participants ......................................................................................................... 35

Instrumentation...................................................................................................... 36
  Perceived Wellness Survey................................................................................. 37
  Attitude Toward Retirement Scale ................................................................. 41
  Beck Depression Inventory-II ........................................................................ 43
  Beck Anxiety Inventory....................................................................................... 44

Procedures ............................................................................................................ 46
  Packet Description .......................................................................................... 47

Data Collection ...................................................................................................... 48
  Local Business ................................................................................................. 49
  Local Women’s Group ..................................................................................... 49
  Mailing List ...................................................................................................... 49
  Local Schools .................................................................................................... 50
  Local University ................................................................................................. 50
  Local Churches ................................................................................................. 51
Monetary Incentive Procedures ................................................................. 51

Analysis .............................................................................................................. 53

III. RESULTS ........................................................................................................ 58

Descriptive Results ......................................................................................... 58

Primary Variables .......................................................................................... 59

Demographic Variables .................................................................................. 60

Correlational Results ....................................................................................... 60

Research Question One Results .................................................................... 60

Demographic Correlations ............................................................................. 64

Research Question Two Results .................................................................... 64

Exploratory Analysis ....................................................................................... 66

Internal Reliability .......................................................................................... 68

IV. DISCUSSION ................................................................................................... 69

Discussion of the Primary Purposes .............................................................. 69

Research Question One .................................................................................. 69

Research Question Two .................................................................................. 71

Clinical and Research Contributions ............................................................ 71

Suggestions for Future Research .................................................................... 74

Suggestions for Qualitative Research ............................................................ 74

Proposals for Longitudinal Studies ................................................................ 75

Suggestions for Wellness Studies .................................................................... 76

Proposals for Cultural and Demographic Studies ......................................... 76
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Descriptive Statistics of the Primary Variables for People Nearing Retirement</td>
<td>59</td>
</tr>
<tr>
<td>2.</td>
<td>Descriptive Statistics of the Demographic Variables for People Nearing Retirement</td>
<td>61</td>
</tr>
<tr>
<td>3.</td>
<td>Pearson Product-Moment Correlation Between Primary and Demographic Variables for People Nearing Retirement</td>
<td>64</td>
</tr>
<tr>
<td>4.</td>
<td>Summary of Hierarchical Regression Analyses Predicting Overall Wellness for People Nearing Retirement (N = 168)</td>
<td>66</td>
</tr>
<tr>
<td>5.</td>
<td>Pearson Product-Moment Correlation Between the PWS Subscales for People Nearing Retirement</td>
<td>67</td>
</tr>
<tr>
<td>6.</td>
<td>Factor Analysis of the Perceived Wellness Survey Subscales for People Nearing Retirement</td>
<td>88</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

It is no surprise that the U.S. population is not only growing in number, but also growing older. Researchers from the National Institute on Aging (2006) predicted that by the year 2030 one in five Americans will be 65 years of age or older with about 72 million people in this age group. The Committee for Economic Development (1999) reported that due to medical advancements, less physical types of work, and more health-conscience lifestyles, people are living longer. The authors of this report predicted that by 2030 life expectancy will approximate 82 years for men and 85 years for women. From these predictions one may wonder, “If people are living longer will they also be engaged in the workforce longer?” However, at some point most employees will engage in the process of retirement. Retirement has been described as a dynamic process that may take many years of adjustment (Honig & Hanoch, 1985).

Within this introduction I briefly describe five variables related to issues of retirement: bridgework, housing, physical health, psychological health, and overall wellness. I illustrate these variables in more detail within the literature review. For the purpose of this project, only selected psychological variables and wellness were studied. The psychological variables included anxiety, depression, and attitude toward retirement. I included issues such as bridgework, housing, and physical health to better understand wellness, attitude toward retirement, anxiety, and depression during the retirement process. A brief rationale for the study is given at the end of this introduction, whereas a
more comprehensive rationale and the research questions are described at the end of this literature review.

Bridgework

Bridgework is defined for this study as paid employment that falls between the time when an individual leaves his or her primary career and the time of complete withdrawal from the work force (Kim & Feldman, 2000; Weckerle & Shultz, 1999). There are two explanations for people to work during their retirement. First, individuals may work during retirement to supplement their income (AARP, 2004). Many types of unforeseen challenges (Heckhausen, 2001), such as disability, being laid off, or caring for a spouse or parent in ill health (Magai & Halpern, 2001), may result in a need to supplement income during retirement. A second reason why individuals may work during retirement is to gain psychosocial benefits, such as making social connections (Perlman, 1982; Purvine, 1972) and creating new life roles (Elwell & Maltbie-Crannell, 1981).

Demographic and psychosocial variables that are found to be significantly associated with bridgework participation are reviewed within the literature review. Specifically, the variables of gender, race, health status, education, self-efficacy, and social support are reviewed in terms of their associations with bridgework participation.

Housing

Housing issues during retirement are reviewed here to provide a more complex understanding of the psychological variables that are considered for this study. Researchers have found relationships between housing issues and psychological health during the time of retirement. Two themes are found in the retirement literature
concerning housing. First, housing characteristics such as the quality of the house, the type of dwelling in which one resides, and place attachment are significantly related to well being, life satisfaction, anxiety, and depression (Evans, Kantrowitz, & Eshelman, 2002; Gueldner et al., 2001). A second issue found in the literature is deciding where to live during retirement. When deciding where to live during retirement, a person may decide not to move, to move elsewhere within the community, or to migrate out of the area. Migration may consist of moving within the state, moving out of state, or moving to a different region of the country.

The decision where to live during retirement is related to many life circumstances, such as financial resources, retirement timing, health status, and the responsibility of caring for older parents and/or grandchildren (Haas & Serow, 2002; Robison & Moen, 2000). Some of these life circumstances may disrupt plans individuals have concerning where they want to live during retirement. These circumstances, in addition to where one decides to live, are also related to psychological health (Bosse, Aldwin, Levenson, & Workman-Daniels, 1991; George & Gwyther, 1986; Schulz, Visintainer, & Williamson, 1990). Thus, when thinking about the relationship between housing issues during retirement and psychological health it is important to consider the characteristics of the house as well as the circumstances that are related to deciding where to live.

Physical Health

Two themes emerged in the literature concerning physical health. The first was the idea of preserving physical health during retirement and the second was how physical health and psychosocial variables are related.
Spiro (2001) noted how individuals should be vigilant of their physical health during the retirement years and how they should be engaged in behaviors to maintain health. The baby boomer generation, defined as individuals born between 1946 and 1964, are the next generation nearing retirement (Maples & Abney, 2006). Collectively, the baby boomers were found to be in better physical condition when compared with the generation before them (Zapolsky, 2003). Other researchers found in a survey study that 58% of baby boomers reported being in good to excellent health, and 54% expect to engage in regular exercise during retirement (AARP, 2004). However, these researchers indicated many of the participants admit they are not currently engaged in behaviors to maintain good health. It is uncertain at this time what future health trends the baby boomer generation will exhibit during their retirement.

The other theme is the relationship between physical health and psychosocial variables. Specifically, researchers have focused on how stress and depression (Chrousos & Gold, 1992; Lawler, Ouimette, & Dahlstedt, 2005; Resnick, Acierno, & Kilpatrick, 1997) as well as gender and unemployment (Arnetz et al., 1987; Hildingh, Luepker, Baigi, & Lidell, 2006; Tytherleigh, Jacobs, Webb, Ricketts, & Cooper, 2007) are related to physical health. These researchers provided only a general overview of the relationships between physical health and psychosocial variables and did not look specifically at how these variables are related during retirement.

Psychological Variables

Researchers have studied many types of psychological variables individuals experience during retirement, such as stress (Bosse et al., 1991), worry (Skarborn &
Nicki, 2000), attitude (Reitzes, Mutran, & Fernandez, 1996), anxiety, and depression (Fretz, Kluge, Ossana, Jones, & Merikangas, 1989). Within these studies, many psychological variables had relationships with various life circumstances during retirement, such as finances, bridgework, family issues, physical health status, housing issues, and retirement timing. Specifically, I used anxiety, depression, and attitude toward retirement for this study because of their relationships with the life circumstances listed.

Wellness

Last, wellness is defined from multiple perspectives (Archer, Probert, & Gage, 1987; Ardell, 1988; Hatfield & Hatfield, 1992). A common theme among definitions of wellness is the integration of many dimensions of a person. The Perceived Wellness Model (T. Adams, Bezner, & Steinhardt, 1997) was chosen for this study to define and conceptualize wellness. This model included physical, psychological, emotional, intellectual, spiritual, and social dimensions of wellness.

One purpose of this study was to discover the relationships between the variables of anxiety, depression, attitude toward retirement, and wellness in workers who are nearing the time of retirement. A second purpose was to find the predictive value of anxiety, depression, and attitude toward retirement on wellness in workers nearing retirement.

Review of the Literature

Within this literature review I provide a detailed summary of the retirement research that is related to the topics of bridgework, housing, physical health, psychological variables, and wellness. The psychological variables reviewed here are
anxiety, stress, worry, depression, and attitude toward retirement. Within this review I also provide insight into why these topics are important during retirement. Whereas one may assume the above variables are related to each other, their degree of association in the next generation of employees who are nearing retirement has not been studied.

Bridgework and housing variables are not included as part of this research study. These variables are reviewed to add breadth to the variables under study. The variables used for this study are wellness, anxiety, depression, and attitude toward retirement. A rationale and research question for this study is presented at the end of the literature review.

Bridgework

This section is divided into three topic areas concerning bridgework. First, bridgework is defined and described. Second, two explanations of why individuals work during their retirement is given. Last, demographic and psychosocial variables that are associated with bridgework participation are presented.

Definition and Description

Bridgework is defined as paid employment that falls between the time when an individual leaves his or her primary career and the time of complete withdrawal from the work force (Kim & Feldman, 2000; Weckerle & Shultz, 1999). It can range from taking a part-time to a full-time job in a similar or completely different field of work. Typically, bridgework consists of fewer responsibilities, less stress, decreased physical requirements, scheduling flexibility, reduced fringe benefits, and fewer hours worked (Feldman, 1994; Sinick, 1976) when compared to a career job. Shultz (2003) reported that one third of retired men and one half of retired women participate in bridgework. He
also stated that working during retirement is becoming more prevalent partially due to early retirement incentive programs and extended longevity. Whereas early retirement and extended longevity may be associated with bridgework, these variables do not explain why individuals return to work.

**Why People Work During Retirement**

*Financial supplementation.* Individuals may work during their retirement to supplement their income. In a survey study conducted by the AARP (2004), researchers found that 79% of baby boomers plan to work during their retirement, 35% of those want to work for enjoyment and 25% will work due to financial necessity. The AARP results did not report why the other 40% of participants will return to work. These participants who work due to financial necessity may be dealing with unforeseen challenges at this time of life (Heckhausen, 2001), such as disability, being laid off, or caring for a spouse or parent in ill health (Magai & Halpern, 2001). These challenges may be accompanied by financial responsibilities that result in a need to supplement income during retirement.

*Psychosocial benefits.* Whereas bridgework can provide for the needed financial supplementation for some people, psychosocial needs also may be met through work. Retired individuals may have difficulty accepting the loss of their role as employee, which may negatively affect their coping skills and life satisfaction (Elwell & Maltbie-Crannell, 1981; Randall, 1981). One way to compensate for this loss of work role is to engage in employment during retirement. Retirees may gain psychological benefits from working, such as an increased sense of self-definition (Perlman, 1982). Purvine (1972) described how work can provide not only for financial needs, but also for social and
psychological needs. The following studies described what kinds of psychosocial benefits are important to retirees who seek out bridgework.

Mor-Barak (1995) studied the meaning older adults attribute to work by assessing four variables: (a) personal (need for self-esteem, personal satisfaction, and pride); (b) social (need to interact with others in a work setting); (c) generative (need to teach and prepare the upcoming generations); and (d) financial (need for income and benefits). The author had two goals. First was to determine if these four variables were significant attributes of work meaning for older adults. Second, the author compared ethnic and gender differences in participants’ meaning of work.

Results confirmed that all four variables were significant attributes of work meaning for older adults. Also, differences were found between ethnic groups in terms of work meaning. Specifically, Asian Americans scored higher on the social meaning of work subscale when compared with Caucasians and Hispanic Americans; furthermore, Asian Americans scored higher on the financial meaning subscale when compared with Hispanic Americans. No differences were found between genders.

Ulrich and Brott (2006) wanted to understand why retirees engaged in bridgework and what challenges and benefits they experienced. The authors interviewed participants (N = 24) who met the criteria of being retired, 62 years or older, and employed. Two themes were found as to why participants engaged in bridgework; the desire to increase meaning in life and provide a sense of self-control (Ulrich & Brott). Participants reported wanting to find work that would meet their needs, such as a need to fill their time, give them a voice within the work setting, meet financial needs, and remain within their career
to some extent (Ulrich & Brott). The authors also found that work provided participants a balance to life, higher self-esteem, and a sense of enjoyment. In summary, some participants who work during retirement attempt to meet their financial needs, whereas others use work to meet their social and psychological needs.

**Variables Associated With Bridgework**

Some researchers attempted to discover who is most likely to seek out bridgework. Ruhm (1994) found demographic differences in bridgework participation. He noted high school dropouts, women, and minorities engaged in bridgework less than Caucasian males and individuals with higher levels of education. It was speculated that less educated individuals may have fewer opportunities to engage in bridgework due to a paucity of skills (Ruhm, 1994). The National Academy on an Aging Society (NAAS; 2000) reported African American males near retirement age are less physically and mentally healthy when compared to Caucasian males the same age. These physical and mental health differences may also hinder participation in bridgework.

