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The purpose of this study was to examine the relationships among retirement role model characteristics, retirement self-efficacy, and current life satisfaction in midlife workers. Most of the literature related to retirement planning and to counseling workers who are preparing for retirement (e.g., Harper & Shoffner, 2004; Perkins, 2000; Quick, 1990) does not contain suggestions for assisting workers in identifying and observing retirement role models, possibly because there is little evidence as to if and how role models affect retirement self-efficacy. Considering that self-efficacy predicts later performance (Bandura, 1977a, 1997), interventions that increase retirement self-efficacy can be expected to increase later success in the tasks associated with transitioning to retirement, in addition to reducing preretirement anxiety.

In this study, a proposed structural model describing the relationships among role model characteristics, retirement self-efficacy, and current life satisfaction was tested, and correlations among the model variables were examined. A model describing the relationships among two role model characteristics (success of models in retirement and similarity of abilities and resources between role models and the participants), retirement self-efficacy, and current life satisfaction was determined to be a good fit. Significant positive correlations at the  $p < .01$  level were identified between current life satisfaction and both retirement self-efficacy ( $r = .52$ ) and variety of retirement role models ( $r = .28$ ) and between retirement self-efficacy and both success of models in retirement ( $r = .36$ ) and

variety of models ( $r = .18$ ). The role model characteristic of success of models in retirement also correlated significantly ( $p < .01$ ) with the other two retirement role model characteristics, variety of models ( $r = .20$ ) and similarity of abilities and resources between the role models and the participants ( $r = .60$ ).

Participants for the study were 218 University of North Carolina at Greensboro employees between the ages of 45 and 60 years. Participants completed the Personal Wellbeing Index (PWI; Australian Centre on Quality of Life, 2002), a modified version of the Retirement Self-Efficacy (RSE) Scale (Neuhs, 1991), the Retirement Observations Questionnaire (ROQ; Harper, 2004), and a demographic questionnaire.

RETIREMENT MODELING: AN EXPLORATION OF THE EFFECTS OF  
RETIREMENT ROLE MODEL CHARACTERISTICS ON  
RETIREMENT SELF-EFFICACY AND  
LIFE SATISFACTION IN  
MIDLIFE WORKERS

by

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Approved by

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To Janice Brown, my primary retirement role model.

APPROVAL PAGE

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## CHAPTER I

### INTRODUCTION

Orientations, mentors, and formal guides (such as school counselors and human relations personnel) assist individuals in navigating most transitions along the career development continuum. As workers navigate the latter stages of their careers, however, it is less clear who assists them in learning how to transition to and negotiate retirement the final stage of career development. Without a framework of assistance for retirement preparation incorporated into workplace culture, workers must find their own ways of learning about retirement and of establishing self-efficacy toward the upcoming transition to retirement.

Self-efficacy is “concerned not with the number of skills you have, but with what you believe you can do with what you have under a variety of circumstances” (Bandura, 1997, p. 37). In relation to retirement, self-efficacy refers to how workers believe they will manage the tasks associated with retirement (Neuhs, 1991). Do they expect to succeed at the tasks that generally are thought to lead to a satisfying retirement, or do they expect to fail at these tasks? The extent to which they succeed affects overall life satisfaction, a key indicator of possible mental health and wellbeing in later life, and arguably the most common outcome variable studied in relation to adjustment to aging (e.g., Gibson, 1991; Hayslip, Beyerlein, & Nichols, 1997; Marshall, Clarke, & Ballantyne, 2001; Neuhs, 1990; Thériault, 1994).

Self-efficacy theory identifies several contributors to self-efficacy: mastery experience, vicarious experience, social and verbal persuasion, and physiological and emotional states (Bandura, 1995, 1996, 1997). Social and verbal persuasion and physiological and emotional states contribute to the development of self-efficacy to lesser degrees than mastery and vicarious experiences (Bandura, 1997). Although opportunities for mastery experiences related to the retirement transition exist, such available experiences as job changes, vacations, and sabbaticals involve temporary transitions usually at earlier stages of life and provide limited approximations of the retirement transition. Phased retirement, wherein a worker maintains part-time employment for a period of time while adjusting to retirement on a part-time basis, is a new option available to only a limited number of workers (Watson Wyatt Worldwide, 1999); little training and few role models exist for this type of retirement transition. Workers also encounter opportunities to learn about the retirement transition through vicarious experience, such as through observation of others who already have retired or media representations of retirees or workers preparing to retire. If the self-efficacy literature accurately describes the development of retirement self-efficacy (e.g. Bandura, 1995, 1996, 1997), then one of the primary ways of developing perceptions of retirement self-efficacy prior to actual retirement may be through observation of retirement role models

Although retirement is a major life transition and a stressful transition for approximately 30% of retirees (Bossé, Spiro III, & Kressin, 1996), no quantitative research has explored the relationship between self-efficacy toward retirement and observations of retirement role models. Instead, researchers have focused on other, sometimes less mutable,

influences on retirement views, preretirement stress, and satisfaction leading up to and following retirement. These influences include age (Dorfman, 1995; Kim & Feldman, 2000); gender (Calasanti, 1996; Kim & Feldman, 2000); socioeconomic status and financial resources (Bossé, Aldwin, Levenson, & Workman-Daniels, 1991; Calasanti, 1996; Dorfman, 1995; Gall, Evans, & Howard, 1997; Kim & Feldman, 2000); health of the worker or retiree (Alpass, Neville, & Flett, 2000; Bossé et al., 1991; Calasanti, 1996; Dorfman, 1995; Gall et al., 1997; Kim & Feldman, 2000); voluntariness, expectancy, and phasing in of retirement (Gall et al., 1997; Kim & Feldman, 2000); preretirement occupation and job satisfaction (Alpass et al., 2000; Dorfman, 1995); personality of the worker (Bossé et al., 1991); marital or relational status (Calasanti, 1996; Dorfman, 1995; Kim & Feldman, 2000); social support (Alpass et al., 2000; Bossé et al., 1991); and hassles and life events (Bossé et al., 1991). Although these preretirement factors seem to influence retirement views and the worker's situation going into retirement, they do not explain how workers develop self-efficacy toward the tasks associated with the transition to retirement. Thus, our understanding of life satisfaction in retirement is limited, and a better understanding of the factors associated with retirement self-efficacy is necessary as a foundation for developing interventions to assist adults with planning for and transitioning to retirement.

In this chapter, the rationale for this study is presented. The problem this study addressed, the purpose of this study, research questions, significance of this study, and definitions of terms used in the study are described. Finally, the organization of the study is presented.

## Rationale for the Study

In order to understand why the effects of retirement role model characteristics on retirement self-efficacy and life satisfaction in midlife workers were studied, who midlife workers are and the common challenges they face should be examined. Retirement self-efficacy also needs to be understood, along with how role models and their characteristics may help shape the development retirement self-efficacy in midlife workers. In the following sections, a brief overview is provided of what is known about midlife adults as they prepare for retirement, retirement self-efficacy, and retirement role models.

### *Midlife Adults*

Although midlife (or middle adulthood) appears to be a distinct stage of life (e.g., Lachman & James, 1997; Levinson et al., 1978; Levinson & Levinson, 1996; Neugarten & Datan, 1996), the beginning and ending of the midlife stage is less clear. The timeframe and tasks of midlife have changed over time (Neugarten & Datan, 1996), and demographics, personal characteristics, and the timing of midlife-related events determine when midlife occurs and how long midlife lasts for each person (Schlossberg, Waters, & Goodman, 1995). In this study, midlife was considered the years between ages 45 and 60 (inclusive), years that most descriptions of midlife seem to include in their definitions of this stage (e.g., Levinson et al., 1978; Levinson & Levinson, 1996; Neugarten & Datan, 1996).

Results from the 2000 U.S. census show that 53,467,133 people in the U.S. were between 45 and 60 years of age in 2000 (<http://factfinder.census.gov/>). This represented approximately 20% of the total U.S. population and 27% of the adults 20 years of age and

older. Approximately 81% of the population between the ages of 45 and 54 participated in the labor force. Participation in the labor force steadily declined among older midlife adults to approximately 67% of the population between the ages of 55 and 59. Although most midlife adults (persons between 45 and 60 years of age) in the U.S. participated in the labor force in 2000, less than half of the adults five years past midlife and less than one quarter of the adults ten years past midlife participated in the labor force. Thus, for many midlife workers, retirement may be a current option or an option that is available in the near future (<http://factfinder.census.gov/>).

Preparing for retirement, however, is just one of several major challenges that midlife adults face. While negotiating the task of generativity (Erikson, 1997), midlife adults commonly assume conflicting demands between work and family (Carr, 2002; Grzywacz, Almeida, & McDonald, 2002) and changing roles within the family, such as the transition to the caregiver role for parents and parents-in-law and the emergence of the grandparent role (Peterson, 2002). Although work and family roles commonly provide avenues for generativity and increased wellbeing, the burden of the demands of these roles can result in stress (MacDermid, Heilbrun, & DeHaan, 1997; Peterson, 2002), and this stress can negatively affect perceived health (Thomas, 1997). In the midst of addressing the challenges of their varied roles, midlife adults also may face health changes. Although for most midlife adults, health generally is good, the prevalence of chronic conditions and the overall death rate increases during midlife (Aldwin, Spiro, Levenson, & Cupertino, 2001; Merrill & Verbrugge, 1999). For women, menopause usually occurs during midlife, but women vary greatly in their experience of this major physical change (Avis, 1999;

Huffman & Myers, 1999). Although Avis (1999) concluded that there was no evidence that menopause commonly causes women difficulties, Huffman and Myers (1999) noted that related emotional and physiological symptoms associated with menopause are serious enough for a significant minority of women to have a major impact on their lives. Thus, along with the sense of generativity provided by the varied roles of midlife, midlife adults face challenges related to balancing the demands of these roles and handling the stress resulting from those demands and from physical and health changes.

Midlife adults face their challenges and their pursuit of generativity with abilities and resources they developed or honed over the first four or more decades of life and the deficits carried over from their earlier years. Personality factors, such as neuroticism, extraversion, openness, conscientiousness (Goodwin & Engstrom, 2002), optimism, and perceived locus of control over events and problems in life (Thomas, 1997), may contribute to personal perception of health quality. Household income, educational level, and presence of health insurance also contribute to perceived health (Wilson, 2001). Psychological distress for women in midlife can be related to childhood family experiences, adolescent behaviors, and mental health earlier in adulthood and to ongoing or more recent circumstances and behaviors, such as emotional support, smoking, and weight (Kuh, Hardy, Rodgers, & Wadsworth, 2002). Self-esteem, the individual's view of personal worth, generally increases throughout childhood, adolescence, and early adulthood, peaks somewhere around the time of midlife, and remains relatively stable until declining as the transition from midlife to older adulthood approaches (Trzesniewski, Donnellan, & Robins, 2003). For women, the amount of flexibility and resourcefulness in adapting to stressors in

their early 40s seems to predict their life adjustment and life satisfaction in their early 50s in such areas as relationship satisfaction, work satisfaction, physical health, and psychological distress (Klohn, Vandewater, & Young, 1996). Thus, the coping abilities, outlook, resources, and deficits developed over time shape how midlife adults approach the challenges they anticipate and encounter.

As for actual retirement consideration and preparation, most midlife adults expect to retire, think about retirement, look forward to retirement, and discuss retirement with others (Ekerdt, Kosloski, & DeViney, 2000). Furthermore, a preretirement process affecting emotions appears to exist (Ekerdt & DeViney, 1993). Increasing proximity to planned retirement may result in more frequent feelings of nervousness and tiredness. Age (Dentinger and Clarkberg, 2002; Kosloski, Ekerdt, & DeViney, 2001), marriage, higher education levels, poor health, greater opportunity for hierarchical advancement in the workplace, and pension eligibility (Kosloski et al., 2001) relate to increased retirement planning. Higher levels of intrinsic satisfaction with work and higher levels of positive social relationships in the work environment relate to less retirement planning (Kosloski et al., 2001). The decision of when to retire is affected by such factors as age, the experience of a major illness, caregiving responsibilities, the presence of children under 21 years of age, the length of time in the preretirement job, and the professional status of the preretirement job (Dentinger & Clarkberg, 2002). Members of younger cohorts retire at earlier ages than members of older cohorts (Dentinger & Clarkberg, 2002), indicating that retirement patterns may be changing.

Men and women tend to approach retirement differently. Although more women desire to retire by ages 62 or 65, they may plan for and discuss retirement less than men (Kosloski et al., 2001). This difference in retirement planning, however, may be related more to income and the types of occupations and industries in which women are employed than to gender (Dietz, Carrozza, & Ritchey, 2003). Factors that influence timing of retirement also vary by gender (Dentinger & Clarkberg, 2002). Experiencing a major illness increases the likelihood of retirement for men but does not significantly increase the likelihood of retirement for women (Dentinger & Clarkberg, 2002). Men seem to retire faster when they have no children, when their children are older than 21 years of age (Dentinger & Clarkberg, 2002), or when their children live outside the home and contact is reduced to less than once a week (Szinovacz, DeViney, & Davey, 2001). Although one study showed that the presence or absence of children in the home does not seem to affect when women choose to retire (Dentinger & Clarkberg, 2002), another study identified a more complex interaction among gender, race, marital status, and number of children in the household that contributes to the likelihood of retirement (Szinovacz, DeViney, & Davey, 2001). Caregiving responsibilities slow the speed of retirement for men and increase the speed of retirement for women (Dentinger & Clarkberg, 2002). Although men who hold professional jobs tend to transition to retirement more slowly than men in nonprofessional jobs, women in professional jobs tend to transition to retirement more quickly than women in nonprofessional jobs. Length of time holding a job does not appear to affect timing of retirement among men, but for women, longer job tenure tends to relate to a quicker transition to retirement. These differences between men and women in retirement planning

and retirement timing indicate that retirement preparation and retirement decision-making processes vary between men and women.

Racial and ethnic differences in retirement planning also appear to exist. Whites tend to think about and discuss retirement more than members of other racial and ethnic groups (Ekerdt et al., 2000; Kosloski et al., 2001), but Whites may have less definite plans for retirement (Kosloski et al., 2001). Although Blacks tend to discuss retirement less than Whites, Blacks tend to discuss retirement more than workers in other racial and ethnic groups (Ekerdt et al., 2000). In midlife, Blacks are more likely to be retired than Whites, and Whites are more likely to be retired than Hispanics (Flippen & Tienda, 2000). The differences in actual retirement, however, may be related as much to circumstances as to choices regarding retirement. Blacks and Hispanics tend to experience more involuntary job separation (including health-related separation) than Whites, and Blacks and Hispanics tend to identify themselves as unemployed or out of the labor force more than Whites. Regardless of whether retirement circumstances or fundamental choices are different, there appear to be racial and ethnic differences in how workers plan for retirement and when they actually retire.

Men and women and individuals in different racial and ethnic groups tend to respond to some common midlife situations differently, plan for retirement in varied ways, and retire at different times. Although researchers have examined some variables related to retirement consideration and preparation in midlife, no researchers have explored how midlife workers' attitudes toward their retirement future affect their retirement plans.

### *Retirement Self-efficacy*

Retirement self-efficacy encompasses individuals' perceptions of how effectively they will be able to navigate the anticipated tasks and challenges associated with the shift of their roles from workers to retirees. Although Bandura did not investigate the development of self-efficacy as it applies to the task of transitioning to retirement, the types of self-efficacy that Bandura explored required the use of differing combinations of cognitive, social, emotional, and behavioral skills (Bandura, 1977a, 1997), much like the tasks and circumstances that challenge adults as they transition to retirement.

Bandura (1997) cited numerous studies (e.g., Bandura & Jourden, 1991; White, 1982; Wood & Bandura, 1989) in an effort to show that self-efficacy affects the motivation to attempt tasks, the emotions related to tasks, the amount of effort invested in tasks, the persistence of effort when obstacles are encountered, and ultimately, the amount of success people experience in performing tasks. Recently, researchers have found support for Bandura's theory that self-efficacy predicts or affects task performance (e.g., Allinder, 1995; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Brownell & Pajares, 1996; Dimmock & Hattie, 1996; Harrison, Rainer, Hochwarter, & Thompson, 1997; Kahn & Scott, 1997; Levinson, 1995; Lou, Dai, & Catanzaro, 1997), but mixed results indicate that self-efficacy might not be related to performance for all tasks with all populations (Eaton & Dembo, 1997). The mechanisms for self-efficacy affecting task performance can involve modulation of motivation (Ashton, 1985), interest (Bieschke, Bishop, & Garcia, 1996; Lenox & Subich, 1994), and intention (Fouad & Sprea, 1996). In addition to affecting task performance, self-efficacy can affect stress related to tasks (Cox, 1995) and overall life

satisfaction (Dorfman, Holmes, & Berlin, 1996). For some tasks, self-efficacy can vary by individuals based on such factors as sex (Busch, 1995; Betz, Harmon, & Borgen, 1996; Junge & Dretzke, 1995), race (Alvarez, Hofstetter, Donovan, & Huie, 1994), perceived racial climate (Greenstein, 2000), socioeconomic status (Clark, 1996), and career stage (Guthrie & Schwoerer, 1996). Overall, the results of multiple empirical studies have supported a clear relationship pattern between self-efficacy and performance on a wide variety of tasks by various groups.

Research specific to retirement self-efficacy is limited, but some researchers (i.e., Fretz, Kluge, Ossana, Jones, & Merikangas, 1989; Taylor & Shore, 1995) indicate that retirement self-efficacy influences the future retirement transition in ways similar to how self-efficacy influences other tasks, possibly demonstrating that results from nonretirement-related self-efficacy studies can be extrapolated to retirement self-efficacy. Workers who expect to make the retirement transition successfully tend to plan to retire at younger ages, an indication that retirement self-efficacy influences motivation to attempt the retirement transition (Taylor & Shore, 1995). Workers who have higher levels of retirement self-efficacy tend to experience less preretirement anxiety, an indication that retirement self-efficacy influences the feelings associated with the retirement transition (Fretz et al., 1989). If Bandura's (1997) self-efficacy theory accurately describes self-efficacy in relationship to the retirement transition, retirement self-efficacy also affects efforts to make the retirement transition successful, persistence in effort when difficulties arise, and overall future success with the retirement transition. Thus, retirement self-efficacy could function as a pivotal component of the retirement process, steering workers to plan for retirement confidently

and to execute retirement plans successfully. Retirement self-efficacy, however, must develop somehow, and understanding the sources of this development provides information needed to strengthen retirement self-efficacy.

### *Retirement Role Models*

Self-efficacy theory describes vicarious experience, including the observation of role models, as a strong catalyst for the development and strengthening of self-efficacy (Bandura, 1977a, 1995, 1996, & 1997). Characteristics of the observed role models and of the process of observation modulate the effects of the observations on self-efficacy development. Bandura identified some role model characteristics (or factors) that can impact the observer's development of self-efficacy. These characteristics include the success of the models, the variety (multiplicity and diversity) of the models, the similarity of attributes (such as sex and race/ethnicity) between the models and the observer, and the similarity of abilities and resources (historical and performance attributes) between the models and the observer.

Although most researchers focus on how role models affect children (Ochman, 1996), adolescents (e.g., Cleaveland, 1994; Martin & Bush, 2000), and young adults (e.g., Nauta, Epperson, & Kahn, 1998; Perrone, Zanardelli, Worthington, & Chartrand, 2002), some researchers have demonstrated that role models also affect mid and later-life adults (e.g., Kivnick & Jernstedt, 1996; Marwit & Lessor, 2000). The majority of researchers who have explored the relationship between role models and the development of self-efficacy have found support for Bandura's self-efficacy theory (e.g., Kivnick & Jernstedt, 1996; Marwit & Lessor, 2000), but mixed results are evident (Hernandez, 1995). Results from

one study bring into question whether the observation of role models by Mexican American female high school students actually affects the observer's level of self-efficacy (Hernandez, 1995). Thus, further research on role models was needed, and research that specifically examined the different characteristics of retirement role models and how these characteristics relate to variations in levels of the observer's retirement self-efficacy particularly was needed in order to understand the process of how workers learn about retirement. The characteristics of retirement role models that were examined included: success of models in retirement, variety of models, similarity of attributes between the models and the observer, and the similarity of abilities and resources between the models and the observer.

#### Statement of the Problem

The problem that was addressed in this study was that the relationships among retirement role model characteristics, retirement self-efficacy, and current life satisfaction for midlife workers were unknown, and these relationships had potential to be useful to mental health workers in the design of more effective interventions for issues related to retirement planning and anticipation. The clarification of the relationships among retirement role model characteristics, retirement self-efficacy, and current life satisfaction had the potential to become the base for new or changed interventions. Most of the literature related to retirement planning and to counseling workers who are preparing for retirement (e.g., Harper & Shoffner, 2004; Perkins, 2000; Quick, 1990) did not contain suggestions for assisting workers in identifying and observing retirement role models, possibly because there was little evidence as to if and how retirement role models affect

retirement self-efficacy. Although Perkins' pre-retirement planning workshop used retirees as assistants, the intervention did not appear to focus the use of the retirees as retirement role models. Poser and Engels (1983) may have provided the only evidence of the integration of retirement role models in a preretirement intervention. With clearer evidence of how the observation of retirement role models affects retirement self-efficacy, counselors and other mental health workers may appropriately design and justify the development of interventions for midlife workers aimed at increasing retirement self-efficacy using retirement role models. Considering that self-efficacy predicts later performance (Bandura, 1977a, 1997), interventions that increase retirement self-efficacy should be expected to increase later success in the tasks associated with transitioning to retirement in addition to reducing preretirement anxiety. Ultimately, these interactions may have a significant impact on life satisfaction of older individuals.

For many, retirement is a stressful life event (Brown, 1994), and anticipation of retirement may result in preretirement anxiety and depression (Ekerdt & DeViney, 1993; Fretz et al., 1989). Low retirement self-efficacy has been shown to predict preretirement anxiety (Fretz et al., 1989), but little has been known about how workers develop retirement self-efficacy. If self-efficacy theory accurately describes how workers learn about retirement tasks and develop self-efficacy toward retirement, midlife workers could increase their confidence in their abilities to transition to a successful retirement by spending more time observing retirees similar to themselves who they view as having succeeded at retirement tasks (Bandura, 1977a, 1997). Through observing a greater variety of retirees, workers could further develop positive retirement self-efficacy, reduce their

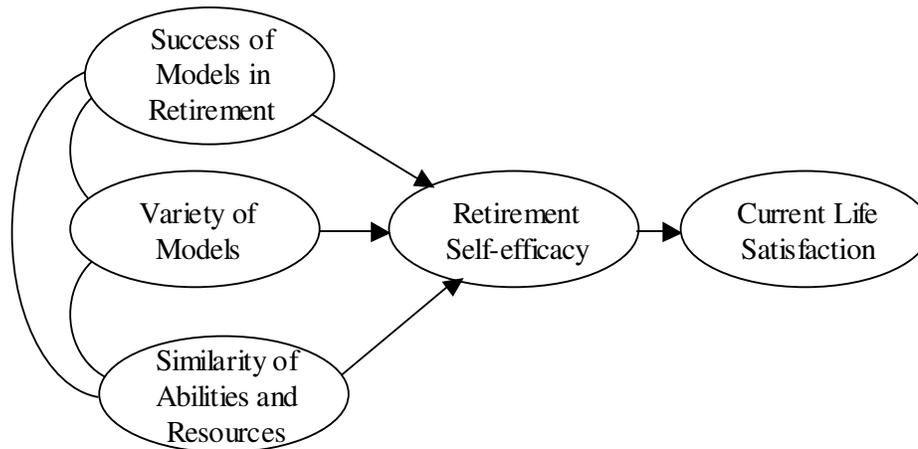
anxiety related to retirement, and increase their life satisfaction in the second half of their lives.

### Purpose of the Study

The purpose of this study was to examine the relationships among retirement role model characteristics, retirement self-efficacy, and life satisfaction in midlife workers. A major focus of the study was to examine how retirement role model characteristics contribute to the development of retirement self-efficacy in midlife workers. Figure 1 illustrates the structural model that was examined. This hypothesized model was based on the relationships between role modeling characteristics and self-efficacy development as described by self-efficacy theory (Bandura, 1977a, 1995, 1997), existing literature on retirement (see Chapter 2), and results from the pilot study described in Appendix B. For the purpose of this study, it was hypothesized that the following retirement role model characteristics would be positively related to retirement self-efficacy: success of models in retirement, variety of models, and similarity of abilities and resources between role models and participants. Furthermore it was hypothesized that retirement self-efficacy would be positively related to current life satisfaction.

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Figure 1. Hypothesized Structural Model of Retirement Self-efficacy Development and its Effect on Life Satisfaction in Midlife Workers



### Research Questions

Based on self-efficacy theory, what is known about the tasks of the retirement transition, and examination of the fit of the proposed model, the following research questions were addressed:

- RQ1 Do the variables in the proposed model (success in retirement, variety of role models, similarity of abilities and resources between the role models and the participants, retirement self-efficacy, and current life satisfaction) correlate significantly?
- RQ2 Does the three-factor model of retirement role modeling, which includes success of models in retirement, variety of role models, similarity of abilities

and resources between the role models and the participants, retirement self-efficacy, and current life satisfaction, fit for workers 45 to 60 years of age?

- RQ3 Will the three-factor model of retirement role modeling fit equally well for male and female workers 45 to 60 years of age?
- RQ4 Will the three-factor model of retirement role modeling fit equally well for minority and non-minority workers 45 to 60 years of age?
- RQ5 Are there any significant differences between the mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction for male and female workers 45 to 60 years of age?
- RQ6 Are there any significant differences between the mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction for minority and non-minority workers 45 to 60 years of age?

### Significance of the Study

Exploration of the relationships among various characteristics of retirement role models and participants' retirement self-efficacy and life satisfaction added to the body of knowledge about the retirement process by focusing on learning about retirement through observation of retirees. Counselors and other helping professionals will be able to use this information in guiding exploration with clients of the clients' retirement views and how those views developed and in designing more effective retirement planning interventions.

### Definition of Terms

The following terms are operationally defined for the purposes of this study:

*Life satisfaction:* Life satisfaction, also referred to in the literature as *subjective wellbeing*, is a personal subjective evaluation of satisfaction (or contentment) with the status of one's own life (Lau, Kong, Cummins, & McPherson, in press). Aspects of one's life for which a person may evaluate satisfaction include standard of living, health, achievement, relationships, safety, connection with the community, and future security. Life satisfaction is the overall evaluation of these aspects of one's own life.

*Midlife workers:* Persons between the ages of 45 and 60 (inclusive) who were employed a minimum of 20 hours per week at the time of the study were considered midlife workers.

*Minorities:* Persons who identify themselves as some other race/ethnicity than Caucasian. This concept was selected so that some race/ethnicity analysis could be done by race/ethnicity even though the sample was expected to be too small to analyze race/ethnicity differences for specific groups other than Caucasians.

*Self-efficacy:* Self-efficacy is comprised of "beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2). In other words, self-efficacy is a person's perceptions about her or his own ability to perform a future task or related set of tasks.

*Retirement:* Retirement involves ending an employment situation and meeting at least one of the following conditions: a) receiving a pension from an employer; b) receiving Social Security retirement benefits; or c) intending to support oneself on a permanent basis

primarily from savings (e.g., regular savings accounts and retirement accounts such as 401(k) and 403(b)) and assets (e.g., stock dividends, sale of business, sale of home, or sale of other business or personal assets).

*Retirement self-efficacy:* Retirement self-efficacy is “the belief that one possesses the knowledge and skill needed to effectively negotiate retirement” (Taylor-Carter & Cook, 1995, p. 75).

*Retirement role models:* Retirement role models are the persons observed in their post-retirement years by others. Retirement role models provide examples of how retirement can be experienced. Observation of a retirement role model could have occurred anytime in a respondent’s past and could have occurred through direct observation or indirect observation (such as through the media or through reports from friends or family members).

*Characteristics of role models:* Characteristics of role models include the observer’s perception of the success of the models in retirement, variety of models, and similarity of abilities and resources to the models.

### Organization of the Study

This study is presented in five chapters. Chapter 1 contains a brief overview of the relationship between perceived retirement self-efficacy and future success in transitioning to retirement. Chapter 1 also contains a description of the characteristics of role models that influence the development of self-efficacy and an overview of the challenges that midlife workers face. The statement of the problem, purpose of the study, proposed structural model, research questions, significance of the study, operationalized definitions of terms,

and organization of the study also are described. Chapter 2 contains a comprehensive review of the literature regarding midlife workers, the relationship between perceived retirement self-efficacy and future success in transitioning to retirement, and the retirement role model characteristics that are hypothesized to impact perceived retirement self-efficacy. Chapter 3 describes the methodology used in the study, including hypotheses for research and descriptions of the sample, instrumentation, procedures, and data analysis techniques. In chapter 4, the results of the data analysis are presented. Results parallel the research questions and hypotheses. Chapter 5 includes a summary of the research, discussion of the results, and implications for counselors and counselor educators. Limitations of the study and suggestions for future research also are presented in Chapter 5. Appendices contain copies of the materials used in the study and in the pilot study, along with a description of the pilot study and findings from that study.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

In Chapter I, the rationale for investigating the relationship among retirement role model characteristics, retirement self-efficacy, and life satisfaction was presented. In this chapter, a review of the literature concerning retirement, life satisfaction, self-efficacy, and role models is presented.

#### Retirement

Retirement as a career transition is difficult to define flexibly enough to include all situations considered as retirement. Kim and Moen (2002) defined retirement as “receiving a pension (or early retirement package) from a career employer and/or Social Security benefits” (p. 214) in an effort to operationalize retirement as the exit from full-time, career employment. This definition, however, does not include retirees who finance their own retirement. Through retirement savings accounts and investments, workers can retire without a pension and before qualifying for Social Security benefits. Kim and Moen (2002) noted that an alternate definition for retirement could be “the final exit” from the workforce. The workforce, however, does not contain a one-way exit door, and many retirees stay in the workforce or return to the workforce as part-time (or full-time) workers. Thus, a final exit from the workforce may not be identifiable or representative of many retirees. Some researchers (e.g., Ekerdt & DeViney, 1993; Mulley, 1995) have considered retirees who have returned to (or stayed in) the workforce as still being in the preretirement

process, regardless of whether the retirees considered themselves as continuing in a preretirement process or as transitioned to a postretirement phase of life that included work. Other researchers (e.g., Bossé et al., 1991) have allowed study participants to identify a combination of their retirement status (for example, retired or never retired) and their current work status (for example, not employed, unemployed, employed part-time, or employed full-time). The difficulty in defining retirement may stem from the varied ways workers transition to retirement and the diverse, sometimes work-based, activities in which retirees choose to engage. Because workers and retirees conceptualize and live their retirements in varied ways, perhaps retirement has become a more personalized concept that individuals define for themselves and apply to both themselves and others. Regardless of how narrowly or broadly retirement is defined, workers seem to face some challenges as they approach retirement (e.g., MacEwen, Barling, Kelloway, & Higginbottom, 1995; Neuhs, 1991; Skarborn & Nicki, 2000) and some tasks as they transition to retirement (e.g., Neuhs, 1991; Sharpley & Yardley, 1999). The following sections describe mental and physical health challenges related to the approach of retirement, tasks related to the transition to retirement, and methods of counseling midlife workers who are preparing for retirement.

### *Mental and Physical Health Challenges*

Anticipating retirement and transitioning to retirement can be stressful (Bossé et al., 1991), and this stress may affect the health of adults (Ekerdt & DeViney, 1993; Skarborn & Nicki, 2000). Stress in general, and more particularly prolonged stress, has been shown to result in a compromised immune system and increased health risks, such

as cancer, infectious diseases, cardiovascular diseases, and depression (Donatelle, 2003; Gruchow, 2003). Although the retirement literature does not directly connect retirement-related stress with these severe physical health risks, the stress related to the approach of the retirement transition appears to be prolonged (Bossé et al., 1991) and related to such mental health concerns as worries (Skarborn & Nicki, 2000), anxiety (Skarborn & Nicki, 2000), nervousness (Ekerdt & DeViney, 1993), depression (Skarborn & Nicki, 2000), obsessive-compulsiveness (Skarborn & Nicki, 2000), and general tiredness (Ekerdt & DeViney, 1993).