G. A. Adams and Lax (2002) identified psychosocial variables that may influence participation in bridgework. They found that motivation toward work, job-related efficacy, emotional support, and social support predict bridgework participation. For instance, an individual with a strong work ethic, a supportive spouse, and a high level of confidence in his or her work abilities has a higher probability of engaging in bridgework than someone who has little motivation to work, an unsupportive spouse, and little confidence in his or her job skills.
In summary, retirees may return to work for a number of reasons, such as to meet financial obligations, seek out social relationships, fulfill psychological needs, and gain a sense of generativity. Factors associated with bridgework participation are demographic variables, physical health, and psychosocial variables.

Housing

Housing issues during retirement are reviewed here to provide a more complex understanding of specific psychological variables that may be present during retirement, such as depression, anxiety, and well being (Evans et al., 2002; Gueldner et al., 2001). Two themes are found in the housing literature. The first focused on the characteristics of a residence, such as the quality of the home, the type of residence, and place attachment in relation to psychological health. The second theme dealt with decisions one makes about where to live during retirement and what life circumstances may influence housing choices. These themes provided a more thorough understanding of the psychological variables considered for this study.

Housing Characteristics

First, housing characteristics are related to psychological well being. Evans et al. (2002) studied the correlations between housing quality, place attachment, and well being. Their sample \( (N = 497) \) consisted of older adults who were at least 60 years old, living independently within the community, who had no signs of dementia. The authors conducted home interviews and administered three instruments. Results indicated that well being correlated with both housing quality and place attachment after statistically partialling the control variables of gender, education level, income, home ownership
status, residential status (living alone or with someone), number of years in the residence, and the amount of assistance needed in activities in daily living within the last year. Activities of daily living include bathing, toileting, dressing, cooking, and walking (Aldwin & Gilmer, 1999). The authors suggested that a person’s attachment to a home and the quality of his or her house is positively associated with psychological well being. The authors admitted that their study offered no causative evidence about housing characteristics and well being and that conducting a longitudinal study would be ideal to better understand these variables.

In addition to the housing quality and the attachment level one has to his or her home, the type of residence in which one is living is correlated with psychological health. Gueldner et al. (2001) compared psychological variables in two groups of older adults (N = 138) living in two different settings. Group one consisted of individuals residing in a community setting and group two were individuals residing in nursing home facilities. The authors controlled for gender and age within the study. Results indicated that participants living in the community reported higher levels of life satisfaction and vigor, whereas the nursing home participants reported higher levels of anxiety and depression (Gueldner et al.). One limitation of this study was that the authors did not assess participants’ health status. Health status may have played a role as to why participants lived in nursing homes and may have been related to their anxiety and depression scores. Whereas this study is not representative of most individuals preparing to retire, it does suggest that psychological health is correlated with the type of dwelling in which one
resides. Retiring individuals may want to consider the type of place they live during retirement due to its relationship with psychological health.

**Decisions Where to Live**

Retirement may bring on many housing related decisions individuals must make. The decision to move or not to move, move within the same community, or move to another community may come into question upon retirement (Robison & Moen, 2000). The thought of where one will live during retirement may have never been considered or may have been planned in advance.

The choice to move to another community, move within the current community, or not to move at all may be influenced by many life circumstances. Haas and Serow (2002) provided a literature review focusing on variables that may influence the future growth of retirement communities made up of the baby boomer generation. The authors reported how retirement may look different for the baby boomer generation in comparison with the previous generation in terms of retirement timing and relocation interests. In terms of retirement timing, they described how baby boomers expected to retire at 65 years old or later; however, many were forced into retirement by circumstances beyond their control, such as company layoffs or poor health. In terms of relocation interests, the authors described how individuals may move to be closer to family members, but gave no predictions on what number of individuals may move.

Robison and Moen (2000) examined housing plans and expectations individuals had for their retirement. Participants ($N = 678$) were between 50 and 72 years of age and completed two interviews. Results indicated that participants who were planning to move
wanted to migrate for better amenities and a higher quality of life, such as better weather, lower cost of living, and available social services. The authors also found differences between participants who expected to move and participants who expected not to move. Older workers and retirees expected not to move from their residence, whereas participants who expected to move reported not having strong community relationships, rented their homes, and had higher levels of depression.

Financial resources and caregiving responsibilities are variables that may discourage moving. Specifically, a lack of financial resources can influence what options retirees have in regard to where they will live. The more financial resources retirees hold, the more options that may be available to them (Robison & Moen, 2000).

Caregiving has been found to be related to the likelihood of relocation (Robison & Moen, 2000). Caregiving responsibilities include assisting older adults with activities of daily living, mobility assistance, and supervision (Stephens & Franks, 1999). As people live longer, age-related disabilities increase (Spence, 1999), leaving retirees with greater caregiving responsibilities for their older parents. Caregiving responsibilities to grandchildren were also found to reduce moving probability (Haas & Serow, 2002; Robison & Moen, 2000).

The decision to move may be influenced by the desire to be closer to family or providing care to family members. The AARP (2004) reported that 35% of baby boomers have been or are currently caring for older parents, 19% anticipate caring for a parent at some point during retirement, and 17% expect to supply financial resources to both parents and children during retirement. This “sandwich concept,” described as being
caught between caregiving responsibilities of older parents and/or younger children, a career, and a marital role (Putney & Bengtson, 2001), can influence the decision to move during retirement. A retiring couple may possess too many family responsibilities to move. Robison and Moen (2000) found family involvement was influential to relocation during retirement. Retirees may want to move or stay in place in order to be closer to family, whether it be older parents, children, or grandchildren. In summary, housing characteristics and decisions about where to live influenced by certain life circumstances are related to life satisfaction, well being, anxiety, and depression.

**Physical Health**

Two themes emerge from the literature concerning the physical health of retirement-age people: (a) The idea of preserving physical health during retirement, and (b) correlations between physical health and psychosocial variables.

**Preserving Health**

Spiro (2001) noted how individuals of all ages, including people in retirement, should be engaged in a lifestyle that is health promoting. He described how physical health is a process that involves decline, but can also involve maintenance and improvement at all points along the lifespan. This type of health promoting philosophy can also be seen in the national project Healthy People 2010 (2008). Healthy People 2010, developed by the U.S. Department of Health and Human Services, is a set of health objectives for the nation to achieve between the years 2000 and 2010. These objectives based on baseline data are for the areas of physical activity, overweight and obesity, tobacco use, substance abuse, practicing responsible sexual activity, mental health,
violence and injury, environmental quality, immunization, and accessing healthcare (Healthy People 2010, 2008). The goals of HP 2010 are to increase longevity, increase quality of life, and reduce disease.

As stated before, the baby boomer generation is defined as individuals born between 1946 and 1964 and the next generation nearing retirement (Maples & Abney, 2006). Currently, researchers present conflicting results about the physical health of the baby boomer generation. One study found that baby boomers are in better physical condition when compared with the generation before them (Zapolsky, 2003). These improved health conditions could be a result of better lifestyle choices, less physical types of jobs, and improved healthcare (Committee for Economic Development, 1999). AARP (2004) found in a survey research study that 58% of baby boomers reported being in good to excellent health, and 54% expect to engage in regular exercise during retirement (AARP). However, many of the participants admitted they are not currently engaged in behaviors to maintain good health nor know how they will maintain good health during retirement.

Another study found that baby boomers reported more physical ailments when compared to the generation before them. The National Bureau of Economic Research (2007) compared the self-reported health status between three age groups. Group one consisted of individuals born between 1936 and 1941, group two consisted of individuals born between 1942 and 1947, and group three consisted of individuals born between 1948 and 1953. The researchers designated the participants who qualified for group three as the baby boomer group. They used data taken from a nationwide survey study that
asked participants \((N = 20,000)\) to rate their overall health, how much pain they have, and their overall physical agility and mobility. Data were collected at three different points in time, when participants were between the ages of 51 and 56 years old. The researchers did not describe whether the participants were employed.

The researchers found that groups two and three were less likely to report their health was “excellent or very good.” Also, group three reported more difficulties with pain, chronic health problems, substance abuse, and mental health conditions. Last, group three reported having more difficulty performing physical tasks, such as kneeling, walking, going up stairs, and other daily chores.

In summary, there are conflicting results to the health status of individuals within the baby boomer generation. It is uncertain at this time what future health trends the baby boomer generation will develop, and it is unknown how these health trends will influence other psychosocial variables, such as bridgework opportunities, housing decisions, and psychological health.

*Health and Psychosocial Variables*

The second theme reviewed is the relationship between physical health and psychosocial variables. Specifically, I review how physical health status is correlated with the psychosocial variables of stress, depression, and unemployment. Little research has been found that studied relationships between health status and psychosocial variables during retirement. Therefore, a literature review has been provided to demonstrate these relationships at various points on the lifespan.
Many researchers have found that relationships exist between psychological stress and physical health (Chrousos & Gold, 1992; Feldman & Schnurr, 1995; Lawler et al., 2005; Resnick et al., 1997). Specifically, Lundberg (2006) reported that stress is related to how various systems of the body function, such as the gastrointestinal tract, cardiovascular system, the immune system, and sleep mechanisms.

Lawler et al. (2005) studied the association between extreme forms of stress and self-reported physical health. Participants (N = 141) were recruited from a university setting. All but three of the participants reported having experienced at least one traumatic event in their lives. Eight instruments were given measuring posttraumatic stress symptoms, coping strategies, and physical health status. The authors reported that 13% of the participants met the criteria for posttraumatic stress disorder (PTSD). Results indicated a correlation (r = .64, p < .05) between PTSD symptoms and health status after controlling for the effects of health behaviors, age, gender, and other reported psychopathology.

Other research into the association between health status and stress supports this connection. Ohman, Bergdahl, Nyberg, and Nilsson (2007) studied the association between moderate stress and health status using a longitudinal design. The authors divided participants (N = 1,983) into two groups based on their reported stress level. Group one participants (n = 1,000) were moderately stressed and group two participants (n = 983) were mildly stressed. Three instruments were given measuring perceived health status, stress, and demographics. These instruments were administered three times to all participants over a 10-year period. Results indicated at the 5-year mark that there were no
differences between the two groups in relation to health status. At the 10-year mark, results showed that group one had an increase in reported tumors compared to group two. No other differences were found related to cardiovascular functioning, diabetes, and the musculoskeletal system. Therefore, these authors presented findings that suggest how different levels of stress are associated with different levels of health status. Participants with more severe stress have stronger associations with health problems, whereas participants with mild stress have less associations with health problems.

Tytherleigh et al. (2007) studied gender differences in the workplace in regard to stress level, job commitment, physical health, and psychological health. The authors recruited participants \( (N = 1,974) \) from eight British universities. The ASSET, which the authors did not spell out, was described as a work screening instrument that is made up of subscales measuring job perceptions, commitment to the job, vocational stress, employees’ perception of how committed their organization is to them, attitude toward the job, physical health status, psychological health status, and demographics. Each participant completed the ASSET. The authors found that men and women reported similar levels of stress and job commitment. However, they described how men and women are stressed about different things and expressed stress in different ways. Specifically, men reported feeling more stressed about their level of pay and benefits, whereas women reported higher levels of physical and psychological illnesses due to their stress. The researchers suggested that their findings add to the existing body of literature that women have higher associations between stress, psychological health, and physical health than do men.
Hildingh et al. (2006) also studied women in relation to health and stress. They compared daily life stress, self-confidence, and health complaints in female participants \((N = 587)\) aged 26 years old from two cultures. Group one consisted of Swedish participants \((n = 386)\) and group two consisted of U.S. participants \((n = 201)\). The authors used a standardized health questionnaire that measured health complaints, physical well being, social well being, and mental well being. The name of the instrument was not given. The researchers found that the U.S. participants reported higher levels of employment stress and scored higher for work satisfaction than did the Swedish participants. A positive relationship was found between stress levels and reported headaches for the Swedish participants, whereas a negative relationship was found between health status and depression for both groups. Last, the authors found that physical well being was positively associated with self-confidence in both groups.

In addition to stress, other psychosocial variables have been found to be related to physical health. Carney et al. (1988) conducted a 12-month longitudinal study investigating the relationship between Major Depressive Disorder (MDD) and Cardiac Incidents (CAD). Of the 77 participants initially screened for CAD, 52 participants \((67.5\%)\) were found to have had significant CAD upon entering the study. Of these 52 participants, nine of them met the criteria for MDD. At the 12-month follow-up participants were reinterviewed to determine if any coronary events occurred within that 12-month period. The authors found that 77.8\% of people \((n = 7)\) diagnosed with MDD had a major cardiac event during the 12-month period, whereas only 34.9\% of the nondepressed group \((n = 13)\) experienced a cardiac event during that time. Results
indicated that depression \( r = .40 \) was the single best predictor of having a cardiac event during the 12 months following diagnosis. However, the researchers reported that more studies are needed to determine causality between CAD and MDD. One limitation of this study was that it was not stated how long the participants were depressed. It was unknown if these participants were depressed before being diagnosed with CAD or became depressed upon receiving the diagnosis of CAD.

Arnetz et al. (1987) investigated differences in immune system functioning between employed and unemployed individuals. Participants \( N = 25 \) consisted of Swedish women. The authors controlled for socioeconomic status, age, work history, physical health, and drug use. They divided the participants into three groups. Group one \( (n = 9) \) consisted of women who were unemployed and receiving standard financial benefits, which consisted of 90% of their wage from their previous job and no treatment. Group two \( (n = 8) \) consisted of unemployed women receiving the same financial benefits as group one. In addition, group two participated in two intervention groups, consisting of political and social self-help groups. These self-help groups were not described in detail. Group three \( (n = 8) \) was the control group, made up of women currently employed. Over a 9-month period all three groups gave blood to measure lymphocyte levels. The lymphocyte levels of the unemployed participants were not taken prior to becoming unemployed. Analysis of variance was used to assess differences in blood levels of lymphocytes. The authors reported that group three had higher levels of lymphocytes when compared to groups one and two. No differences were found between groups one and two, suggesting the self-help groups had no influence on lymphocyte levels. Thus,
unemployed women had lower immune system levels when compared to women who were employed (Arnetz et al., 1987). The authors suggested that unemployment influences immune system functioning; however, this assumption may be premature. They did not account for other variables that may have contributed to their results, such as psychological health and marital status. Another limitation of this study was the sample size. The researchers used only 25 participants within their study, making it difficult to achieve adequate power (Cohen, 1988) and generalizability.

In summary, researchers have demonstrated how relationships exist between psychosocial variables and physical health status. Whereas physical health will not be directly used for this study, it is included as a dimension under the concept of wellness (T. Adams et al., 1997). Wellness is described later in this literature review. So as psychosocial variables are related to physical health, it is important to think about how physical health contributes to overall wellness.

*Psychological Variables*

Researchers have studied many types of psychological variables related to retirement. Variables described here are anxiety, stress, worry, depression, and attitude toward retirement. These psychological variables are described as having relationships with many life circumstances during retirement, such as finances, bridgework, family issues, housing issues, and physical health.

*Anxiety and Depression*

Stress and worry, two types of anxious symptomology, have been found to be related to retirement. Bosse et al. (1991) found 30% of men surveyed reported retirement
to be stressful. These participants ($N = 1516$) described having problems related to health, finances, boredom, and the health of a spouse. One limitation to this study was the uncertainty as to when this survey was administered to the participants. The authors reported the participants in the sample surveyed were born between the years 1884 and 1945. If this survey was administered around the time of publication the age range of subjects would fall between 44 and 105 years old. This age difference may create differences in the responses of subject areas related to health, finances, and well being.

Skarborn and Nicki (2000) compared levels of worry between employees nearing retirement and those already retired. Their intent was to determine if there were differences in levels of worry between these preretirement and postretirement groups. Participants ($N = 96$) were given four instruments that measured levels of worry. The authors recruited the preretirement group ($n = 48$) from various businesses and corporations within the community and the postretirement group ($n = 48$) from seniors’ associations. Results indicated preretirees had higher levels of worry than postretirees. Specifically, preretirees worried more about family affairs, finances, and world matters when compared to postretirees. One limitation of this study was the authors did not narrowly define the participant criteria for preretirement. Participants were only required to be aged 50 or older and be employed. The authors provided no information on the length of time these participants planned to work before retiring.

Fretz et al. (1989) described how anxiety and depressive symptomology are related to knowledge about retirement, attitude toward retirement, and plans made for retirement. Participants ($N = 129$) took the Multiple Affect Adjective Checklist (MAAC)
to measure depression and anxiety levels. The authors found participants who developed a retirement plan, were knowledgeable about retirement, and had a more positive attitude toward retirement had higher self-efficacy and lower depression and anxiety levels. Also, attitude toward retirement was found to be the main predictor of anxiety and depression.

Using strategies to become knowledgeable about and plan for retirement may mitigate the problems of boredom, finances, and health (Bosse et al., 1991). Fretz et al. (1989) suggested from their findings that creating a financial and social plan for retirement as well as possessing a positive attitude about postretirement life may lower anxiety and depression during the later years.

Researchers have found relationships between caregiving responsibilities and psychological distress. Specifically, Schulz et al. (1990) studied depression in caregivers over a 2-year period. Each participant (N = 172) was the primary caregiver of a family member diagnosed with Alzheimer’s disease. The participants’ mean age was 57 years old, which is around the time they would be nearing retirement. The researchers conducted four in-home interviews asking caregivers about their level of social support, the type and amount of care they provided, their depressive symptoms, and their patient’s acting-out behaviors. The authors found that both male and female caregivers experienced depressive symptoms. Males reported lower depressive symptoms early in the study that increased over time, whereas female depressive symptoms were high and consistent throughout the study. They also found positive relationships between caregiver depression and patient acting-out behaviors, lack of social support for the caregiver, poor finances, and a strained patient-caregiver relationship.
Williamson and Shaffer (2001) studied the relationship between caregiver depression and abusive behavior directed toward the care recipient. Each participant ($N = 142$) was the primary caregiver to his or her spouse. The caregivers’ mean age was 72 years old, suggesting many of them were already retired. A structured interview was conducted asking the caregivers about their depressive symptoms, the quality of their marriage before and after the onset of the illness, the amount of assistance they provide to their spouse, and if they have been abusive to their spouse. The authors found a positive relationship between caregiver depression and abusive behaviors directed toward the care recipient. They also found caregivers who were satisfied with their marriage prior to their spouse’s illness reported less depressive symptoms and abusive behaviors. Thus, these studies indicate how caregiving responsibilities are related to depressive symptoms and aggressive behaviors during the time of pre- and postretirement.

Last, differences are found between men and women in relation to anxiety and depression during the age one typically retires. The U.S. Department of Health and Human Services (2008) reported that twice as many women have an anxiety disorder diagnosis when compared to men, and that 9% of women aged 50 and older experience some kind of anxiety disorder. The National Institutes of Health (2007) also reported that women are twice as likely to have a depressive disorder diagnosis, and that 6.6% of women aged 50 and older have a depressive disorder. These statistics were found to transcend racial, ethnic, and economic status among women. The National Institutes of Health reported many possible causes of depression exist for women at this time of life, such as hormonal imbalances, abuse, oppression, interpersonal factors, and personality
characteristics, but so far researchers have not found a definitive cause. As stated above, researchers demonstrate that the time of retirement is related to anxiety (Skarborn & Nicki, 2000) and depression (Fretz et al., 1989) and should be included as a possible cause of distress in women as they near retirement.

**Attitude Toward Retirement**

Whereas researchers have demonstrated how anxiety and depression are related to preparedness for retirement, knowledge of retirement, marital status, and financial status, they have also shown how attitude toward retirement is related to other variables. Mutran, Reitzes, and Fernandez (1997) looked for relationships between attitude toward retirement, social background, preparation for retirement, anticipation levels of retirement, worker identity, commitment to work, and self-esteem. The authors collected data at two points from 1992 to 1994. Participants \(N = 753\) were randomly selected from the North Carolina Department of Motor Vehicles list of individuals holding valid drivers licenses. At the first data collection all participants were employed. At the second data collection some participants were retired \(n = 309\) and others were still employed \(n = 444\). Six instruments were used to measure attitude toward retirement, social background, preparation level for retirement, worker identity, commitment to work, and self-esteem.

Mutran et al. (1997) reported eight findings upon gathering the first data set. First, income level was positively related to attitude toward retirement, suggesting the higher an individual’s reported income, the more positive his or her attitude is toward retirement. Second, marital status was related to attitude toward retirement, meaning
participants who were married had a more positive attitude toward retirement than unmarried participants. One limitation of this study was how the authors categorized marital status. Marital status was measured by asking participants if they were “married” or “not married.” Participants who fit the not married category were not given the opportunity to describe their status as never married, widowed, or divorced. Also, the authors did not consider participants’ sexual orientation as part of the marital status variable or a separate demographic variable, which may contribute to the findings.

Third, pension expectation was related to attitude toward retirement, implying that participants who expected to receive a pension during their retirement had a more positive attitude toward retirement (Mutran et al., 1997). Fourth, retirement planning was positively related to attitude toward retirement. This means participants who reported reading about retirement, attending preretirement programs, talking about retirement with others, and constructing concrete plans for their retirement had a more positive attitude toward retirement. Fifth, anticipating a time of retirement was related to having a positive attitude toward retirement. Anticipated time of retiring was measured in two ways: (a) Participants answered with a yes or no response to whether they had a projected date of retirement, and (b) if they answered yes, participants reported how many years they had left to work until their projected retirement date. Whereas the authors reported a relationship between having an anticipated time of retiring and attitude toward retirement, they reported that no relationship existed between the number of years until retirement and attitude toward retirement.
Sixth, self-perceived worker competence had a positive relationship with attitude toward retirement (Mutran et al., 1997). The authors speculated participants who see themselves as competent employees may also see themselves as competent retirees. Seventh, self-esteem was positively related to attitude toward retirement. In other words, participants who had a higher score on the self-esteem instrument also had a more positive attitude toward retirement. Last, depression had a negative relationship with attitude toward retirement, meaning individuals who scored higher on the depression scale had a less positive attitude toward retirement.

Mutran et al. (1997) reported three findings in the second data set. First, planning for retirement scores from the first data set had positive relationships with attitude toward retirement scores in the second data set. The authors suggested that these planning strategies were helpful to these participants and will continue to be helpful during retirement. Second, a relationship was found between the two data sets measuring attitude toward retirement. The authors reported that the participants who scored high on the attitude scale in 1992 were also the ones that scored high on the attitude scale in 1994. Third, self-esteem scores from the first data set had a positive relationship with the attitude toward retirement scores from the second data set. Thus, the authors speculated how this positive sense of self may be consistent over time and promote a positive attitude toward retirement.

A limitation of this study was the sample used. Mutran et al. (1997) randomly sampled individuals who possessed a valid drivers license, excluding nonlicensed individuals who could have participated in the study.
Whereas Mutran et al. (1997) found a relationship between preparation level for retirement and attitude about retirement, Glamser (1976) examined how preparation level for retirement, financial state, number of friends, and social activity related to attitude toward retirement. Participants \( N = 70 \) consisted of older workers who completed four instruments. Results indicated that preparation level for retirement \( (r = .33) \), perception of financial state \( (r = .33) \), and number of close friends \( (r = .26) \) were related to attitude toward retirement.

The AARP (2004) conducted a survey of 1,200 baby boomers between the ages of 38-57 years old. The purpose of the study was to gain an understanding of participants’ beliefs, attitudes, and behaviors toward retirement. They reported that “69% of baby boomers are optimistic about their retirement years” (p. 5); and that “46% of baby boomers’ attitudes about retirement in recent years have become more positive when compared to a survey taken by AARP five years earlier” (p. 5). However, 31% of baby boomers were not optimistic about their retirement (AARP), which may be related to anticipated retirement problems.

There are three limitations to the AARP (2004) research. First, the AARP research does not qualify as scholarly research that undergoes critical peer review. Second, the sample was drawn from a list of participants who owned landline telephones. This may exclude potential participants with a lower socioeconomic status, households that primarily use cell phones, and others with unlisted phone numbers. The rationale for using research produced by the AARP for my study is that little scholarly research currently exists that focuses on the current generation of workers nearing retirement.
Research from the AARP serves as a starting point by which new questions can be formulated, studied, and reviewed within the academic literature.

In summary, researchers have demonstrated how anxiety, depression, and attitude toward retirement are related with each other and other variables during the time of retirement. These variables consist of physical health status, socioeconomic status, the number of interpersonal relationships one has, boredom, marital status, self-esteem, level of preparedness for retirement, pension expectations, and one’s anticipated date of retirement.

Wellness

Wellness has been defined in a number of ways. Originally, wellness was referred to as *optimal health* and was defined as not merely the absence of disease, but a state of complete physical, mental, and social well being (World Health Organization, 1958). Ardell (1988) constructed a new definition, reporting that an individual can be “healthy” even when one is not disease-free by making more positive lifestyle choices.

Optimal health, now more commonly referred to as wellness, can be defined as “the process and state of a quest for maximum human functioning that involves the body, mind, and spirit” (Archer et al., 1987, p. 311). Hatfield and Hatfield (1992) provided a process-oriented perspective on wellness. These authors suggested that wellness is a mindful, purposeful process in which any individual can become involved. They also described wellness as based on prevention, balance, and integration. Both descriptions illustrate integration as part of the wellness process, but do not tell what parts of a person
need to be integrated. Three models of wellness are described within this section and provide insight into what dimensions may make up overall wellness.

Randall (1981) presented three challenges that can influence wellness during retirement. First, he described challenges to physical wellness, reporting that disease processes can develop as the body ages. Second, Randall illustrated challenges concerning psychological wellness, describing how retirement can affect an individual’s self-concept. Last, social wellness may be threatened due to the loss of one’s role of worker within society, resulting in a sense of worthlessness and loneliness. The main limitation of Randall’s insights is that they are all conceptual, with no research proving the validity of these proposals. Below, two models of wellness based on research are described with a depiction of how the reviewed retirement variables fit into these models.

A model of wellness that is based within the counseling literature is the Wellness Wheel Model (Myers & Sweeney, 2005; Myers, Sweeney, & Whitmer, 2000; Sweeney & Whitmer, 1991; Whitmer & Sweeney, 1992). This model is primarily based on the theory of individual psychology (Myers & Sweeney, 2005). Myers et al. (2000) described this wheel as holistic in nature, consisting of several dimensions related to the human condition. These dimensions are presented on a wheel, organizing the dimensions and making it more “user friendly.” The authors listed these dimensions of wellness from the inside of the wheel to the outside in the following order: (a) spirituality; (b) intrapsychic constructs (stress management, gender identity, cultural identity, self-worth, self-esteem, sense of control, realistic beliefs, sense of humor, creativity, and emotional awareness); (c) physicality (exercise, self-care, and nutrition); (d) life tasks (love, friendship, and
work); (e) societal constructs (religion, education, family, community, government, and business); and (f) global events. Each dimension is thought to interact with and influence the other dimensions.