Workers approaching retirement tend to worry more than retirees (Skarborn & Nicki, 2000). A Canadian study of 96 preretirement and postretirement adults (evenly divided in gender and retirement status) demonstrated that the preretirement adults had more financial ( $p < .01$ ), personal ( $p < .04$ ), family ( $p < .01$ ), and world ( $p < .01$ ) worries than the postretirement adults. Although the preretirement adults appeared to worry more than the postretirement adults, both groups indicated they had similar primary worries. Among the 88 items on one instrument for which the participants indicated their level of worry, four of the five most frequently endorsed items were the same for the preretirement and postretirement groups. The additional primary item of frequent concern for the preretirement group was “Social security benefits are being reduced” (p. 67). Skarborn and Nicki speculated that the postretirement group did not worry as much about social security benefits being reduced because they might expect their benefits to be maintained at a fixed level. Regardless of the reason for this difference in worry about social security benefits, the high frequency (71.0%) of the identification of reduced social security benefits among

the preretirement adults indicates that most midlife workers worry about their future retirement.

Worries about the future may translate into increased anxiety, depression, and obsessive-compulsiveness (Skarborn & Nicki, 2000). The total scores on the instrument measuring specific worries in the Canadian study (Skarborn & Nicki, 2000) correlated with total scores on a symptom checklist of 90 items reflecting psycho-pathological dimensions ( $p < .01$ ). The subscales of anxiety ( $p < .01$ ), depression ( $p < .01$ ), and obsessive-compulsiveness ( $p < .01$ ) correlated with the total scores on the instrument measuring specific worries. Total scores on a second instrument measuring frequency and phenomenology of worries also correlated with the total scores on the instrument measuring specific worries. Although this study provides evidence of increased worries, anxiety, depression, and obsessive-compulsiveness among preretirement workers, weaknesses of this study limit the generalizability of the results. These weaknesses include a small sample size, a restricted recruitment location (one small university city), varied recruitment procedures that may have resulted in dissimilar preretirement and postretirement groups, and different ages of members of each group (the preretirement mean age was 55 years, and the postretirement mean age was 67 years). At least for the participants in this study, the preretirement adults worried more and identified more symptoms of anxiety, depression, and obsessive-compulsiveness than the postretirement adults.

Other researchers have found that male workers who are in closer proximity of retirement tend to experience greater feelings of nervousness and tiredness than workers

who are in farther proximity from retirement (Ekerdt & DeViney, 1993). In a study of 901 male workers who demonstrated a stable planned age for retirement, Ekerdt and DeViney (1993) found comparisons between participants who anticipated retiring in more than 10 years and participants who anticipated retiring sooner yielded significant increases in nervousness and tiredness among the workers closer to retirement. The participants who were within 1 year of retirement reported feeling nervous ( $p < .001$ ) and tired ( $p < .01$ ) significantly more frequently than workers planning to retire in 10 or more years. A trend toward increased nervousness and tiredness began several years before anticipated retirement, with workers 2 to 5 years before retirement reporting feeling nervous ( $p < .05$ ) and workers 6 to 7 years ( $p < .05$ ) and 2 to 3 years ( $p < .01$ ) before retirement reporting feeling tired more frequently than workers at least 10 years from retirement. Although the groups of workers closer in proximity to retirement had higher mean ages than the group of workers 10 or more years from retirement, differences in age did not explain all increases in nervousness and tiredness. Nearness to retirement seemed to relate to increased feelings of nervousness and the more physical feeling of tiredness. Because this study was conducted exclusively with male workers, nothing is known about whether women experience increased nervousness and tiredness as they approach retirement.

In a 5-year longitudinal study of 458 married adults, Kim and Moen (2002) found that newly retired men experienced higher morale than men who had been retired for a longer duration and men who continued to work. This higher morale in the few years following retirement seems to support the findings of Skarborn and Nicki (2000) that workers worry more prior to retirement than after retirement. Skarborn and Nicki, however,

did not examine differences between new retirees and retirees of longer durations. Kim and Moen (2002) found that men who had been retired for a longer duration reported more depressive symptoms than newly retired men and men who continued to work. These differences in morale and depressive symptoms indicate that retirees may continue to adjust to retirement for several years following actual retirement. Kim and Moen also found that men who experienced lower morale prior to retirement tended to have greater increases in morale when they were newly retired than men who already had high morale prior to retirement. Retirement might have been a more welcomed change for the male workers who had lower morale than for those who had higher morale. Although Kim and Moen did not find any overall significant changes in morale or depressive symptoms among women who were continuously employed, newly retired, and continuously retired, they found that similar to men, resources such as personal control and subjective health contributed to changes in morale and depressive symptoms across the years preceding and following retirement.

Marshall et al. (2001) pointed out that initial retirement is just one of several factors related to stress in the retirement transition. Their study of 2,146 early retirees from a major Canadian telecommunications company focused on work instability and congruence following retirement. Nearly two-thirds of the retirees expected retirement to be their final exit from the workforce, but 14.9% of these men and 10.7% of these women later reentered the workforce. Similarly, of the roughly one-third of the retirees who expected to work after retirement, 6.1% of men and 7.1% of women did not find work and additional retirees reported being out of work and looking for a job following retirement. Of the 818 retirees

who reported working following retirement, these retirees reported having held a total of 1,245 jobs since beginning their retirement. This work instability and the incongruence between expected and actual postretirement work related to increased life stress ( $p < .01$  for men;  $p < .001$  for women) and decreased life satisfaction ( $p < .05$  for men;  $p > .05$  for women). Unmet work expectations following retirement and difficulty in obtaining and keeping a suitable job following retirement can add to life stress and negatively affect life satisfaction for retirees.

Although changes in physical health related to retirement have been cited as a great concern of workers and retirees (e.g., Eliopoulos, 1989; Hayslip et al., 1997; Neuhs, 1990; Skarborn & Nicki, 2000), retirement may not have a directly apparent impact on physical health (Ekerdt, Baden, Bossé, & Dibbs, 1983; Marshall et al., 2001; Mein, Martikainen, Hemingway, Stansfeld, & Marmot, 2003; Salokangas & Joukamaa, 1991). A British longitudinal study examining changes in physical and mental health found that civil servants who remained working at or near retirement age and reported similar physical health deteriorations and greater mental health deteriorations than similar age civil servants who retired (Mein et al., 2003). The study concluded that retirement had no effects on physical health and possibly benefits to mental health. One weakness of this study is the short span of time (approximately 36 months) between the baseline and follow-up measurements. At the baseline measurement, all 1,010 participants were between 54 and 59 years of age and working, and at the follow-up measurement, 392 of these participants were retired. All of the retirees could be considered newly retired, and recognizing that age 60 years was the mandatory retirement age for civil servants at the time of this study, all the

participants who continued to work were very near their own retirement. Taken in combination with results from studies by Kim and Moen (2002) and Skarborn and Nicki (2000), this study of civil servants may further support at least short term mental health improvements directly following retirement. On its own, this study (Mein et al., 2003) provides evidence that physical health does not immediately decline at retirement due to the retirement transition. Whether or not the civil servants experienced long term mental health improvements or continued similar levels of physical decline is not known.

What is known is that a pattern of stress-related symptoms of mental health deficiencies can appear in the years prior to retirement (Ekerdt & DeViney, 1993; Skarborn & Nicki, 2000), possibly due to the stress of retirement anticipation (Bossé et al., 1991). A slow stable pattern of physical health decline might occur during the preretirement years and continue into retirement at roughly the same rate (Ekerdt, et al., 1983; Mein, et. al., 2003; Salokangas & Joukamaa, 1991). The continuous stress related to the retirement transition may or may not account for the stable decline prior to and after retirement, but general prolonged stress has been shown to result in a compromised immune system and has been identified as contributing to a variety of health risks (Donatelle, 2003; Gruchow, 2003). In order to understand how increased stress might develop for workers as they approach and transition to retirement, tasks associated with the retirement transition must be examined.

### *Retirement Tasks*

In the retirement literature, a variety of authors have described numerous tasks associated with the transition to retirement (e.g., Bossé, Spiro, & Levenson, 1997; Neuhs

1990, 1991; Schlossberg, 2004), and many of these tasks have been validated through studies of workers approaching retirement and retirees (e.g., Friedman & Havighurst, 1954; MacEwen et al., 1995; Sharpley & Yardley, 1999). In the following sections, the retirement tasks related to maintaining physical health; maintaining mental health; maintaining financial independence; staying active; negotiating government, pension, and insurance regulations; and handling the broader decisions and adjustments that affect life during retirement are described.

#### *Maintaining Physical Health.*

As already noted, maintaining physical health amidst the retirement transition is a challenge that many workers and new retirees perceive they face (e.g., Eliopoulos, 1989; Hayslip et al., 1997; Neuhs, 1990; Skarborn & Nicki, 2000). Based on a review of retirement literature, Neuhs (1990, 1991) recognized this perceived challenge as a retirement task and included a Health subscale in her Retirement Self-Efficacy Scale. The Health subscale focused on tasks related to physical health, such as eating, sleeping, maintaining one's activity level, obtaining adequate health insurance, filling out insurance forms, and maintaining overall health. Regardless of whether or not the transition to retirement poses a risk for physical health, the perceived risk keeps discussions of physical health tasks included in many retirement planning interventions (e.g., Eliopoulos, 1989; Comish, 1995; Glamser & DeJong, 1975; Tiberi, Boyack, & Kerschner, 1978)

#### *Maintaining Mental Health.*

For workers anticipating retirement and retirees, maintaining mental health may involve avoiding excess worries and anxieties, managing stress, maintaining a positive

outlook on life, and finding sources of meaning and purpose in life. The relationships among retirement, worries, anxiety, and nervousness (Ekerdt & DeViney, 1993; Skarborn & Nicki, 2000) already have been examined in a previous section, so the focus of this section is on stress related to retirement (Bossé et al., 1991) and on combating stress through maintaining a positive outlook (Sharpley & Yardley, 1999) and experiencing meaning and purpose in life (Friedman & Havighurst, 1954; Sharpley & Yardley, 1999).

Although most adults do not find retirement as a particularly stressful event, a substantial minority of adults consider retirement as stressful (Bossé et al., 1991). Bossé et al. used data from a sample of 1,516 men concerning stressful life events to evaluate the stressfulness of retirement. Of the 200 participants who were identified as having retired in the past year, 30.4% rated retirement as “somewhat,” “very,” or “extremely” stressful. For these retirees, the stress of the transition to retirement added to the stress of other life events. Bossé et al. claimed that retirement was not stressful because the majority of the new retirees (69.6%) rated retirement as “not at all” or “a little” stressful and because in stressfulness, retirement was the second lowest of 31 rated life events. The rating of retirement as the second lowest stressful life event, however, appeared to be generated from data obtained from the total 1,516 participants in the study, which included men who ranged in age from 39 to 88 years. Only 676 of the 1,516 participants were retirees, and 200 of these were new retirees. Of the 840 participants who were not retirees, 9.4% stated that they had experienced a problem in the past year with planning for retirement. This data indicates that it is somewhat common for workers to encounter problems preparing for

retirement and even more common for new retirees to experience stress related to retirement.

In a study of 109 retirees between 65 and 80 years of age who were living in a retirement village, Sharpley and Yardley (1999) found that retirees who were happier reported less stress than retirees who were more depressed ( $p < .001$ ). Happier retirees reported less stress in such areas of life as mental health ( $p < .0001$ ), recreation ( $p < .0001$ ), family affairs ( $p < .0025$ ), personal relationships ( $p < .0001$ ), finances ( $p < .0001$ ), exercise ( $p < .005$ ), and housing ( $p < .005$ ). Happier employees also reported less stress due to loss of purpose ( $p < .0001$ ), loneliness ( $p < .0001$ ), boredom ( $p < .0001$ ), and fear of death ( $p < .01$ ). Although many of these areas of stress are related to tasks in categories other than the task of maintaining mental health, this study demonstrates that difficulties with any of the retirement tasks can result in increased stress, which might result in increased depression. Although a few of the more depressed retirees identified “keeping a positive outlook” as a strategy that helped them cope with stress, the happier retirees more frequently reported using this coping strategy. Thus, happier retirees more consciously work to keep a positive outlook and experience less stress.

Happier retirees also seem to experience more purpose to their lives (Sharpley & Yardley, 1999). In a study of 109 retirees living in a retirement village, Sharpley and Yardley found that significantly fewer of the happier retirees (as compared with the more depressed retirees) identified loss of purpose as a source of stress ( $p < .0001$ ). An early series of studies of workers in varied occupations identified work as one source of purpose (Friedman & Havighurst, 1954). In this study, workers reported that work provided more

than just income, routine, and association. Work also provided purposeful activity, self-expression, creativity, service to others, and new experiences, and served as a source of self-respect. Among the occupational groups, the two groups that more clearly identified their work as providing service to others (salespeople, 41%; physicians, 38%) also indicated that they wanted to continue working past age 65 (salespeople, 65%; physicians, 67%). No participants from these occupational groups responded that work provided “No meaning other than that of earning a living” (p. 172), but some participants from the other occupational groups identified only earning a living as the meaning of their work (steelworkers, 34%; coal miners, 18%, and skilled craftsmen, 19%) and fewer participants from these groups stated that they wanted to continue working past age 65 (steelworkers, 32%; coal miners, 42%, and skilled craftsmen, 49%). In order to avoid experiencing depressive symptoms following retirement (Sharpley & Yardley, 1999), workers who feel their jobs provide them with meaning or purpose in life and who do not experience adequate meaning and purpose outside of work may need to find new sources of meaning or purpose in retirement. Managing stress through keeping a positive outlook on life and avoiding excess worries about retirement tasks, such as maintaining financial independence, also might help these workers maintain a satisfactory level of mental health.

#### *Maintaining Financial Independence.*

Financial concerns, with the associated retirement task of maintaining financial independence, seems to be the most common element of retirement planning interventions (e.g., Eliopoulous, 1989; Neuhs, 1986; Schlossberg, 2004; Tiberi et al., 1978). In a study of retirees living in a retirement village, Sharpley and Yardley (1999) found that significantly

fewer of the happier retirees (as compared with the more depressed retirees) identified finances as a source of stress ( $p < .0001$ ). In fact, 22.4% of the more depressed retirees reported that they would advise others who were about to retire to “Get financial advice” (p. 34), and only 15.8% of the happier retirees said that they would give this same advice. Many of the less happy retirees may have viewed difficulties with financial independence as a factor related to their unhappiness, whereas few of the happy retirees seemed to attribute their happiness to financial planning.

Supporting financial planning as an important retirement task, one group of researchers found that financial planning was related to more positive expectations for retirement (MacEwen et al., 1995). Data from 213 employees of a Canadian university who participated in this study showed that financial planning correlated with expected financial satisfaction during retirement ( $p < .01$ ), expected satisfaction with activities during retirement ( $p < .01$ ), increased activity planning related to retirement ( $p < .01$ ), reduced retirement anxiety ( $p < .01$ ), and expected overall change in wellbeing during retirement ( $p < .05$ ). Higher expected financial satisfaction during retirement also correlated with expected satisfaction with activities during retirement ( $p < .01$ ), increased activity planning related to retirement ( $p < .01$ ), reduced retirement anxiety ( $p < .01$ ), and expected overall change in wellbeing during retirement ( $p < .05$ ). The mean age of participants was 43.75 years ( $SD = 9.27$ ), and no retirees were included in the study. Thus, most of the participants probably were not in close proximity to their own transitions to retirement. The participants also were highly educated (average was 18 years of education;  $SD = 3.78$ ), and most reported having at least adequate incomes (average monthly income was \$3,136;  $SD =$

\$2,045). The demographics of the study participants limit generalizability, but the study results still support the perceived importance of financial planning as a retirement task.

Through a longitudinal study of 458 mostly White (95%) married adults, Kim and Moen (2002) found that income adequacy after retirement may differ between men and women. For men, being newly retired related to decreased income adequacy ( $p < .05$ ), and for women, being newly retired related to increased income adequacy ( $p < .05$ ). This difference in retirement income adequacy may be explained by the fact that men likely were the primary earners in the households and their reduced retirement income affected the households more than their wife's reduced retirement income. This pattern of income adequacy increase for women following retirement cannot be generalized to single, divorced, or widowed women. Given the evidence that finances are a perceived source of stress for retirees who experience symptoms of depression (Sharpley & Yardley, 1999), financial planning is related to more positive expectations for retirement among workers (MacEwen et al., 1995), and income adequacy can decrease at retirement for married men (Kim & Moen, 2002), maintaining financial independence seems to be a legitimate retirement task. The connection between financial planning and planning retirement activities further emphasizes the perceived importance of finances to workers anticipating retirement and retirees (MacEwen et al., 1995).

#### *Staying Active.*

Staying active during retirement is identified frequently as an element of retirement planning interventions (e.g., Eliopoulous, 1989; Neuhs, 1986; Schlossberg, 2004). Happier retirees engage in active physical, mental, and social lifestyles (Sharpley & Yardley, 1999),

but for many workers retirement requires adjusting to the loss of structure and social involvement that work provided (Fletcher & Hansson, 1991).

In their study of retirees living in a retirement village, Sharpley and Yardley (1999) found that the happier retirees perceived personal relationships ( $p < .0001$ ), family affairs ( $p < .0025$ ), loneliness ( $p < .0001$ ), recreation ( $p < .0001$ ), exercise ( $p < .005$ ), and boredom ( $p < .0001$ ) as significantly less stressful than retirees who reported more depressive symptoms. These differences between the happier and more depressed retirees may be due to stable personality, health, or resource differences or to differing interests and the variability of access to activities and people who support those different interests. Regardless of reasons why the more depressed retirees found activity-related items more stressful than the happier retirees, staying active during retirement requires creating and maintaining relationships with others and engaging in activities.

For workers prior to their retirement, retirement activity planning may reduce retirement anxiety. In a study of Canadian university employees, MacEwen et al. (1995) found that activities planning correlated with expected satisfaction with activities during retirement ( $p < .01$ ), reduced retirement anxiety ( $p < .01$ ), and expected overall change in wellbeing during retirement ( $p < .01$ ). Expected satisfaction with activities during retirement also correlated with reduced retirement anxiety ( $p < .05$ ), and expected overall change in wellbeing during retirement ( $p < .01$ ). Although the participants in this study were from only one employer and many were not yet in close proximity to retirement, the data from this study provide additional evidence that even many years prior to retirement, workers recognize the importance of staying active during retirement. Staying active in

general is important, and staying aware of regulations that may affect one's access to resources that can help one maintain a strong activity level also is important.

*Negotiating Government, Pension, and Insurance Regulations.*

Eliopoulos (1989), Neuhs (1986), and Lo and Brown (1999) included aspects of government, pension, and insurance regulations in their retirement planning interventions. Eliopoulos (1989) focused on awareness of pensions and benefits (such as Social Security and Medicare), applying for benefits, and legal protections such as trusts, power of attorney, protection of assets, and legal resources. Neuhs (1986) did not report on the government, pension, and insurance regulations topics she included in her pre-retirement planning program, but the retirement self-efficacy instrument that she designed contained measurements of confidence in deciding on the time for retirement and appropriate pension and benefits plans and applying for pension benefits, Social Security, and Medicare. In their retirement education intervention, Lo and Brown (1999) included the additional topics of property tax rebates, management of real estate, estate planning, and the role of the government in retirement. The constantly changing offerings of, procedures related to, and regulations applying to government programs, occupational pensions, and insurance plans may make the specific subtasks of negotiating government, pension, and insurance regulations more difficult to identify. These subtasks also may vary according to the worker's employer (varying pension and benefit plans), marital or partnership status (varying needs and opportunities for legal protections), and place of residence (varying available government programs and insurance plans). The task of negotiating government,

pension, and insurance regulations may seem broad, but it involves fairly narrow and concrete subtasks compared with some of the broader retirement tasks.

*Handling the Broader Decisions and Adjustments of Retirement.*

Some broader decisions and adjustments of retirement include coping with changes (Neuhs, 1991), planning for use of one's time (Neuhs, 1991), deciding on where to live and when to downsize (Schlossberg, 2004; Sharpley & Yardley, 1999), maintaining respect from others (Friedmann & Havighurst, 1954), remaining satisfied with the decision to retire (Bossé et al., 1997; Neuhs, 1991), and adjusting successfully to retirement (Neuhs, 1991). These broad decisions and adjustments to retirement straddle multiple previously described tasks. For example, coping with changes includes such things as health changes, financial changes, changes in activities and relationships, and changes in regulations and programs. Although planning time seems to relate more to activities, planning time also relates to making time for healthcare and financial planning. Deciding where to live and when to downsize can affect finances and activities most obviously but also can affect availability of healthcare and can be in response to such mental health concerns as stress and worries. Similarly the other broad decisions and adjustments of retirement relate to multiple categories of retirement tasks. Considering that there are numerous physical and mental health, financial, activity-based, and regulations-based, and broader tasks related to the retirement transition, understanding how counselors and other professionals have attempted to train workers and retirees for these tasks is important.

### *Counseling for Retirement*

A variety of interventions have been proposed as methods for reducing preretirement anxiety (Comish, 1995; Durrant, 1985; Fretz et al., 1989; Schlossberg, 2004) and depression (Fretz et al., 1989), and increasing preretirement planning (Durrant, 1985; Eliopoulous, 1989; Schlossberg, 2004; Taylor-Carter, Cook, & Weinberg, 1997; Tiberi et al., 1978; Trossman, 2002), images of possibilities in retirement (Comish, 1995), retirement self-efficacy (Comish, 1995; Neuhs, 1986; Poser & Engels, 1983; Schlossberg, 2004), retirement knowledge (Durrant, 1985; Poser & Engels, 1983; Schlossberg, 2004; Tiberi et al., 1978; Trossman, 2002), positive retirement attitudes (Tiberi et al., 1978), and continuing connection with career development after retirement (Harper & Shoffner, 2004). These interventions have included employer-initiated voluntary preretirement planning and education seminars (Eliopoulous, 1989; Neuhs, 1986; Taylor-Carter et al., 1997), community-based preretirement small group discussions led by retirees (Poser & Engels, 1983), retirement planning seminars at professional gatherings (Trossman, 2002), group counseling (Comish, 1995), individual counseling (Eliopoulous, 1989; Harper & Shoffner, 2004), and bibliotherapy (Schlossberg, 2004; Trossman, 2002). Of these interventions, only the community-based preretirement group discussions led by retirees (Poser & Engels, 1983) and the bibliotherapy intervention presented by Schlossberg (2004) have utilized retirement role models to guide workers through learning about retirement.

Data from some studies indicate interventions to improve the transition to retirement can be effective (e.g., Comish, 1995; Glamser & DeJong, 1975; Poser & Engels, 1983; Taylor-Carter et al., 1997; Tiberi et al., 1978), but not all preretirement interventions

are equally effective (Comish, 1995; Glamser & DeJong, 1975; Tiberi et al., 1978). Beyond a few studies that were designed to compare types of preretirement education interventions (Comish, 1995; Glamser & DeJong, 1975; Tiberi et al., 1978), it is difficult to compare types of interventions because of varied instruments, populations, goals, and history.

The interventions compared by Tiberi et al. (1978) included education programs that utilized different learning models. These models included a facilitated/interaction (F/I) model that utilized films and a trained facilitator to lead group activities and discussions; a semistructured stimulus/discussion (S/D) model that utilized audio-visual materials, case studies, paper-and-pencil activities, and partially unfacilitated discussions; a presentation/audience (P/A) model that utilized lectures presented by experts and optional readings and question and answer periods; and an individual/resource (I/R) model that utilized video-taped information, a booklet, and optional unstructured discussions. The interventions were of varied lengths, with the F/I (approximately 20 hours over 3 days) and S/D (10 to 20 hours over days or weeks) models being the most time intensive and the P/A (1 hour a week for 6 weeks) and I/R (80 minutes a week for 5 weeks) models being the least time intensive. A control group that did not receive any preretirement education also was assessed. Random assignment to groups was not used in order to facilitate participants' schedules. The control group participants were the participants whose schedules did not allow for participation in any of the treatment groups. Thus, the participants in the least time intensive interventions and the control group may have been dissimilar to the participants in the most time intensive interventions in regards to their schedules, varied demands on their time, and involvement in activities.

From the data of the 295 participants who completed the pretest, post-test, and follow-up (3 months after final education session) assessments, Tiberi et al. (1978) found that the F/I ( $p < 0.1$ ) and S/D ( $p < .05$ ) models most effectively facilitated positive behavior (retirement planning) changes, and the F/I ( $p < .01$ ) and P/A ( $p < .01$ ) models most effectively facilitated information (retirement knowledge) improvements. The F/I ( $p < .05$ ) and S/D ( $p < .05$ ) models seemed to facilitate positive attitudinal outcomes in the area of preretirement optimism, while the P/A model indicated a trend toward negative attitudinal outcomes in preretirement zest, preretirement optimism, and functional worth and capability ( $p > .05$ ). Positive behavior changes were not evident with the P/A or I/R models or with the control group ( $p > .05$ ), information changes were not evident with the S/D or I/R models or with the control group ( $p > .05$ ), and attitudinal changes were not evident with the I/R model or with the control group ( $p > .05$ ).

Tiberi et al. (1978) concluded that the F/I and S/D models were more effective in facilitating change, possibly because these models included discussions that encouraged more affective expressions of feelings regarding retirement. Other explanations exist for the F/I and S/D models appearing to be more effective. The median ages for members of these groups were less (57.5 for F/I and 56.9 for S/D) than for the other treatment groups (63.4 for P/A and 62.8 for I/R), the time intensity of the F/I and S/D treatments may have drawn less busy and possibly less stressed participants or more motivated participants. With less time for education and minimal opportunities for feedback on the information from the P/A and I/R model participants, the information that was provided may not have been as appropriately targeted as the information provided to the participants in the F/I and S/D

models. Regardless, this study indicates that some workers may need to discuss preretirement concerns with others in order to gain confidence in their retirement futures and to increase their retirement planning behaviors.

Another study compared the effectiveness among a cognitive-behavioral targeted-change intervention group, a structured discussion group, and a wait list group in lowering retirement related anxiety and depression, increasing retirement self-efficacy and possible selves (images of possible future selves in retirement), and increasing retirement preparation behaviors (Comish, 1995). The 61 female workers who participated in this study were assigned randomly to one of these groups, and then the wait-list group members later were assigned to a treatment group. The treatment groups met for eight 2-hour sessions, and both were facilitated by trained counselors who endeavored to create a supportive, collaborative environment. The cognitive-behavioral change group leader employed additional interventions designed to reduce stress, increase problem-solving skills, change participants' images of their future, and replace negative self-statements with more positive self-statements. Comparing data from a pretest, a post-test, and a follow-up test (administered 3 months following treatment end), the researcher found no changes among any of the groups on anxiety and depression. A greater increase in retirement self-efficacy and positive possible selves occurred in both treatment groups compared with the wait-list group. A greater increase in positive possible selves also occurred in the cognitive-behavioral group compared with the structured-discussion group. Using a measure of 15 retirement preparation behaviors, the two treatment group differed on only three behaviors. The cognitive-behavioral group reported more action or intended action concerning

locating available retirement resources ( $p < .05$ ) and speaking with an insurance agent about retirement plans ( $p < .05$ ) than the structured discussion group. The structured discussion group, however, reported more action or intended action concerning preparing or revising a will ( $p < .05$ ) than the cognitive-behavioral group. Although some change occurred in both treatment groups, neither treatment group proved to be particularly more effective than the other treatment group. Both groups increased retirement planning behaviors, but they failed to reduce retirement-related anxiety and depression more than the control group.

Glamser and DeJong (1975) examined the effectiveness of individual briefing and group discussion preretirement interventions. A no-treatment control group provided further comparison information. All 132 participants were workers (mean age 62 years) from manufacturing facilities in Pennsylvania. The group discussion intervention involved eight 90-minute meetings during one month and reading assignments from a book on retirement preparation. The individual briefing intervention involved one 30-minute meeting with a personnel manager who explained the company's retirement benefits and gave the participants four booklets about retirement planning, income, health, and leisure activities. Pretest and posttest data indicated that the group discussion intervention increased knowledge about retirement issues more than the individual briefing or no treatment ( $p < .01$ ). No difference was found in knowledge acquisition between the individual briefing intervention and no treatment. At posttest, the group discussion intervention scores were significantly higher ( $p < .05$ ) on how well the group members felt

they were prepared for retirement, as compared with the participants who received an individual briefing or no treatment.

A comparison between pretest and posttest scores indicated that participants in the group discussion intervention had significantly increased their involvement in retirement planning activities more than the control group participants ( $p < .001$ ). Individual briefing participants also increased their involvement in retirement planning activities more than the control group participants, but this increase was not significant ( $p < .055$ ). Neither retirement intervention seemed to affect morale or attitude toward retirement or the company. The authors cautioned, however, that the pretest scores for these items were at least mildly positive, which may have limited the range for identifying positive change. Although the individual briefing intervention was designed to represent the level of retirement preparation provided by many companies, this intervention proved minimally effective. In contrast, the group discussion intervention appeared to address enough of the participants' retirement needs in order to increase the participants' knowledge about retirement, comfort with how well they felt they prepared for retirement, and motivation to engage in more retirement planning activities. Results from this study clearly indicate that broader and more in-depth reading and group discussion about retirement topics provide workers with better preparation for retirement than a brief description of retirement benefits and minimal literature about retirement issues. Thus, all retirement planning interventions are not equally effective, and finding or developing an intervention that is flexible enough to address each individual's needs would be helpful. Using retirement role models as guides to facilitate retirement planning might provide this flexibility.

Using retirement role models to help guide workers through the retirement transition has not been documented well or explored adequately. Of the two interventions that were found to use retirement role models, only one had published outcome data (Poser & Engels, 1983). This intervention used retired volunteers to lead small group discussions concerning the maintenance of self-esteem, the continuation of interpersonal relations, and the management of time and activities during retirement. The eight group leaders participated in a two-day program that trained them to facilitate the discussions using audio taped scenarios describing retirement challenges, and the group participants recruited through mass media announcements participated in a 15-hour weekend seminar that was segmented into rotating small group discussions (8 or 9 people per group) led by the retirees, a panel discussion during which some of the retirees described how they had adapted to retirement, and talks by professionals on health and finance.

Of the original 34 participants, 25 participants completed pre-intervention and three month follow-up post-intervention assessments measuring retirement knowledge, morale toward retirement, and self-efficacy toward keeping busy in retirement, maintaining self-esteem in retirement, and involvement in social activities during retirement. Significant increases were demonstrated in the follow-up assessments of retirement knowledge ( $p < .05$ ), self-efficacy toward keeping busy in retirement ( $p < .01$ ), and overall retirement self-efficacy ( $p < .05$ ), and positive trends ( $p > .05$ ) were noted in the assessments of morale toward retirement and maintaining self-esteem in retirement. A 35-member control group was assessed similarly to the experimental group, with 25 control group members completing the follow-up assessments. No statistically significant differences were

identified in the pre-intervention assessment between the experimental group and the control group, and no statistically significant changes between pre-intervention and follow-up assessments were identified in the control group. Only one positive trend ( $p > .05$ ) was noted in the control group assessments, and that trend was in the area of involvement in social activities during retirement. Although the results of this study indicate that the retirement seminar may have contributed to increased retirement knowledge and retirement self-efficacy, whether the involvement of retirement role models in the intervention contributed to these increases is uncertain. Several other methods, including peer discussions and expert presentations (which could be classified as social and verbal persuasion), could have contributed to the increases in retirement knowledge and retirement self-efficacy. Thus, more investigation is needed in order to determine whether workers develop retirement self-efficacy through retirement role models and whether the retirement role models need to be physically present or whether they can be effective through videotape, telephone, or written communication.