The Perceived Wellness Model focuses on similar dimensions as the wellness wheel; however, it is based on different theoretical orientations. T. Adams et al. (1997) described how this model is based on the systems theory and the salutogenic perspective. According to the authors, the systems theory implies that each separate part of the system is both independent and necessary within the larger system. Thus, the dimensions of the human condition, noted below, are separate entities, but all are needed for overall wellness. The authors also described how the salutogenic orientation suggests that good health is more than being disease-free. Good health is considered to be living at one’s best possible level and achieving a sense of equilibrium from a physical, mental, and social perspective. They described six dimensions of wellness: (a) physical wellness, defined as possessing a positive view and anticipation of physical health; (b) spiritual wellness, defined as taking an optimistic opinion of meaning and purpose in life; (c) psychological wellness, defined as having an outlook that life’s trials and situations will turn out favorably; (d) social wellness, defined as having the opinion one serves as a support and is supported by others; (e) emotional wellness, defined as having a strong sense of self-concept, self-esteem, and self-regard; and (f) intellectual wellness, defined as being engaged in an ideal level of cognitively enriching activity.

Randall (1981), Myers and Sweeney (2005), and T. Adams et al. (1997) described their models as having many dimensions of wellness. Thus far within this literature
review I reviewed many of these dimensions in relation to retirement. Psychological variables such as anxiety (Bosse et al., 1991; Skarborn & Nicki, 2000), depression (Fretz et al., 1989), and attitude (Mutran et al., 1997) can be found within the dimensions of these wellness models. Specifically, attitude would be found within the psychological dimension of the Perceived Wellness Model, whereas anxiety, stress, worry, and depression would be within the emotional dimension (T. Adams et al., 1997). Health and bridgework are also found within these wellness models. Health is found within the physical dimension of the Perceived Wellness Model (T. Adams et al., 1997) and within the Wellness Wheel Model under nutrition, exercise, and self-care (Myers & Sweeney, 2005). Last, bridgework is found within the social dimension of the Perceived Wellness Model and under the vocational section of the Wellness Wheel Model.

Many variables I described within this literature review have relationships with retirement, such as anxiety, depression, and attitude toward retirement. These variables also have associations with wellness. It is uncertain at this time the degree of association between these variables and wellness for individuals who are currently nearing the time of retirement.

Rationale

The first purpose of this study was to determine the relationships between anxiety, depression, attitude toward retirement, and wellness for individuals who are nearing the time of their retirement. Throughout the literature review multiple studies have illustrated how anxiety, depression, and attitude toward retirement are prevalent during the time of retirement. However, no study currently exists that looks at how these variables are
associated with wellness as one nears retirement. The second purpose of this study was to determine what kind of predictive value depression, anxiety, and attitude toward retirement have on wellness in full time employees nearing retirement.

Two of the five main variables described in the literature review were used in this study; psychological variables were used as predictor variables and wellness was used as the criterion variable. First, selected psychological variables included anxiety, depression, and attitude toward retirement. The literature is replete with studies indicating how anxiety, depression, and attitude toward retirement are correlated with retirement (AARP, 2004; Bosse et al., 1991; Fretz et al., 1989; George & Maddox, 1977; Payne, Robbins, & Daugherty, 1991; Skarborn & Nicki, 2000). The second variable used for this study, which served as the criterion variable, was wellness. The Perceived Wellness Model was chosen here to provide a conceptualization of wellness. Based on this model, wellness is seen as an individual’s quality of life based on physical, psychological, emotional, intellectual, social, and spiritual dimensions (T. Adams et al., 1997). These dimensions of wellness have also been shown to be a topic of interest for the majority of the baby boomer generation (AARP, 2004), the next generational cohort nearing retirement (Maples & Abney, 2006).

The research questions for my study are: (a) What relationships exist between anxiety, depression, attitude toward retirement, and overall wellness for workers who are nearing the time of their retirement; and (b) what predictive value do anxiety, depression, and attitude toward retirement have on overall wellness for workers who are nearing the time of their retirement?
CHAPTER II

METHOD

The purpose of this study was to determine the relationships between anxiety, depression, attitude toward retirement, and wellness for individuals who are nearing the time of their retirement and to determine the predictive value of anxiety, depression, and attitude toward retirement on overall wellness for individuals who are nearing the time of their retirement. The methods section is divided into four subsections: (a) participants, (b) instrumentation, (c) procedures, and (d) data analysis. First, in the participants subsection I describe participant criteria. Second, in the instrumentation subsection I depict the four instruments used for this study: (a) Perceived Wellness Survey, (b) Attitude Toward Retirement Scale, (c) Beck Depression Inventory-II, and (d) Beck Anxiety Inventory. The reliability and validity of each instrument is described. Third, in the procedures subsection I illustrate the content of the questionnaire packets, the data collection procedures for each participating group, and the monetary incentive procedures. Last, in the data analysis subsection I list the descriptive statistics, correlational analyses, and regression analyses that were used. I also provide a review of simple, stepwise, and hierarchical regression analyses in order to determine the approach used in this study. Within the analysis subsection I provide a rationale for the needed number of participants for this study.
Participants

A convenience sample was used for this study. Participants were sampled from community organizations, such as a local business, a women’s group, a 4-year university, schools, churches, and a mailing list that was purchased from a survey company.

The participants met two criteria for this study. First, all participants planned to retire within five years of participating in this study. As noted in chapter 1, employees who are closer to the time of retirement have been reported to experience more worry compared to employees with many years before retiring (Skarborn & Nicki, 2000). However, Skarborn and Nicki defined closeness to retirement only by participant age. These authors’ criteria required preretiree participants to be aged 50 or older and still be employed. They provided no information on the length of time these participants planned to work before retiring.

For the purpose of this study, adding the 5-year retirement deadline criterion prevents employees from participating who do not intend to retire within five years; thus placing the participants closer to the time of retirement. The 5-year cutoff was chosen because it adds to the specificity of the concept “near retirement” and yet includes a wide enough band of years to allow for an adequate sample for statistical analysis. No study was found that defines preretirement by the number of years left to work. Preretirement for this study was defined as an employee who plans to retire from their primary career within the next five years.

The second criterion is that participants were still employed in their primary career. Primary career for this study was defined as a type of job or career one worked in.
for at least 10 years. An employee who worked in the accounting field for 15 years would be an example of a primary career. Employees who had retired from their primary career and were engaged in a second career were not utilized. Retirement for this study was defined as the ending of one’s primary career which had been held for at least 10 years.

Demographic data collected from the participants included sex, race, income level, education, age, marital status, and job type. Job types consisted of management, professional, service, sales, administrative, farming, construction, installation, production, transportation, and armed forces (Bureau of Labor Statistics, 2007). The demographic variables for this study were chosen because the literature described how these variables are related to anxiety (Bosse et al., 1991; Skarborn & Nicki, 2000), depression (Fretz et al., 1989), and attitude toward retirement (Mutran et al., 1997) during pre- and post-retirement.

Instrumentation

This study determined relationships between anxiety, depression, attitude toward retirement, and wellness for individuals who are nearing the time of their retirement. The four instruments used to measure these variables are described in this section. These instruments were chosen because of their ease of completion, completion time, and sound validity and reliability. The instruments included the: (a) Perceived Wellness Survey, (b) Attitude Toward Retirement Scale, (c) Beck Depression Inventory-II, and (d) Beck Anxiety Inventory.
The Perceived Wellness Survey (PWS) measured the criterion variable of wellness. The PWS measured the levels of wellness across six dimensions: physical, social, spiritual, emotional, intellectual, and psychological (T. Adams et al., 1997). Each of the six dimensions had six items. Items were scored on a Likert type scale, ranging from 1, *very strongly disagree*, to 6, *very strongly agree*. The PWS is scored using an overall composite score. Calculating the overall composite score first involves finding the magnitude and balance scores (T. Adams et al., 1997; Harari, Waehler, & Rogers, 2005). The magnitude score is calculated by adding the averages of each dimension of wellness (Bezner, Adams, & Whistler, 1999). The balance score is calculated by finding the square root of the variance among the six magnitude scaled scores and adding 1.25 as a constant value (Harari et al., 2005). Adding the constant prevents the balance score from equaling zero and invalidating the score (T. Adams et al., 1997). The overall wellness composite score is calculated by dividing the magnitude score by the balance score (T. Adams, Bezner, Drabbs, Zambarano, & Steinhardt, 2000; Harari et al., 2005). Scores range from 3-29. Higher scores on the PWS suggest a higher level of wellness. Items from the six dimensions were dispersed throughout the scale. The PWS takes approximately 15 minutes to complete.

The PWS produces six subscores and one overall wellness score. The subscores measure each of the six dimensions listed above. The six dimensions of the PWS were assessed for exploratory analysis, but only the overall wellness score is addressed in the research questions and used for data analysis.
T. Adams, Bezner, Garner, and Woodruff (1998) assessed the PWS to determine temporal stability, construct validity, and discriminant validity. To determine temporal stability, a test-retest procedure was used with 1,077 participants from three different places of employment ($n = 796$) and from a set of undergraduate students ($n = 281$). Students completed the test-retest procedure in a classroom, whereas the employees were mailed the surveys with a request to complete them within a certain time. The student participants completed the retest procedure 10 days after their first test, whereas the employees completed and returned their second test between 17 to 34 days after the first test. Results indicated overall reliability of the PWS for both the employee ($r = .73$) and student ($r = .81$) samples. Results did not determine the reliability of each subscale of the PWS.

T. Adams et al. (1998) assessed for construct validity by comparing participants’ subscores on the PWS with their scores on 41 other scales that were thought to measure similar constructs. These scales measured constructs such as physical health, psychological health, spirituality, and interpersonal relationships. The authors provided the name of each instrument, a brief description of each instrument, and a reference where the instrument can be found. Results showed that the PWS was correlated with 33 of the 41 instruments.

Last, T. Adams et al. (1998) assessed for discriminant validity by dividing the scores on these instruments and the PWS into quartiles. A one-way ANOVA with Tukey’s HSD post hoc analysis was used to determine if there were differences between the highest and lowest quartiles of perceived wellness in relation to these other scales.
They found differences between the highest and lowest scores of wellness of the scales tested, suggesting the PWS has discriminant validity.

There were three limitations to this study. First, convenience sampling was used and thus limits the generalizability of the results. Second, all the participants were volunteers. Golaszewski, Lynch, Clearie, and Vickery (1989) reported how employees who voluntarily engage in work-related wellness programs and health monitoring activities are healthier than the overall population. Thus, the results T. Adams et al. (1998) presented may be positively skewed toward better health. Last, whereas the authors named and defined the instruments they used to establish the construct validity of the PWS, they did not present these scales’ validity, reliability, sample items, or scoring procedures.

In another study, T. Adams et al. (1997) assessed the PWS for both reliability and validity. A convenience sample \((N = 558)\) was taken from employees of 3M Incorporated and students from the University of Texas at Austin. The PWS scale was found to have overall internal consistency \((\alpha = .91)\). The internal consistency for the subscales were: physical \((\alpha = .81)\), psychological \((\alpha = .71)\), social \((\alpha = .64)\), intellectual \((\alpha = .64)\), spiritual \((\alpha = .77)\), and emotional \((\alpha = .74)\). All were found to be significant \((p \leq .05)\).

T. Adams et al. (1997) assessed discriminant validity by comparing participants’ PWS scores with assessments from four EAP, nursing, or wellness professionals. The assessment contained two sets of six statements developed from the PWS subscales. The first set of statements portrayed someone who may possess a high level of wellness, and the second set depicted low levels of wellness. These health professionals were instructed
to classify five employees who they thought may possess high levels of wellness and five employees with low levels of wellness. A sample statement identifying a well person was: “Identify five employees who seem to expect that positive things will result no matter what the circumstances.” A sample statement identifying an unwell person was: “Identify five employees who seem to be insecure with who they are.” The authors did not state the level of knowledge professionals had of the employees they classified. T-tests were used to determine differences between participants’ PWS scores and the healthcare professionals’ scores. Results showed that the healthcare professionals’ scores and the employees’ PWS scores were in agreement regarding “wellness” of employees, suggesting a high level of discriminate validity ($t = 5.46, p < .05$).

T. Adams et al. (1997) assessed for content validity by asking college students to classify the PWS items into their respected six classifications. Results found a correlation ($r = .98, p < .05$) between items and appropriate classifications.

The PWS was also found to be related to other psychological measures. Harari et al. (2005) investigated the relationship between the PWS, the Beck Depression Inventory-Second Edition (BDI-II), and the Beck Anxiety Inventory (BAI). The authors administered these three instruments to undergraduate college students ($N = 317$) and found that the PWS accounted for 29.5% of the variance on the BDI-II, and 14% of the variance on the BAI.

In summary, the PWS was used in this study to measure overall wellness in employees nearing retirement. It was chosen for three reasons: (a) researchers have demonstrated adequate validity and reliability (T. Adams et al., 1998; T. Adams et al.,
1997); (b) the PWS included a multidimensional perspective of wellness, measuring physical, psychological, social, spiritual, emotional, and intellectual wellness; and (c) the PWS takes a short time to complete, which increased the likelihood that participants would complete the study.

**Attitude Toward Retirement Scale**

The Attitude Toward Retirement Scale (ATRS) measures “a preretirement attitude toward retirement” (Glamser, 1976, p. 105). The ATRS consists of five Likert type items (5 = strongly agree, 4 = agree, 3 = undecided, 2 = disagree, and 1 = strongly disagree). Scores can range between 5 and 25, with higher scores representing a more positive attitude toward retirement.

Glamser (1976) tested reliability by comparing items on the ATRS with items from other instruments that measured commitment to work, preparedness for retirement, perceptions of financial stability, social activity, and knowledge about retirement. Information on these instruments was not provided. The participants (N = 70) were sampled from a wide array of occupations, ranging from chemists to machinists. Glamser found that scores on perceived financial state (r = .33), preparedness for retirement (r = .33), and the number of friends one has (r = .26) were positively correlated with ATRS scores (p < .05). Using Cronbach’s alpha coefficient, reliability was established at .77.

Abel and Hayslip (1986) used the ATRS in a study that looked at the relationships between attitude toward retirement, locus of control, life satisfaction, self-esteem, and attitude toward work. The authors administered five scales to 53 participants who were enrolled in a preretirement seminar. They reported that the internal reliability for the
The ATRS was adequate at .80. Results indicated that attitude toward retirement, measured by the ATRS, was related to work commitment ($r = .55$), life satisfaction ($r = .23$), and physical health ($r = .26$).

Scale items of the ATRS consist of the following: “Retirement is mostly good for a person,” “I think that things will go well for me in retirement,” “It is not fair to make a person retire because of his age,” “I am looking forward to the time off that retirement will bring,” and “If it were up to me alone, I would keep on working as long as possible.”

There are four potential limitations to the ATRS. First, only two studies were found that tested for the reliability of the ATRS. More studies are needed to better establish its reliability. Second, there are only five items on the ATRS, and thus the full array of dimensions composing attitude toward retirement may not be addressed. Third, the ATRS was constructed 31 years ago and may not be relevant to the current generation of employees nearing retirement. Last, Powers (1982) argued that the item: “If it were up to me alone, I would keep on working as long as possible” was questionable in terms of if it was an appropriate measure of attitude toward retirement. The author speculated how this item could be used to measure either attitude toward retirement or attitude toward work.

In summary, the ATRS was used for this study to measure attitude toward retirement of employees who are nearing retirement. This instrument was used because few other instruments are currently available that measure attitude toward retirement. Also, the ATRS takes a short time to complete, which increased the likelihood that the participants would complete the study.
Beck Depression Inventory-II

The Beck Depression Inventory-II (BDI-II) is an instrument designed to measure depressive symptomology (Groth-Marnat, 1999). The BDI-II can be used to assess depressive symptoms in individuals who may or may not possess a diagnosable depressive disorder (Beck, Steer, & Garrison, 1986). Thus, this instrument was chosen for its ability to measure depressive symptoms in non-depressed individuals because it was assumed that most of the participants for this study would not meet the criteria for a depressive disorder.

The BDI-II is a 21-item instrument using a four point Likert scale. When completing the BDI-II individuals rate their level of severity on 21 symptoms of depression (0 = no symptoms, 1 = mild symptoms, 2 = moderate symptoms, 3 = severe symptoms). Scores can range from 0-63. Scores of 5-9 are reported to indicate no or minimal depression, 10-18 mild to moderate depression, 19-29 moderate to severe depression, and 30-63 severe depression. A score of 4 or below is considered possibly “faking good” (Groth-Marnat, 1999). According to Groth-Marnat the 21 symptoms in the BDI-II are sadness, pessimism, sense of failure, dissatisfaction, guilt, expectation of punishment, dislike of self, self-accusation, suicidal ideation, episodes of crying, irritability, social withdrawal, indecisiveness, change in body image, retardation at work, insomnia, fatigue, loss of appetite, loss of weight, somatic preoccupation, and low energy levels. The BDI-II takes 5-10 minutes to complete (Groth-Marnat, 1999).

Validity and reliability of the BDI-II are well established. Beck, Steer, and Garbin (1988) reported in their meta analysis that internal consistency ranged between .73 and
.92, with an average of .86. The BDI-II was also found to have concurrent validity with other instruments that measure depressive symptomology. Beck, Steer, et al. found a significant correlation \( r = .76 \) between the BDI-II and the Minnesota Multiphasic Personality Inventory Depression Scale, whereas Brown, Schulberg, and Madonia (1995) reported a correlation \( r = .73 \) between the Hamilton Psychiatric Rating Scale for Depression and the BDI-II.

In summary, the BDI-II was used for this study to measure depressive symptoms in employees nearing retirement. It was chosen over other instruments that measure depressive symptoms for two reasons. First, there is extensive research that establishes the BDI-II as a valid and reliable instrument. Second, the BDI-II consists of only 21-items and takes a short time to complete.

**Beck Anxiety Inventory**

The Beck Anxiety Inventory (BAI) was constructed to measure anxious symptomology in adults (Ayala, Vonderharr-Carlson, & Kim, 2005). Morin et al. (1999) described this instrument as consisting of 21-items on a four point Likert scale (0 = Not at all, 1 = Mildly: did not bother me much, 2 = Moderately: it was very unpleasant, 3 = Severe: I could barely stand it). Total scores range from 0-63, with higher scores indicating higher anxiety. Morin et al. provided a breakdown of scores (0-9 = Normal, 10-18 = Mild/Moderate Anxiety, 19-29 = Moderate/Severe Anxiety, 30-63 = Severe Anxiety). The BAI was noted for its effectiveness at detecting anxiety, its completion time efficiency, its ease of administration, its ease of completion, and its simple
interpretation (Ayala et al., 2005). The BAI takes 5-10 minutes to complete (Morin et al., 1999).

The Beck Anxiety Inventory was found to have adequate validity and reliability. Beck, Epstein, Brown, and Steer (1988) tested the BAI for discriminate validity, concurrent validity, and internal consistency. Participants ($N = 160$) were recruited from outpatient clinics who were being treated for anxiety or affective disorders. They were assessed and diagnosed by mental health professionals prior to participating in the study. Participants were divided into three groups to determine the discriminant validity of the BAI. Group one consisted of individuals with an anxiety disorder and no depressive disorder ($n = 82$), individuals with a depressive disorder and no anxiety disorder ($n = 30$), and individuals with no diagnosis as a control group ($n = 16$). Group two consisted of individuals with anxiety disorders and a possible secondary depressive disorder ($n = 95$), individuals with a depressive disorder and a possible secondary anxiety disorder ($n = 49$), and a control group ($n = 16$). Group three consisted of individuals with an anxiety disorder that is classified as primary or secondary ($n = 144$), individuals with a depression diagnosis without anxiety ($n = 30$), and a control ($n = 16$). All participants took the BAI. To determine discriminate validity, an analysis of variance with Tukey’s post hoc was used to determine group differences between BAI scores based on diagnoses. The authors found differences ($p < .001$) in BAI scores between participants with anxiety disorders, depressive disorders, and the control. Specifically, participants with anxiety disorders produced higher scores on the BAI than participants with depressive disorders and the control.
To test for concurrent validity, each participant went through a clinical interview and was rated using the Hamilton Anxiety Rating Scale (HARS) and the Cognition Checklist-Anxiety Subscale (CCAS). Participants’ scores were correlated with their BAI scores. Beck, Epstein, et al. (1988) found correlations between the BAI scores and scores on the HARS ($r = .51$) and the CCAS ($r = .51$). The authors also reported a test-retest reliability at one week ($r = .75$) and two weeks ($r = .92$). Last, internal consistency of the BAI was reported to be adequate ($\alpha = .92$).

Morin et al. (1999) assessed the convergent and discriminate validity of the BAI using older adults. Participants ($N = 281$) were 55 years and older, averaging 69 years of age. They were administered the BAI, the BDI, and the Brief Symptom Inventory-Anxiety Subscale (BSI-AS). The authors found a positive correlation between the BAI and the BSI-AS ($r = .73$), whereas the BAI had a modest correlation with the BDI ($r = .44$).

In summary, the BAI was used in this study to measure anxious symptomology in employees nearing retirement. The BAI was used for this study because researchers have found it to be a valid, reliable, and efficient instrument (Ayala et al., 2005).

Procedures

The procedures section is divided into three sections: (a) packet description, (b) data collection, and (c) the monetary incentive. The packet description section describes the materials included within the participant research packet, such as the consent letter, the demographics form, the instructions page, and the four instruments. The data collection section describes how the participant research packets were distributed and
collected from each participating group. Last, the monetary incentive section describes the monetary incentive for participants to complete the research packet, the procedures for the drawing, and the procedures for how the researcher distributed the prizes.

**Packet Description**

The participant research packets consisted of two sections. First, an “informed consent” letter and directions page (see Appendix A) that was approved by the Kent State University Institutional Review Board (IRB) was included in the packet. The consent letter included a brief description of the study, the criteria participants must meet in order to qualify, a request for the employee’s participation, a description of the confidential and voluntary nature of the study, estimate of how long it might take to complete the research packet, an explanation of the participant’s right to stop at any time without penalty, and notification of the monetary incentive (explained later). The letter included an explanation that the demographics form and all four inventories had to be fully completed to qualify for the monetary incentive. Instructions explaining how to complete and return the research packet were attached to the consent letter.

The consent letters for all of the participating groups contained the same information that was listed above. However, the consent letters and directions pages provided different procedures for each group concerning the drawing and how the research packets were to be returned based on each group’s individual circumstance.

The second section consisted of a demographics form (see Appendix B) and the four instruments. The demographics form included a request for information about the participants’ sex, race, income level, education level, age, marital status, and job type.
Job types consisted of management, professional, service, sales, administrative, farming, construction, installation, production, transportation, and armed forces (Bureau of Labor Statistics, 2007). The included instruments were the Perceived Wellness Survey, the Beck Anxiety Inventory, the Beck Depression Inventory-II, and the Attitude Toward Retirement Scale. These instruments were randomly distributed within the research packets. Randomizing the order of the instruments minimizes any influential effect one instrument may have on another (Fowler, 2002).

Some research packets, those to be returned through the U.S. mail, contained a self-addressed stamped envelope and a postcard. The envelope was included so participants could return the completed research packets to the researcher. No identifying information was to be put on the return envelope. The participants were instructed to put their identifying information on the postcard and return it in order to qualify for the monetary incentive. This separated the participants’ responses from their identifying information to preserve anonymity. The groups that received these return envelopes and postcards were the local university, local schools, local churches, and those on the purchased mailing list.

**Data Collection**

Kent State University’s Institutional Review Board (IRB) approved this study (see Appendix C). The researcher received permission to distribute the research packets to participants from a local business, a mailing list, a women’s group, schools, a local university, and churches. The following is a description of the data collection process for each group.
Local Business

First, the researcher received permission from the human resources department of a local business to distribute the research packets to their employees. A full description of the study was provided to the designated human resource representative. The human resource representative provided the researcher with an estimation of the number of employees that met the criteria for the study. The research packets were distributed to participants by the designated human resource representative. In the consent letter, participants were instructed that they had one month to complete and return the research packet in the included envelope. Participants had the option of returning their completed research packets to the designated human resource representative directly or through work mail.

Local Women’s Group

Permission was received to distribute research packets to the members of a local women’s group. A full description of the study was provided to a designated contact person for the women’s group. The contact person provided the researcher with an estimation of the number of group members who would qualify for the study. The researcher met with the group, described the study, and distributed the research packets to the group members who chose to participate. The participants completed the packet materials and returned the packets to the researcher at that time.

Mailing List

A mailing list ($n = 400$) was purchased from the survey company Sales Genie. Research packets were mailed to participants who met the criteria for the study. The
participants were informed through the consent letter that they had one month to complete and return their research packet. Research packets were returned through the mail using the self-addressed stamped envelope that was provided in that packet. Participants were also instructed to put their identifying information on the postcard (included) and mail it to the researcher if they wished to participate in the monetary incentive drawing.

*Local Schools*

The researcher received permission from the principals of local schools to distribute the research packets to school employees. The designated representatives of each school then placed research packets in the mailboxes of employees. The participants were instructed if they chose to participate to mail their completed research packets directly to the researcher using the self-addressed stamped envelope included in the packet. Participants were also instructed to put their identifying information on the postcard (included) and mail it if they wished to participate in the monetary incentive.

*Local University*

The researcher received permission from the Institutional Review Board of the local university to distribute the research packets to university employees. Research packets were mailed out to employees who were a part of the Twenty Year Club. The researcher found the Twenty Year Club on the university website. The primary membership requirement for this club is that employees must have worked 20 or more years at the university. The researcher mailed the research packets to the employees’ work address. The participants were informed through the consent letter if they chose to
participate to mail their completed research packets directly to the researcher using the self-addressed stamped envelope included in the packet. Participants were also instructed to put their identifying information on the postcard (included) and mail it to the researcher if they wished to participate in the monetary incentive drawing.

Local Churches

The researcher sought permission from the clergy and/or administrators of local churches to distribute the research packets to congregation members. Upon receiving approval the researcher distributed the research packets to a designated representative of each church. The designated representative distributed the research packets to church members who qualified for the study and wished to participate. The participants were instructed through the consent letter if they chose to participate to mail their completed research packets to the researcher using the self-addressed stamped envelope included in the packet. Participants were also instructed to put their identifying information on the postcard (included) and mail it to the researcher if they wished to participate in the monetary incentive drawing.