Although no outcome data is available for the bibliotherapy intervention proposed by Schlossberg (2004), this intervention relies on the reading of a book written for workers planning for retirement and new retirees who want to improve their retirement. For the development of this book (and for her own learning about retirement), Schlossberg interviewed many retirees to learn about the journeys of retirees who experienced success during retirement. In her book, Schlossberg passed on the stories she heard from the retirees, along with information about the retirement transition, tips for making the transition more satisfying, and short audits for clarifying resources and personal approaches

to life. By using this book, workers can learn about the retirement transition through the vicarious experiences described in the stories of retirees and through verbal persuasion presented in the information about retirement, the retirement tips, and results from the audits. Although no outcome data is available for this bibliotherapy intervention, the significance of hearing retirees tell their stories is apparent in the many varied stories and examples documented by Schlossberg. After bearing witness to these stories, Schlossberg chose to document the stories along with retirement and psychological information rather than just prepare a “how to” guide to retirement based on what she learned about retirement. Reading, hearing, or observing actual stories of retirement may be an important adjunct to knowing information about retirement and may provide a learning experience that most traditional retirement interventions have failed to provide.

Retirement interventions have been shown to be effective at reducing preretirement anxiety (Comish, 1995; Durrant, 1985; Fretz et al., 1989; Schlossberg, 2004) and depression (Fretz et al., 1989) and increasing preretirement planning (Durrant, 1985; Eliopoulous, 1989; Schlossberg, 2004; Taylor-Carter et al., 1997; Tiberi et al., 1978; Trossman, 2002), self-efficacy (Comish, 1995; Neuhs, 1986; Poser & Engels, 1983; Schlossberg, 2004), knowledge (Durrant, 1985; Poser & Engels, 1983; Schlossberg, 2004; Tiberi et al., 1978; Trossman, 2002), and positive attitudes toward retirement (Tiberi et al., 1978). A wide variety of interventions have been shown to be effective, including planning and education seminars (Eliopoulous, 1989; Neuhs, 1986; Taylor-Carter et al., 1997; Trossman, 2002), small group discussions (Glamser and DeJong, 1975; Poser & Engels, 1983), group counseling (Comish, 1995), individual counseling (Eliopoulous, 1989; Harper

& Shoffner, 2004), and bibliotherapy (Schlossberg, 2004; Trossman, 2002). Although two interventions utilized retirement role models (Poser & Engels, 1983; Schlossberg, 2004), the effectiveness of retirement role models in fostering the development of retirement self-efficacy has not been examined.

### Life Satisfaction

Life satisfaction is a personal subjective evaluation of overall satisfaction (or contentment) with the status of all aspects of one's own life, including one's standard of living, health, achievement, relationships, safety, connection with the community, and future security (Lau, Kong, Cummins, & McPherson, in press). As outlined in the preceding sections, the anticipation of the retirement transition and the actual transition to retirement can affect various aspects of one's life (e.g., Ekerdt & DeViney, 1993; Fletcher & Hansson, 1991; MacEwen et al., 1995; Sharpley & Yardley, 1999; Skarborn & Nicki, 2000), and thus, can affect life satisfaction. In fact, many retirement studies have included measurements of life satisfaction, a key indicator of possible mental health and wellbeing in later life (e.g., Gibson, 1991; Hayslip et al., 1997; Marshall et al., 2001; Neuhs, 1990; Thériault, 1994).

Antonovsky and Sagy (1990) described life satisfaction as a "tentative assessment" at every stage in life and a "core challenge" (p. 364) during the retirement transition. At retirement, reevaluation of life satisfaction occurs, which may cause radical restructuring of one's life. The individual transitions from thinking in terms of what one is required to do (for example, work and raise children) to what one wants to do. This reevaluation of life

satisfaction challenges the individual to make adjustments that create opportunities for greater satisfaction in areas of life that the individual views as most important.

There is some evidence that life satisfaction may be stable across the retirement transition (Thériault, 1994), but this evidence is equivocal. Results from a longitudinal study of 17 people in a Montreal organization showed that life satisfaction did not vary significantly at the three testing times, six months before retirement, one month after retirement, and from six to twelve months after retirement. Although Thériault used the data from this study as evidence that life satisfaction remains stable throughout the retirement transition, the small sample size might have kept the data from yielding a significant difference. Additionally, all of the testing times were very close to actual retirement. As indicated by previously described studies, the retirement transition may begin years before retirement and continue years after retirement (Ekerdt & DeViney, 1993; Kim & Moen, 2002). Thus, stability of life satisfaction across the retirement transition should be investigated over a period of years instead of a period of months.

Life satisfaction correlates inversely with anxiety about retirement (Hayslip et al., 1997) and directly with retirement self-efficacy (Neuhs, 1990). Data from a study of 92 university teachers (mean age was 50.1 years) and 52 retired university teachers (mean age was 69.8 years) indicated that life satisfaction correlated inversely with anxiety about retirement (Hayslip et al., 1997). The correlation between life satisfaction and anxiety about retirement was stronger for the actively employed teachers ( $p < .01$ ) than the retired teachers ( $p < .05$ ). Life satisfaction also was shown to correlate ( $p < .05$ ) with retirement self-efficacy in a study of 40 midlife workers (mean age was 57.2 years) and 83 retirees

(mean age was 70.2 years) from a major university (Neuhs, 1990). Although both of these studies were conducted with current and former university employees, the study that correlated life satisfaction with retirement self-efficacy was conducted with a wider range of university employees, including faculty, administrators, and staff (Neuhs, 1990). The limited samples, each from one university, limit the generalizability of these studies. The studies, however, provide evidence that in some worker and retiree populations, life satisfaction is correlated with lower retirement anxiety (Hayslip et al., 1997) and greater retirement self-efficacy (Neuhs, 1990).

The correlations of life satisfaction with lower retirement anxiety and higher retirement self-efficacy (Neuhs, 1990) seem to make sense, considering that the retirement transition affects many areas of an individual's life (e.g. Ekerdt & DeViney, 1993; Fletcher & Hansson, 1991; MacEwen et al., 1995; Sharpley & Yardley, 1999; Skarborn & Nicki, 2000) and life satisfaction represents an overall evaluation of all areas of one's life (Lau et al., in press). Further investigation of the relationship between life satisfaction and retirement self-efficacy, particularly prior to retirement, is needed in order to learn how to assist workers better in reevaluating and restructuring their lives for a more satisfying retirement.

### Self-Efficacy

Self-efficacy refers to what individuals think and how they feel about how well they will be able to perform specific tasks under a variety of circumstances (Bandura, 1997). Bandura stated that skills alone do not ensure effective functioning. Both skills and efficacy beliefs are required for effective functioning to occur. Bandura further described the wide

impacts of efficacy beliefs by explaining that self-efficacy affects interests, motivation to attempt tasks, persistence, performance, success, task-related stress, and overall life satisfaction. Self efficacy has been examined in a number of recent studies (e.g., many studies examining self-efficacy (e.g. Allinder, 1995; Bandura & Jourden, 1991; Brownell & Pajares, 1996; Levinson, 1995), and the results generally have supported Bandura's description of the effects of self-efficacy on individuals and how they perform tasks. Bandura (1997) provided an exhaustive summarization and examination of the studies performed regarding self-efficacy. In the following paragraphs, his findings and those of more recent studies are summarized.

In support of self-efficacy theory, self-efficacy has been shown to affect motivation (Allinder, 1995; Bandura et al., 1996) and success (Allinder, 1995; Bandura et al., 1996; Brownell & Pajares, 1996). Bandura et al. (1996) showed that children's ( $N = 179$ ; ages 11 to 14 years) academic self-efficacy and self-regulatory efficacy had direct effects on academic achievement. Academic efficacy and social efficacy also affected the children's academic aspirations. Thus, self-efficacy affected both motivation to succeed and success itself. Data from a study of 19 special education teachers showed that teachers who had high teaching efficacy (confidence that students learn from their educational experiences) set more ambitious end-of-year goals for their students, and teachers who had both high teaching efficacy and high personal efficacy (confidence that their skills are sufficient enough to effect change in students) increased the ambitiousness of their end-of-year goals for their students more frequently (Allinder, 1995). Although teaching efficacy did not appear to relate to higher student achievement, personal efficacy was associated with

higher student achievement. Students of the teachers who had high personal self-efficacy achieved at higher levels, and therefore, the teachers demonstrated more success in their teaching. Another study of teachers (200 second grade teachers) also found that teachers' efficacy beliefs affected their teaching success (Brownell & Pajares, 1996). Although the results from these studies indicate that the motivation and success of students are related to the self-efficacy of both the students and of their teachers, these studies do not provide evidence that self-efficacy relates to achievement for tasks other than learning and teaching.

The relationships among self-efficacy, interest, and success (or performance) have been established for a wider variety of tasks than just teaching (Bandura & Jourden, 1991; Harrison et al., 1997; Kahn & Scott, 1997; Wood & Bandura, 1989). For example, Kahn and Scott (1997) showed that research self-efficacy had a direct effect on research interest and an indirect effect on research productivity among 267 counseling psychology doctoral students. Wood and Bandura (1989) used a simulated organization management exercise and 24 graduate students in business studies as organization managers to examine managerial self-efficacy. This exercise showed that managerial self-efficacy had a direct effect on organizational performance. Bandura and Jourden (1991) used a similar simulated organization management exercise with 60 graduate students in business studies, and this exercise also showed that managerial self-efficacy had a direct effect on organizational performance. Harrison et al. (1997) showed a relationship between computer self-efficacy (confidence in computer-related knowledge and skills) and computer use in 776 employees of a large university. Although self-efficacy has been demonstrated to relate to motivation

and performance for productivity- and business-related tasks (Bandura & Jourden, 1991; Harrison et al., 1997; Kahn & Scott, 1997; Wood & Bandura, 1989), self-efficacy cannot be generalized as a contributor to success for all tasks.

For some tasks, self-efficacy does not seem to affect performance. Lou et al. (1997) found that rehabilitation self-efficacy (belief by the patient that effort in rehabilitation will result in improvement) was not significantly related to rehabilitation improvements among four paraplegic persons who had spinal cord injuries. Although the small size of this sample would make significance difficult to prove, the lack of proof and nature of the task indicate that self-efficacy may not be as strong a determinant for performance of all tasks.

#### *Self-Efficacy and Culture*

Self-efficacy may not affect motivation and performance similarly for individuals of different cultures (Eaton & Dembo, 1997) and may be available in varying levels in different cultures (Alvarez et al., 1994; Eaton & Dembo, 1997). A study of 154 Asian American and 372 non-Asian ninth graders showed that although Asian American students demonstrated greater achievement on academic tasks than non-Asian students, Asian American students reported less confidence than non-Asian students in their ability to perform those tasks successfully. For both Asian American and non-Asian students, self-efficacy beliefs were correlated with achievement behavior, but achievement appeared to be motivated more by fear of academic failure for Asian American students and self-efficacy for non-Asian students. Differences in cultural values may account for the varied relationships among self-efficacy, achievement motivation, and actual achievement, but

further research is needed in order to investigate the relationship between cultural values and self-efficacy.

Data from another study further indicated that differences occur in self-efficacy by race/ethnicity Alverez et al. (1994) investigated communication patterns of 475 parents who had children attending a multiracial/ethnic high school. Amidst the findings, the researchers recognized that parents of different racial/cultural backgrounds perceived they had different levels of ability to influence change at the school, or self-efficacy toward change. Among the groups compared (Latino, Anglo, Black, and Asian), Asian parents had greater levels of self-efficacy toward change at the school than parents of other racial/ethnic backgrounds. Latino parents had lower levels of self-efficacy toward change than Anglo parents. Comparisons between Black parents and parents who were either Latino or Anglo did not yield statistically significant differences. The researchers reported that group sample sizes might not have been adequate to identify differences in self-efficacy in all races/ethnicities. Furthermore, the researchers did not investigate possible causes for differences in self-efficacy. Thus, we do not know if cultural differences were responsible for the different levels of self-efficacy, if school or community environment contributed to self-efficacy differences, or if there were other explanations for self-efficacy differences by race/ethnicity. Results from these studies, however, indicate that, although self-efficacy may serve as a motivator and predictor of success for individuals, self-efficacy may not motivate and predict success similarly in all cultures and may not be available at similar levels in all cultures. These results have implications relative to the concept of retirement

self-efficacy, particularly in regard to cultural differences in retirement efficacy expectations.

### *Retirement Self-Efficacy*

Retirement self-efficacy is the belief that one has the knowledge and skills necessary to deal with the changes associated with retirement (Taylor-Carter & Cook, 1995). Most studies of retirement self-efficacy have utilized instruments that contained minimal measurements of retirement self-efficacy (Fretz et al., 1989; Taylor & Shore, 1995) or instruments that were not published for examination of this construct (Poser & Engels, 1983). Only one study of retirement self-efficacy utilized a more extensive published instrument to measure the confidence of participants in being able to perform specific and general retirement tasks (Neuhs, 1990, 1991). In the following paragraphs, the methods that have been used to measure retirement self-efficacy and the findings from these retirement self-efficacy studies are described.

Of the studies that contained minimal measurements of retirement self-efficacy, one study measured retirement self-efficacy simply by asking participants to rate their ability to adjust to retirement and their chances of adjusting to retirement (Fretz et al., 1989), and the other study measured retirement self-efficacy through four items regarding confidence in making an easy adjustment, expected trouble with the adjustment, feelings toward the retirement transition, and expected enjoyment of retirement (Taylor & Shore, 1995). Poser and Engels (1983) measured retirement self-efficacy with a slightly more extensive 9-item instrument that measured the retirement subtasks of maintaining self-esteem, staying involved in interpersonal relations, and managing time and activities. Neuhs (1990, 1991)

furthered the measurement of retirement self-efficacy by assessing expected overall adjustment to retirement and a wider range of retirement subtasks, including tasks related to maintaining health, managing finances, staying active, and making appropriate pension and governmental based decisions related to retirement. This expanded approach to measuring retirement self-efficacy afforded a more complex understanding and investigation of retirement self-efficacy. Retirement could be described and examined at a sub-task level and at a more general level.

Focusing on retirement self-efficacy at a general level only, Fretz et al. (1989) provided evidence that retirement self-efficacy influences feelings associated with the retirement transition and mental health of workers. These researchers administered a set of instruments to 108 male and 21 female workers who were within 36 months of being eligible to retire from a large technology company or a university. The instruments measured anxiety and depression using an adjective checklist, physical health using general subjective health items with 7-point Likert-type response scales and specific physical status and symptom items with three responses each ranging from no problem to a lot of problems, income adequacy in retirement using a 7-point Likert-type response scale, estimated income amount at retirement using a forced choice among four ranges describing the percentage of their current income, specific psychosocial variables, including retirement self-efficacy level and strength, attitudes toward retirement, knowledge about retirement, planfulness of retirement, social support, and job commitment (which focused on the job-related accords of status, work role, and social support that were hypothesized to be lost at retirement), using 7-point Likert-type response scales, and knowledge about retirement and

aging using factual items for which correct and incorrect responses could be identified. Retirement self-efficacy level (whether they had the ability to adjust to retirement) correlated directly with subjective health, attitudes toward retirement, knowledge about retirement, planfulness of retirement, social support, and retirement self-efficacy strength, and inversely with anxiety, depression, and job commitment ( $p < .05$ ). Retirement self-efficacy strength (their chances, out of 100, of adjusting to retirement) correlated directly with subjective health, attitudes toward retirement, knowledge about retirement, planfulness of retirement, social support, and retirement self-efficacy level, and inversely with anxiety, depression, and job commitment ( $p < .05$ ). Higher levels of retirement self-efficacy may buffer against anxiety and support subjective health while helping workers increase their knowledge about retirement, retirement planning activities, and positive attitudes toward their future retirement. Higher levels of social support and lower levels of job commitment may play a role in encouraging the development of retirement self-efficacy.

Also focusing on retirement self-efficacy at a general level, Taylor and Shore (1995) demonstrated that retirement self-efficacy might influence motivation to attempt the retirement transition. In a study of 303 workers from a large firm, workers who expected to successfully make the retirement transition (as measured by four 5-point scales) planned to retire at younger ages ( $p < .05$ ). Other factors that also correlated with a younger planned retirement age were younger current age, poorer self-rated current health, lower social expectations, stronger leisure orientation, less organizational commitment, and less overall job satisfaction ( $p < .05$ ). Ages of the participants ranged from 19 to 71 years (mean age

was 47 years), and 134 (44%) of the participants already were eligible for retirement (retirement was available at age 52 years with 30 years of service). For the older workers, choice of planned retirement age fell into a more restricted, higher range than for younger participants; older workers who already had retired were not included in the study. Men (82%) and Whites (89%) were over represented, which limits generalizability of the results. Although the study had clear limitations, the results indicate that a relationship might exist between retirement self-efficacy and planned retirement age. Further investigation of this relationship with controls for participant age differences could further our understanding of how retirement self-efficacy affects the retirement decision.

Considering the evidence specific to retirement self-efficacy and the evidence concerning self-efficacy beliefs related to other tasks, retirement self-efficacy likely affects workers' motivation to retire (Ashton, 1985; Taylor & Shore, 1995), feelings about future retirement (Fretz et al., 1989), efforts to make the retirement transition successful, persistence in effort when difficulties arise, overall future success with the retirement transition, and satisfaction with retirement (e.g., Allinder, 1995; Bandura, 1997; Bandura & Jordan, 1991; Brownell & Pajares, 1996; Dimmock & Hattie, 1996; Levinson, 1995; Wood & Bandura, 1989), which may be related to satisfaction with life overall, as discussed in a previous section. Considering the importance of retirement self-efficacy on workers and their future retirement experiences, understanding how the development of retirement self-efficacy in workers can be fostered may be essential to improving retirement success.

### *Development of Self-Efficacy*

Bandura (1995, 1996, 1997) identified four general factors that can affect the development of efficacy beliefs: mastery experience (or enactive efficacy information), vicarious experience, social and verbal persuasion, and physiological and emotional states. Mastery experience is one of the most common methods for developing self-efficacy (Bandura 1995, 1997). Essentially, individuals develop beliefs about what they can do and how well they can perform based on their own past and ongoing efforts. Vicarious experience contributes to the development of self-efficacy by providing individuals with information about how others have approached and succeeded at performing tasks. If opportunities for mastery experience are unavailable, as often is the situation with workers who are developing retirement self-efficacy before their own retirement, watching others (role models) perform tasks provides observers with information that can shape their self-efficacy development. Social and verbal persuasion can affect self-efficacy development by providing encouragement or dissuasion of efforts, and physiological and emotional states further can heighten feelings of anticipation of success or vulnerability to failure. Social and verbal persuasion and physiological and emotional states affect self-efficacy development at lesser levels than mastery and vicarious experiences and generally serve to reinforce the established path of self-efficacy development. Because vicarious experience may be the primary method for workers to develop retirement self-efficacy before actually retiring, vicarious experience (i.e., observation of role models) is examined more closely in the following sections.

### Retirement Role Models

Observation of role models provides observers with opportunities to learn how to perform tasks and to develop self-efficacy (Bandura, 1977a, 1997). Bandura termed this process learning by *vicarious experience* and explained that vicarious experience has a weaker impact on people than direct, or mastery, experience and that the impact, or resultant learning, can be changed more easily. In other words, a person who has directly experienced success with a task knows personal success continues to be possible, whereas a person who previously only has observed other people succeeding at the task is more likely to be less certain about the possibility of personal success with the task. Although self-efficacy developed through vicarious experience is more vulnerable to change, this vulnerability to change might help facilitate the change process in counseling. For a task that is not practiced (or directly experienced) prior to when the task must be performed, such as the task of retirement, learning how to perform the task and developing self-efficacy toward the task may occur through vicarious experience. Thus, a closer examination of the vicarious learning process, particularly focusing on the characteristics of role models, might provide counselors with a clearer understanding of how their clients learn about and develop self-efficacy toward retirement and how the vulnerabilities of this learning process can be used to increase their clients' retirement self-efficacy.

Role models have been shown to have an impact on the development of self-efficacy during childhood (Ochman, 1996), adolescence (Cleaveland, 1994; Martin & Bush, 2000), and young adulthood (Nauta et al., 1998; Perrone et al., 2002), and role models continue to have an important impact well into older adulthood (Kivnick &

Jernstedt; 1996). Kivnick and Jernstedt performed an extensive qualitative case study of an older adult who several people identified as a positive role model for aging and disability. The referrals to this role model came from people who knew the individual professionally or personally and who felt inspired by the individual, hopeful of a similar aging process as that person, or wishful that other older adults could learn what this person has learned. Although the data from this study focused more on a continuation of life patterns than on the transmission of attitudes and skills through modeling, some of the results bring into clearer focus the importance of role models for later life development and success. The referrals to this role model underscored the fact that adults observe how others are aging and those observations affect self-efficacy related to aging tasks. In addressing the role model, one of the referral sources stated, "You know, you are the only reason I don't give up altogether. I am always in pain....But then I look at you, and I know you are in more pain than I am....So how could I quit?" (p. 137). This observer seemed to persevere at least in part because she saw her role model persevering through what she thought were worse circumstances and more difficult tasks. The model herself described her continued perseverance as partly learned from her aunt who had told her, "You're going to get older, so age gracefully" (p. 159). The role model seemed to have her own elder role model, an aunt who showed her how to age. Although this study lacks quantifiable data concerning role models for aging tasks, the study clearly supports that adults continue to learn from and follow role models in the latter stages of adulthood.

The effects of role models continue past when the role modeling relationship ends and even past the death of the role model (Marwit & Lessor, 2000). Marwit and Lessor

studied the effects of deceased mentors on their former protégés using a questionnaire that contained open-ended questions and questions with Likert-type scale responses. The researchers determined that the 40 former protégés who participated in this study continued to look to their deceased mentors as role models (26%), for situation-specific guidance (29%), and to help them clarify their values (21%). The remaining participants (24%) simply identified the role of their deceased mentor as one of providing remembrances. For the majority of the participants, the memory of their former mentors continued to guide them as they made decisions and performed tasks. The continuation of role model impact on observers after the death of the role model is particularly important in considering how people learn about retirement. If this continuation of impact applies throughout the lifespan and for the tasks associated with retirement, then people may begin learning about retirement and developing retirement self-efficacy as soon as they are exposed retirees and workers approaching the retirement transition. For some people, this learning process may begin in early childhood as they observe their grandparents or great grandparents navigate retirement-related tasks. Even after these early role models die, the memory of them may continue to serve as role models and guide the observers as they approach their own midlife and older adulthood and retirement.

Although the afore described studies have demonstrated the effect of role models on the development of self-efficacy (for example, Cleaveland, 1994; Kivnick & Jernstedt, 1996; Marwit & Lessor, 2000; Ochman, 1996), one role-model-based intervention designed to improve self-efficacy yielded conflicting results (Hernandez, 1995). In this intervention, Hernandez used a series of three presentations led by successful Hispanic

female role models to increase career and educational aspirations and self-efficacy in 47 Hispanic female high school students. The presenters discussed their personal histories, their own efforts that led to their successes, their perceptions of their overall success, and the possibility of success for the participants. Results were obtained from questionnaires and from focus group comments. No baseline data was provided, and the results were reported in a generalized manner. The author stated that the data from the questionnaires indicated high self-efficacy but the comments in the focus groups suggested that the participants viewed themselves as confronting major obstacles to success. The participants stated that although the presentations were useful, the information provided, in and of itself, could not remove the external obstacles that might keep them from reaching their aspirations.

Hernandez (1995) attributed the mixed results to the mismatch between the role models' internal locus of control and the participants' external locus of control. The participants generally felt strongly that they could aspire and achieve, but they felt similarly strongly that external obstacles could block them from actualizing those aspirations and achievements. Another explanation for the lack of improvement in self-efficacy would be that the participants did not really observe the role models attempting tasks. Instead, the role models conveyed brief historical information about how they achieved success. This historical information may not have contained enough details for the participants to learn new strategies for tackling obstacles and achieving success. Thus, a base level of observation may be needed in order for the observer to learn approaches to tasks from a role model and for that learning to contribute to the development of self-efficacy.

Numerous studies have supported Bandura's (1977a, 1997) theory that the observation of role models affects the development of self-efficacy across the lifespan (e.g., Cleaveland, 1994; Kivnick & Jenstedt, 1996; Martin & Bush, 2000; Ochman, 1996; Perrone et al., 2002). Other researchers also have shown that role models can take many forms, such as directly-observed people (Hellman & Harbeck, 1997; Kivnick & Jenstedt, 1996; Perrone et al., 2002; Zirkel, 2002), deceased mentors (Marwit & Lessor, 2000), characters in a story (Ochman, 1996), and self-created imagined characters (Kazdin, 1974b, 1975, 1976). No researchers, however, have investigated the relationship between role models and the development of self-efficacy or have provided data describing the people who are serving as retirement role models. Bandura identified some of the factors that influence the vicarious learning process as the success demonstrated by role models, the variety of role models, the similarity of attributes between role models and their observers, and the similarity of abilities and resources between role models and their observers as judged through past observations of the models (1977a, 1997). In the following sections, the primary literature related to these role model characteristics is examined.

### *Success of Models*

The perceived level of success of role models affects observers' perceptions of their own potential for success (Bandura, 1971, 1997; Marx & Roman, 2002). Besides learning that success is possible from observing models perform tasks successfully, observers also learn techniques that lead to success, coping strategies for boosting confidence, and the relationship between effort and success (Bandura, 1971, 1986, 1997). For observers who already have established efficacy beliefs, successful models can teach new approaches to

tasks and can further raise the observers' self-efficacy. Unsuccessful models also provide information that affects the self-efficacy of their observers. For observers who believe they have a better approach to a task than the approach used by the unsuccessful models, self-efficacy may be raised. The observers may feel confident that their approach is a more suitable way to perform the task. For people who observe models fail or barely succeed using what seem to be skillful tactics, the failure or near failure of the models can lead to reevaluation and lowering of self-efficacy by the observers. Although Bandura described the relationship between the success of models and the development of self-efficacy by the observers and studies have supported this relationship in other populations (e.g., Hellman & Harbeck, 1997; Kazdin, 1974, 1975, 1976), the relationship between success of retirement role models and the development of retirement self-efficacy in workers has not been explored.

Hellman and Harbeck (1997) showed a relationship between academic success modeled by parents and increased academic self-efficacy in college students. Using a one-way ANOVA in a study of 1,522 first time college students at a Midwestern U.S. campus, first generation college students scored significantly lower in academic self-efficacy than second-generation college students ( $p < .01$ ). Academic self-efficacy was measured through a single item, "In relation to the general population of our society, I consider my academic ability to be:" (p. 166), and its five-point Likert-type scale responses ranged from "considerably below average" to "considerably above average." Although this item fairly well described the concept of academic self-efficacy, the absence of additional items that could have tested for socially desirable and random responses threatens the construct

validity of academic self-efficacy. Furthermore, the researchers described the participants as “typically ranged in age from 22 to 31” (p 166), which is an unusually high age range for newly enrolled first time college students. Although the age range of this sample limits how generalizable the data can be for a more traditional college student population, the results still provide evidence that academic success modeled by parents may contribute to the development of academic self-efficacy in some college students. Thus, success might be a role model characteristic that contributes to the development of self-efficacy in the observer of the role model.

Hellman and Harbeck (1997) provided further evidence that modeled levels of success, rather than success as a simple binary construct, may further contribute to the development of self-efficacy. In the same study, the researchers sub grouped second generation college students into those whose parents had completed some college courses without attaining a bachelor’s degree, those whose parents had received a bachelor’s degree, and those whose parents had completed some courses beyond a bachelor’s degree. Although first generation college students scored lower on academic self-efficacy than second generation college students whose parents had received at least a bachelor’s degree, first generation college students did not score significantly lower in academic self-efficacy than second generation college students whose parents had not attained a bachelor’s degree. Also, second generation college students whose parents had not attained a bachelor’s degree scored lower on academic self-efficacy than second generation college students who had more academically successful parents. In reporting on tests among the first generation college students and the subgroups of second-generation college students, Hellman and

Harbeck provided means and standard deviations but no  $p$  values. Considering that there was no significant difference in academic self-efficacy between the two groups with parents who modeled the least amount of academic success, a certain demonstrable level of success may need to be observed before the modeling can lead to the development of increased self-efficacy.

Using a more experimental design, Marx and Roman (2002) performed a study that demonstrated perceived role model success might affect observer performance even when the observer does not actually watch the role model perform any tasks. Knowledge that the role model succeeded without actual observation of the task performance or success may provide motivation, confidence, or some other quality that contributes to the observer's success. For this study, the role model was identified as a female experimenter who the participants never met. The participants were 44 female college students who had strong math interest and ability, who had taken at least one college math course, and who had exceeded a minimum math score on the SAT. These participants arrived at a testing room to find a note on the door explaining that the experimenter was late, describing the experimenter's math qualifications (either strong, successful qualifications or weak, less successful qualifications), and directing the participants to complete the study instruments, which included a math competence test and a math ability self-appraisal.

Using a one-way ANOVA and controlling for math SAT scores, the data indicated that participants in the group with the experimenter who was described as more successful in math performed significantly better on the math test than participants in the group with the experimenter who was described as less successful in math ( $p < .01$ ; Marx & Roman,

2002). Although these results demonstrated that role model success might have affected participant success, a one-way ANCOVA of the math ability self-appraisal scores with math SAT scores as the covariate further indicated that the participants with the more successful role model experimenter had significantly higher math self-efficacy than the participants with the less successful role model experimenter ( $p = .03$ ). Thus, both math self-efficacy and math performance were higher among the students who knew their role model experimenter was successful, indicating that knowledge of role model success may be enough to affect self-efficacy and performance for some tasks with some observers.

In three studies similar to each other that examined the effects of assertive behavior training with adults through covert modeling, Kazdin (1974b, 1975, 1976) found that participants who imagined models performing assertive behaviors and experiencing positive consequences that reinforced the assertive behaviors increased their own assertive behaviors more consistently than the participants who simply imagined models performing assertive behaviors without any consequences from the behaviors. Although the imagined models successfully demonstrated assertive behaviors, the participants who also imagined positive consequences from those behaviors received the additional clarifying message that the assertive behaviors were successful in achieving desired results. Thus, the impact of the success of role models may be increased by observing or imagining positive results from the successful performance of tasks.

Applying this to the task of retiring from a job, all workers who have left their jobs for “retirement” could be considered as having successfully performed the task of retiring. To observers, however, the real evaluation of retirement success may come later when the

consequences of retiring can be observed. This need for seeing the outcome fits with Bandura's description of efficacy expectations as "the conviction that one can successfully execute the behavior required to produce the outcome" (p. 193; Bandura, 1977a). Without observing the consequences or outcome of successful behaviors, the observer may not be certain that the model has performed the task successfully.

Besides measuring changes in assertive behaviors, Kazdin's (1974b, 1975, 1976) studies on the effects of assertive behavior training through covert modeling examined self-rated measures that more closely relate to assertiveness self-efficacy. These self-rated measures were: assertive ability, ability in saying no, and extent of problems saying no. Although Bandura (1977a, 1997) described a link between self-efficacy and subsequent performance, Kazdin's (1974b, 1975, 1976) studies bring into question the closeness of this link. All of these measures indicated improvement in assertiveness self-efficacy following the imagined observation of successful models, but some of the measures indicated more improvement in participants who imagined models demonstrating assertive behaviors without imagining consequences of these behaviors than participants who imagined both the models demonstrating successful behaviors and positive consequences reinforcing the assertive behaviors. The measures that were higher for imagined observation of just the assertive behaviors without reinforcement varied among the studies. Although all imagined models successfully performed assertiveness behaviors, observation of the consequences reinforcing the assertive behaviors more consistently related to subsequent increases in assertive behaviors than to increases in assertiveness self-efficacy. Thus, the observation of

consequences that reinforce successful performance may be more important in developing actual skills or changing behaviors than in increasing self-efficacy.