Monetary Incentive Procedures

Six, $25 Visa gift cards were the monetary incentive for this study. Participants who completed and returned their research packets and post cards within the allotted time were entered into a drawing for these gift cards. Because of the different procedures each group had for collecting their research packets, different procedures were needed to identify participants for the drawing and distribute the gift cards. These procedures are described below.
Participants from the local business and women’s group were instructed to keep their informed consent letter when they returned their packets. Each informed consent letter contained its own identification number. These numbers were used to identify participants for the drawing. The identification numbers for the local business were 1 to 50 and local women’s group were 51 to 100.

Participants from the mailing list, local schools, the local university, and churches were asked to mail a postcard (included) that included their identifying information when they returned their research packets. The postcards were mailed separately from the research packets to assure the anonymity of the participants’ item responses. The participants’ identifying information was used to identify participants for the drawing and to send them the gift card.

Each return address and identification number that was returned with a completed research packet was transferred to a 3 x 5 note card. All note cards were combined and six were randomly drawn. Any cards drawn that contained addresses were mailed the gift cards. The designated representatives from the business and women’s group were notified if any cards were drawn from these places. The designated human resource representative from the local business notified employees of any winning numbers. The winning participants had to show their consent letter containing the identification number to the human resource representative in order to claim the gift card. The designated contact representative from the women’s group announced the winning numbers at the next scheduled meeting and any winning participants had to present their consent letter containing the identification number to collect the gift card.
Analysis

This study used three types of statistical analyses. First, descriptive statistics reported the means, standard deviations, ranges, skewness, and kurtosis for the criterion variable and predictor variables. Descriptive statistics were also provided for the demographic variables. Second, Pearson Product-Moment correlation analysis assessed the relationships between the variables of wellness, anxiety, depression, and attitude toward retirement. Last, hierarchical multiple regression analysis was used to determine how predictor variables accounted for the variance of the criterion variable.

There are three primary types of multiple regression. First, standard regression is considered the most basic form of regression, by which all predictor variables are entered into the equation concurrently (Tabachnick & Fidell, 1983). Standard regression would answer a research question such as, “What is the extent of the overall association between wellness and attitude toward retirement, anxiety, and depression?” Tabachnick and Fidell described how each predictor variable is assessed as if it had entered the regression equation after all the variables had been entered. Thus, each predictor variable is evaluated by its prediction of the criterion variable above and beyond what the other predictor variables offered. One limitation to the standard regression model is that a predictor variable’s association to the criterion variable may be limited because it is entered with the other predictor variables simultaneously.

Second, stepwise regression is described as a “model-building” (Tabachnick & Fidell, 1983, p. 106) method of analysis, devised to determine which predictor variables contribute the most to the criterion variable and place these predictors in an arranged
order of contribution (Cohen, Cohen, West, & Aiken, 2003). Stepwise regression would answer the question, “What is the best linear combination of predictor variables to predict the criterion variable in this sample?” (Tabachnick & Fidell, 1983, p. 107). This process is used when no logical or theoretical recommendations can be made as to which variables may be entered first into the equation, leaving the order of entry based on statistical criteria. Therefore, stepwise regression can be used in an attempt to create theory from the data instead of to validate a theory with data. Researchers have described this regression model as a debatable method (Cohen et al., 2003; Tabachnick & Fidell, 1983). Cohen et al. argued that stepwise regression should not be used when the research goal is theoretically driven, when the participant sample is small, and when the number of predictor variables under study is large.

Third, hierarchical regression is described as a “model-testing” (Tabachnick & Fidell, 1983, p. 106) method of analysis. This model of regression is used when theory or logic can determine the order by which each independent variable is entered into the equation (Cohen et al., 2003). Each predictor variable is entered into the equation in some predetermined order and its effect size is identified. Hierarchical regression would answer the question, “Does depression significantly predict overall wellness after controlling for attitude and anxiety?”

Cohen et al. (2003) described two principles of hierarchical regression. First, the causal priority principle is if a predictor variable is influential to another predictor variable, the influential variable should be entered first. For example, suppose negative self-talk and depression are predictor variables in a study. It could be argued from a
cognitive behavioral orientation that negative self-talk influences depression, thus negative self-talk should be entered first. The second principle is referred to as research relevance, which entails gathering information about the statistical relevance about each predictor variable in relation to the criterion variable. Many times researchers gather data on variables that are outside the sphere of the primary predictor variables of a study. When this occurs, the predictor variables thought to be most predictive are entered first. Variables deemed as less predictive are included in an order of some assumed importance after the primary predictors are entered.

The research methodology for this study was a correlational design. The criterion variable was overall wellness. There were a total of four predictor variables: (a) attitude toward retirement, (b) BDI scores, (c) BAI scores, and (d) income level. Income level was included in the regression because it had significant relationships with the criterion and predictor variables. Race, education, age, sex, marital status, and job type had no significant relationships with the criterion and predictor variables for this study. Hierarchical multiple regression analysis was used to determine the predictive value these four variables had on overall wellness.

The predictor variables were entered into the hierarchical regression equation in two blocks (George & Mallery, 2005). Block one included attitude toward retirement, depression, and anxiety. These variables were entered into a specific order based on theoretical orientation, the casual priority principle, and the research relevance principle. Attitude toward retirement was entered first, based on rational-emotive theory. Based on the A-B-C model of rational-emotive behavioral theory, the activating event (A) of
nearing retirement would be interpreted by an individual’s belief system (B), which is made up of ideas and attitudes (Ellis, 1989). Ellis described how an individual’s belief system, which is made up of attitudes and ideas, would produce psychological consequences (C), such as anxiety and depression. This theoretical outlook is consistent with the casual priority principle, which states that if a predictor variable (attitude toward retirement) is thought to be influential to another predictor variable (depression and anxiety), the assumed influential variable (attitude toward retirement) should be entered first.

Depression was entered second based on the principle of research relevance. As stated earlier, Harari et al. (2005) investigated the relationship between the PWS, the BDI-II, and the BAI. They found that the PWS accounted for 29.5% of the variance on the BDI-II, whereas the PWS accounted for 14% of the variance on the BAI. Anxiety was entered third. Income level was entered into block two.

Skewness and kurtosis were examined to determine if the assumptions of normality, linearity, and homoscedasticity were met (Stevens, 1999). The significance level was set at $p < .05$.

A sample of 168 participants was used to help maintain adequate statistical power due to the number of variables used for this study (Cohen, 1988; Tabachnick & Fidell, 1983). Tabachnick and Fidell (1989) reported that “if hierarchical regression is used, one would like to have 20 times more cases than predictor variables” (p. 128). This study used four predictor variables, creating a ratio of 42 participants for each predictor variable and exceeding Tabachnick and Fidell’s recommendation of a 20:1 ratio.
In summary, three types of statistical analyses were used for this study. First, descriptive statistics reported the means, standard deviations, ranges, skewness, and kurtosis for the criterion and predictor variables. Descriptive statistics were also provided for the demographic variables. Second, Pearson Product-Moment correlation analysis assessed the relationships of wellness, anxiety, depression, and attitude toward retirement. Third, hierarchical multiple regression analysis was used to determine how the predictor variables accounted for the variance for overall wellness. Last, the sample size was determined to account for statistical power. Chapter 3 presents the results of this study.
CHAPTER III

RESULTS

The purpose of this study was twofold. First was to determine what relationships exist between anxiety, depression, attitude toward retirement, and wellness for workers who are nearing the time of their retirement. Second, the researcher sought to determine the predictive value anxiety, depression, and attitude toward retirement have on overall wellness for workers who are nearing retirement.

This chapter includes a summary of the three types of statistical analyses used for this study. First, descriptive results are presented for all of the variables. Second, correlational results are presented for depression, anxiety, attitude toward retirement, and wellness. Last, results are presented for the hierarchical multiple regression analysis that was used to determine how the predictor variables accounted for the variance of the criterion variable. After addressing the primary purposes of the study an exploratory analysis of the Perceived Wellness Survey subscales is provided and the internal reliability for each instrument is presented.

Descriptive Results

This section includes the means, standard deviations, ranges, skewness, and kurtosis for all 10 variables. First, the primary variables of wellness, depression, anxiety, and attitude toward retirement are presented. Second, the demographic variables of age, sex, race, job type, education, income level, and relationship status are presented.
Primary Variables

Means, standard deviations, skewness, and kurtosis for the predictor variables and criterion variable are presented in Table 1.

Table 1

Descriptive Statistics of the Primary Variables for People Nearing Retirement

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>6.15</td>
<td>6.07</td>
<td>2.51</td>
<td>9.50</td>
</tr>
<tr>
<td>Anxiety</td>
<td>5.26</td>
<td>4.60</td>
<td>1.05</td>
<td>0.99</td>
</tr>
<tr>
<td>Attitude</td>
<td>19.10</td>
<td>2.19</td>
<td>0.38</td>
<td>0.21</td>
</tr>
<tr>
<td>Wellness</td>
<td>16.23</td>
<td>3.50</td>
<td>-0.17</td>
<td>0.08</td>
</tr>
</tbody>
</table>

The Beck Depression Inventory-II (BDI-II) scores for this study ranged from 0-39. As noted earlier, BDI-II scores can range from 0-63. Scores of 5 to 9 are reported to indicate no or minimal depressive symptoms, 10 to 18 mild to moderate symptoms, 19 to 29 moderate to severe symptoms, and 30 to 63 severe symptoms (Groth-Marnat, 1999). For the purpose of this study scores under five were included in the ‘no to minimal depression’ category. There were 168 participants in this study. Results indicated that 136 participants (81%) had no to minimal depressive symptoms, 25 participants (15%) had mild to moderate depressive symptoms, 5 participants (3%) had moderate to severe depressive symptoms, and 2 participants (1%) had severe depressive symptoms.
The Beck Anxiety Inventory (BAI) scores for this study ranged from 0-23. As noted earlier, scores on the BAI can range from 0-63. Scores of 0-9 indicate normal anxiety, 10-18 indicate mild to moderate anxiety, 19-29 indicate moderate to severe anxiety, and 30-63 indicate severe anxiety (Morin et al., 1999). Results indicated that 134 participants (80%) had normal anxiety, 32 participants (19%) had mild to moderate anxiety, and 2 participants (1%) had moderate to severe anxiety.

As noted in chapter 2, scores on the Attitude Toward Retirement Scale (ATRS) range between 5 and 25, with higher scores representing a more positive attitude toward retirement (Glamser, 1976). ATRS scores for this study ranged from 14-25. Last, scores on the Perceived Wellness Survey (PWS) range from 3-29 (T. Adams et al., 1997). Participants’ scores on the PWS for this study ranged from 7-24. Higher scores on the PWS suggest a higher level of wellness (T. Adams et al.).

Demographic Variables

The demographic variables for this study are found in Table 2. The mean age for participants was 60 years ($SD = 5.13$). Participants’ actual ages were used to estimate this mean.

Correlational Results

Research Question One Results

The first research question was “What relationships exist between the variables of anxiety, depression, attitude toward retirement, and wellness for individuals who are nearing retirement?” Pearson Product-Moment Correlation was used to calculate these relationships. Results indicated that all of the primary variables are significantly
Table 2

Descriptive Statistics of the Demographic Variables for People Nearing Retirement

<table>
<thead>
<tr>
<th>Variable</th>
<th>Participant #</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-49</td>
<td>1</td>
<td>0.6%</td>
</tr>
<tr>
<td>50-59</td>
<td>78</td>
<td>47%</td>
</tr>
<tr>
<td>60-69</td>
<td>78</td>
<td>47%</td>
</tr>
<tr>
<td>70-79</td>
<td>10</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>106</td>
<td>63%</td>
</tr>
<tr>
<td>Females</td>
<td>62</td>
<td>37%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>159</td>
<td>95%</td>
</tr>
<tr>
<td>African American</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Asian American</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Job Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>36</td>
<td>21%</td>
</tr>
<tr>
<td>Professional</td>
<td>63</td>
<td>37%</td>
</tr>
<tr>
<td>Service</td>
<td>30</td>
<td>18%</td>
</tr>
<tr>
<td>Sales</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Administrative</td>
<td>23</td>
<td>14%</td>
</tr>
<tr>
<td>Farming</td>
<td>1</td>
<td>0.6%</td>
</tr>
<tr>
<td>Construction</td>
<td>1</td>
<td>0.6%</td>
</tr>
<tr>
<td>Installation</td>
<td>1</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 2 (continued)

*Descriptive Statistics of the Demographic Variables for People Nearing Retirement*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Participant #</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job Type (continued)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Transportation</td>
<td>1</td>
<td>0.6%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>30</td>
<td>18%</td>
</tr>
<tr>
<td>Some College</td>
<td>34</td>
<td>20%</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>12</td>
<td>7%</td>
</tr>
<tr>
<td>Bachelors Degree</td>
<td>42</td>
<td>25%</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>32</td>
<td>19%</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>15</td>
<td>9%</td>
</tr>
<tr>
<td>Medical Degree</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0-$19,999</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>$20,000-$39,999</td>
<td>15</td>
<td>9%</td>
</tr>
<tr>
<td>$40,000-$59,999</td>
<td>28</td>
<td>17%</td>
</tr>
<tr>
<td>$60,000-$79,999</td>
<td>29</td>
<td>17%</td>
</tr>
<tr>
<td>$80,000-$99,999</td>
<td>29</td>
<td>17%</td>
</tr>
<tr>
<td>$100,000-$119,999</td>
<td>24</td>
<td>15%</td>
</tr>
<tr>
<td>$120,000-$139,999</td>
<td>11</td>
<td>15%</td>
</tr>
<tr>
<td>$140,000-</td>
<td>29</td>
<td>17%</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 2 (continued)

**Descriptive Statistics of the Demographic Variables for People Nearing Retirement**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Participant #</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>141</td>
<td>84%</td>
</tr>
<tr>
<td>Single</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Single and in a relationship</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Separated</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Divorced</td>
<td>9</td>
<td>6%</td>
</tr>
<tr>
<td>Widowed</td>
<td>2</td>
<td>1%</td>
</tr>
</tbody>
</table>

correlated to wellness ($p < .001$) for those nearing retirement. These correlations are explained below.