Before one can analyze success in retirement role models to determine whether this success affects retirement self-efficacy development in observers, retirement success must be better understood. Individuals define success in a variety of ways according to their needs, values, and concerns, but in general, retirement success relates to how well workers are able to perform the tasks associated with their own transition to retirement. Although individuals may subjectively measure their success with these tasks, the retirement transition tasks include preparing for future financial needs (Danigelis & McIntosh, 2001; Eliopoulous, 1989; Lo & Brown, 1999), planning one's postretirement time and activities (Eliopoulous, 1989; Lo & Brown, 1999; Mobily, Lemke, & Gisen, 1991; Poser & Engels, 1983; Sharpley & Yardley, 1999), establishing or maintaining meaningful interpersonal relationships during retirement (Eliopoulous, 1989; Lo & Brown, 1999; Poser & Engels, 1983; Sharpley & Yardley, 1999), maintaining or improving mental and physical health (Sharpley & Yardley, 1999), establishing or maintaining sources of personal meaning and purpose (Sharpley & Yardley, 1999), maintaining or broadening skills (Lo & Brown, 1999), and experiencing happiness and satisfaction with current circumstances and looking toward the future (Sharpley & Yardley, 1999). Because workers observing retirement role models cannot know with certainty how successful their retirement role models feel they have been with their retirement transition tasks, workers must judge the success of their retirement role models based on the consequences of task performance (Bandura, 1971; Kazdin, 1974b, 1975, 1976) and social comparison information (Bandura, 1971, 1986). For

example, a worker might view a retirement role model as financially successful if several years after retirement the worker observes the model living in a house and driving a car that compare favorably with the houses and cars owned by other people the worker knows. Thus, how well a retirement role model has succeeded in the retirement transition is a perception by the worker based on the worker's observations of the model and of other people. To date, no studies have investigated how the success of retirement role models relates to the development of retirement self-efficacy.

#### *Variety of Models*

Observation of tasks repeatedly performed by a variety of models supports stronger self-efficacy development than observation of the tasks performed by a single model (Bandura, 1977a, 1997). Although an observer easily can discount success by a single model, the observer may have more difficulty discounting observations of repeated success by a number of diverse models. Similarly, observations of failures by a variety of models can affect self-efficacy more negatively than the observation of failure by just one model. Through each observation, regardless of the success or failure of the model, the observer gains more information about the observed task and ways of attempting the task.

Observers create novel responses from elements of responses they have seen modeled by multiple people (Bandura, 1971). Wide variations in observed responses can lead to more innovative approaches to performing related tasks. As applied to retirement, workers who observe a wide variety of retirement role models may obtain a greater amount of information about possible approaches to performing retirement tasks than workers who have more limited retirement role model observations. Because of their greater amount of

information about approaches to performing retirement tasks, the workers who have observed more retirement role models may perceive more options of how to perform retirement tasks. These options may include the actual observed approaches and more customized approaches inspired by variations in observed performance.

Two of Kazdin's (1975, 1976) studies on assertive behavior training through covert modeling examined differences in assertiveness self-efficacy and assertive behaviors between adults who learned assertiveness skills by imagining one model and adults who learned assertiveness skills by imagining multiple models. In a behavior role-playing test, the participants who observed multiple models consistently demonstrated more assertive behaviors than did participants who observed only one model. Measures of self-efficacy, however, produced mixed results. In one study, the groups that imagined observing a single model and the groups that imagined observing multiple models recorded similar improvements in self-reported areas of assertiveness ability, ability to say no, and the extent to which saying no was a problem (Kazdin, 1975). In the other study, the group that imagined observing multiple models recorded significantly greater improvements in self-reported areas of assertiveness ability ( $p < .05$ ), ability to say no ( $p < .01$ ), and the extent to which saying no was a problem ( $p < .05$ ) than the group that observed a single model (Kazdin, 1976). Although Kazdin's studies on assertiveness training through covert modeling provide evidence that multiple role models may assist in the development of abilities, the mixed results of these studies indicate that further research is needed to determine whether a variety of role models is more effective than a single role model in the development of the observer's self-efficacy. Furthermore, the focus of Kazdin's studies on

assertiveness training using imagined models provides limited applicability to how workers learn retirement tasks and develop retirement self-efficacy from observed models.

Through the observation of a variety of models, individuals can learn different patterns of behavior or ways of approaching and performing tasks (Bandura, Ross, & Ross, 1963). Individuals then adopt a combination of attributes from the various models, creating their own style rather than adopting all the attributes of a single model. Although observing success from a variety of models leads to greater self-efficacy (Bandura, 1977b), no studies have explored how having a variety of retirement role models affects retirement self-efficacy. The complexity of the task of transitioning to retirement, however, may warrant a great variety of models. If Bandura's (1977a, 1997) theory is generalizable to the function of variety of retirement role models, having a variety of retirement role models might buffer the impact of the observation of a perceived retirement failure. For example, the observation of several retirement successes could enable the observer to develop and maintain high retirement self-efficacy while observing one retiree seemingly struggling and failing to successfully transition to retirement. Variety of retirement role models also might provide diverse roadmaps for retirement success. By watching different approaches to the retirement transition, workers might gain confidence and acquire knowledge needed to formulate their own customized retirement plans. If the effects of observing a variety of role models could be generalized to the observation of retirement role models, workers might increase their retirement self-efficacy by increasing the variety of retirement role models they observe or by recalling to mind their varied observations of retirees throughout the past.

### *Similarity of Attributes Between Role Models and Observers*

Although watching role models attempt a task provides observers with some sense of their own odds for succeeding at the same task, observers may recognize that their potential for success may vary from the models they observe. Through the observation of models who share similar attributes with the observers, observers judge their own potential for success and develop self-efficacy for the observed task (Bandura, 1997). Bandura identified attributes as personal characteristics that the observer views as predictive of capabilities leading to performance success. These characteristics can include race, ethnicity, gender, age, educational level, and socioeconomic status. Research has supported Bandura's theory that similarity of observable personal characteristics, such as gender (Ochman, 1996; Perrone et al., 2002; Zirkel, 2002) and race (Zirkel, 2002), can influence observers' development of self-efficacy. Although no research has examined the relationship between retirement role model attribute similarity and retirement self-efficacy, if self-efficacy theory could be generalized to describe the development of retirement self-efficacy, it may be conjectured that similarities of attributes between the workers and their observed retirement role models might influence the workers' retirement self-efficacy.

Ochman (1996) noted that same-sex role models have more impact on their observers than opposite sex role models, and Zirkel (2002) noted that role models combining same sex and same race/ethnicity as their observers have more impact on the observers than role models not matched in one of these characteristics. The degree of influence that role models exert may vary by the sex of the observer (Ochman, 1996). For example, Ochman found that among grade schoolers, girls were influenced more than boys

by a same-sex role model. Similarly, the degree of influence that role models matched on both sex and race/ethnicity exert may vary by the race/ethnicity of the observer (Zirkel, 2002). Furthermore, when given a choice of role models, people may be more likely to choose role models of the same sex than of the opposite sex (Perrone et al., 2002). The contributions of similarity in gender and race for retirement role models has not been explored, but if similarity in gender and race are found to be important contributors to how workers learn about retirement tasks and develop retirement self-efficacy from retirement role models, then workers would gain more from their retirement role models if they paid more attention to the models who were most similar to them in gender and race/ethnicity.

In a study of third graders, the children gained more self esteem from watching positive same-sex role models than from watching positive opposite sex role models (Ochman, 1996). Ochman used videotaped actors reading stories about the adventures of a girl or a boy who was a nongender-role stereotyped character to determine whether the sex of the storyteller or of the character affected the self-esteem of third grade children. The self-esteem of each child was measured before watching the first story and after watching the twelfth story. A 24-item Likert-type scale was used to measure each child's self-esteem. For each item, the child pointed to a picture of a stick figure that the child was most like (the one who does the task well or the one who does not do the task well) and answered whether she/he was like the stick figure "a lot" or "a little" or not like the figure "a lot" or "a little." ANOVA was used to compare self-esteem score changes among the participants based on the sex of the story reader, the sex of the main character in the stories, and the sex of the participant. A strong interaction effect between the sex of the main character and the

sex of the participant was noted ( $p = .003$ ). Further  $t$  tests indicated that this interaction effect was stronger for the girls ( $p < .001$ ) than for the boys ( $p > .05$ ). Although the interaction effect for the boys was not significant, a trend was noted. There was no significant effect of the sex of the story reader on changes in self-esteem scores. In this study, the main character of the story served as a role model, and the children, particularly the girls, demonstrated more influence from observing a same-sex role model than from observing an opposite sex role model.

The generalizability of this study is limited by the age of the participants, the lack of racial/cultural variability in the sample, and the methods used. The very young and limited age range of the participants prompts caution when considering whether to apply the results of this study to how midlife adults may be influenced by their retirement role models. Although the participants were recruited from ten primary schools, the great majority (approximately 91%) of the participants were White Australian, which further limits the generalizability of the study results (Ochman, 1996). In this study, the videotaped stories were created carefully to depict strong nongender-role stereotyped characters on mythical adventures. In real life, role models are not crafted so carefully and do not as consistently demonstrate optimal choices and actions and decisive, positive results. Instead, observers may be left with a more complex learning task when presented with real role models demonstrating more questionable decisions and actions yielding mixed results. Even so, this study of third graders indicates that similarity in sex of role models may be an important component to how much observers learn from their role models.

Zirkel (2002) conducted a 2-year longitudinal study of the effect of role models on academic involvement and achievement in 80 adolescents from three schools in a New England city. The results of this study support the importance of similarities in gender and race/ethnicity between role models and their observers. Participants identified their life tasks and the future careers they would like to pursue and indicated whether they personally knew someone who performed their desired careers and if any of the people they knew in those careers were of the same sex and race as them. This initial data was used to separate the participants into three groups, those with no role models ( $n = 30$ ), those with unmatched role models only (role models of a different sex and/or different races or ethnicities;  $n = 14$ ), and those with matched role models (at least one role model of the same sex and same race and ethnicity;  $n = 35$ ).

Using one-way ANOVAs, the researchers analyzed the students' grades 14 to 24 months after the study began (Zirkel, 2002). Zirkel reported no significant difference in academic achievement between the group with no role models and the group with unmatched role models at 18 to 24 months after the study began and significantly higher academic achievement by the group with matched role models than by the combined groups with no role models and unmatched role models at 14 to 18 months after the study began ( $p \leq .05$ ). Interaction between participant race and presence of a role model was checked, and no interaction was found. Although Zirkel may not have compared grade reports at a inconsistent interval, the results indicate that students who had role models of the same sex and race/ethnicity performed better than students who had no role models or role models who were dissimilar in sex or race/ethnicity.

Zirkel (2002) performed additional comparisons that further indicate similarity of sex and race in the role model relationship increases the impact of having a role model. Although there was no significant difference in the number of educational and professional goals identified between the students who had no role models and the students who had unmatched role models, the students who had matched role models identified significantly more overall goals ( $p \leq .01$ ) and more educational and professional goals ( $p \leq .01$ ) than their peers. A two-way ANOVA that examined the interaction of race and presence of a role model indicated that the effect of having a role model on number of overall goals and educational and professional goals was significantly stronger for the students of color than for the White students ( $p \leq .05$ ). Thus, the impact of having a role model who is of the same sex and race/ethnicity may vary by the race/ethnicity of the observer.

In a career decidedness study of 405 traditional age undergraduate college students at a Southeastern university, 290 (approximately 72%) of the participants identified their role model as someone of the same sex (Perrone et al., 2002). This percentage was not significant ( $p > .01$ ), but these findings might indicate a possible slight preference for same-sex role models among college students. Although a preference for same-sex role models does not provide evidence that such models are more influential in self-efficacy development than opposite-sex role models, this possible preference for same-sex role models could indicate that college students more closely observe people of the same sex or more readily acknowledge the influence these people have on career development decisions.

Although studies relating to similarity of sex and race/ethnicity in role models and their observers have been conducted on younger age groups and have not examined how role models affect the development of retirement self-efficacy, there is evidence that Bandura (1997) was correct in proposing that similarity in sex and race/ethnicity between role models and observers impacts how the observers learn from their role models. In addition to what Bandura has proposed, the results of studies have shown that the sex and race/ethnicity of the observer may affect how much impact the similarity of sex and race/ethnicity of the role model has on the observer (Ochman, 1996; Zirkel, 2002). Further studies are required to determine the importance of similarity of sex and race/ethnicity in role models on the development of retirement self-efficacy in midlife workers.

#### *Similarity of Abilities and Resources Between Role Models and Observers*

Similarity of attributes provides some information observers can use to determine their potential for success, but observers recognize that they also may differ from their models in abilities and resources that contribute to task performance (Bandura, 1997). Past observations of role model performance provide clues as to the similarity of abilities and resources that observers share with their models. Essentially, observers believe that if others who have similar abilities and resources succeed, they too can succeed (Kazdin, 1974a). Likewise, if others who have similar abilities fail, they too likely will fail (Brown & Inouye, 1978).

Through a study of helplessness learned through modeling, Brown and Inouye (1978) demonstrated that perceived similarity or difference of one's abilities as compared to the abilities of a model could affect the observer's development of self-efficacy and

subsequent task performance. Brown and Inouye assigned 40 male college students to one of four groups. Participants in three of the groups were paired with a confederate model, and participants in the fourth group were given no model. The participants attempted to solve difficult anagrams, some of which had no solutions, and persistence and self-efficacy for solving the anagrams were measured for each anagram problem. A pretest was conducted followed by a posttest. The participants who were paired with a model worked on their pretest anagram solutions simultaneously as their model and in view of their models. After the pretest, two groups of participants were told how well they performed as compared to their model. One group received similar scores as their model, and the other group received scores that were considerably higher than their model. The participants who were paired with a model then watched their model as the model attempted to solve more anagrams and expressed failure at the task. All participants then attempted to solve the posttest anagram problems.

ANOVA was used to compare the changes between the pretest and posttest in the self-efficacy and persistence scores among the groups (Brown & Inouye, 1978). Participants who were told they had demonstrated similar anagram solving abilities as their models reported significantly lower self-efficacy toward solving anagram problems ( $p < .002$ ) and persisted at trying to solve the posttest problems significantly less ( $p < .001$ ) than the participants who were told they had demonstrated greater anagram solving abilities than their models. Watching unsuccessful models and believing their abilities were similar to the unsuccessful models may have prompted one group of participants to believe that they too would not succeed. Thus, they gave up on trying to succeed more quickly. The

group that persisted longer in trying to solve the problems may have believed that they would not succumb to the same defeat as their models because they had greater ability than their models.

Although the Brown and Inouye (1978) study demonstrated how observers could learn helplessness from unsuccessful role models who they believe have similar abilities, this study examined learned helplessness in a controlled setting through clear tasks. Unlike in a real world setting, in which workers learn about complex retirement tasks and develop retirement self-efficacy, the participants in the Brown and Inouye study were given a practice test (pretest), clear instructions, and even clear statements about how their abilities compared to the abilities of their models. In comparison, workers must struggle to figure out what retirement tasks are, how tasks might be approached under varying conditions, and how workers compare in a variety of abilities and resources that might relate to successful performance of retirement tasks. Although workers might learn helplessness from their retirement role models, the greater complexity and context of retirement tasks and the less certainty of differences in the retirement role models' abilities and resources limit how much the Brown and Inouye study can be generalized to the development of self-efficacy for retirement tasks.

Results from a study comparing the effects of peer modeling and teacher modeling on elementary school children provide some conflicting evidence about the effect of similarity of abilities between the role model and the observer on the development of self-efficacy (Schunk & Hanson, 1985). Each of the 72 participant was exposed to one of six treatment conditions, watching two videotapes of a same-sex child demonstrating mastery

subtraction skills, watching two videotapes of a same-sex child demonstrating coping skills that led to the successful completion of subtraction problems, watching two videotapes of a female teacher demonstrating accurate working of the same subtraction problems, and a control condition in which no videotapes were viewed. Before treatment, subtraction self-efficacy and subtraction skills were measured. After viewing each videotape, the participants who watched a videotaped child rated how similar they felt they were in mathematics to the child they observed. All children received classroom instruction on how to perform the subtraction operations demonstrated in the videotapes.

Even though all participants had demonstrated difficulty learning some mathematics operations, there were no significant differences as measured by a *t* test of correlated scores and an ANOVA of averaged scores in perceived mathematics similarity between the groups that observed a child demonstrating mastery subtraction skills and the groups that observed a child demonstrating coping skills that led to successful completion of subtraction problems (Schunk & Hanson, 1985). This lack of observed difference in ability might be related to the ultimate success with subtraction by all models. This success could have indicated a consistently viewed base of ability for mathematics skills. Regardless of the reason, the participants did not seem to differentiate the levels of mathematics ability demonstrated by the child role models. Although not measured, the researchers assumed that the participants perceived the teacher model as having greater mathematics ability and therefore as more dissimilar in mathematics ability. This dissimilarity in mathematics ability, however, was confounded by the dissimilarity in the attribute of age and for the male participants, the attribute of sex.

In comparing pretest self-efficacy scores with posttest self-efficacy scores using ANCOVA and then the Scheffé method, the researchers found no significant difference between the groups that observed a child demonstrating mastery subtraction skills and the groups that observed a child demonstrating coping skills that led to successful completion of subtraction problems. Significantly greater improvements in subtraction self-efficacy, however, were recorded by the groups that observed child models than by the group that observed the teacher model ( $p < .05$ ). The group that demonstrated the least amount of improvement in subtraction self-efficacy was the control group ( $p < .01$ ). Successful role models seemed to facilitate increases in self-efficacy among all groups who observed role models, but similarity in mathematics ability had a questionable contribution to self-efficacy development. Even though differences in ability among the child models were programmed into the videotapes, the participants failed to report observing ability differences, and these unobserved ability differences did not result in significant differences in self-efficacy development. The researchers, however, used differences in self-efficacy development between the groups that observed child models and the group that observed the teacher model as evidence that similarity in abilities between successful models and their observers increases the self-efficacy of the observers more than dissimilarities in abilities. Was the significantly greater improvement in subtraction self-efficacy demonstrated by the participants who watched child role models, as compared with participants who watched the teacher role model, due to difference in abilities of the role models or difference in the ages of the role models? Additional research is needed in order to determine whether observers recognize differences in ability in their role models and

whether recognized differences in ability affect the development of self-efficacy, particularly the development of retirement self-efficacy.

Although no research has examined the relationship between similarities in retirement role model abilities and resources and retirement self-efficacy, if self-efficacy theory could be generalized to describe the development of retirement self-efficacy, similarities between the workers and their observed retirement role models in the areas of past success and of anticipated success-related abilities and resources might influence workers' retirement self-efficacy. For example, workers might compare their anticipated economic status at the time of their retirement to the perceived economic status of observed retirees. Perceived similarity of such items as income, benefits, savings, and property could indicate that the worker and the observed retirement role model have similar economic resources and similar abilities to prepare financially for the future. These clues about similarity in economic resources and financial planning abilities might lead the worker to assume that the worker shares a similar opportunity to succeed financially in retirement as the observed retirement role model. Perceived past success that relates to other retirement tasks (e.g., planning time and activities, establishing and maintaining meaningful interpersonal relationships, and maintaining or improving mental and physical health) further determines the level of ability and resource similarity that workers share with their retirement role models. Although results from several studies support the premise that similarity of abilities and resources between observers and their role models influences the observers' development of self-efficacy (e.g., Kazdin, 1974a; Brown & Inouye, 1978), the

effect of this similarity between workers and their retirement role models on retirement self-efficacy has not been explored.

### Summary of Literature Review

Retirement is an individually-defined career transition that begins when a worker starts considering options and planning for disengagement from the workforce or from a career of long standing. Major areas of tasks related the retirement transition include maintaining physical health, maintaining mental health, maintaining financial independence, staying active, negotiation government, pension, and insurance regulations, and handling broader decisions, such as coping with changes, maintaining respect from others, and adjusting successfully to retirement. Most workers handle the mental and physical challenges that accompany these tasks fairly well, but for some workers, these tasks are stressful and accompanied by worries and depression (e.g., Bossé, 1991; Ekerdt & DeViney, 1993; Skarborn & Nicki, 2000).

Preretirement interventions have been shown to be effective at reducing preretirement anxiety and depression and increasing retirement planning (e.g., Eliopoulous, 1989; Trossman, 2002; Tiberi, 1978). These interventions, however, have yielded varying results. Although retirement role models have been included in a very limited set of preretirement interventions (Poser & Engels, 1983; Schlossberg, 2004), little is known about the usefulness of incorporating retirement role models in retirement interventions.

Life satisfaction, the personal and subjective assessment of how one is functioning in all facets of one's life, is inversely related to retirement anxiety and directly related to retirement self-efficacy (Hayslip et al., 1997; Neuhs, 1990). Life satisfaction becomes

increasingly important as one approaches retirement and more thoroughly reassesses areas of one's life that previously seemed more constrained. With a greater sense of retirement self-efficacy, the individual might gain confidence to make life changes, including retiring, that could support increased life satisfaction. Developing greater retirement self-efficacy, however, is a challenge in itself.

Self-efficacy, an assessment of confidence in one's abilities to successfully perform specific tasks, is most commonly developed through mastery experience, or determining whether one can do something by attempting to do it (Bandura 1995, 1997). Few opportunities for retirement mastery experiences are available prior to retirement; so most workers must develop their retirement self-efficacy in another manner. The most likely manner might be through vicarious experience, or watching others perform retirement tasks. These others that one watches are called retirement role models.

Individuals learn more or less from role models based on the characteristics of the role models (Bandura 1977a, 1997). Although very little information is available concerning retirement role models, role model characteristics that have been shown to affect self-efficacy development and that might more specifically affect retirement self-efficacy include success of models, variety of models, similarity of attributes, such as sex and race/ethnicity, between the models and their observers, and similarity of abilities and resources between the models and their observers.

Currently the literature consists of information from examinations of some relationships among retirement, self-efficacy, and life satisfaction, but the literature does not contain information about whether retirement self-efficacy develops through

observation of retirement role models. The literature also does not contain information about how the retirement role model characteristics contribute to the development of retirement self-efficacy, and no model of the development of retirement self-efficacy and life satisfaction through role models is documented in the literature. Furthermore, differences by sex and race/ethnicity in the process of developing retirement self-efficacy and life satisfaction through retirement role models are not described.

## CHAPTER III

### METHODOLOGY

In Chapters I and II, the rationale and review of the literature for investigating the relationship among retirement role model characteristics (role model success in retirement, variety of role models, and the similarity of abilities and resources between the role models and the participants), retirement self-efficacy, and life satisfaction were presented. In this chapter, the proposed hypotheses to examine the research questions stated in Chapter 1, the criteria for participation in the study, the assessment instruments used in the study, the study procedures, and the statistical analyses used to evaluate the data from the study are presented.

#### Research Hypotheses

The following research questions are presented with the hypotheses that will be tested for each question:

- RQ1      Do the variables in the proposed model (success in retirement, variety of role models, similarity of abilities and resources between the role models and the participants, retirement self-efficacy, and current life satisfaction) correlate significantly?
- H1      The variables in the proposed model will correlate significantly.
- RQ2      Does the three-factor model of retirement role modeling, which includes success of models in retirement, variety of role models, similarity of abilities

and resources between the role models and the participants, retirement self-efficacy, and current life satisfaction, fit for workers 45 to 60 years of age?

- H2 The three-factor model of retirement role modeling will fit for workers 45 to 60 years of age.
- RQ3 Will the three-factor model of retirement role modeling fit equally well for male and female workers 45 to 60 years of age?
- H3 The three-factor model of retirement role modeling will fit equally well for male and female workers 45 to 60 years of age but will vary in terms of the correlations and path coefficients.
- RQ4 Will the three-factor model of retirement role modeling fit equally well for minority and non-minority workers 45 to 60 years of age?
- H4 The three-factor model of retirement role modeling will fit equally well for minority and non-minority workers 45 to 60 years of age but will vary in terms of the correlations and path coefficients.
- RQ5 Are there any significant differences between the mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction for male and female workers 45 to 60 years of age?
- H5 The mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction will differ for male and female workers 45 to 60 years of age.

- RQ6 Are there any significant differences between the mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction for minority and non-minority workers 45 to 60 years of age?
- H6 The mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction will differ for minority and non-minority workers 45 to 60 years of age.

#### Population and Participants

The population of interest in this study is midlife workers. Participants in this study included midlife workers between 45 and 60 (inclusive) years of age who worked a minimum of 20 hours per week for The University of North Carolina at Greensboro (UNCG). All UNCG permanent employees who met these age and workload requirements and who did not participate in the pilot study were invited to participate in the study. The employees who decide to participate and who returned their completed study packets in a timely manner were included in the study. A 2003 census of UNCG employees indicated that approximately 44% of the UNCG employees were between the 44 and 60 years of age and 11% of the UNCG employees were older than 60 years of age (S. D. Carrigan, personal communication, August 23, 2004).

The UNCG Human Resources Department (S. D. Farrell, personal communication, February 28, 2005) identified a total of 962 employees as meeting the age and minimum hours worked study requirements. Of these employees, approximately 58% were female and 42% were male. The racial/ethnic makeup of these employees was predominately White, with approximately 81% reported as White non-Hispanic, 16% as Black non-

Hispanic, and 3% as other categories or unreported. Approximately 9% had a doctoral or professional degree, 24% had a masters degree, 29% had a bachelors degree, 3% had an associates degree or a certificate from a trade school or a business school, 4% had some college, 24% had a high school degree or certificate, 1% had less than a high school education, and 6% had an unspecified level of education. The overwhelming majority (approximately 88%) was employed full time by the university. The mean age of the employees was approximately 53.1 years of age, with a standard deviation of approximately 4.3 years. The employees worked in a variety of jobs at the university, including faculty, administration, professional, office, maintenance, and service positions.

The study utilized structural equation modeling data analysis, for which a minimum sample of 200 participants was required (Kelloway, 1998). Although equivalent numbers of male and female and minority and non-minority participants was desired, the chosen site did not provide even participation. Based on the 2003 census of UNCG employees (Carrigan, 2004), the 58% female and 42% male population might yield reasonably equivalent numbers of male and female participants, but the 18% minority and 82% non-minority population is unlikely to yield similar numbers of minority and non-minority participants. If the 2003 census of UNCG employees continues to describe the participant pool, then only approximately 196 employees would be eligible minority participants. This small pool of minority participants might result in unclear answers to the research questions relating to race/ethnicity (RQ3, RQ5, RQ6, RQ9, and RQ10).

### Instruments

Participants completed the Personal Wellbeing Index (PWI; Australian Centre on Quality of Life, 2002), a modified version of the Retirement Self-Efficacy (RSE) Scale (Neuhs, 1991), the Retirement Observations Questionnaire (ROQ; Harper, 2004), and a demographic questionnaire (in that order). The following table provides a summary of how the instruments and their subscales map to constructs. The following sections describe these instruments, and copies of the instruments are included in Appendix A.

Table 1. Instrument and Construct Mapping.

Instrument & Subscale	Life Satisfaction	Retirement Self-Efficacy	Success of Models	Variety of Models	Similarity of Abilities & Resources
PWI (8 items)	√				
RSE (44 items)		√			
ROQ Success subscale (12 items)			√		
ROQ Variety subscale (7 items)				√	
ROQ Abilities & Resources subscale (10 items)					√

### *Personal Wellbeing Index*

The Personal Wellbeing Index (PWI; Australian Centre on Quality of Life, 2002) was used to measure life satisfaction. Permission for use of the PWI was obtained from Robert A. Cummins. The PWI also is referred to as the International Wellbeing Index, (R. A. Cummins, personal communication, February 5, 2005), is part of the Australian Unity Wellbeing Index, and was derived from the Comprehensive Quality of Life Scale (ComQol; Lau, Cummins, & McPherson, in press). In support of its international design, the PWI has been used for studies in over a dozen countries (Australian Centre on Quality of Life, n.d.), but no information is available concerning the use of this instrument in the U.S.

The PWI is a 7-item self-report instrument that allows for cross-cultural measurement of subjective wellbeing through questions of life satisfaction (Lau et al., in press). An optional eighth item is used to assess “life as a whole,” and this item was included in the study as part of the PWI (Australian Centre on Quality of Life, 2002). The domains of wellbeing, or life satisfaction, that the PWI measures are: standard of living, personal health, achievement in life, personal relationships, personal safety, connectedness with the community, and future security (Lau et al., in press). The 11-point Likert-type response scale ranges from completely dissatisfied (0) to completely satisfied (10), with a midpoint of mixed (5).

The PWI has been used in 12 national Australian surveys, each survey having 2,000 participants (R. A. Cummins, personal communication, February 5, 2005). The 7-item version of the instrument is stable and respectably reliable, with a Cronbach’s alpha of

between 0.7 and 0.8 (Lau et al., in press). The mean subjective wellbeing value for the PWI across the Australian surveys was 74.48 on a scale of 0 to 100.

### *Retirement Self-Efficacy Scale*

A modified version of the Retirement Self-Efficacy (RSE) Scale (Neuhs, 1991) will be used to measure retirement self-efficacy. This instrument will be labeled Retirement Questionnaire in order to avoid terms that might be confusing to the participants. Permission for use and modification of the RSE Scale was obtained from Thomas Corr, the current copyright holder of this instrument, and Appendix C contains a copy of this permission statement. Although used in only one documented study (Neuhs, 1990, 1991), the RSE Scale is the only published instrument that measures retirement self-efficacy through items that focus on confidence in performing a wide variety of the subtasks of retirement.

The original RSE Scale contained 27 items that measured retirement self-efficacy and five subscales: health (6 items), financial (8 items), activities (4 items), government and pension regulations (5 items), and retirement itself (4 items; Neuhs, 1990, 1991). Responses to each item are made using a 5-point response scale, ranging from “very little” confidence (1) to “quite a lot” of confidence (5) in being able to perform the identified retirement task. Although total scores can range from 27 to 135, no data is available indicating scores that represent high and low risk levels for retirement problems. Appendix C contains a copy of the original RSE Scale.

In a study of 40 pre-retired and 83 retired participants between 50 and 70 years of age, Cronbach’s coefficient of alpha for the RSE Scale was measured at .92, indicating

high internal consistency of the instrument (Neuhs, 1990). Among the pre-retired participants, the overall mean was 111.00 and the standard deviation was 21.17, and among the retired participants, the overall mean was 99.00 and the standard deviation was 26.18. Experts in retirement studies verified validity of the instrument through review, and an early version of the RSE Scale was reduced from 31 questions to the published 27-question format based on recommendations from the review by these experts (Neuhs, 1991).

In the modified version of the RSE Scale, a new item replaced two original items in the governmental and pension regulations subscale, and two other items were revised in order to make the items more representative of the varied tasks retired persons currently face. Because not all workers qualify for Social Security or a pension plan, items referring to application for these sources of income were replaced by an item that measures the confidence of the participants in applying for Social Security, pension benefits, withdrawals from retirement savings accounts, or other sources of retirement income. An item related to applying for Medicare was revised to include applying for Medicare or other health insurance. An item related to deciding on the most appropriate pension benefit plan was modified to include deciding on the most appropriate pension benefit plan or insurance package. A final question in the governmental and pension regulations subscale was modified to clarify that “an appropriate time for retirement” is “a time for retirement that is best for you.”

Two questions in the financial subscale were reworded for clarity, one so that the participants would recognize that having adequate money for travel related only to the travel that the participant wanted to do, and the other so that maintaining a comfortable

residence would be measured more explicitly as “enough money for housing of your choice.” Additional items were revised to reduce the Flesch-Kincaid reading grade level from the original 12.0 to 8.6, as reported by Microsoft Word 2000 release 9.0.6926 SP-3. Reduction in the reading level was intended to facilitate increased understandability by participants who had low education levels.