First, depression is negatively correlated with wellness ($r = -.59$), meaning that as one’s depression increases, his or her wellness decreases (see Table 3). Second, anxiety is negatively correlated with wellness ($r = -.40$), indicating as one’s anxiety increases, his or her wellness decreases. Third, attitude toward retirement is positively correlated with wellness ($r = .23$), suggesting the more positive one’s attitude toward retirement, the higher his or her wellness level.

Thus, the results for the first research question showed that all of the primary variables were significantly related to wellness. For instance, as one’s depression and anxiety increases, his or her wellness decreases, and as one’s attitude toward retirement becomes more positive, his or her wellness levels increase.
Table 3

Pearson Product-Moment Correlation Between Primary and Demographic Variables for People Nearing Retirement

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellness (1)</td>
<td>-</td>
<td>.23**</td>
<td>-.40**</td>
<td>-.59**</td>
<td>.19*</td>
</tr>
<tr>
<td>Attitude (2)</td>
<td>-</td>
<td>-.13</td>
<td></td>
<td>-.19*</td>
<td>-.01</td>
</tr>
<tr>
<td>Anxiety (3)</td>
<td>-</td>
<td></td>
<td>.55**</td>
<td></td>
<td>-.23**</td>
</tr>
<tr>
<td>Depression (4)</td>
<td>-</td>
<td></td>
<td></td>
<td>-.17*</td>
<td></td>
</tr>
<tr>
<td>Income (5)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *p < .05 **p < .001

Demographic Correlations

Income level was found to be significantly correlated to some of the primary variables and the criterion variable (see Table 3). Specifically, income had a negative relationship with anxiety ($r = -.23$) and depression ($r = -.17$), suggesting as one’s income increases, his or her anxiety and depression decreases. Also, income was found to be positively correlated to overall wellness ($r = .19$), meaning as one’s income increases, his or her wellness level increases.

Research Question Two Results

The second research question was “What kind of predictive value does depression, anxiety, and attitude toward retirement have on wellness in full time employees nearing retirement?” A hierarchical multiple regression was calculated to
determine the predictive value these variables had on wellness. Two blocks were entered into the regression. Block one included attitude toward retirement, depression, and anxiety. Block two consisted of income and was included because of its significant relationship with the criterion and predictor variables (see Table 4).

Results indicated that the variables in block one accounted for 38% of the variance when predicting overall wellness. The beta weight for attitude toward retirement was .13 ($p < .05$), indicating a positive correlation with wellness. This means that if one scored high on wellness, he or she would be more likely to have a more positive attitude toward retirement. The beta weight for depression was -.52 ($p < .05$), indicating a negative correlation with wellness. This means that if one scored high on wellness, he or she would be more likely to score low on depression. The beta weight for anxiety was not found to be significant.

Results showed that income level in block two accounted for an additional 1% of variance when entered after block one. This means that income added only 1% to the variance over and above the variables in block one when predicting overall wellness. Thus, the $R^2$ change for block two was only .014 and was not significant. The beta weights for depression ($\beta = -.51$) and attitude toward retirement ($\beta = .13$) in block two showed little change from block one. The beta weights for anxiety and income were not found to be significant in block two.
Table 4

Summary of Hierarchical Regression Analyses Predicting Overall Wellness for People Nearing Retirement \((N = 168)\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>(B)</th>
<th>(SE\ B)</th>
<th>(\beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.20</td>
<td>.10</td>
<td>.13*</td>
</tr>
<tr>
<td>Depression</td>
<td>-.30</td>
<td>.04</td>
<td>-.52*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.08</td>
<td>.06</td>
<td>-.10</td>
</tr>
<tr>
<td>Block 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.21</td>
<td>.10</td>
<td>.13*</td>
</tr>
<tr>
<td>Depression</td>
<td>-.29</td>
<td>.04</td>
<td>-.51*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.06</td>
<td>.06</td>
<td>-.08</td>
</tr>
<tr>
<td>Income</td>
<td>.13</td>
<td>.13</td>
<td>.07</td>
</tr>
</tbody>
</table>

Note. *\(p < .05\)

Exploratory Analysis

The Perceived Wellness Scale (PWS) purports to measure wellness on the six subscales of psychological, emotional, social, physical, intellectual, and spiritual wellness (T. Adams et al., 1997). As described in chapter 2, researchers have attempted to legitimize the PWS subscales. T. Adams et al. (1998) studied the construct validity of the subscales by comparing them to instruments that measured similar constructs, whereas T. Adams et al. (1997) studied the subscales’ content validity. However, these authors did not look at the correlations between the subscales nor run a factor analysis on the
subscales. The exploratory aspect of this study looked at a correlation analysis and factor analysis on the subscales to determine the discreteness of the measure.

First, correlation analysis was conducted to determine the relationships between the subscales. The results indicated significant correlations between the subscales (see Table 5), suggesting that the subscales may not measure separate constructs of wellness. For instance, spiritual wellness was found to be highly related to emotional ($r = .72$), psychological ($r = .66$), social ($r = .61$), physical ($r = .46$), and intellectual wellness ($r = .67$), suggesting that these scales may be measuring a similar construct.

Table 5

*Pearson Product-Moment Correlation Between the PWS Subscales for People Nearing Retirement*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>.63**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>.52**</td>
<td>.51**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>.38**</td>
<td>.46**</td>
<td>.38**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiritual</td>
<td>.66**</td>
<td>.72**</td>
<td>.61**</td>
<td>.46**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Intellectual</td>
<td>.53**</td>
<td>.55**</td>
<td>.55**</td>
<td>.29**</td>
<td>.67**</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note. *p < .05 **p < .001*

A factor analysis was conducted on the PWS to determine the nature of the subscales. Results of the factor analysis indicated that eight factors had eigenvalues that
were significant; however, only two subscales had a perfect loading on two factors. The items designated by the authors as the physical subscale loaded on the second factor and the items noted as the psychological subscale loaded on the third factor. The other four subscales did not load on any specific factor. A table of the factor analysis results is provided (see Appendix D).

Thus, the results of the correlational analysis indicated that the six subscales are highly correlated and may measure the same construct. Although the PWS may provide a measure for overall wellness, only two of the subscales appear to measure the constructs they were intended.

Internal Reliability

A correlation coefficient for each instrument was calculated to determine internal reliability. Specifically, Cronbach Alpha was used to determine the internal reliability of each instrument. Results indicated that Cronbach’s alpha was adequate for the Perceived Wellness Survey (\( \alpha = .93 \)), the Beck Depression Inventory-II (\( \alpha = .81 \)), and the Beck Anxiety Inventory (\( \alpha = .88 \)). Internal reliability for the Attitude Toward Retirement Scale was found to be low (\( \alpha = .11 \)) when all five items were entered. It was argued that the fifth item on the ATRS may “be just as appropriate for a commitment-to-work scale as an attitude-toward-retirement scale” (Powers, 1982, p. 257) and may not be an accurate measure of attitude toward retirement. Therefore, a correlation coefficient for the first four items were calculated and the results indicated a higher score for internal reliability (\( \alpha = .54 \)). Let it be noted however, that all five items were entered into the regression model.
CHAPTER IV

DISCUSSION

Within this chapter I discuss the findings of the two research questions. Second, I describe the research and clinical contributions of this study. Third, I discuss the implications for future research. Fourth, I review the limitations of this study.

Discussion of the Primary Purposes

A review of the professional literature indicated that attitude toward retirement, depression, and anxiety are related for people nearing retirement. Fretz et al. (1989) found that attitude toward retirement is negatively related to depression and anxiety for people nearing retirement, meaning that the less positive one’s attitude is toward retirement, the higher his or her level of depression and anxiety will be. Mutran et al. (1997) also found that attitude toward retirement is negatively related to depression for people nearing retirement, suggesting that the more positive one’s attitude is toward retirement, the lower his or her level of depression will be. Researchers have also found that anxiety is prevalent in people nearing retirement and people already retired (Bosse et al., 1991; Skarborn & Nicki, 2000). These findings are in alignment with the findings of this current study, which are described below.

Research Question One

Researchers from previous studies have established relationships between attitude toward retirement (Mutran et al., 1997), depression (Fretz et al., 1989), and anxiety (Skarborn & Nicki, 2000) for people nearing retirement; however, they have not studied
these variables in relation to wellness. The first purpose of this study was to determine how these variables were related to wellness for people nearing retirement. The first research question was “What relationships exist between the variables of anxiety, depression, attitude toward retirement, and wellness for workers who are nearing retirement?” The results of a correlational analysis indicated that all four variables were significantly related to one another. These results support the preexisting research that attitude, depression, and anxiety are related. Results also indicated that attitude toward retirement, depression, and anxiety were significantly related to wellness for those nearing retirement. Specifically, attitude toward retirement had a positive relationship with wellness for people nearing retirement, suggesting the more positive one’s attitude toward retirement was, the higher his or her wellness level. Depression had a negative relationship with wellness for people nearing retirement, indicating the higher participants scored on depression, the lower they scored on wellness. Last, anxiety was negatively related with wellness for people nearing retirement, meaning the higher the participants’ level of anxiety, the lower he or she scored on wellness.

Two things can be mentioned about these findings. First, the finding that attitude toward retirement, depression, and anxiety are related for people nearing retirement supports the existing literature (Fretz et al., 1989; Mutran et al., 1997; Skarborn & Nicki, 2000). One could argue that this study used the next generation of people nearing retirement, thus establishing an existing concept that was only studied in earlier generational cohorts. Second, within this study I included wellness into the retirement
literature by establishing relationships between wellness, attitude toward retirement, anxiety, and depression.

Research Question Two

Researchers from previous studies have not only established relationships between attitude toward retirement (Mutran et al., 1997), depression (Fretz et al., 1989), and anxiety (Skarborn & Nicki, 2000) for people nearing retirement, but they have also found what is most predictive of anxiety and depression in this population. Specifically, attitude toward retirement was found to be the largest predictor of anxiety and depression for people nearing retirement (Fretz et al., 1989). However, researchers have not studied how attitude toward retirement, depression, and anxiety predict wellness for people nearing retirement. The second purpose of this study was to determine what kind of predictive value attitude toward retirement, depression, and anxiety have on wellness for people nearing retirement. The second research question was “What kind of predictive value does depression, anxiety, and attitude toward retirement have on wellness for workers nearing retirement?” The results of a hierarchical multiple regression indicated that depression ($\beta = -.52$) and attitude ($\beta = .13$) accounted for 38% of the variance when predicting overall wellness, whereas anxiety was not found to be a significant predictor. Income was added to the regression model because of its significant relationship to wellness; however, income only contributed 1% to the variance.

Clinical and Research Contributions

As stated in the introduction, retirement is a developmental process that may take many years of adjustment (Honig & Hanoch, 1985). Whereas the retirement process may
be seen as a normal developmental occurrence on the lifespan, researchers have
discovered people who are nearing retirement and people already retired can experience
distress transitioning into this time of life (Fretz et al., 1989; Mutran et al., 1997;
Skarborn & Nicki, 2000). I found that depression and attitude toward retirement
accounted for 38% of the variance for wellness in workers nearing retirement, confirming
my intuition based on previous research (Fretz et al., 1989; Mutran et al., 1997; Skarborn
& Nicki, 2000). As the baby boomer generation, born between 1946 and 1964 and
numbering 77.5 million Americans (AARP, 2004; Maples & Abney, 2006), continues to
near retirement some may experience distress during this transition. The retirement
research based on other generations may not be suitable for the baby boomer generation.
The baby boomer cohort will face unique challenges and circumstances as they near
retirement based on the socio-historical context in which they live (Long, 1990; Taylor &
Hartman-Stein, 1995). Maples and Abney (2006) also described how this cohort will face
challenges related to physical health, employment, finances, and relationships that are
unique to this generation. Therefore, further research is needed for the baby boomer
generation to determine what other variables are related to wellness when transitioning
into retirement.

The findings of this study can also be helpful to mental health workers.
Specifically, these findings can help guide clinical case conceptualizations for counselors
who may see clients who are nearing retirement. From the results of this study counselors
would know that income, anxiety, depression, attitude toward retirement, and wellness
are related for people nearing retirement. It is recommended counselors who are seeing
clients nearing retirement assess them based on each of these variables to better conceptualize their case. Also, the counselor would know that attitude toward retirement and depression account for 38% of the variance for wellness in people nearing retirement. It is also recommended the counselor take these variables into account when treating clients who are nearing retirement. For example, a client who is nearing retirement may come in for counseling because he or she may be feeling depressed or anxious about a number of issues related to this time of life, such as health, retirement planning, finances, and caretaking responsibilities. The counselor would want to determine if these depressive or anxious symptoms are related to retirement issues. If so, it is recommended the counselor focus on these retirement issues as well as how the client can improve his or her wellness to help decrease depressive symptoms.