Eighteen questions were added to measure additional retirement tasks described in the retirement literature and identified in the pilot study. These added questions included five new items in the activities subscale that measured confidence in maintaining and establishing meaningful relationships (Eliopoulos, 1989) and maintaining, broadening, and utilizing skills and knowledge (Lo & Brown, 1999). Seven items were added to the retirement itself subscale in order to measure confidence in adjusting to changes in employment status, coping with changing needs in the immediate family, coping with changing expectations from family members, maintaining status in the family and society, and deciding where to live and if and when to reduce possessions and possibly move to a smaller home. The health subscale was renamed “physical health,” and a mental health subscale (5 items) was added. One item was added to the physical health subscale to measure confidence in finding suitable healthcare providers. The mental health subscale contained questions related to the tasks of maintaining emotional health; avoiding excessive anxiety, worries, and stress; maintaining a positive attitude; and experiencing meaning or purpose in life (Sharpley & Yardley, 1999). The following table summarizes modifications that were made to the RSE Scale in order to clarify information and to cover a more comprehensive set of current retirement tasks.

Table 2. Modifications Made to the Subscales of the RSE Scale.

RSE Subscale	Original Items	Added Items	Combined Items	Reworded Items*	Total Final Items
Physical Health (originally “Health”)	6	1	0	0	7
Mental Health	0	5	0	0	5
Financial	8	0	0	2	8
Activities	4	5	0	0	9
Government, Pensions, and Insurance (originally “Governmental and Pension Regulations”)	5	0	2	3	4
Retirement Itself	4	7	0	0	11

\* These items were reworded for clarity or to more accurately reflect current retirement tasks. Additional items were revised to reduce the reading level.

The final modified RSE Scale contained the following six subscales: physical health (7 items), mental health (5 items), financial (8 items), activities (9 items), government and pension regulations (4 items), and retirement itself (11 items). Factor analysis was not used to verify that items in the subscales matched the factors measured because only the total score for the RSE Scale was used in analysis. Cronbach’s alpha was used to test the reliability of the scores.

#### *Retirement Observations Questionnaire*

The Retirement Observations Questionnaire (ROQ) was developed for this study (Harper, 2004). Items were written to measure role model characteristics (i.e., success in retirement, variety of role models, and similarity of abilities and resources between the

models and their observers) as described by Bandura (1977a, 1997) and retirement tasks as described in the retirement literature. This survey instrument contained four subscales: role model's success in retirement (12 items), variety of role models (7 items), and similarity of abilities and resources between the models and the participants (10 items). Eight additional questions provided contextual background about the participant's primary retirement role model. These additional items were used for descriptive purposes to learn more about the relationships between participants and their role models, characteristics of the role models (for example, same or different gender and race/ethnicity), and qualities of the retirement of the role models (for example, when the retirement occurred).

*Variety of Models Subscale.*

Variety of role models was measured by asking the participants to identify the number of retired persons they had observed. In order to assist the participants in remembering the retired persons they had observed, several categories of persons were provided. These categories included relatives, friends, service providers, members of organizations, outsiders (i.e., people who the participants had heard about but with whom they had not directly interacted, such as people who appeared in the news or in magazines and characters from books or movies), and others (a category for which the participants were encouraged to provide further description). These seven items were responded to using a 7-point response scale, with responses ranging from none (0) to six (6) retired persons observed who met the specified description. Items for which no response was recorded were scored as 0, provided that the participant responded to at least one of the ROQ variety of role models subscale items.

Although the variety of role models subscale measured all observations of all retired persons, the other subscales provided measurements based on the observations of each participant's primary retirement role model only. Limiting the measurement of these subscales to each participant's primary retirement role model (instead of all retirement role models, regardless of impact on the participants or amount of time spent observing the retired persons) allowed for more accurate comparative analyses of the data. The primary retirement role model was the retired person who most shaped the participant's views about retirement or who the participant observed during retirement more than the other retired persons.

*Success of Models Subscale.*

The retirement tasks for which success was measured include maintaining and establishing meaningful relationships (Eliopoulos, 1989); maintaining, broadening, and utilizing skills and knowledge (Lo & Brown, 1999); maintaining status in the family or society; maintaining mental health (Sharpley & Yardley, 1999); maintaining physical health (Neuhs, 1990, 1991; Sharpley & Yardley, 1999); preparing for financial needs (Danigelis & McIntosh, 2001; Eliopoulos, 1989; Lo & Brown, 1999); staying active during retirement (Eliopoulos, 1989; Lo & Brown, 1999; Mobily et al., 1991; Poser & Engels, 1983; Sharpley & Yardley, 1999); looking forward to future (Sharpley & Yardley, 1999); establishing or maintaining sources of personal meaning and purpose (Sharpley & Yardley, 1999); and experiencing happiness (Sharpley & Yardley, 1999). These 12 items were responded to using a 7-point response scale, with the responses ranging from little or no success (1) to a lot of success (7) for each retirement task.

*Similarity of Abilities and Resources Subscale.*

Similarity of abilities and resources between the role models and the participant was based on the abilities and resources that might be used when attempting the retirement tasks for which success is measured (Bandura 1977a, 1997). These abilities and resources include physical abilities, mental or emotional abilities, interpersonal abilities, family resources, social resources, planning abilities, financial resources, health resources, and interests, knowledge, and skills. Some of the connections between these abilities and resources and the retirement tasks include physical abilities and health resources used to maintain physical health and stay active during retirement; mental and emotional abilities used to maintain mental health and look forward to the future; interests, knowledge, and skills used to maintain, broaden, and utilize skills and knowledge; interpersonal abilities, family resources, and social resources used to maintain and establish meaningful relationships and maintain status in the family or society; and planning abilities and financial resources used to prepare for financial needs. These 10 items were responded to using a 7-point response scale, with response options that ranged from much less than me (1) to much more than me (7). Similar to me was the midpoint value (4). Responses were coded as -3 (much less than me) to 3 (much more than me), with 0 as the midpoint value (similar to me).

### *Demographic Questionnaire*

The demographic questionnaire was developed to obtain descriptive information related to the participants concerning age, gender, race/ethnicity, and retirement plans. Information about age of the participants also provided descriptive data for post hoc analyses. Information about gender and race/ethnicity provided data needed to analyze the research questions. Information about expected retirement, education level, and type of job allowed for further descriptive details and post hoc testing of differences based on these attributes.

### Procedures

The clarity and applicability of all instruments were verified first through a pilot study described in Appendix B. Following analysis of the pilot study data, modifications to the instrument packet, and approval from the Institutional Review Board (IRB) of The University of North Carolina at Greensboro of study changes, instrument packets were distributed through UNCG internal mail to UNCG permanent workers who were identified by UNCG Human Resource Services as being between 45 and 60 years of age and working a minimum of 20 hours per week. Each instrument packet contained an Invitation to Participate in the Study, an incentive raffle ticket postcard, an addressed return envelope, and an instrument booklet containing the PWI, the modified RSE Scale, the ROQ, and the Demographic Questionnaire in that order. The order of the instrument booklet was selected in order to avoid contamination of the results of the PWI and the RSE Scale by directed thoughts concerning the participants' observations of retirement role models.

In the Invitation to Participate in the Study, the potential participants were invited to participate in the study and instructed on how to participate. The instructions explained that participation was voluntary, data would be kept confidential, and that returning the completed instrument booklet implied consent for using the participant's data in the study. The participants were asked to complete all surveys in the instrument booklet and return the completed instrument booklet in the addressed return envelope through internal mail. Instructions stated that if the recipient chose to participate in the study and wanted to be entered in the raffle, the recipient should complete the raffle ticket postcard and return it through internal mail separate from the instrument booklet in order to preserve confidentiality of data. All persons who returned completed raffle tickets within two weeks of packet distribution were entered in a drawing for two \$50 prizes. Although the raffle was intended to promote participation, no checking was possible to verify that persons who entered the raffle had participated in the study.

#### Data Analysis/Analysis of Hypotheses

The data analyses for the study included descriptive analysis of the participants, the participants' responses to instrument items, and differences in responses between male and female participants and between minority and non-minority participants. Reliability measurements of the instruments also were performed. Structural equation modeling (SEM) was used to examine the effects of role model success in retirement, variety of role models, and the similarity of abilities and resources between the role models and the participants on retirement self-efficacy and current life satisfaction for the total participants, as well as for the male and female groups and the minority and non-minority groups.

ANOVAs were used to check for differences between means on factors by gender and race/ethnicity, and correlation was used to identify differences in means between the study variables. The following table summarizes the data analysis techniques that were used to test each research hypothesis. The following sections detail how these forms of analysis were used.

Table 3. Hypothesis Mapping to Data Analysis Techniques.

Hypothesis	Correlation	SEM	ANOVA
H1	√		
H2		√	
H3		√	
H4		√	
H5			√
H6			√

#### *Descriptive, Correlational, and Reliability Statistics*

Demographic information was analyzed for frequencies, means, modes, and standard deviations in order to describe the participants and the sample. Means and standard deviations were computed for the instruments and their applicable subscales. Pearson Product-Moment correlations between total scores on each instrument and subscales were computed for the participants, for the male and female groups, and for the minority and non-minority groups. Reliability measurements of the PWI, the modified RSE

Scale, and the subscales of the ROQ also were performed. Cronbach's alpha was used as the method of estimating internal reliability and consistency. Descriptive and correlational analyses were conducted using the Statistical Package for the Social Sciences (SPSS for Windows Release 11.5.0, 2002).

### *Structural Equation Modeling*

Hypotheses Two, Three, and Four were examined using structural equation modeling (SEM). These hypotheses stated that the three-factor model of retirement role modeling, which includes success in retirement, variety of role models, and the similarity of abilities and resources between the role models and the participants, will significantly predict retirement self-efficacy and current life satisfaction as measured in workers 45 to 60 years of age (H1) and that the model will fit equally well for male and female workers (H2) and for minority and non-minority workers (H3). Five SEM models allowed examination of the proposed model's fit for all participants, for male and female participants, and for minority and non-minority participants. The three role model factors in the model were measured by selected questions from the ROQ, retirement self-efficacy was measured by the modified RSE Scale (total score), and current life satisfaction was measured by the PWI (total score). The SEM analyses were conducted using LISREL 8.54 Student Edition (Jöreskog & Sörbom, 2003).

### *Parametric Statistics*

Hypothesis One was tested using correlation. For this hypothesis, the correlations among the study variables (success in retirement, variety of role models, similarity of abilities and resources between the role models and the participants, retirement self-

efficacy, and current life satisfaction) were computed for the total participants and for the groups of male, female, minority, and non-minority participants. Differences among the correlations for the different groups were examined.

Hypotheses Five and Six were tested using one-way ANOVA tests. The differences between mean scores of male and female participants and of minority and non-minority participants were examined for the three factors of role modeling, retirement self-efficacy, and life satisfaction using ANOVA.

#### *Imputed Data*

Missing or unclear data was handled in accordance with the design of the instrument or subscale. Deductive imputation was used for missing data in the PWI and RSE Scale and the Success of Models and Similarity of Abilities and Resources subscales in the ROQ. For PWI, a maximum of 15% (or one item) missing data was tolerated and coded as the average of all reported items for that participant on the PWI. For the RSE Scale and the Success of Models and Similarity of Abilities and Resources subscales in the ROQ, a maximum of 10% missing data was tolerated and coded as the average of all reported items for that participant on the related instrument (RSE Scale) or subscale (Success of Models or Similarity of Abilities and Resources). For the PWI and RSE Scale and the Success of Models and Similarity of Abilities and Resources subscales in the ROQ, any multiple answers for an item were coded as an average of the answers for that instrument or subscale. An exception was made when a blank line closely followed the line containing multiple responses. The combination of multiple responses on one line followed

by a blank line was interpreted as a misalignment of responses, and one response was assigned to each item.

For the Variety of Models subscale of the ROQ, all missing data was coded as 0 (zero), provided that at least one item in the subscale was completed. Any multiple answers for an item were coded as the highest marked answer.

## CHAPTER IV

### RESULTS

In Chapters I, II, and III, the rationale for the study, the review of the literature, and the criteria for investigating the relationships among retirement role model characteristics (role model success in retirement, variety of role models, and the similarity of abilities and resources between role models and participants), retirement self-efficacy, and current life satisfaction were presented. In this chapter, the participants in the study are described, and the results are summarized. The results include analyses of the instruments used in the study and analyses of the data associated with the proposed hypotheses.

#### Description of the Participants

Study packets were mailed to all University of North Carolina at Greensboro (UNCG) permanent employees who had not participated in the pilot study and who were identified by the UNCG Human Resources department as being between 45 and 60 (inclusive) years of age and working a minimum of 20 hours per week. A total of 939 packets were mailed. Of those, 218 were returned with usable data in time for inclusion in the study, one was returned with data but was omitted from the study because the participant's age was outside the study parameters, and five were returned as undeliverable. The response rate was 23%, or 218 participants. Although this response rate resulted in some similarities among participant demographics, UNCG mid-life worker population

demographics, and U.S. mid-life adult demographics, the participant demographics varied considerably in some areas.

Participant demographics are shown in Table 4. As shown in this table, in general, participant demographics were more similar to the demographics of the UNCG mid-life worker population than the U.S. mid-life adult population. More than three-quarters of the 218 respondents, 87%, identified themselves as Caucasian, which is more than the 81% Caucasian population of mid-life workers at UNCG (S. D. Farrell, personal communication, February 28, 2005) and the 80% Caucasian population of mid-life adults in the U.S. in 2000 (<http://factfinder.census.gov/>). Greater than two-thirds of the respondents, 68.8%, identified themselves as female, which is disproportionately more than the 58% population of mid-life workers at UNCG (S. D. Farrell, personal communication, February 28, 2005) and the 51% population of mid-life adults in the U.S. in 2000 (<http://factfinder.census.gov/>). The mean age of participants who reported their age was 53.1 years (SD = 4.3), and the modal age was 54 years. Education levels were very high with 53.2% reporting having advanced degrees and only 27.1% reporting having less than a bachelors degree. Among mid-life workers at UNCG, only 33% had advanced degrees and 32% had less than a bachelors degree (S. D. Farrell, personal communication, February 28, 2005), and in the general U.S. mid-life adult population in 2000, only about 26% of the mid-life adults had attained a bachelors degree or higher (<http://factfinder.census.gov/>). Participants reported better health than the general U.S. mid-life population in 2002 (U.S. Department of Health and Human Services, 2002). Compared with 56% of the general U.S.

population that reported having excellent or very good health in 2002, 62.4% of the study participants reported being in excellent or very good health.

Table 4 provides detailed information on the participants by gender and race/ethnicity, age, and education levels, along with additional information about the job types and health status levels of the participants.

Table 4. Demographic Description of Participants by Gender (including races/ethnicities, ages, education levels, job types, and current health status;  $N = 213$ ).

Demographic Characteristic	Male ( $n = 63$ ) 28.9%		Female ( $n = 150$ ) 68.8%		Total Participants ( $N = 218$ ) 100%		
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Race/ethnicity</b>							
Minority (19 African-American and 3 Hispanic-American)	5	2.3	17	7.8	22	10.1	
Caucasian	57	26.1	132	60.6	189	86.7	
Missing data					7	3.2	
	Total					100.0	
<b>Age</b>							
45 to 50	16	7.3	45	20.6	61	28.0	
51 to 55	21	9.6	55	25.2	76	34.9	
56 to 60	24	11.0	47	21.6	71	32.6	
Missing data					10	4.6	
	Total					100.0	

Demographic Characteristic	Male ( <i>n</i> = 63) 28.9%		Female ( <i>n</i> = 150) 68.8%		Total Participants ( <i>N</i> = 218) 100%	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Education</b>						
Less than high school	1	0.5	1	0.5	2	0.9
High school diploma	6	2.8	14	6.4	20	9.2
Some College	3	1.4	18	8.3	21	9.6
Associates degree or trade school certificate	4	1.8	12	5.5	16	7.3
Bachelors degree	11	5.0	23	10.6	34	15.6
Masters degree	14	6.4	40	18.3	54	24.8
Doctoral degree	22	10.1	40	18.3	62	28.4
Missing data					9	4.1
	Total				99.9	
<b>Job Type</b>						
Faculty	27	12.4	54	24.8	81	37.2
Staff	35	16.1	95	43.6	130	59.6
Missing data					7	3.2
	Total				100.0	

Demographic Characteristic	Male ( <i>n</i> = 63) 28.9%		Female ( <i>n</i> = 150) 68.8%		Total Participants ( <i>N</i> = 218) 100%	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Health status						
Poor	0	0	0	0	0	0
Fair	6	2.8	12	5.5	18	8.3
Good	16	7.3	41	18.8	57	26.1
Very good	27	12.4	62	28.4	89	40.8
Excellent	13	6.0	34	15.6	47	21.6
Missing data					7	3.2
Total					100.0	

Table 5 contains a summary of retirement plans of participants by gender.

Retirement plans varied by proximity of planned retirement, how plans have changed in the past five years, retirement preparation activities in which the participants have engaged, and the amount of stress the participants perceive they experience related to their future retirement. Most participants (94%) indicated that they planned to retire, but the timing of their retirement plans varied from within 1 year (1.8%) to more than 16 years (9.6%). The most frequently specified retirement timeframes were 6 to 10 years (28.9%), 11 to 15 years (28.4%), and 1 to 5 years (18.8%). A few participants (6.0%) reported that they had no idea when they would retire. More than half of the participants (60.1%) reported that their plans had not changed in the past five years. Of those whose retirement plans had changed, most

(26.1%) reported that they plan to retire later. A majority of the participants reported that they had taken part in such retirement planning tasks as saving money for retirement (76.6%), reading about retirement (64.7%), and discussing retirement with family members or significant others (58.7%). Less than half of the participants reported that they had made plans for retirement (47.2%) or attended a retirement seminar (31.7%). Although a few participants reported feeling considerable stress (2.8%), a lot of stress (3.7%), or a fair amount of stress (6.4%) related to retirement, most participants reported feeling only some stress (21.6%) or a little stress (32.1%) related to retirement, and over one quarter of the participants (29.8%) reported experiencing no retirement-related stress.

Table 5. Frequencies by Gender of the Retirement Plans of the Participants ( $N = 218$ ).

Retirement Plans	Male ( $n = 63$ ) 28.9%		Female ( $n = 150$ ) 68.8%		Total Participants ( $N = 218$ ) 100%	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Expected retirement time						
Within 1 year	0	0	4	1.8	4	1.8
In 1 to 5 years	17	7.8	24	11.0	41	18.8
In 6 to 10 years	16	7.3	47	21.6	63	28.9
In 11 to 15 years	19	8.7	43	19.7	62	28.4
In more than 16 years	4	1.8	17	7.8	21	9.6
No idea of when	4	1.8	9	4.1	13	6.0
Do not expect to retire	2	0.9	5	2.3	7	3.2
Missing data					7	3.2
Total					99.9	
Change of retirement plans in past 5 years						
Plan to retire earlier	6	2.8	15	6.9	21	9.6
Plan to retire later	14	6.4	43	19.7	57	26.1
No change in plans	41	18.8	90	41.3	131	60.1
Missing data					9	4.1
Total					99.9	

Retirement Plans	Male ( <i>n</i> = 63) 28.9%		Female ( <i>n</i> = 150) 68.8%		Total Participants ( <i>N</i> = 218) 100%	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Retirement planning tasks pursued						
Read about retirement	45	20.6	96	44	141	64.7
Discussed retirement with family or significant others	38	17.4	90	41.3	128	58.7
Attended retirement seminar	24	11.0	45	20.6	69	31.7
Saved money for retirement	57	26.1	110	50.5	167	76.6
Made plans for retirement	40	18.3	63	28.9	103	47.2
Retirement stress						
No stress	22	10.1	43	19.7	65	29.8
A little stress	22	10.1	48	22.0	70	32.1
Some stress	15	6.9	32	14.7	47	21.6
A fair amount of stress	1	0.5	13	6.0	14	6.4
A lot of stress	2	0.9	6	2.8	8	3.7
Considerable stress	0	0	6	2.8	6	2.8
Missing data					8	3.7
Total					100.1	

### Analyses of Reliability and Descriptive Statistics for Study Instruments

In the following sections, correlations between items within the instruments and reliability within the instruments are provided. The means and standard deviations for instrument and subscale scores are presented along with a profile of mean scores.

#### *Item Analyses and Reliabilities*

Item analysis was performed on all instruments and applicable subscales. The greatest positive effect that removal of any item would have had on the alpha coefficient of any instrument or subscale was .016. In the ROQ Variety of Models subscale, removal of only one item, ROQ 7, would have increased the alpha coefficient, and this increase would have been 0.016. In the ROQ Success subscale, removal of only one item, ROQ 18, would have increased the alpha coefficient, and this increase would have been 0.001. No items in the PWI, RSE, or ROQ Similarity of Abilities and Resources subscale reduced alpha coefficients. Because the potential increase in reliability was so low, all items in all instruments and subscales were retained.

#### *Reliability*

Cronbach's alpha coefficient was used to measure internal consistency for each instrument and subscale applicable to data analyses. The  $\alpha$  coefficients for male, female, minority, and non-minority groups and for the total participants are listed in Table 6. As shown in this table, the  $\alpha$  coefficients ranged from .76 to .97 for the instruments as measured using the total participants. For subgroups of participants, the  $\alpha$  coefficients ranged from .74 to .97. The  $\alpha$  coefficient for the PWI ranged from .87 to .97 among the groups, which was higher than the range between 0.7 of 0.8 reported for the national

Australian surveys (Lau et al., in press). The  $\alpha$  coefficient for the modified RSE used in the study ranged from .93 to .97 among the groups, which was higher than the .92 reported for original RSE Scale (Neuhs, 1990). No norming comparisons of  $\alpha$  coefficients were available for the ROQ subscales. The lowest  $\alpha$  coefficients were for the ROQ Variety of Models subscale (.74 to .88), which contained 7 items designed to guide participants through identifying the number of retired people they have observed. The  $\alpha$  coefficients of Female ( $\alpha = .74$ ) and Caucasian ( $\alpha = .75$ ) groups for this subscale were the lowest  $\alpha$  coefficients. Overall, the  $\alpha$  coefficients were respectable for all instruments and subscales for all groups.

Table 6. Alpha Coefficients for the PWI and RSE Instruments and the ROQ Subscales of Variety, Similarity of Abilities and Resources, and Success for Males, Females, Minorities, Caucasians, and All Participants.

Instrument and Subscale	Males	Females	Minorities	Caucasians	Total Participants
PWI (8 items)	.90	.92	.87	.92	.91
RSE (44 items)	.96	.97	.93	.97	.97
ROQ subscales					
Success (12 items)	.95	.95	.93	.96	.95
Variety (7 items)	.81	.74	.88	.75	.76
Similarity of Abilities and Resources (10 items)	.86	.83	.92	.81	.84

*Descriptive Statistics for all Instruments*

In Table 7, the means and standard deviations for the instruments and applicable subscales are presented for male and female participants, minority and Caucasian participants, and the total participants. The mean score for males was higher than the mean score for females on the PWI and lower than females on the ROQ Success subscale and the ROQ Similarity of Abilities and Resources subscale. The scores appeared to be more varied among females than males for the PWI and the RSE. The mean score for minorities was higher than the mean score for Caucasians on the ROQ Similarity of Abilities and Resources subscale. The scores appeared to be more varied among Caucasians for the PWI and RSE and less varied for the ROQ subscales than among minorities. The means and standard deviations for females and Caucasians appeared to be more consistent with the means and standard deviations for the total participants than the other groups, but this likely is accounted for by the larger group sizes of females and Caucasians.

Table 7. Means and Standard Deviations by Gender and Race/Ethnicity for the PWI, RSE, and ROQ Subscales of Variety, Similarity of Abilities and Resources, and Success.

Instrument and Subscale	Male ( <i>n</i> = 63) 28.9%		Female ( <i>n</i> = 150) 68.8%		Minority ( <i>n</i> = 22) 10.1%		Caucasian ( <i>n</i> = 189) 86.7%		Total Participants ( <i>n</i> = 218) 100%	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
PWI	60.23	10.34	57.85	13.81	56.22	11.79	58.82	13.10	58.37	12.88
RSE	168.14	23.84	168.99	29.84	166.77	21.15	168.85	28.97	168.58	27.98
ROQ										
Success	61.68	15.33	65.65	16.00	59.13	16.93	65.05	15.73	64.33	15.83
Variety	23.37	9.81	23.35	9.05	20.32	11.21	23.71	9.02	23.43	9.28
Similarity of Abilities and Resources	0.67	8.56	1.23	8.44	1.30	12.70	1.11	7.82	1.02	8.41

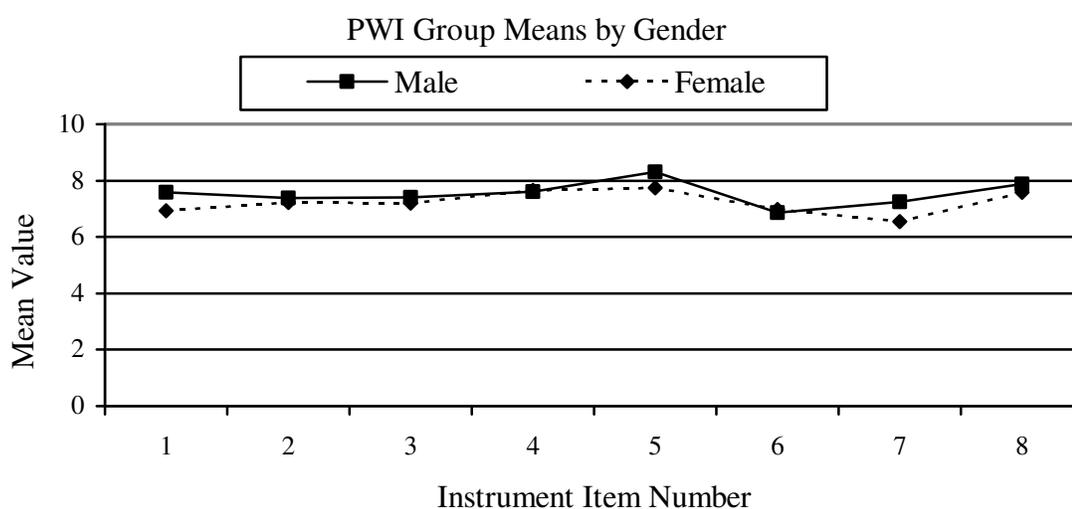
### *Profile of Mean Scores*

Further examination of the instruments and subscales was made through the generation of mean scores by gender and race/ethnicity groups for individual items in each instrument. In Figure 2 through Figure 7, the profiles mean scores are graphed.

The profile of means for items in the PWI was similar between males and females as illustrated in Figure 2, but the means varied significantly for three of the eight questions. For question 1, “your standard of living,” males reported higher satisfaction ( $p < .05$ ) with a mean of 7.59 ( $sd = 1.30$ ) than females with a mean of 6.93 ( $sd = 2.32$ ). For question 5, “how safe you feel,” males reported higher satisfaction ( $p < .05$ ) with a mean of 8.30 ( $sd =$

1.38) than females with a mean of 7.75 ( $sd = 1.84$ ). The final difference ( $p < .05$ ) in means by gender was on question 7, “your future security,” for which males reported higher satisfaction with a mean of 7.25 ( $sd = 1.74$ ) than females with a mean of 6.54 ( $sd = 2.41$ ).

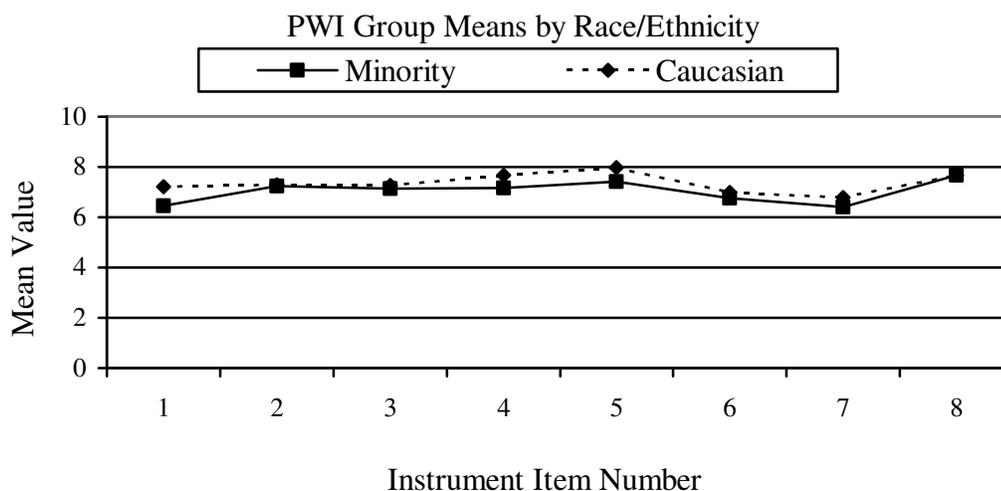
Figure 2. Profile of Mean Scores for the Male and Female Groups on the PWI.



The profile of means for items in the PWI was similar between minorities and Caucasians as illustrated in Figure 3, and no significant difference was found for any items between minorities and Caucasians. The small size of the minority group ( $n = 22$ ) may explain the lack of identified difference in responses to PWI questions between minorities and Caucasians, and the combining of all minorities into one group further limits the interpretation of these results.

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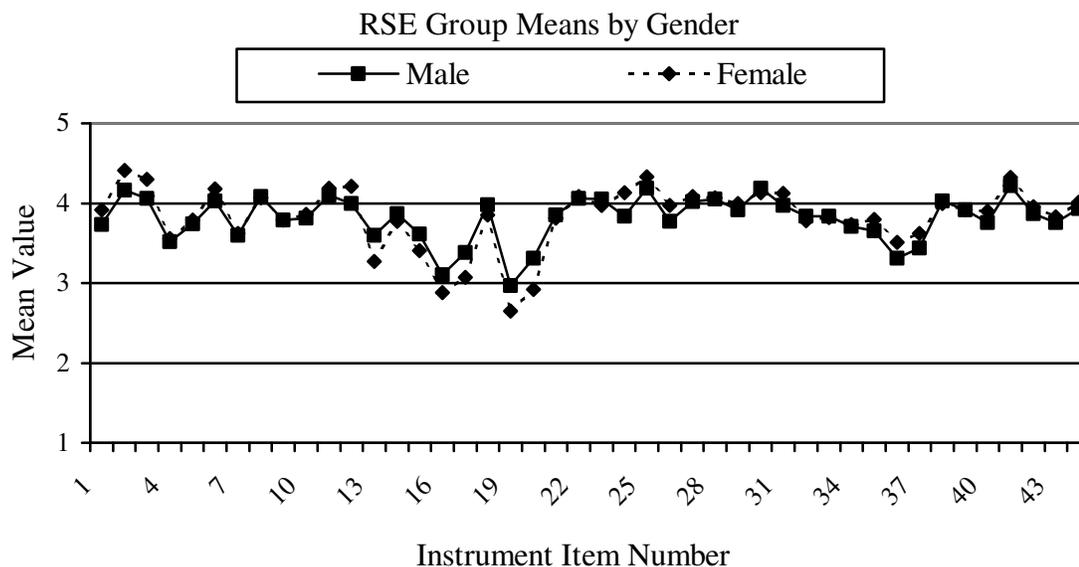
Figure 3. Profile of Mean Scores for the Minority and Caucasian Groups on the PWI.




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The profile of means for items in the RSE was similar between males and females as illustrated in Figure 4, but the means varied significantly for three of the 44 questions. For question 2, “Eat adequately,” males reported lower retirement self-efficacy ( $p < .05$ ) with a mean of 4.16 ( $sd = 0.77$ ) than females with a mean of 4.41 ( $sd = 0.75$ ). For question 20, “Decide how much retirement income you should invest,” males reported higher retirement self-efficacy ( $p < .05$ ) with a mean of 3.31 ( $sd = 1.01$ ) than females with a mean of 2.92 ( $sd = 1.20$ ). The final difference in means by gender was on question 24, “Attend meetings and organizations as desired,” for which males reported lower retirement self-efficacy ( $p < .05$ ) with a mean of 3.84 ( $sd = 0.89$ ) than females with a mean of 4.13 ( $sd = 0.99$ ).

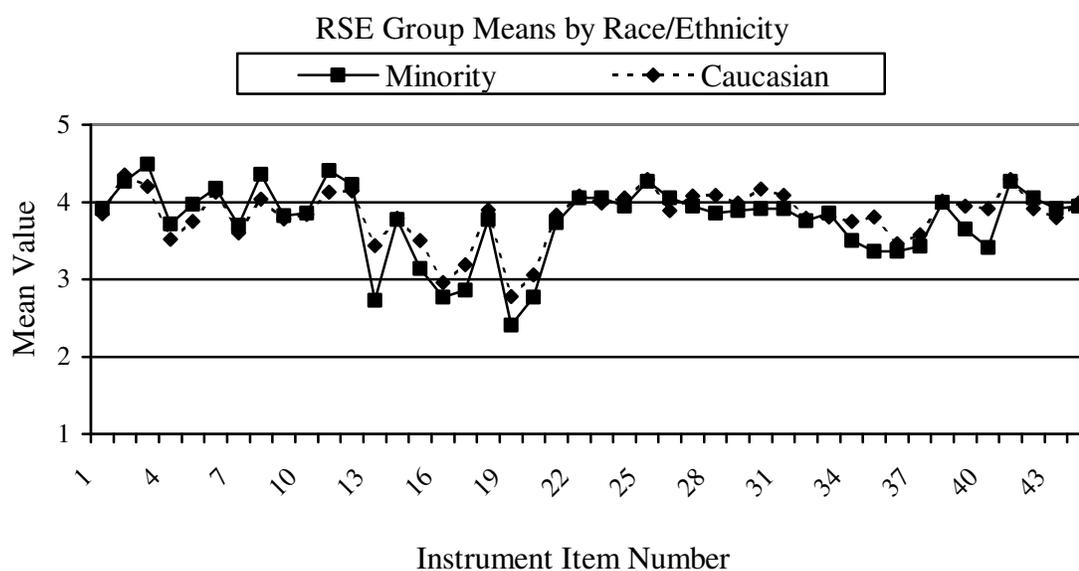
Figure 4. Profile of Mean Scores for the Male and Female Groups on the RSE.



The profile of means for items in the RSE was similar between minorities and Caucasians as illustrated in Figure 5, but the means varied significantly for three of the 44 questions. The small size of the minority group ( $n = 22$ ) may have contributed to the lack of identified difference in some additional RSE questions, and the combining of all minorities into one group further limits the interpretation of these results. For question 13, “Have enough money for housing of your choice,” minorities reported lower retirement self-efficacy ( $p < .01$ ) with a mean of 2.73 ( $sd = 1.03$ ) than Caucasians with a mean of 3.44 ( $sd = 1.13$ ). For question 35, “Adjust to changing employment status,” minorities reported lower retirement self-efficacy ( $p < .05$ ) with a mean of 3.36 ( $sd = 1.14$ ) than Caucasians with a mean of 3.81 ( $sd = 0.97$ ). The final difference in means by race/ethnicity was on

question 40, “Decide if and when to downsize...,” for which minorities reported lower retirement self-efficacy ( $p < .05$ ) with a mean of 3.41 ( $sd = 1.44$ ) than Caucasians with a mean of 3.91 ( $sd = 1.05$ ).

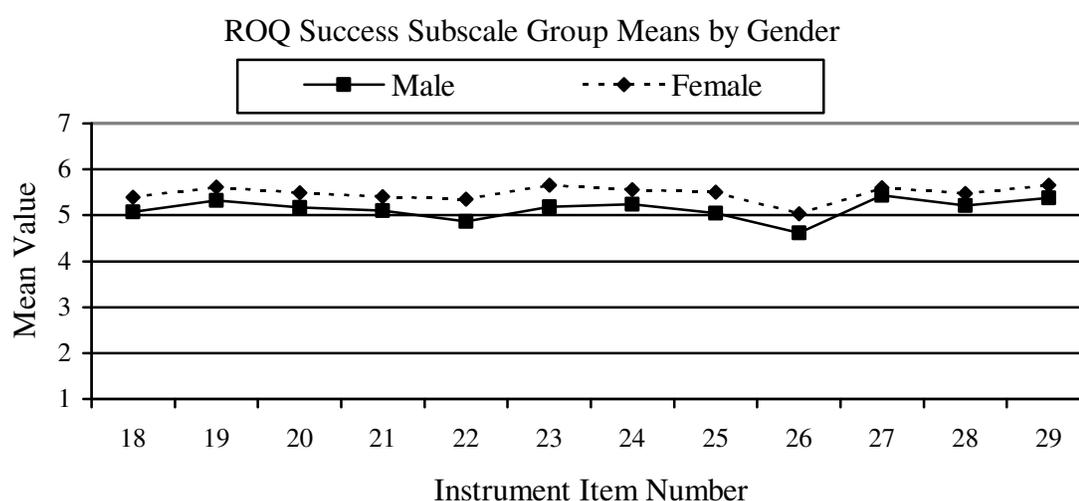
Figure 5. Profile of Mean Scores for the Minority and Caucasian Groups on the RSE.



The profile of means for items in the ROQ Success of Retirement Role Models subscale was similar between males and females as illustrated in Figure 6, but the means varied significantly for one of the 12 questions. For question 23, “Staying active during the early to middle years of retirement,” males reported having observed retirement role models who had a mean level of success at 5.19 ( $sd = 1.54$ ), which was lower ( $p < .05$ )

than the level of success, 5.65 ( $sd = 1.56$ ), that females reported for their retirement role models.

Figure 6. Profile of Mean Scores for the Male and Female Groups on the ROQ Success of Retirement Role Models Subscale.



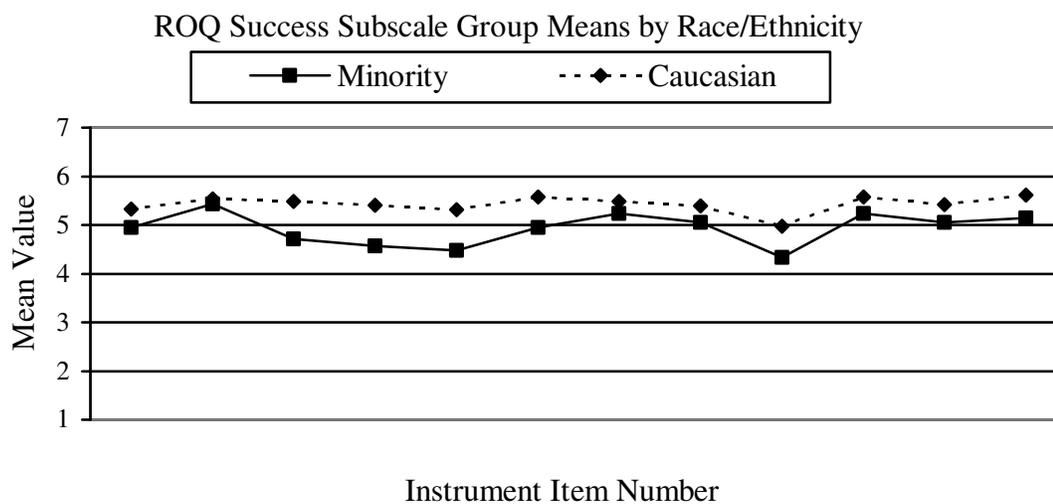
The profile of means for items in the ROQ Success of Retirement Role Models subscale was similar between minorities and Caucasians as illustrated in Figure 7, but the means varied significantly for three of the 12 questions. For each of these three differences, minorities reported observing lower levels of success in their retirement role models than Caucasians reported. The small size of the minority group ( $n = 21$ ) may have contributed to the lack of identified difference in some additional ROQ Success of Retirement Role Models subscale questions, and the combining of all minorities into one group further limits the interpretation of these results. For question 20, “Before retirement, preparing for

his/her upcoming financial needs in retirement,” minorities reported having observed retirement role models who had a mean level of success at 4.71 ( $sd = 2.13$ ), which was lower ( $p < .05$ ) than the level of success, 5.48 ( $sd = 1.54$ ), that Caucasians reported for their retirement role models.

For question 21, “During the early to middle years of retirement, preparing for future financial needs,” minorities reported having observed retirement role models who had a mean level of success at 4.57 ( $sd = 2.11$ ), which was lower ( $p < .05$ ) than the level of success, 5.41 ( $sd = 1.57$ ), that Caucasians reported for their retirement role models. For question 22, “Making plans for the future during the early to middle years of retirement,” minorities reported having observed retirement role models who had a mean level of success at 4.48 ( $sd = 2.14$ ), which was lower ( $p < .05$ ) than the level of success, 5.31 ( $sd = 1.61$ ), that Caucasians reported for their retirement role models.

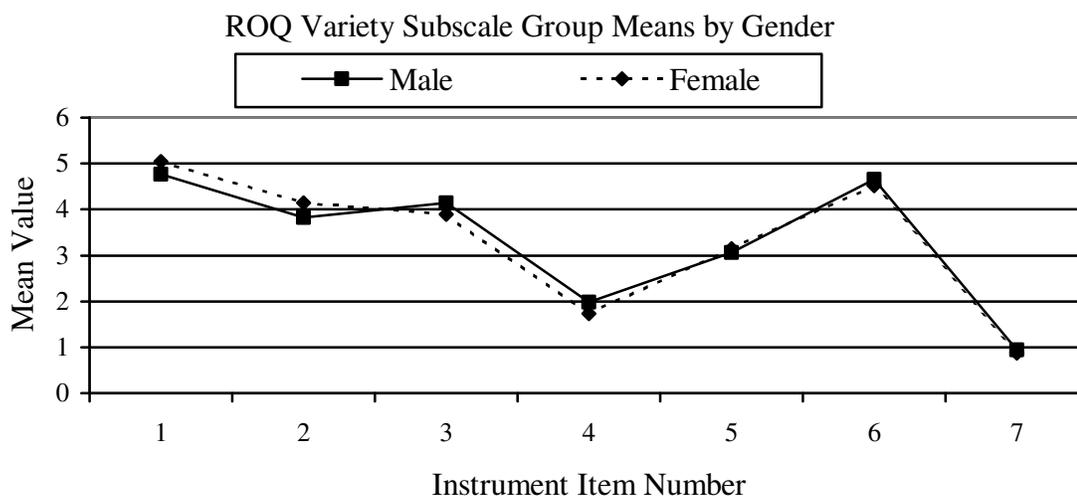
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Figure 7. Profile of Mean Scores for the Minority and Caucasian Groups on the ROQ Success of Retirement Role Models Subscale.



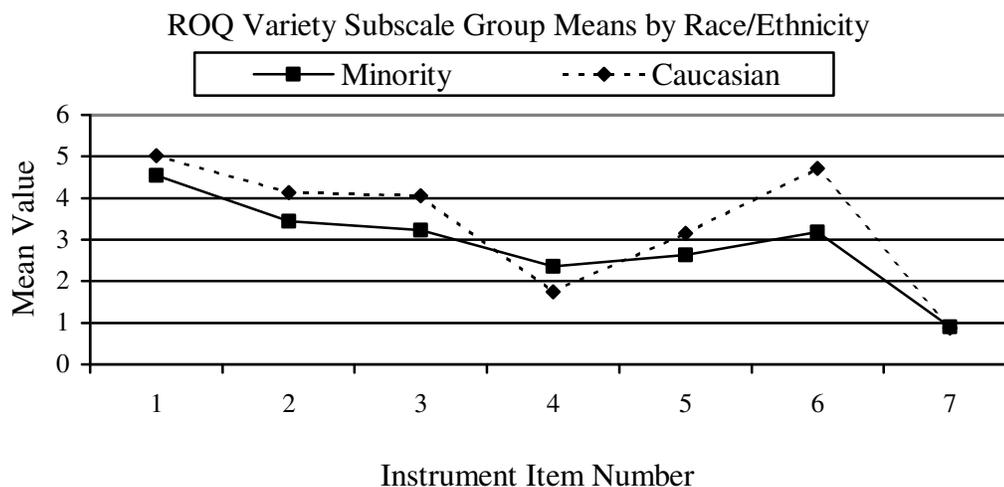
The profile of means for items in the ROQ Variety subscale was similar between males and females as illustrated in Figure 8. No significant difference was found for any items between males and females.

Figure 8. Profile of Mean Scores for the Male and Female Groups on the ROQ Variety of Retirement Role Models Subscale.



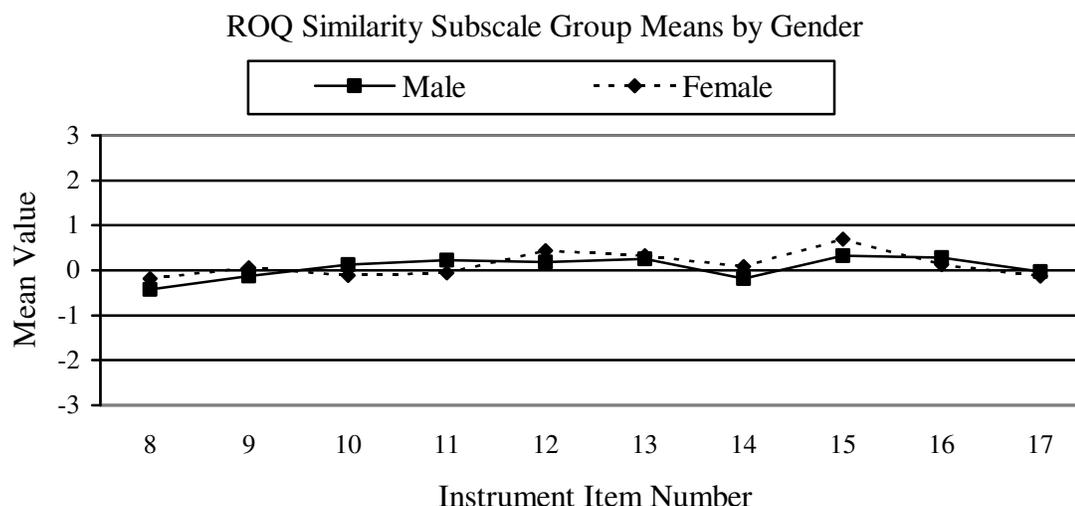
The profile of means for items in the ROQ Variety subscale was similar between minorities and Caucasians as illustrated in Figure 9, but the means varied significantly for one of the seven questions. The small size of the minority group ( $n = 22$ ) may have contributed to the lack of identified difference in some additional ROQ Variety subscale questions, and the combining of all minorities into one group further limits the interpretation of these results. Minorities reported having observed a mean of 3.18 ( $sd = 2.36$ ) retired “Outsiders” (category 6), which was less ( $p < .01$ ) than Caucasians, who reported having observed a mean of 4.72 ( $sd = 2.01$ ) retired “Outsiders.”

Figure 9. Profile of Mean Scores for the Minority and Caucasian Groups on the ROQ Variety of Retirement Role Models Subscale.



The profile of means for items in the ROQ Similarity of Abilities and Resources subscale was similar between males and females as illustrated in Figure 10. The means did not vary significantly for any of the ten questions. The mean responses ranged from  $-0.43$  ( $sd = 1.47$ ) to  $0.32$  ( $sd = 1.22$ ) for males and  $-0.18$  ( $sd = 1.45$ ) to  $0.7$  ( $sd = 1.75$ ) for females, indicating that the abilities and resources of the role models were fairly similar to the participants for both males and females.

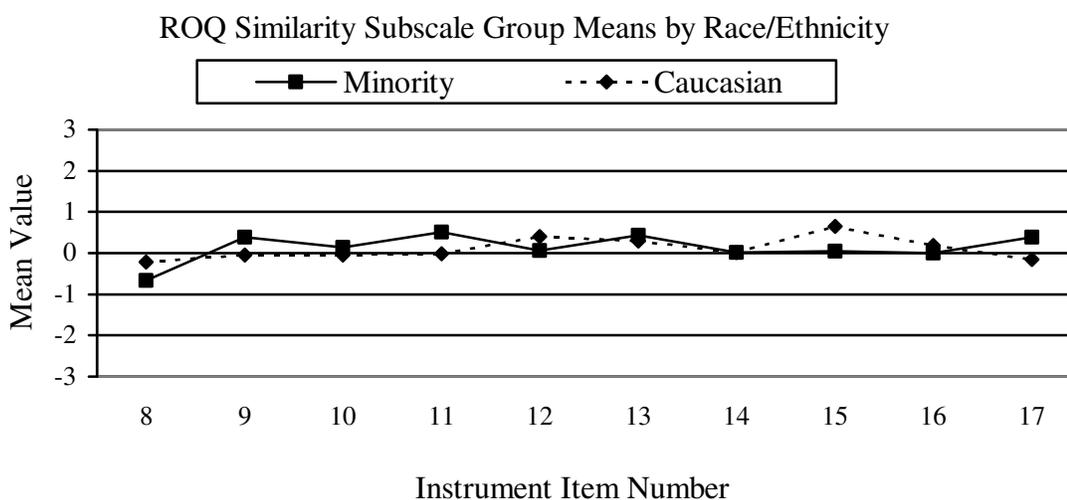
Figure 10. Profile of Mean Scores for the Male and Female Groups on the ROQ Similarity of Abilities and Resources Subscale.



The profile of means for items in the ROQ Similarity of Abilities and Resources subscale was similar between minorities and Caucasians as illustrated in Figure 11, but the means varied significantly for one of the ten questions. The small size of the minority group ( $n = 21$ ) may have contributed to the lack of identified difference in some additional ROQ Similarity of Abilities and Attributes subscale questions, and the combining of all minorities into one group further limits the interpretation of these results. For question ROQ 17, minorities reported that their primary retirement role models had a mean of slightly more ( $0.38$ ;  $sd = 1.50$ ;  $p < .05$ ) “Interests, knowledge, or skills” than them, and Caucasians reported that their primary retirement role models had a mean of slightly fewer ( $-0.15$ ;  $sd = 1.11$ ) “Interests, knowledge, or skills” than them. The mean responses ranged from  $-0.67$  ( $sd = 1.77$ ) to  $0.51$  ( $sd = 1.41$ ) for minorities and  $-0.21$  ( $sd = 1.42$ ) to  $0.65$  ( $sd =$

1.72) for Caucasians, indicating that the abilities and resources of the role models were fairly similar to the participants for minorities and Caucasians.

Figure 11. Profile of Mean Scores for the Minority and Caucasian Groups on the ROQ Similarity of Abilities and Resources Subscale.



### Results of Hypothesis Testing and Structural Equation Modeling

In the following sections, the results of the analyses for each of the hypotheses are described. Some participants failed to complete all instruments and subscales completely enough to allow for imputing missing data. In order to create and test models for which there was no missing data, casewise deletion was used. This resulted in an  $n$  of 208 for the total sample, an  $n$  of 60 males, an  $n$  of 144 females, an  $n$  of 20 minorities, and an  $n$  of 182 Caucasians. The following sections describe the results of the hypothesis testing on these samples.

### *Hypothesis One*

Hypothesis One stated that the variables in the proposed model (success in retirement, variety of role models, similarity of abilities and resources between the role models and the participants, retirement self-efficacy, and current life satisfaction) would be positively correlated. Pearson Product-Moment correlations among the variables were computed for all participants and for male, female, minority, and Caucasian participants, along with the alpha coefficients for the instruments and their subscales.

In Table 8, the intercorrelations for the model variables derived for the total participants ( $n = 208$ ) are presented along with the alpha coefficients on the diagonal. Among the total participants, six of the ten intercorrelations yielded significant positive correlations ( $p < .01$ ). Current life satisfaction correlated with retirement self-efficacy (.52;  $p < .01$ ) and variety of models (.28;  $p < .01$ ). Retirement self-efficacy correlated with success of role models in retirement (.36;  $p < .01$ ) and variety of models (.18;  $p < .01$ ). Among the role model characteristics, success of role models in retirement correlated with similarity of abilities and resources between the role models and the participants (.60;  $p < .01$ ) and variety of models (.20;  $p < .01$ ).

Table 8. Intercorrelations for Scores on Variables in the Proposed Model for the Total Participants.

Variable	Life Satisfaction	Retirement Self-efficacy	Success in Retirement	Variety of Models	Similarity of Abilities and Resources
Life Satisfaction (PWI)	<b>.91</b>				
Retirement Self-efficacy (RSE)	.52**	<b>.97</b>			
Success in Retirement (ROQ/Success)	.13	.36**	<b>.76</b>		
Variety of Models (ROQ/Variety)	.28**	.18**	.20**	<b>.84</b>	
Similarity of Abilities and Resources (ROQ/Similarity)	-.08	-.02	.60**	.06	<b>.95</b>

Reliabilities are listed on the diagonal, and correlations are listed on the off diagonals.

\*  $p < .05$ ; two tailed ( $n = 208$ )

\*\*  $p < .01$ ; two tailed

In Table 9, the correlations for the model variables as a function of gender are presented. Although among both the male participants ( $n = 60$ ) and the female participants ( $n = 144$ ), five of the ten intercorrelations yielded significant positive correlations, only three of these significant correlations were among the same variables. Current life satisfaction correlated with retirement self-efficacy for both males (.56;  $p < .01$ ) and

females (.52;  $p < .01$ ), and retirement self-efficacy correlated with success of role models in retirement for males (.26;  $p < .05$ ) and females (.39;  $p < .01$ ). Among the role model characteristics, success of role models in retirement correlated with similarity of abilities and resources between the role models and the participants for both males (.60;  $p < .01$ ) and females (.59;  $p < .01$ ). For males, success of role models in retirement also correlated with variety of models (.44;  $p < .01$ ). For females, variety of models correlated with both current life satisfaction (.32;  $p < .01$ ) and retirement self-efficacy (.24;  $p < .01$ ).

Table 9. Intercorrelations for Scores on Variables in the Proposed Model as a Function of Gender.

Variable	Life Satisfaction	Retirement Self-efficacy	Success in Retirement	Variety of Models	Similarity of Abilities and Resources
Life Satisfaction (PWI)	--	.56**	.10	.25	-.02
Retirement Self-efficacy (RSE)	.52**	--	.26*	.06	.02
Success in Retirement (ROQ/Success)	.16	.39**	--	.44**	.60**
Variety of Models (ROQ/Variety)	.32**	.24**	.10	--	.34**
Similarity of Abilities and Resources (ROQ/Similarity)	-.10	-.03	.59**	-.07	--

Intercorrelations for male participants ( $n = 60$ ) are listed above the diagonal, and intercorrelations for female participants ( $n = 144$ ) are listed below the diagonal.

\*  $p < .05$ ; two tailed

\*\*  $p < .01$ ; two tailed

In Table 10, the correlations for the model variables as a function of race/ethnicity are presented. Among the minority participants ( $n = 20$ ), two of the ten intercorrelations yielded significant positive correlations, and among Caucasian participants ( $n = 182$ ), six of the ten intercorrelations yielded significant positive correlations. The small size of the minority group may explain the fewer significant correlations as compared with the

correlations found in the Caucasian group. Although no significant correlations were found among the minority participants for current life satisfaction, among the Caucasian participants, current life satisfaction correlated significantly with retirement self-efficacy (.54;  $p < .01$ ) and variety of retirement role models (.31;  $p < .01$ ). Retirement self-efficacy correlated significantly with success of role models for both the minority participants (.45;  $p < .05$ ) and the Caucasian participants (.35;  $p < .01$ ). For the Caucasian participants, retirement self-efficacy also correlated with variety of retirement role models (.22;  $p < .01$ ).

Table 10. Intercorrelations for Scores on Variables in the Proposed Model as a Function of Race/Ethnicity.

Instrument/Subscale	Life Satisfaction	Retirement Self-efficacy	Success in Retirement	Variety of Models	Similarity of Abilities and Resources
Life Satisfaction (PWI)	--	.23	.22	.16	.31
Retirement Self-efficacy (RSE)	.54**	--	.45*	-.08	.07
Success in Retirement (ROQ/Success)	.11	.35**	--	.31	.67**
Variety of Models (ROQ/Variety)	.31**	.22**	.19*	--	.22
Similarity of Abilities and Resources (ROQ/Similarity)	-.14	-.02	.59**	.03	--

Intercorrelations for minority participants ( $n = 20$ ) are listed above the diagonal, and intercorrelations for Caucasian participants ( $n = 182$ ) are listed below the diagonal.

\*  $p < .05$ ; two tailed

\*\*  $p < .01$ ; two tailed

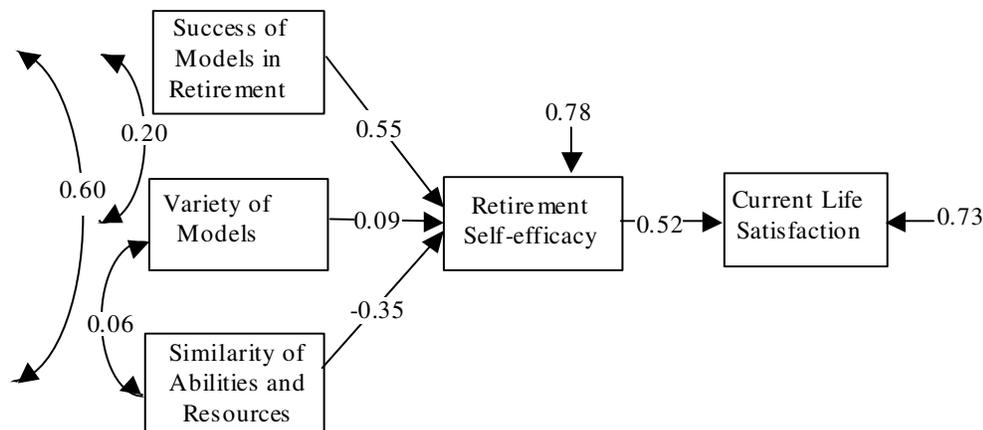
The correlations presented in this section partially supported Hypothesis One. All significant correlations were positive. In every group except the minority group, current life satisfaction was correlated significantly with retirement self-efficacy. The only other variable that was correlated with current life satisfaction was variety of retirement role models, and this variable was correlated in all of the larger groups (total participants,

female participants, and Caucasian participants). In every group, success of role models in retirement was correlated with retirement self-efficacy. The only other role model characteristic variable that was correlated with retirement self-efficacy was variety of retirement role models, and this variable was correlated in all of the larger groups. In every group, similarity of abilities and resources between the role models and the participants was significantly correlated with success of role models in retirement, and in three of the groups (total participants, male participants, and Caucasian participants), variety of retirement role models also was significantly correlated with success of role models in retirement. Significant correlations were not found in any group between current life satisfaction and success of role models in retirement or similarity of abilities and resources between the role models and the participants. Significant correlations also were not found in any group between retirement self-efficacy and similarity of abilities and resources between the role models and the participants. The variables that correlated significantly varied in strength of correlation. Considering that significant positive correlations were found, examination of the proposed model was indicated.

### *Hypothesis Two*

Hypothesis Two stated that the three-factor model of retirement role modeling would fit for workers 45 to 60 years of age. Using LISREL 8.54 Student Edition (Jöreskog & Sörbom, 2003), confirmatory factor analysis was employed to assess the fit of the model. A minimum sample of 200 participants was required (Kelloway, 1998) for each model, and the total sample of midlife workers ( $n = 208$ ) met this requirement. Figure 12 illustrates the expected three-factor model of retirement role modeling for the participants.

Figure 12. Expected Three-factor Model of Retirement Role Modeling for Midlife Workers



Chi-Square=12.31 df=3, P-value=0.00639, RMSEA=0.123

The model was created using the correlations described in Table 8 and the following standard deviations: PWI  $SD = 13.013$ , RSE  $SD = 28.113$ , ROQ Success of Retirement Role Models subscale  $SD = 15.691$ , ROQ Variety of Models subscale  $SD = 9.151$ , and ROQ Similarity of Abilities and Resources subscale  $SD = 8.531$ .

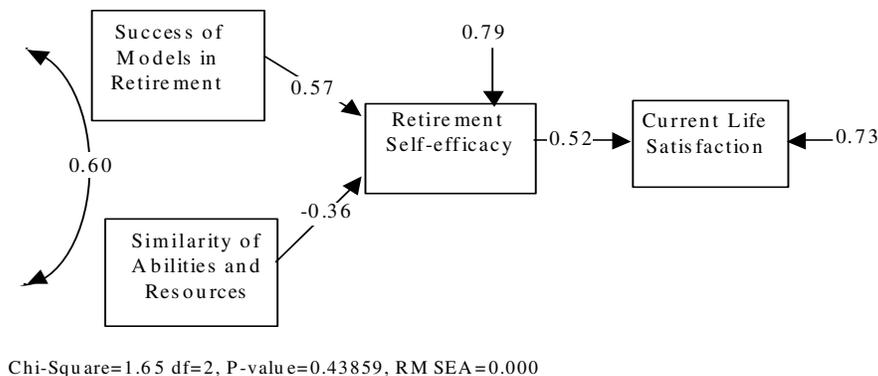
Results of confirmatory analysis suggest that the model was a poor fit for the data. The degrees of freedom were 3, and Chi-Square was measured at 12.31 ( $p < .01$ ), indicating that the unexplained variance was substantial. The Goodness of Fit Index (GFI) was 0.98, and the Comparative Fit Index (CFI) was 0.95, both of which were within the range that would indicate a good fit. The Adjusted Goodness of Fit Index (AGFI), however, was 0.88, which was below the range that would indicate a good fit, and the Root Mean

Square Error of Approximation (RMSEA) was 0.123, which was above the range that would indicate a good fit. The mixed goodness of fit statistics were interpreted as indicators that the model was a poor fit for the data.

Alternative models were considered. These models included the elimination of the variety of role models factor, converting the success of role models and the similarities of abilities and resources factors to mediating factors (mediating the effect of the variety of role models on retirement self-efficacy), and converting the model to a linear format (variety of models affecting similarity of abilities and resources, similarity of abilities and resources affecting success of models, success of models affecting retirement self-efficacy, and retirement self-efficacy affecting current life satisfaction). The best fit resulted from eliminating the variety of models factor from the model. Eliminating this factor may have improved the model fit because the sample size was inadequate to accommodate all anticipated factors. Figure 13 illustrates the resulting two-factor model of retirement role modeling for mid-life workers.

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Figure 13. Two-factor Model of Retirement Role Modeling for Midlife Workers



Results of confirmatory analysis for the preceding two-factor model provides a good fit for the data. The degrees of freedom were 2, and Chi-Square was measured at 1.6 ( $p > .05$ ), indicating that the unexplained variance was reasonable. GFI was 1.00, AGFI was 0.98, CFI was 1.00, and RMSEA was 0.0. All of these statistics are within the range that would indicate a good fit. Thus, this alternate model was determined to provide a good fit for the data. This confirmed model illustrates that two of the originally hypothesized role model characteristics contribute to the development of retirement self-efficacy and that retirement self-efficacy contributes to current life satisfaction in mid-life workers. Thus, Hypothesis Two was partially supported.

### *Hypothesis Three*

Hypothesis Three stated that the three-factor model of retirement role modeling would fit equally well for male and female workers 45 to 60 years of age but would vary in

terms of the correlations and path coefficients. A minimum sample of 200 participants was required (Kelloway, 1998) for each model, and neither the male group ( $n = 60$ ) or the female group ( $n = 144$ ) met this requirement. Thus, this hypothesis was not examined. Although the samples were inadequate to create stable models by gender and conduct meaningful comparisons between different gender models, data was entered into LISREL for each gender group, and models were created for preliminary analysis. Appendix D contains these preliminary path diagrams. Although these path diagrams are included in Appendix D, no evaluation of the models was conducted due to the inadequate sample sizes. Further research with larger male and female groups is needed before representative models can be created and tested for gender groups.