The findings of this study present a limited, but insightful outlook of what is predictive of wellness for people nearing retirement. As stated above, depression and attitude toward retirement contributed 38% of the variance for wellness; however, they are only two variables of many that may predict wellness during this time of life. Therefore, this study contributes a small piece to the larger picture when thinking about what is predictive of wellness for people nearing retirement. More research is needed to determine what other variables predict wellness for people nearing retirement, specifically people within the baby boomer generation. Recommendations for future research are presented below.
Suggestions for Future Research

This section provides recommendations for future research in relation to retirement. The four recommendations are: (a) suggestions for qualitative research, (b) proposals for longitudinal studies, (c) suggestions for wellness studies for people nearing retirement, and (d) proposals that consider cultural and demographic variables for people nearing retirement.

Suggestions for Qualitative Research

Whereas significant relationships were found between attitude toward retirement, depression, anxiety, and overall wellness in people nearing retirement, no research exists that explains why people nearing retirement may feel anxious or depressed, why they may have a positive or negative attitude toward retirement, and what people nearing retirement are doing to maintain their sense of overall wellness. Studies using qualitative methodologies are recommended to help provide insight as to why people nearing retirement may feel depressed, anxious, have a positive or negative attitude toward retirement, and what they are doing to maintain their sense of wellness. Also, researchers may find that variables contributing to wellness for individuals nearing retirement will vary. For instance, some people may report that education, income, and past vocational success are variables that preserve their wellness, whereas others may say that physical health, interpersonal relationships, and spirituality maintain their wellness. The themes found through qualitative methods could be used in larger quantitative studies that could generalize results to the larger population. These results may help researchers and
clinicians understand what variables are important and why they are important for individuals nearing retirement.

**Proposals for Longitudinal Studies**

It is unknown how attitude toward retirement, depression, anxiety, and wellness will change for the next retiring generation as they move from preretirement into retirement life. It is also unknown how these variables will change within people during their retirement. For instance, does attitude toward retirement, anxiety, depression, and wellness change over time in retired people or vary among retired people, and if so, why? It is recommended that longitudinal research be conducted that looks at how these variables may change as individuals move from preretirement to retirement life and over many years during retirement life. Comparative studies could be used to determine if these variables significantly change as people transition from preretirement to retirement. Specifically, a repeated measures design could be used to assess how depression, anxiety, attitude toward retirement, and wellness change over time. Many other variables could also be studied during this time of life, such as perceived control, stress management, life satisfaction, boredom, and meaning in life. Also, over time these variables may change as far as which are most predictive of one another. Correlational studies are recommended to determine which of these variables are most predictive of wellness at different points in retirement life.

Whereas a repeated measures design would tell if these variables change over time, this type of methodology does not tell why these variables are changing. Qualitative methodologies could be used to portray participants’ stories in both pre- and
postretirement to explain why these variables may be changing. Therefore, a mixed methodology could examine if variables significantly change over time and tell why these variables may be changing.

**Suggestions for Wellness Studies**

Research is needed to examine wellness during the time of retirement. Two wellness scales could be used for these studies. First, the Perceived Wellness Scale (T. Adams et al., 2000; T. Adams et al., 1997; Harari et al., 2005) was used for this study that examined overall wellness. Whereas this scale is a good measure for overall wellness, the distinctness of its subscales does not appear to measure what they intend. As part of an exploratory analysis for this current study I found that only two subscales loaded on two factors and the other four subscales did not align with any specific factors (see Appendix D). A second wellness instrument that could be used is the Five Factor Wellness Inventory, which is based on the Wellness Wheel Model (Myers et al., 2000; Sweeney & Whitmer, 1991; Whitmer & Sweeney, 1992). The Five Factor Wellness Inventory has gone through an extensive exploratory and confirmatory factor analysis (Myers & Sweeney, 2005). It is recommended that a study similar to this study be conducted with people who have are already retired to determine what may be predictive of wellness.

**Proposals for Cultural and Demographic Studies**

The sample taken for this study was homogeneous in nature. Specifically, the sample consisted mostly of Caucasian individuals earning a high income who were well educated and in professional positions. I was unable to determine in exploratory analysis if significant differences in attitude, depression, anxiety, and wellness existed between
races, income levels, education levels, and job types. It is recommended that similar studies be conducted that focus on multiple races, income levels, education levels, and job types in relation to wellness for people nearing retirement and people already retired.

Limitations

The two primary limitations to this study were the instruments used and the heterogeneity of the sample. These limitations are discussed below.

The first limitation was the instruments used. The Perceived Wellness Survey (PWS) was designed to measure both overall wellness and the sub-categories of wellness. T. Adams et al. (1997) reported that the PWS has six subscales: psychological, emotional, social, physical, intellectual, and spiritual. However, the results of exploratory analysis for this study indicated that the subscales were highly correlated. Also, the results of factor analysis showed that only two of the six subscale items (physical and psychological) loaded on specific factors and four of the six subscale items did not (emotional, spiritual, intellectual, and social). This suggests that four of the six subscales do not measure the distinct wellness constructs they were thought to measure. Thus, researchers studying dimensions of wellness may want to choose a wellness instrument that has been shown to have subscales that measure what they are intended. It is also recommended that further research be conducted on the PWS subscales to make each subscale more distinct in what construct it is supposed to measure.

The Attitude Toward Retirement Scale was designed to measure one’s attitude toward retirement (Glamser, 1976). The results of this study found the internal reliability to be low (α = .11). Powers (1982) suggested that the last item of the scale might measure
either commitment to work or attitude toward retirement, suggesting that the item may not be valid. When removing the last item the internal reliability made a modest improvement ($\alpha = .54$). It is suggested that additional research be conducted to determine the validity and reliability of the ATRS. Specifically, additional items are needed to better measure attitude toward retirement for people nearing retirement. A second recommendation is that a new instrument be developed. The first step in this instrument’s development may be conducting qualitative research to determine what constructs make up attitude toward retirement as people near retirement, such as beliefs about retirement, beliefs about work, thoughts about aging, perceived control, self-concept, and self-esteem.

A second limitation was the sample’s demographic homogeneity. Specifically, the sample consisted mostly of Caucasian individuals earning a high income who were well educated and in professional positions. These demographics cannot present stable findings about race, low-income workers, people with less education, and workers in nonprofessional positions. Further research is needed to determine what variables are most predictive of wellness in people who represent a variety of races, people in nonprofessional positions, people with less education, and people who earn a lower income.

Summary

The purpose of this study was twofold. First was to determine what relationships exist between anxiety, depression, attitude toward retirement, and wellness for individuals nearing retirement. Secondly, the researcher sought to determine the
predictive value anxiety, depression, and attitude toward retirement have on overall wellness for individuals nearing retirement. Participants ($N = 168$) were taken from a convenience sample and administered the Perceived Wellness Survey, the Beck Depression Inventory-II, the Beck Anxiety Inventory, and the Attitude Toward Retirement Scale. Results indicated that attitude toward retirement, depression, anxiety, and wellness were all significantly related, whereas depression and attitude toward retirement were most predictive of wellness. Further research is needed to determine what other variables are predictive of wellness for individuals nearing retirement and how these variables may change over time. Also, research is needed to determine what variables are predictive of wellness in certain demographic groups, such as race, job type, education level, and income level. These studies may be helpful to the counselor who sees individuals struggling with the transition from the world of work to the world of retirement.
APPENDIX A

INFORMED CONSENT LETTER AND DIRECTIONS
Consent Letter: ‘Depression, Anxiety, and Attitude Toward Retirement as Predictors of Wellness For Workers Nearing Retirement’

Dear Concerned:

Hello and thank you for your consideration to participate in my study. I want to do research looking at what variables are most predictive of wellness in employees who are nearing the time of retirement. I want to do this because it is important to learn about what variables are most associated with wellness during the transition into retirement. The results of this study could guide future studies in the construction of retirement programs aimed at helping employees make a healthy transition into retirement and improve their overall wellness.

If you are thinking of retiring within the next five years from a job or career that you have been engaged in for at least ten years you qualify for this study. I would like you to take part in my project by completing this questionnaire, which contains four instruments and a demographics form. These instruments will ask you questions about your attitude toward retirement, feelings of anxiety, feelings of depression, and your overall state of wellness. The demographics form will ask about your age, sex, race, education level, socioeconomic status, job type, and marital status. This questionnaire takes approximately 15 minutes to finish. If you decide to participate please follow the directions that are attached to this letter.

Your participation in this study is voluntary and your identifying information will be kept confidential. You may stop taking this questionnaire at any time with no penalty. Returning the completed questionnaire packet will indicate your consent. If you happen to feel undue discomfort from completing this study please contact the Kent State University Counseling and Human Development Center for support (330-672-2208).

An opportunity to win a $25 pre-paid gift card will be given to those who complete this study. All four instruments and the demographics form must be fully completed within a month to qualify. Participants who complete this study will be entered into a drawing. Six participants will be drawn and will receive a gift card. Your name and home address will be used to identify you for the drawing. Put your return address on the post card when you return the questionnaire. If your address is drawn I will mail you the prize. All identifying information will be destroyed after the study.

If you have any questions or comments concerning this study please contact Thomas Foster at (330)-760-2737. Dr. Donald Bubenzer and Dr. Steve Rainey are the faculty advisors for this study and can be reached in 309 White Hall, Kent State University at (330)-672-2662. Information about Kent State’s rules on research can be obtained by Dr. John West, Acting Vice President and Dean, Division of Research and Graduate Studies (330) 672-2851.

I appreciate very much your help with this study.

Respectfully:

Thomas Foster       Donald Bubenzer, Ph.D.       Steve Rainey, Ph.D.
Kent State University     Kent State University       Kent State University

82
Directions:

- Read and keep the consent letter.
- Complete all four instruments within the packet.
  - Beck Depression Inventory-II
  - Beck Anxiety Inventory
  - Perceived Wellness Survey
  - Attitude Toward Retirement Scale
  - Note: You do not need to complete these in any specific order.
- Complete the demographics form.
- Put all four instruments and the demographics form into the self-addressed, stamped envelope found within the packet and mail it.
- If you want to be included in the drawing, please put your return address on the self-addressed, stamped post card and mail it. Separating your address from your questionnaire responses will ensure your anonymity.

Thank you for your participation!!
Demographics Form

How old are you?

_________ Age

What sex are you?

_________ Female
_________ Male

What race are you?

☐ African American
☐ American Indian
☐ Asian American
☐ Caucasian
☐ Hispanic American
☐ Pacific Islander
☐ Other _________

What best describes your current relationship status?

☐ Single
☐ Single, but in a committed relationship
☐ Married
☐ Separated
☐ Divorced
☐ Widowed

What is the total annual income of your household?

☐ $0-$19,999
☐ $20,000-$39,999
☐ $40,000-$59,999
☐ $60,000-$79,999
☐ $80,000-$99,999
☐ $100,000-$119,999
☐ $120,000-$129,999
☐ $130,000-

How much education have you completed?

☐ High school diploma
☐ Some college
☐ Associates degree
☐ Bachelors degree
☐ Masters degree
☐ Doctoral degree
☐ Medical degree

What is your job type?

☐ Management
☐ Professional
☐ Service
☐ Sales
☐ Administrative
☐ Farming
☐ Construction
☐ Installation
☐ Production
☐ Transportation
☐ Armed Forces
February 7, 2008

Mr. Thomas Foster  
Counseling and Human Development  
325 White Hall  

Re: 08-306 – “Depression, Anxiety, and Attitude toward Retirement as Predictors of Wellness for Workers Nearing Retirement”

Dear Mr. Foster:

I am pleased to inform you that the Kent State University Institutional Review Board approved your Application for Approval to Use Human Research Participants as Level II. This application was approved on February 2, 2008 and is good for one year.

HHS regulations and Kent State University Institutional Review Board guidelines require that any changes in research methodology, protocol design or principal investigator have the prior approval of the IRB before implementation and continuation of the protocol. The IRB further requests an annual report and a final report at the conclusion of the study.

A periodic review form will be sent following the marked end date of your protocol or within a year of the original date of approval of the application. Please complete the form and return it. If the project is expected to extend beyond the marked end date, please insert the new expected end date on the periodic review form. If the project is complete and all data analysis has concluded, please mark the appropriate box on the form. If data analysis is continuing, research is considered to be continuing.

Kent State University has a Federal Wide Assurance on file with the Office for Human Research Protections (OHRP), FWA Number 00001853.

If you have any questions, please contact me at 330-672-2764.

Sincerely,

[Signature]

Tonya Frederick  
IRB Administrator  

cc: Dr. Donald Bubenzer  
Dr. Steve Rainey

Division of Research and Graduate Studies  
(330) 672-2851 • Fax: (330) 672-2658  
Graduate Program Services  
(330) 672-2660 • Fax (330) 672-2658  
P.O. Box 5190 • Kent, Ohio 44242-0001 • http://www.kent.edu
APPENDIX D

FACTOR ANALYSIS TABLE
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Table 6
Factor Analysis of the Perceived Wellness Survey Subscales for People Nearing Retirement (continued)

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REFERENCES


Williamson, G. M., & Shaffer, D. R. (2001). Relationship quality and potentially harmful behaviors by spousal caregivers: How we were then, how we are now. *Psychology and Aging, 16*, 217-226.