#### *Hypothesis Four*

Hypothesis Four stated that the three-factor model of retirement role modeling would fit equally well for minority and non-minority workers 45 to 60 years of age but would vary in terms of the correlations and path coefficients. A minimum sample of 200 participants was required (Kelloway, 1998) for each model, and although the Caucasian group ( $n = 182$ ) came close to meeting this sample size requirement, the minority group ( $n = 20$ ) clearly did not meet this requirement. Although the samples were inadequate to create stable models by race/ethnicity and conduct meaningful comparisons between different race/ethnicity models, data was entered into LISREL for each group, and models were created for preliminary analysis. Appendix D contains these preliminary path diagrams. Although these path diagrams are included in Appendix D, no evaluation of the models was conducted due to the inadequate sample sizes. Further research with larger

race/ethnicity groups is needed before representative models can be created and tested for racial/ethnic groups.

#### *Hypothesis Five*

Hypothesis Five stated that the mean scores of the three subscales of role models and the scales of retirement self-efficacy and life satisfaction would differ for male and female workers 45 to 60 years of age. As shown in Table 11, only one significant difference was found in the means of the three subscales of role models or scales of retirement self-efficacy or life satisfaction for male and female midlife workers. This difference was  $-2.11$  ( $p < .05$ ) and occurred in means between males and females for success of role models in retirement. Significant differences also were found in the variance of the similarity of life satisfaction ( $8.63$ ;  $p < .01$ ) and retirement self-efficacy ( $4.04$ ;  $p < .05$ ). This difference in variance indicates that scores on the PWI and the RSE varied more widely among female participants than among male participants. The female sample was over twice the size of the male sample, and this difference in sample size may account for the greater variability of responses among female participants.

Although the data does not appear to support Hypothesis Five, rejecting Hypothesis Five is premature due to the small sample size for males. Further investigation with a larger male sample is warranted before Hypothesis Five can be analyzed. Information contained in this section is provided for interest only and should not be interpreted as evidence for rejecting Hypothesis Five.

Table 11. Mean and Standard Deviation by Gender for the PWI, RSE, and ROQ Subscales of Variety, Similarity of Abilities and Resources, and Success.

Variable	Male ( <i>n</i> = 60)		Female ( <i>n</i> = 144)		t-test for Equality of Means	
	Mean	SD	Mean	SD	t	Sig.
Life Satisfaction (PWI)	60.37	10.25	57.54	13.97	1.42	.158
Retirement Self-efficacy (RSE)	167.57	23.96	168.72	29.95	-0.27	.791
Variety of Models (ROQ/Variety)	23.55	9.59	23.59	8.97	-0.03	.977
Similarity of Abilities and Resources (ROQ/Similarity)	0.58	8.66	1.26	8.57	-0.52	.605
Success in Retirement (ROQ/Success)	61.12	15.47	66.16	15.65	-2.11	.037*

\*  $p < .05$ ; two tailed

\*\*  $p < .01$ ; two tailed

### *Hypothesis Six*

Hypothesis Six stated that the mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction would differ for minority and non-minority workers 45 to 60 years of age. As shown in Table 12, no significant difference was found in the means of the three subscales of role models or scales of retirement self-efficacy and life satisfaction for minority and non-minority midlife workers. A significant difference was found in the variance of the similarity of abilities and resources of role models (11.32;  $p < .001$ ). This difference in variance indicates that scores on the ROQ Similarity of Abilities and Resources subscale varied more widely among minority

participants than among Caucasian participants. The minority sample was small, and the Caucasian sample was more than nine times the size of the minority sample. The inadequate size of the minority sample and the differences in sample sizes between minorities and Caucasians may account for the lack of difference found in the means between minorities and Caucasians and in the greater variance of responses by minorities on the ROQ Similarity of Abilities and Resources subscale. Although the data only partially supports Hypothesis Six, accepting or rejecting Hypothesis Six may be premature due to the small sample size for minorities. Further investigation with a larger minority sample may be warranted before Hypothesis Six can be validly accepted or rejected.

Table 12. Mean and Standard Deviation by Race/Ethnicity for the PWI, RSE, and ROQ Subscales of Variety, Similarity of Abilities and Resources, and Success.

Variable	Minority ( <i>n</i> =20)		Caucasian ( <i>n</i> =182)		t-test for Equality of Means	
	Mean	SD	Mean	SD	t	Sig.
Well-being (PWI)	55.30	11.93	58.70	13.18	-1.11	.269
Retirement self- efficacy (RSE)	165.36	20.66	168.59	29.12	-0.48	.630
Variety of models (ROQ/Variety)	21.40	10.76	23.82	8.98	-1.12	.263
Similarity of abilities and resources (ROQ/Similarity)	1.42	13.02	1.09	7.92	0.16	.870
Success in retirement (ROQ/Success)	59.95	16.93	65.19	15.61	-1.42	.159

\*\*  $p < .01$ ; two tailed

## Post-Hoc Analyses

### *Participant Age*

In order to identify the effect of age on responses, participants were assigned to one of two age groups, the early midlife group (ages 45 through 52) or the later midlife group (ages 53 through 60), and comparisons were made between these groups using one-way ANOVA. These age groups were chosen so half of the ages surveyed would be in each group. Differences by age group were found in the mean scores for the PWI and the ROQ variety of retirement role models subscale. The mean score on the PWI was 56.30 for the younger midlife group ( $n = 90$ ) and 59.93 for the older midlife group ( $n = 117$ ), indicating that the older midlife participants might experience greater levels of life satisfaction than the younger midlife participants ( $p < .05$ ). The mean score on the ROQ variety of retirement role models subscale was 21.36 for the younger midlife group ( $n = 91$ ) and 24.53 for the older midlife group ( $n = 117$ ), indicating that the older midlife participants may have known more retirement role models than the younger midlife participants ( $p < .05$ ). No significant differences in mean scores on other instruments and subscales were identified by age group. In addition, the age groups did not differ significantly in retirement stress or in changes in retirement plans during the past 5 years.

### *Retirement Observations*

More than half (62%) of the participants identified their primary retirement role model as a relative, and in written descriptions of their primary retirement models, the participants frequently described a parent. The second most commonly identified category for primary retirement role models was friend (26%), and the third most commonly

identified category for primary retirement role models was business or professional contact (6%). A few people identified a member of an organization as their primary retirement role models (3%), and one person each identified their primary retirement role model as a service provider, an outsider, or other.

More than three-quarters (78%) stated that they continued to observe their primary retirement role model at the point in life when they completed the surveys. Others stated that their observations of their retirement role model ended many years ago (3%); two to ten years ago (11%), or more recently (8%). More than half of the participants stated that they wanted their own retirement to be more different from (as opposed to more similar than) the retirement experienced by their primary retirement role model (68%).

Similarity of attributes between the participants and their retirement role models originally was hypothesized to affect the development of retirement self-efficacy, but this factor was removed from the model of retirement role modeling and the planned research following the pilot study. During the pilot study, almost all of the participants identified their primary retirement role models as people who were similar to them in the attributes of gender and race/ethnicity. The lack of variation in responses to the similarity of attributes questions during the pilot study led to the removal of the planned analysis of this factor. The two questions, however, were retained so that lack of variability in responses could be verified during the main study. Of the participants who responded to the items describing the similarity of retirement role model attributes (n = 214), 66% described their primary retirement role model as being of the same sex, and 98% described their primary retirement role models as being similar to them in race/ethnicity. Thus, the current sample of midlife

workers may be slightly more inclined to select retirement role models who are of the same gender and much more inclined to select retirement role models who are of a similar race/ethnicity as themselves.

### *Qualitative Data*

Qualitative data analyses were conducted using Qualitative Solutions & Research Non-numerical Unstructured Data Indexing Searching and Theorizing (QSR NUD\*IST (Release V 4.0, 2000). Most of the qualitative information supported the instruments by restating information from the instruments regarding retirement activities, types of role models, and ways the participants were similar to or different from their retirement role models. A few described the basis of their retirement concerns and decisions: observations of Alzheimer's Disease, death, and loss of interest in life; events such as personal illness, divorce, or caregiving responsibilities; and situational factors such as not having any children who later could become caregivers, not having adequate income for retirement savings, not trusting the government to adequately fund Social Security and Medicare, and not trusting doctors to accept them as patients. Among the similarities and differences between role models and participants, participants offered the new theme of religion and spirituality. Although "relative" was a category for the relationship between the participant and their primary retirement role model, some participants wrote comments that indicated they viewed their being part of the same family as an underlying source of similarity between themselves and their role models. Although the qualitative data supported the items chosen for the instruments, particularly the ROQ, further examination of the qualitative data may be useful in fine tuning the instruments.

### Summary

In this chapter, the results of the study, which included Pearson Product-Moment correlations, structural equation modeling, and one-way ANOVAs, were summarized. Results supported partial acceptance of Hypotheses One and Two, but lack of adequate sample size for subgroups kept Hypotheses Three through Six from being thoroughly analyzed. The partial acceptance of Hypothesis One resulted from significant positive correlations among some combinations of the following variables: current life satisfaction, retirement self-efficacy, success of role models in retirement, variety of role models, and similarity of abilities and resources between participants and their role models. The partial acceptance of Hypothesis Two resulted from the confirmation of a model similar to the expected model of retirement role modeling but with one factor removed from the hypothesized model.

## CHAPTER V

### DISCUSSION

In Chapters I, II, III, and IV, the rationale for the study, the review of the literature, the criteria for investigating the relationships among retirement role model characteristics (role model success in retirement, variety of role models, and the similarity of abilities and resources between role models and participants), retirement self-efficacy, and current life satisfaction, and the results of the investigation were presented. In this chapter, the results are summarized, the sample and results are discussed, the limitations of the study are identified, the implications for counseling and counselor education are clarified, and the recommendations for future research are outlined.

#### Overview of Study and Results

The purpose of the study was to test a proposed structural model describing the relationships among retirement role model characteristics, retirement self-efficacy, and current life satisfaction in midlife workers. The sample was adequate for the analysis of the model using the total participants, and a modified version of the proposed model was confirmed. Correlations among variables in the model also were examined for the total participants, and most correlations were found to be significant. The sample limited further planned data analyses and interpretation of results.

Participants in the study were UNCG employees between 45 and 60 (inclusive) years of age who worked a minimum of 20 hours per week. The response rate was low

(23%), and although 218 surveys were returned, only 208 contained enough data to be used in confirmatory analysis of the proposed model. This response rate allowed for examination of the proposed model for the total population but did not allow for examination of the model for the identified subgroups of males, females, minorities, and Caucasians.

Additional analysis by subgroups also was hampered by the small sample sizes of some groups, particularly the minority group ( $n = 20$  for complete packets) and the male group ( $n = 60$  for complete packets). A larger, more diverse sample is needed for more complete analyses of all the hypotheses.

The resulting sample more closely matched the UNCG midlife worker population than the general midlife population in the U.S. Still, just comparing to the UNCG midlife worker population, Caucasians were over represented by about 6 percentage points, women were over represented by more than 10 percentage points, and the education levels were higher than expected. In addition, the participants identified their health more favorably than the general midlife population in the U.S. Besides increasing the overall sample size and the sample sizes of males and minorities, for generalizability, participants should be obtained from work settings where education levels are lower and geographical diversity is present.

### Discussion of Hypotheses

Six hypotheses were proposed, and two were partially accepted. Two hypotheses were not examined and two were preliminarily examined, all due to an inadequate sample size and lack of adequate diversity within the sample. Data analysis techniques included Pearson Product-Moment correlations, structural equation modeling, and one-way

ANOVAs. In the following sections, the results of hypothesis testing for the four hypotheses that were examined are discussed.

### *Hypothesis One*

Hypothesis One stated that the variables in the proposed model (success in retirement, variety of role models, similarity of abilities and resources between the role models and the participants, retirement self-efficacy, and current life satisfaction) would be positively correlated. As Bandura's (1997) description of the process of self-efficacy development through role model observations outlined, retirement self-efficacy in midlife workers may be related to the observation of retirement role models. In this study, the perceived success of observed retirement role models and the variety of retirement role models positively correlated, as expected, with the observer's retirement self-efficacy ( $p < .01$ ). Unexpectedly, similarity of abilities and resources between the observer and the retirement role model did not correlate highly with retirement self-efficacy. That unexpected lack of correlation is discussed later. For the two role model constructs that correlated positively with retirement self-efficacy, no causal relationship was established. These correlations, however, are consistent with Bandura's theory, which states that observing successful models and observing a wide variety of models contribute positively to the development of self-efficacy.

Although Bandura (1997) also theorized that the degree of similarity in abilities and resources shared between the observer and the role model affects the development of self-efficacy, these factors did not correlate significantly when they were examined in relation to the tasks associated with retirement. Measurement of similarity of abilities and resources

between the retirement role models and the participants was the only factor in the study for which negative numbers were used. Furthermore, only the total score for the 10 items in this scale was analyzed. The mean total score for these 10 items was 1.02 and the standard deviation was 8.41. As indicated by the standard deviation, the group mean was affected by negative and positive numbers canceling each other when they were added to compute the mean. Individual total scores for this subscale may not have captured differences in similarities between the participants and their retirement role models because of the cancellation effect of adding positive and negative numbers in order to compute the individual's total score for similarity of abilities and resources. Further consideration should be made in how researchers can more accurately gather and analyze data concerning perceived similarities and differences of abilities and resources related to retirement tasks.

Another primary correlation that was substantiated was the positive correlation between retirement self-efficacy and current life satisfaction in midlife workers ( $p < .01$ ). The presence of greater self-efficacy for retirement tasks could relate to satisfaction with current life in numerous ways, but the data do not provide an adequate base for speculation on the ways that retirement self-efficacy and life satisfaction relate. What can be noted is that the relationship appears to exist, indicating that midlife workers who feel confident in their ability to succeed in their future retirement also feel more satisfied with their life prior to actual retirement. Further research is needed in order to examine whether interventions aimed at improving retirement self-efficacy also improve current life satisfaction. Similarly, research is needed in order to examine whether interventions aimed at improving current life satisfaction succeed in also raising retirement self-efficacy.

A correlation also was identified between variety of retirement role models and current life satisfaction. The relationship between current life satisfaction and variety of retirement role models may be similar to the relationship between variety of retirement role models and retirement self-efficacy. Bandura (1971, 1997) described that having a wider variety of models provides the observers with ideas of multiple ways to perform tasks. Knowing that there are multiple ways to succeed, that many people can succeed, and that failure can be followed by success can help a person gain confidence in the odds for personal success. Similarly, watching a variety of people throughout life might provide observers with more confidence in approaching life tasks. As Bandura theorized and other researchers have supported (e.g., Eliopoulous, 1989; Hayslip et al., 1997; Lo & Brown, 1999; Sharpley & Yardley, 1999), self-efficacy toward tasks can lead to success and satisfaction with those tasks. Thus, midlife workers who have observed a greater variety of retirement role models also may use those retirees as models for life tasks prior to retirement. An alternate explanation could be that the presence of a greater variety of retirement role models may have resulted from more social involvement and social support for some participants. Increased social involvement and support could have been more responsible for the higher current life satisfaction scores than the observations of a greater variety of retirement role models.

Additional correlations among the retirement role model factors included correlations between success of role models in retirement and both variety of retirement role models ( $p < .01$ ) and similarity of abilities and resources between the role models and the participants ( $p < .01$ ). The variety of retirement role models subscale was a

measurement of how many retirees the participants had known, and the other role model subscales related to one specific primary retirement role model. Although observing more retirees increases a person's chances of observing highly successful retirees, greater variety of observations does not explain the choice of a successful retiree as the participant's primary role model. Could it be that when a wider variety of role models is available, midlife workers tend to gravitate toward closer observation of the models who are more successful? Additional research would need to answer this question and determine whether exposure to a wider variety of retirement role models, particularly successful retirement role models, would benefit midlife workers who have lower retirement self-efficacy.

The relationship between success of models and similarity of abilities and resources further highlights the connection between role model characteristics. The role models who were described as being more successful in retirement tasks also tended to be viewed as having more abilities and resources than the participants. Considering that abilities and resources are used to accomplish retirement tasks, it would be expected that retirees who have more abilities and resources would be more successful at the tasks associated with retirement.

The discussion of the correlations thus far pertains to the total group of study participants, but positive correlations between success of models and retirement self-efficacy and between success of models and similarity of abilities and resources were supported for all subgroups (male, female, minority, and Caucasian). The significant correlation between life satisfaction and retirement self-efficacy was supported by all subgroups except the minority group, which was the smallest group for which data were

analyzed. Only the female group and the Caucasian group, which were the largest groups for which data were analyzed, supported the significant correlations between life satisfaction and variety of models and between retirement self-efficacy and variety of models. Only the Male group and the Caucasian group supported the significant correlation between success of role models in retirement and variety of models. Finally, an additional significant correlation was observed in the male group between variety of models and similarity of abilities and resources. The significance of these correlations for the male group and the lack of significance for the female group, which was larger than the male group, may indicate that the variety of role models has a different function for males than for females. Further research, possibly qualitative research or research with a larger male sample, is needed to substantiate and clarify this difference.

Lack of significant correlations by all groups for some of the relationships discussed in the preceding paragraphs might be explained by small sample sizes, particularly in the minority and male groups. The support in the male group and lack of support in the female group for significant correlation between variety of models and success of models was unexplained and should be further investigated. This conflicting correlational support indicates that when a wider variety of retirement models was observed, men were more likely to report having a highly successful primary retirement role model, and women were not more inclined to report having a highly successful retirement role model. Similarly, the support by only the male group for a correlation between variety of models and similarity of abilities and resources should be examined. When a wider variety of retirement models was observed by the male participants, they

were more likely to report having a primary retirement role model who had more abilities and resources than themselves.

Although not all variables in the proposed model were significantly correlated in all groups, a significant correlation was found in all groups for some variables, seven out of ten possible correlations were significant for at least one group, and half the correlations were significant for the two largest subgroups (females and Caucasians). The stronger and greater number of correlations found in the larger groups may indicate that the sample sizes of the smaller groups were insufficient. A larger and more diverse sample might lead to a clearer pattern of differences in correlations among current life satisfaction, retirement self-efficacy, success in retirement, variety of role models, and similarity of abilities and resources between the role models and the participants in all groups.

### *Hypothesis Two*

Hypothesis Two stated that the three-factor model of retirement role modeling would fit for workers 45 to 60 years of age. Although the three-factor model of retirement role modeling did not fit, removal of one role model factor, variety of retirement role models, resulted in a model with good fit. In the resulting model, the path between retirement self-efficacy and current life satisfaction illustrated a substantial positive correlation between these two variables, and the path between success of role models in retirement and retirement self-efficacy also illustrated a substantial positive correlation. The path between similarity of abilities and resources and retirement self-efficacy illustrated a moderate negative correlation. The interpretation of this latter negative correlation needs more clarification.

The similarity of abilities and resources role model factor was coded on a scale of -3 to +3. A negative number indicated that the role model had fewer abilities and resources than the observer, and a positive number indicated that the role model had greater abilities and resources than the observer. A number closer to zero represented more similarity to the observer. In the path diagram, the correlation between similarity of abilities and resources and retirement self-efficacy was  $-0.35$ . This negative correlation indicates that participants who described their primary retirement role models as having more abilities and resources tended to score lower on retirement self-efficacy, and participants who described their primary retirement role models as having fewer resources tended to score higher on retirement self-efficacy. These results match Bandura's (1997) self-efficacy theory, in which he explained that observing models similar to oneself or with fewer abilities and resources boosts one's self-efficacy more than observing experts, or models who have more abilities and resources.

Consider, for example, former President Jimmy Carter as a retirement role model. Most people are likely to view him as having far more abilities and resources than themselves. Some people may even consider his ex-presidency as the ideal retirement, but few people are likely to believe that they can strive for and achieve a retirement similar to his. Thus, although his retirement can serve as a model, all of his many abilities and resources keep what he has accomplished in retirement and how he lives in retirement from seeming achievable for most people. Marge, the unnotable former receptionist, however, can serve as a strong retirement model for the people in her family and community because she has negotiated the tasks of retirement well on seemingly few abilities and resources.

She appears to be healthy, happy, and active and have good relationships with her neighbors and family, and she continues to serve her community as a volunteer reader during story time at the local library. Not only can people view Marge's retirement as successful, most of the people who observe her retirement can relate to how she lives her life and can believe that they too can have a similar or greater level of success in their own retirement because they have more abilities and resources to work with than Marge has had.

Observing failure by someone who has more abilities and resources can be more devastating than observing failure by someone who has similar or fewer resources and abilities (Bandura, 1997). Observed failure of an expert can result in such thoughts as, "If they can't do it, what makes me think that I can?" Observing the failure of someone more similar or who has fewer abilities and resources more likely can result in the observer trying to figure out what went wrong and planning for how to avoid the same failure. In the two-factor model, the negative correlation between similarity of abilities and resources and retirement self-efficacy illustrates this relationship between levels of abilities and resources and retirement self-efficacy. Observing retirement role models who have greater abilities and resources than oneself may relate to lower retirement self-efficacy, and observing retirement role models who have fewer abilities and resources may relate to higher retirement self-efficacy.

The original three-factor model of retirement modeling may not have fit because of the correlation between variety of retirement models and success of models in retirement. Another explanation for the lack of fit for the hypothesized model is the small sample size.

A minimum sample of 200 participants was required (Kelloway, 1998) for the model, and the total sample of midlife workers ( $n = 208$ ) barely met this requirement. Reducing the role model factors from three to two might have enabled the sample size to be adequate for the resulting model. Replication of the study with a larger sample would provide further evidence of whether the two-factor model is a better fit than the originally hypothesized three-factor model. Regardless, the fit of the two-factor model supports Bandura's (1997) theory concerning role model characteristics and their importance in the development of self-efficacy. The two-factor model illustrates the relationship that two of the retirement role model factors, success of the role model in retirement and similarity of abilities and resources between the observer and the retirement role model, have with retirement self-efficacy. Although the originally hypothesized three-factor model was not confirmed, further investigation of the original model using a larger sample is justified. Considering that the elimination of one factor improved the model fit to a good level and the mixed goodness of fit statistics obtained from the hypothesized model, a larger sample size eventually might confirm the originally hypothesized model.

#### *Hypothesis Five*

Hypothesis Five stated that the mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction would differ for male and female workers 45 to 60 years of age. Although the data supported only one difference in mean scores between male and female workers, the small sample of male workers ( $n = 60$ ) limited valid interpretation of the data. The one score that was significantly different was the ROQ Success in Retirement subscale ( $p < .05$ ). If the scores for this subscale can be

validly interpreted, the difference would indicate that the female participants perceived greater levels of success in retirement among their primary retirement role models than the male participants. This finding should be viewed tentatively because of the small sample size of males.

Results from Levene's test for homogeneity of variances reinforced the need for a larger sample. Levene's test is designed to verify that the data is symmetric enough to be from the same population. Significant results for the PWI ( $p < .01$ ) and the RSE Scales ( $p < .05$ ) indicate that the scores on these instruments were distributed so differently between these groups that the mean scores are not adequate descriptors of the groups for comparison purposes. If the small male sample size was responsible for lack of homogeneity of variance, increasing the male sample size might result in samples that can be compared more accurately.

#### *Hypothesis Six*

Hypothesis Six stated that the mean scores of the three subscales of role models and scales of retirement self-efficacy and life satisfaction would differ for minority and non-minority workers 45 to 60 years of age. Although the data did not support any differences in mean scores between minorities and Caucasians, the small sample of minority workers ( $n = 20$ ) made valid interpretation of the data impossible. The use of Levene's test for homogeneity of variance resulted in identification of significantly different variances ( $p < .01$ ) for the ROQ Similarity of Abilities and Resources subscale between the minority and Caucasian groups. This further reinforced the need for a larger sample of minorities. In addition to simply increasing the minority sample to compare minorities and Caucasians,

the minority sample should be increased enough to allow for analyses among African Americans, Latinos, Asian Americans, and Native Americans, as there may be considerable differences among these groups. These differences could contribute to lack of homogeneity of variance and to inaccurate generalization of results.

#### Discussion of Post-Hoc Analyses

Post-hoc analyses were performed in order to examine other possible explanations for the results and to construct a clearer profile of role model observations. Although at least one person identified their primary role model as someone from each of the supplied categories (relative, friend, business or professional contact, service provider, member of an organization, outsider, and other), 63% identified a relative as their primary role model. This indicates that the family continues to be a strong source of role models throughout adulthood and possibly the most influential source of information about later life transitions and challenges. Written comments further indicated that many of the relatives who were primary role models were parents of the participants. Adult children may continue to look to their parents for clues about their own futures and for ideas about approaches to aging, whether or not the children embrace these approaches or guard against them. Considering that 62% of the participants stated that they wanted their retirements to be more different from the retirement experienced by their primary retirement role model, many of the participants seemed to use their retirement role models as guides for how not to perform the tasks associated with retirement.

Of course, relatives were not the only primary retirement role models identified. Participants frequently identified friends (26%) as primary retirement role models.

Together, relatives and friends accounted for 88% of the identified primary retirement role models. The close relationships shared by these people may explain the seemingly stronger affect they have on the participants' views about retirement. Anyone, however, can serve as an influential retirement role model, as indicated by one participant who wrote about actively planning for a retirement similar to the retirement of a person she only read about in a magazine. That one magazine story was enough to provide that participant with new ideas about how to approach retirement.

#### Discussion of the Major Findings

From the findings for Hypotheses One and Two, there appears to be clear support for the applicability of Bandura's (1997) theory of self-efficacy to retirement self-efficacy. Although a causal relationship between retirement role model characteristics and retirement self-efficacy could not be determined in this study, the identified relationships between retirement role model characteristics and retirement self-efficacy support the possibility that the observation of retirement role models as outlined in Bandura's theory contribute to the development and maintenance of retirement self-efficacy. Similarly, a causal relationship between retirement self-efficacy and current life satisfaction in midlife workers could not be determined, but the support by the data of a relationship between retirement self-efficacy and current life satisfaction allows for the possibility that causality may be involved in the relationship. The confirmed two-factor model of retirement role modeling clarifies that the hypothesized relationships exist among two retirement role model characteristics (success of role models in retirement and similarity of abilities and resources between the role models and the participants), retirement self-efficacy, and current life

satisfaction in midlife workers. The removal of the role model characteristic variety of models in order to obtain good fit for the model indicates that the quality of the relationship (success of models and similarity of models) is more strongly related to retirement self-efficacy than simply the quantity of retirement role models. The confirmation of this model can be used as evidence that further exploration is needed to examine whether any of the relationships are causal. Further research, possibly qualitative or longitudinal, is needed to determine whether the role modeling relationships contribute to retirement self-efficacy development and whether retirement self-efficacy contributes to current life satisfaction for midlife workers.

#### Limitations of the Study

There are several limitations to the generalizability of the results of this study due to the sampling method, the procedures, and the instruments. To the extent possible, the procedures were designed to overcome these limitations, as discussed below.

Participants were self-selected from one institution. Self-selection may have threatened internal validity, and sampling from only one institution could have threatened external validity. Although all UNCG workers who met the study requirements were invited to participate in the study, the participants selected whether or not they would participate. Interest in, motivation toward, and general attitudes regarding retirement may have affected the workers' decisions to participate in the study. Furthermore, using participants from only one institution resulted in a sample that represented that institution only and could not be generalized to a broader workforce, but this limitation also may have reduced some confounding variables that could have caused further variation in retirement

self-efficacy and life satisfaction. Work and regional culture may have been similar for the participants, retirement benefits likely were similar, and the participants may have had similar threats to continuing employment or chances for becoming eligible for retirement. Although self-selection for participation could have resulted in an unrepresentative sample and results that do not accurately describe a wider population, participation could not have been mandated, and recruiting from one institution reduced some confounding variables.

Characteristics of the sample also may have threatened statistical conclusion validity and internal validity. The limited availability of racial and ethnic diversity within the sample led to low statistical power for data analyses related to research questions One, Four, and Six. These research questions required comparisons of racial/ethnic groups. The sample was inadequate for the construction of a representative structural equation model for a generalized set of minorities and kept analyses from being feasible for more explicit racial/ethnic groups (e.g., African American, Latino, and Asian American). In addition to providing limited racial/ethnic diversity, the sample lacked adequate gender diversity for conclusive analyses based on gender. With only 60 males completing all instruments, the sample of males lacked adequate power for analyses related to research question Three. The disproportion of male participants compared with female participants also may have reduced the accuracy of the gender comparisons performed as part of analyses for research questions One and Five. The sample also contained a higher than average education level for midlife workers. The skewed education level may have threatened internal validity and limited generalizability of the results. Although the reading level of the instruments was intentionally reduced to minimize reading comprehension problems that could have caused

workers with lower education levels difficulties and could have influenced their decision not to participate, the reduced reading level did not ensure that workers with lower education levels selected to participate. Although characteristics of the sample may have threatened statistical conclusion validity and internal validity, efforts were made to reduce these threats.

The method of gathering data solely through self-report written instruments may have reduced construct validity. Participants may have been inclined to inflate their levels of retirement self-efficacy and life satisfaction and report in a more or less positive fashion their observations of retirement role models. Hypothesis guessing may have occurred, which may have resulted in participants providing data that reflected expected results. For example, participants might have guessed that if they provided highly positive answers regarding their own retirement self-efficacy, the researcher expected their primary retirement role model to be described as highly successful during retirement. The self-report approach allowed for responses that resulted from hypothesis guessing, but this method and the study materials did not encourage hypothesis guessing.

Finally, current events could have affected the results of the study. For example, current national discussions debating the long term stability of Social Security and a movement to change Social Security regulations and current state discussions about possibly eliminating health benefits for retired state employees could have affected retirement self-efficacy scores, particularly in the tasks of obtaining adequate health insurance, maintaining financial independence, and negotiating government, pension, and insurance regulations. If current events affected the results of the study, replication of the

study when those events no longer are top news items could result in dissimilar findings. Other unrecognized events also could have threatened the validity of the study results.

Although the study had some potential limitations due to the sampling method, the procedures, and the instruments, procedures were designed to reduce the negative effects of these limitations. Furthermore, some of the limitations possibly provided benefits to the study that might have outweighed the negative effects. For example, sampling from employees at only one work location limited confounding variables at the expense of generalizability. Because this is the first documented study that examined the relationships among retirement role model characteristics, retirement self-efficacy, and current life satisfaction, reducing confounding variables may have been preferable to increasing generalizability. Regardless, the limitations may have reduced internal validity, external validity, construct validity, and statistical conclusion validity, and will need to be considered when interpreting the results. These limitations have importance for understanding the implications of the study.

### Implications

The findings from this study have implications for counselors who work with midlife workers. Counselor educators also can use the results from this study to strengthen their programs so that their students are better prepared to work with midlife workers. The following sections describe implications for practicing counselors and counselor educators.

#### *Counseling Practice*

The literature related to counseling workers who are preparing for retirement (e.g., Harper & Shoffner, 2004; Perkins, 2000; Quick, 1990) focuses on the individual's desires

for the future in retirement, the individual's resources that can be used to prepare for the future, and the individual's knowledge about the tasks associated with retirement.

Counseling literature does not focus on the use of role models in interventions for such mid and later life transitions as retirement.

As indicated by the variety of retirement role models that participants identified in this study, midlife workers may have many role model resources that the counseling literature fails to suggest accessing during counseling for retirement. With counselors frequently focusing on the client's feelings and experiences, counselors easily can bypass exploration of client observations of others. An added focus on exploration of observations of retirement role models may provide counselors with information on which to design additional interventions for working more effectively with people preparing for retirement. These interventions include exploration of observations of a wide variety of retirement role models, the encouragement of interaction with retired persons, and the inclusion of retired persons as co-facilitators or guest members of retirement preparation groups because they would serve as retirement role models.

As adults continue to learn, grow, and make transitions during mid and later life, counselors should consider Bandura's (1997) self-efficacy theory as a possible guide to how people of all ages seem to develop self-efficacy for the new tasks introduced by common transitions. This study supports the consideration of using retirement role models to assist in the development of retirement self-efficacy and the navigation of the tasks related to the retirement transition.

### *Counselor Education*

Considering the aging of the U.S. population (<http://factfinder.census.gov/>), counselor education programs likely will be training more counselors to work with the increasing population of mid and later life adults. Attention to making sure the curriculum addresses the mid and later life developmental tasks associated with retirement might facilitate the preparation of students able to work effectively with this increasing mid and later life population. Focus on the transition toward retirement could be included in such courses as lifespan development, career development, and assessment. Discussions of the importance of role models on self-efficacy development should be expanded to challenge students to consider the ongoing use of role models throughout the lifespan and the availability of successful role models, particularly successful retirement role models, for clients of all ages. Counseling students should be encouraged to become more aware of their own observations of retirees and to seek a variety of retirement role models who are similar to themselves. Because gender, racial, and ethnic differences may exist in how people develop, utilize, and relate to role models, counselor educators should direct students to examine role model relationships in a culturally sensitive manner. Connecting self-efficacy theory (Bandura, 1997), which primarily has been researched and applied to younger populations, to development in mid and later life may provide students with a familiar framework for recognizing and understanding the continued developmental process that occurs throughout adulthood.

### Recommendations for Future Research

Recommendations for future research include replication of the study with larger, more diverse samples and reevaluation of how similarity of abilities and resources between role models and the participants is measured and analyzed. This study also could become a base for examining the relationship between role models and self-efficacy for other common tasks in mid and later adulthood. Finally, research should be undertaken to determine whether there are causal relationships or just simple correlations among retirement role model characteristics, retirement self-efficacy, and current life satisfaction.

Replication of this study in a wider range of employment settings, in more diverse geographical locations, and with more culturally varied participants would generate findings that could allow for examination of Hypotheses Three through Six and be generalizable to a wider population of midlife workers. The wider range of employment settings could include large and small academic and non-academic government institutions at the local, state, and federal levels, large and small private businesses from traditionally blue collar and white collar industries; and nonprofit organizations. Geographical locations should be selected to include sites from varied regions of the country and rural, suburban, and metropolitan areas. Culturally varied participants could be recruited by replicating the study at work locations that employ more racially and ethnically diverse workers, such as traditionally minority colleges and minority-owned businesses. Strong emphasis should be placed on obtaining a racially and ethnically diverse sample so that data from specific racial and ethnic groups could be analyzed discretely instead of under the less useful grouping of

“minorities,” and so that the interaction between race and gender as it relates to retirement self-efficacy development can be examined.

Before replication of the study occurs, the measurement and analysis of similarity of abilities and resources between role models and the participants should be reevaluated. The original methods may be retained, but alternate methods, such as coding the responses from 1 to 7 instead of from -3 to +3 may more accurately capture differences in retirement role model abilities and resources. The difficulty in interpreting the combined negative and positive data and the concerns related to negative and positive numbers canceling out each other reducing the data to totals near 0 should be considered and possibly addressed.

An additional item could be included in future replication of the study in order to learn more about developmental influences on retirement role model observations. Information about the age of the participants when their primary retirement role models retired could allow researchers to analyze the effects of retirement role model observations at different stages of development.

Adding separate analyses of data for varied age groups within midlife also could provide information about development of retirement self-efficacy and its effects on life satisfaction over the course of midlife. Although some post hoc comparisons were made between early and later midlife groups, just two age groups were compared, and no modeling was attempted. More comprehensive comparisons of data for participants of different ages would allow the researchers to identify any developmental shifts in relationships among retirement role model observations, retirement self-efficacy, and life satisfaction during midlife.

Measuring stress and health as outcome variables might clarify whether interventions targeting increased retirement self-efficacy also might improve worker health. A clear and documented relationship between retirement self-efficacy and health in midlife workers could provide employers, health insurance companies, and health providers with more justification for funding retirement counseling.

Although correlations were evaluated and a fitted model was generated, the design of the study did not answer the question of whether retirement role models affect retirement self-efficacy and whether retirement self-efficacy affects current life satisfaction for midlife workers. In order to find these answers, causality needs to be explored. Although identifying correlations was an appropriate first step, clarifying causal relationships would provide counselors and other mental health professionals with justification for using role model exploration and development as interventions with midlife workers who are preparing for retirement. Qualitative or longitudinal research could be used to examine the possible causal relationships among retirement role model characteristics, retirement self-efficacy and life satisfaction. Qualitative or longitudinal research also would allow researchers to identify any key time periods (such as turning 50 or later midlife) or events (such as children graduating from high school or divorce) that might be particularly related to retirement self-efficacy development. A longitudinal study that extends past retirement further would facilitate the exploration of any relationship between retirement self-efficacy prior to retirement and life satisfaction after retirement.

This study also could become a base for examining the relationship between role models and self-efficacy for other common tasks in mid and later adulthood. Now that

Bandura's (1997) self-efficacy theory is partially supported for the retirement transition, examination of how the theory might describe other transitions in adulthood should be pursued.

### Conclusion

The purpose of this study was to examine the relationships among retirement role model characteristics, retirement self-efficacy, and current life satisfaction in midlife workers and to create a model that describes the relationships among these variables. A model containing two retirement role model characteristics (success of role models in retirement and similarity of abilities and resources between the role model and the participant), retirement self-efficacy, and current life satisfaction was confirmed, and significant positive correlations were identified among most of the variables, including between current life satisfaction and both retirement self-efficacy and variety of retirement role models and between retirement self-efficacy and both success of models in retirement and variety of models. The sample was not large enough or diverse enough to investigate the model for groups, other than the total group of midlife workers at UNCG.

Although additional research is needed to understand more fully how midlife workers develop retirement self-efficacy, the findings from this study indicate that observations of retirement role models may be part of this retirement self-efficacy development process. Through exploration of retirement role model observations, counselors who work with midlife adults may be able to gain information from clients that can be used to design more effective interventions for increasing retirement self-efficacy. By increasing student awareness of the ongoing use of role models throughout adulthood,

counselor educators may better prepare students for work with midlife clients. More information about retirement role modeling, retirement self-efficacy development, and the development of life satisfaction during midlife is needed. Further research should be conducted to confirm the model for all midlife groups and to identify causal relationships among retirement role model characteristics, retirement self-efficacy, and current life satisfaction.

## BIBLIOGRAPHY

- Aldwin, C. M., Spiro, A. III, Levenson, M. R., & Cupertino, A. P. (2001). Longitudinal findings from the normative aging study: III. Personality, individual health trajectories, and mortality. *Psychology and Aging, 16*, 450-465.
- Allinder, R. M. (1995). An examination of the relationship between teacher efficacy and curriculum-based measurement and student achievement. *Remedial and Special Education, 16*, .247-254.
- Alpass, F., Neville, S., & Flett, R. (2000). Contribution of retirement-related variables to well-being in an older male sample. *New Zealand Journal of Psychology, 29*, 74-79.
- Alvarez, D. S., Hofstetter, C. R., Donovan, M. C., & Huie, C. J. (1994). Patterns of communication in a racial/ethnic context: The case of an urban public high school. *Urban Education, 29*, 133-149.
- Antonovsky, A., & Sagy, S. (1990). Confronting developmental tasks in the retirement transition. *The Gerontologist, 30*, 362-368.
- Ashton, P. (1985). Motivation and the teacher's sense of efficacy. In C. Ames & R. Ames (Eds.) *Research on motivation in education volume 2: The classroom milieu* (pp. 141-171). Orlando, FL: Academic Press.
- Australian Centre on Quality of Life. (n.d.). Normative and comparative data from members of the international wellbeing group.

<http://acqol.deakin.edu.au/instruments/PWI/>

Normative\_data\_PWIandNWI-International\_280305.doc (retrieved 4/19/05)

Australian Centre on Quality of Life. (2002, February). International Wellbeing Index, Version 2. <http://acqol.deakin.edu.au/instruments/AA-Index-CoreItems-Draft2PWI.doc> (retrieved 2/1/05)

Avis, N. E. (1999). Women's health at midlife. In S. L. Willis & J. D. Reid (Eds.), *Life in the middle: Psychological and social development in middle age* (pp. 105-146). San Diego, CA: Academic Press.

Bandura, A. (1971). Analysis of Modeling Processes. In A. Bandura (Ed.), *Psychological modeling: Conflicting theories* (pp. 1-62). Chicago: Aldine Atherton.

Bandura, A. (1977a). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.

Bandura, A. (1977b). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1995). *Self efficacy in changing societies*. Cambridge University Press.

Bandura, A. (1996). Ontological and epistemological terrains revisited. *Journal of Behavioral Therapy and Experimental Psychiatry*, 27, 323-345.

Bandura, A. (1997). *Self efficacy: The exercise of control*. New York: Freeman.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development*, 67, 1206-1222.

- Bandura, A., & Jourden, F. J. (1991). Self-regulatory mechanisms governing the impact of social comparison on complex decision making. *Journal of Personality and Social Psychology, 60*, 941-951.
- Bandura, A., Ross, D., & Ross S. A. (1963). Vicarious reinforcement and imitative learning. *Journal of Abnormal and Social Psychology, 67*, 601-607.
- Betz, N. E., Harmon, L. W., & Borgen, F. H. (1996). The relationship of self-efficacy for the Holland themes to gender, occupational group membership, and vocational interests. *Journal of Counseling Psychology, 43*, 90-98.
- Bieschke, K. J., Bishop, R. M., & Garcia, V. L. (1996). The utility of the Research Self-Efficacy Scale. *Journal of Career Assessment, 4*, 59-75.
- Bossé, R., Aldwin, C. M., Levenson, M. R., & Workman-Daniels, K. (1991). How stressful is retirement? Findings from the normative aging study. *Journal of Gerontological: Psychological Sciences, 46*, P9-P14.
- Bossé, R., Spiro III, A., & Kressin, N. R. (1996). The psychology of retirement. In R. T. Woods (Ed.), *Handbook of the clinical psychology of ageing* (pp. 141-157). Chichester, England: John Wiley & Sons.
- Bossé, R., Spiro III, A., & Levenson, M. R. (1997). Retirement as a stressful life event. In T. W. Miller (Ed.), *Clinical disorders and stressful life events* (pp. 325-350). Madison, CT: International Universities Press.
- Brown, P. (1994). *Health care and the aged: A nursing perspective*, 2<sup>nd</sup> edn. Sydney: MacLennan and Petty.

- Brown, Jr., I., & Inouye, D. K. (1978). Learned helplessness through modeling: The role of perceived similarity in competence. *Journal of Personality and Social Psychology, 36*, 900-908.
- Brownell, M. T., & Pajares, F. M. (1996). The influence of teachers' efficacy beliefs on perceived success in mainstreaming students with learning and behavior problems: A path analysis. *Research Bulletin, 27* (3 & 4), 10-24.
- Busch, T. (1995). Gender differences in self-efficacy and attitudes toward computers. *Journal of educational computing research, 12*, 147-158.
- Calasanti, T. M. (1996). Gender and life satisfaction in retirement: An assessment of the male model. *Journal of Gerontology: Social Sciences, 51B*, S18-S29.
- Carr, D. (2002). The psychological consequences of work-family trade-offs for three cohorts of men and women. *Social Psychology Quarterly, 65*, 103-124.
- Clark, D. O. (1996). Age, socioeconomic status, and exercise self-efficacy. *The Gerontologist, 36*, 157-164.
- Cleaveland, B. L. (1994). Social cognitive theory recommendations for improving modeling in adolescent substance abuse prevention programs. *Journal of Child and Adolescent Substance Abuse, 3*(4), 53-68.
- Comish, S. E. (1995). Changing images of self: The efficacy of retirement preparation programmes for women (Doctoral dissertation, The University of British Columbia, 1995). *Dissertation Abstracts International, volume 56*, page 4575.
- Cox, C. (1995). Comparing the experiences of Black and White caregivers of dementia patients. *Social Work, 40*, 343-349.

- Danigelis, N. L., & McIntosh, B. R. (2001). Gender's effect on the relationships linking older American's resources and financial satisfaction. *Research on Aging, 23*, 410-428.
- Dentinger, E., & Clarkberg, M. (2002). Informal caregiving and retirement timing among men and women. *Journal of Family Issues, 23*, 857-879.
- Dietz, B. E., Carrozza, M., & Ritchey, P. N. (2003). Does financial self-efficacy explain gender differences in retirement saving strategies? *Journal of Women and Aging, 15*, 83-96.
- Dimmock, C., & Hattie, J. (1996). School principals' self-efficacy and its measurement in a context of restructuring. *School Effectiveness and School Improvement, 7*, 62-75.
- Donatelle, R. J. (2003). *Health: The basics* (5<sup>th</sup> ed.). San Francisco: Benjamin Cummings.
- Dorfman, L. T. (1995). Health conditions and perceived quality of life in retirement. *Health and Social Work, 20*, 192-199.
- Dorfman, L. T., Holmes, C. A., & Berlin, K. L. (1996). Wife caregivers of frail elderly veterans: Correlates of caregiver satisfaction and caregiver strain. *Family Relations, 45*, 46-55.
- Durrant, A. E. (1985). The effects of preretirement workshop participation on women's retirement knowledge, anxiety levels and planning behaviors. *Dissertation Abstracts International, 48*, 3074.

- Eaton, M. J., & Dembo, M. H. (1997). Differences in the motivational beliefs of Asian American and Non-Asian students. *Journal of Educational Psychology, 89*, 433-440.
- Erikson, E. H. (1997). *The life cycle completed* (extended ed.). New York: W. W. Norton.
- Ekerdt, D. J., Baden, L., Bossé, R., & Dibbs, E. (1983). The effect of retirement on physical health. *American Journal of Public Health, 73*, 779-783.
- Ekerdt, D. J., & DeViney, S. (1993). Evidence for a preretirement process among older male workers. *Journal of Gerontology: Social Sciences, 48*, S35-S43.
- Ekerdt, D. J., Kosloski, K., & DeViney, S. (2000). The normative anticipation of retirement by older workers. *Research on aging, 22*, 3-22.
- Eliopoulos, C. (1989). Aiding employees with preretirement planning. *Health Care Supervision, 7* (4), 41-51.
- Fletcher, W. L., & Hansson, R. O. (1991). Assessing the social components of retirement anxiety. *Psychology and Aging, 6*, 76-85.
- Flippen, C., & Tienda, M. (2000). Pathways to retirement: Patterns of labor force participation and labor market exit among the pre-retirement population by race, Hispanic origin, and sex. *Journal of Gerontology: Social Sciences, 55*, S14-S27.
- Fretz, B. R., Kluge, N. A., Ossana, S. M., Jones, S. M., & Merikangas, M. W. (1989). Intervention targets for reducing preretirement anxiety and depression. *Journal of Counseling Psychology, 36*, 301-307.
- Friedman, E. A., & Havighurst, R. J. (1954). *The meaning of work and retirement*. Chicago: University of Chicago Press.

- Fouad, N. A., & Spreda, S. L. (1996). Translation and use of a career-decision making self-efficacy assessment for Hispanic middle school students. *Journal of Vocational Education Research, 21* (4), 67-85.
- Gall, T. L., Evans, D. R., & Howard, J. (1997). The retirement adjustment process: Changes in the well-being of male retirees across time. *Journal of Gerontology: Psychological Sciences, 52B*, P110-P117.
- Gibson, R. C. (1991). The subjective retirement of Black Americans. *Journal of Gerontology: Social Sciences, 46*, S204-209.
- Glamser, F. D., & DeJong, G. F. (1975). The efficacy of preretirement preparation programs for industrial workers. *Journal of Gerontology, 30*, 595-600.
- Goodwin, R., & Engstrom, G. (2002). Personality and the perception of health in the general population. *Psychological Medicine, 32*, 325-332.
- Greenstein, B. (2000). Students' perception of the racial climate on campus and in the classroom and the relationship with academic self-efficacy and academic and intellectual development. *Dissertation Abstracts International, 61*, 1316.
- Gruchow, H. W., (2003). A commentary on the scientific evidence relating the environment to health. Unpublished manuscript.
- Guthrie, J. P., & Schwoerer, C. E. (1996). Older dogs and new tricks: Career stage and self-assessed need for training. *Public Personnel Management, 25*, 59-72.
- Grzywacz, J. G., Almeida, D. M., & McDonald, D. A. (2002). Work-family spillover and daily reports of work and family stress in the adult labor force. *Family Relations, 51*, 28-36.

- Harper, M. C. (2004.) [Retirement Observations Inventory]. Unpublished instrument.
- Harper, M. C., & Shoffner, M. F. (2004). Counseling for continued career development after retirement: An application of the theory of work adjustment. *Career Development Quarterly*, 52, 272-284.
- Harrison, A. W., Rainer, Jr., R. K., Hochwarter, W. A., & Thompson, K. R. (1997). Testing the self-efficacy—performance linkage of social—cognitive theory. *Journal of Social Psychology*, 137, 79-87.
- Hayslip, B., Beyerlein, M., & Nichols, J. A. (1997). Assessing anxiety about retirement: The case of academicians. *International Journal of Aging and Human Development*, 44, 15-36.
- Hellman, C. M., & Harbeck, D., J. (1997). Academic self-efficacy: Highlighting the first-generation student. *Journal of Applied Research in the Community College*, 4, 165-69.
- Hernandez, A. E. (1995). Do role models influence self efficacy and aspirations in Mexican American at-risk females? *Hispanic Journal of Behavioral Sciences*, 17, 256-263.
- Huffman, S. B., & Myers, J. E. (1999). Counseling women in midlife: An integrative approach to menopause. *Journal of Counseling and Development*, 77, 258-266.
- Junge, M. E., & Dretzke, B. J. (1995). Mathematical self-efficacy gender differences in gifted/talented adolescents. *Gifted Child Quarterly*, 39, 22-28.

- Kahn, J. H., & Scott, N. A. (1997). Predictors of research productivity and science-related career goals among counseling psychology doctoral students. *Counseling Psychologist, 25*, 38-67.
- Kazdin, A. E. (1974a). Covert modeling, model similarity, and reduction of avoidance behavior. *Behavior Therapy, 5*, 325-340.
- Kazdin, A. E. (1974b). Effects of covert modeling and model reinforcement on assertive behavior. *Journal of Abnormal Psychology, 83*, 240-252.
- Kazdin, A. E. (1975). Covert modeling, imagery, assessment, and assertive behavior. *Journal of Counseling and Clinical Psychology, 43*, 716-724.
- Kazdin, A. E. (1976). Effects of covert modeling, multiple models, and model reinforcement on assertive behavior. *Behavior Therapy, 7*, 211-222.
- Kelloway, E. K. (1998). Using LISREL for structural equation modeling: A researcher's guide. Thousand Oaks, CA: SAGE.
- Kim, J. E., & Moen, P. (2002). Retirement transitions, gender, and psychological well-being: A life-course, ecological model. *Journal of Gerontology: Psychological Sciences, 57B*, 212-222.
- Kim, S., & Feldman, D. C. (2000). Working in retirement: The antecedents of bridge employment and its consequences for quality of life in retirement. *Academy of Management Journal, 43*, 1195-1210.
- Kivnick, H. Q., & Jernstedt, H. L. (1996). Mama still sparkles: An elder role model in long-term care. *Marriage & Family Review, 24*, 123-164.

- Klohnen, E. C., Vandewater, E. A., & Young, A. (1996). Negotiating the middle years: Ego-resiliency and successful midlife adjustment in women. *Psychology and Aging, 11*, 431-442.
- Kosloski, K., Ekerdt, D., & DeViney, S. (2001). The role of job-related rewards in retirement planning. *Journal of Gerontology: Psychological Sciences, 56B*, P160-P169.
- Kuh, D., Hardy, R., Rodgers, B., & Wadsworth, M. E. (2002). Lifetime risk factors for women's psychological distress in midlife. *Social Science and Medicine, 55*, 1957-1973.
- Lachman, M. E., & James, J. B. (1997). Charting the course of midlife development: An overview. In M. E. Lachman & J. B. James (Eds.) *Multiple paths of midlife development* (pp. 1-17). Chicago: University of Chicago Press.
- Lau, A. L. D., Cummins, R. A., & McPherson, W. (in press). An Investigation into the cross-cultural equivalence of the Personal Wellbeing Index . *Social Indicators Research*.
- Lenox, R. A., & Subich, L. M. (1994). The relationship between self-efficacy beliefs and inventoried vocational interests. *Career Development Quarterly, 42*, 302-313.
- Levinson, D. J., Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B. (1978). *The seasons of a man's life*. New York: Alfred A. Knopf.
- Levinson, D. J., & Levinson, J. D. (1996). *The seasons of a woman's life*. New York: Alfred A. Knopf.

- Levinson, R. A. (1995). Reproductive and contraceptive knowledge, contraceptive self-efficacy, and contraceptive behavior among teenage women. *Adolescence, 30*, 65-85.
- Lo, R., & Brown, R. (1999). Stress and adaptation: Preparation for successful retirement. *Australian and New Zealand Journal of Mental Health Nursing, 8*, 30-38.
- Lou, M. F., Dai, Y. T., & Catanzaro, M. (1997). A pilot study to assess the relationships among coping, self-efficacy and functional improvement in men with paraplegia. *International Journal of Rehabilitation Research, 20*, 99-105.
- MacDermid, S. M., Heilbrun, G., & DeHaan, L. G. (1997). The generativity of employed mothers in multiple roles: 1979 and 1991. In M. E. Lachman & J. B. James (Eds.) *Multiple paths of midlife development*, (pp. 207-240). Chicago: University of Chicago Press.
- MacEwen, K. E., Barling, J., Kelloway, E. K., & Higginbottom, S. F. (1995). Predicting retirement anxiety: The roles of parental socialization and personal planning. *Journal of Social Psychology, 135*, 203-213.
- Marshall, V. W., Clarke, P. J., & Ballantyne, P. J. (2001). Instability in the retirement transition: Effects on health and well-being in a Canadian study. *Research on Aging, 23*, 379-409.
- Martin, C. A., & Bush, A. J. (2000). Do role models influence teenagers' purchase intentions and behavior? *Journal of consumer marketing, 17*, 441-454.
- Marwit, S. J., & Lessor, C. (2000). Role of deceased mentors in the ongoing lives of protégés. *Omega, 41*, 125-138.

- Marx, D. M., & Roman, J. S. (2002). Female role models: Protecting women's math test performance. *Personality and Social Psychology Bulletin*, 28, 1183-1193.
- Mein, G., Martikainen, P., Hemingway, H., Stansfeld, S., & Marmot, M. (2003). Is retirement good or bad for mental and physical health functioning? Whitehall II longitudinal study of civil servants. *Journal of Epidemiol Community Health*, 57, 46-49.
- Merril, S. S., & Verbrugge, L. M. (1999). Health and disease in midlife. In S. L. Willis & J. D. Reid (Eds.), *Life in the middle: Psychological and social development in middle age* (pp. 77-103). San Diego, CA: Academic Press.
- Mobily, K. E., Lemke, J. H., & Gisin, G. J. (1991). The idea of leisure repertoire. *Journal of Applied Gerontology*, 10, 208-223.
- Mulley, G. P. (1995). Preparing for the late years. *Lancet*, 345, 1409-1413.
- Nauta, M. M., Epperson, D. L., & Kahn, J. H. (1998). A multiple-groups analysis of predictors of higher level career aspirations among women in mathematics, science, and engineering majors. *Journal of Counseling Psychology*, 45, 483-496.
- Neugarten, B. L., & Datan, N. (1996). The middle years. In D. A. Neugarten (Ed.), *The meaning of age: Selected papers of Bernice L. Neugarten* (pp. 135-159). Chicago: University of Chicago Press.
- Neuhs, H. P. (1986). Pre-retirement planning: A nursing role. *AAOHN Journal*, 34, 571-573.

- Neuhs, H. P. (1990). Retirement self-efficacy: The effects of socioeconomic status, life satisfaction, health, and readiness for retirement. *Journal of New York State Nurses Association, 21*, 15-20.
- Neuhs, H. P. (1991). Ready for retirement? Give the quiz to find out the retirement issues that can erode or threaten self-confidence in an elder's golden years. *Geriatric Nursing, 12*, 240-241.
- Ochman, J. M. (1996). The effects of nongender-role stereotyped, same-sex role models in storybooks on the self-esteem of children in grade three. *Sex Roles, 35*, 711-735.
- Perkins, K. (2000). EAP Services to older adults in the workplace: A strengths perspective. *Employee Assistance Quarterly, 16*, 53-75.
- Perrone, K. M., Zanardelli, G., Worthington, Jr., E. L., & Chartrand, J. M. (2002). Role model influence on the career decidedness of college students. *College Student Journal, 36*, 109-112.
- Peterson, B. E. (2002). Longitudinal analysis of midlife generativity, intergenerational roles, and caregiving. *Psychology and Aging, 17*, 161-168.
- Poser, E. G., & Engels, M. L. (1983). Self-efficacy assessment and peer group assistance in a preretirement intervention. *Educational Gerontology, 9*, 159-169.
- Quick, J. F. (1990). Time to move on? In Career stress in changing times. *Prevention in Human Services, 8*, 239-250.
- Salokangas, R. K. R., & Joukamaa, M. (1991). Physical and mental health changes in retirement age. *Psychotherapy and Psychosomatics, 55*, 100-107.

- Schlossberg, N. K. (2004). *Retire smart retire happy: Finding your true path in life*. Washington, DC: American Psychological Association.
- Schlossberg, N. K., Waters, E. B., & Goodman, J. (1995). *Counseling adults in transition: Linking practice with theory* (2<sup>nd</sup> Ed.). New York: Springer.
- Schunk, D. H., & Hanson, A. R. (1985). Peer models: Influence on children's self-efficacy and achievement. *Journal of Educational Psychology, 77*, 413-322.
- Sharpley, C. F., & Yardley, P. G. (1999). "What makes me happy now that I'm older". A retrospective report of attitudes and strategies used to adjust to retirement as reported by older persons. *Journal of Applied Health Behavior, 1*(2), 31-35.
- Skarborn, M., & Nicki, R. (2000). Worry in pre- and post-retirement persons. *International Journal of Aging and Human Development, 50*, 61-71.
- Szinovacz, M. E., DeViney, S., & Davey, A. (2001). Influences of family obligations and relationships on retirement: Variations by gender, race, and marital status. *Journal of Gerontology: Social Sciences, 56*, S20-S27.
- Taylor, M. A., & Shore, L. M. (1995). Predictors of planned retirement age: An application of Beehr's model. *Psychology and Aging, 10*, 76-83.
- Taylor-Carter, M. A., & Cook, K. (1995). Adaptation to retirement: Role change and psychological resources. *Career Development Quarterly, 44*, 67-82.
- Taylor-Carter, M. A., Cook, K., & Weinberg, C. (1997). Planning and expectations of the retirement experience. *Educational Gerontology, 23*, 273-288.
- Thériault, J. (1994). Retirement as a psychosocial transition: Process of adaptation to change. *International Journal of Aging and Human Development, 38*, 153-170.

- Thomas, S. P. (1997). Psychosocial correlates of women's self-rated physical health in middle adulthood. In J. B. James & M. E. Lachman (Eds.) *Multiple paths to midlife development* (pp. 257-291). Chicago: University of Chicago Press.
- Tiberi, D. M., Boyack, V. L., & Kerschner, P. A. (1978). A comparative analysis of four preretirement education models. *Educational Gerontology*, 3, 355-374.
- Trossman, S. (2002). A retirement plan of one's own: Nurses, ANA address issues surrounding retirement. *American Journal of Nursing*, 102(11), 51-52.
- Trzesniewski, K. H., Donnellan, M. B., & Robins, R. W. (2003). Stability of self-esteem across the life span. *Journal of Personality and Social Psychology*, 84, 205-220.
- U.S. Census Bureau. Retrieved February 23, 2004, from <http://factfinder.census.gov/>
- U.S. Department of Health and Human Services. (2002). *Summary health statistics for U.S. Adults: National health interview survey, 2002*. Retrieved April 15, 2005, from [http://www.cdc.gov/nchs/data/series/sr\\_10/sr10\\_222acc.pdf](http://www.cdc.gov/nchs/data/series/sr_10/sr10_222acc.pdf)
- Watson Wyatt Worldwide. (1999, September). Phased retirement: Reshaping the end of work. *Insider*. Retrieved February 6, 2004, from <http://www.watsonwyatt.com/us/pubs/insider/showarticle.asp?ArticleID=8376&Component=The+Insider>
- White, J. (1982). *Rejection*. Reading, MA: Addison-Wesley.
- Wilson, S. E. (2001). Socioeconomic status and the prevalence of health problems among married couples in late midlife. *American Journal of Public Health*, 91, 131-135.

- Wood, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology, 56*, 407-415.
- Zirkel, S. (2002). Is there a place for me? Role models and academic identity among white students and students of color. *Teachers College Record, 104*, 357-376.

APPENDIX A  
INSTRUMENTS

This appendix contains a copy of the Invitation to Participate, the raffle ticket, and the instruments used in the study. These instruments are: Personal Wellbeing Index, Retirement (Self-Efficacy) Questionnaire, Retirement Observations Questionnaire, and Demographic Questionnaire.

## Main Invitation to Participate

### INVITATION TO PARTICIPATE IN THE STUDY

#### Retirement Modeling: An Exploration of the Effects of Retirement Role Model Characteristics on Retirement Self-efficacy and Life Satisfaction in Midlife Workers

You are invited to participate in a project that is designed to examine midlife workers' observations of people who have retired and the workers' anticipated abilities to perform retirement tasks. The information from this study may help counselors and other professionals develop more successful ways of helping workers prepare for retirement. By participating in this project, you will have an opportunity to assess your expectations associated with your possible future retirement and to review your observations of others who have retired. This assessment of expectations and review of observations may lead to increasing your awareness of retirement tasks, abilities, and resources. It will take approximately 30 minutes of your time to complete the Personal Wellbeing Index, the Retirement Questionnaire, the Retirement Observations Questionnaire, and the Demographic Questionnaire.

If you choose to participate in this project, please do the following:

1. Read this invitation, and keep the invitation as a record or your consent to participate in the study.
2. Complete the Personal Wellbeing Index, the Retirement Questionnaire, the Retirement Observations Questionnaire, and the Demographic Questionnaire. Place the completed surveys in the addressed return envelope, and deposit the envelope in internal mail.
3. If you wish to be entered into a drawing for two \$50 cash prizes, complete the postcard raffle ticket after returning the completed surveys. Place the raffle ticket in internal mail within two weeks of receiving this study invitation to make sure that your raffle ticket is entered in the drawing. In order to protect the anonymity of your survey responses, return the postcard raffle ticket separately from the envelope containing your completed surveys. Winning raffle tickets will be drawn at the conclusion of the study, which is anticipated to occur later this spring.

There are no risks associated with participating in this project. Your participation in this project is strictly voluntary and you are free to withdraw from participating at any time. Your scores will be maintained in a database with all personal identifying information removed. Scores will be used in examining aggregate data only and no individual scores will be reported publicly. Data will be retained for five years following project completion, after which papers containing raw data will be shredded, data stored on computer disk will be erased, and any portable computer disks (such as CDs) containing data will be mangled.

The research and this invitation have been approved by the University of North Carolina at Greensboro Institutional Review Board, which insures that research involving people follows federal regulations. Questions regarding your rights as a participant in this project can be answered by calling Mr. Eric Allen at (336) 256-1482. Questions regarding the research itself will be answered by calling Melanie Harper at (336) 334-3421. Any new information that develops during the project will be provided to you if the information might affect your willingness to continue to participate in the project.

By returning the completed surveys, you are agreeing to participate in the project described to you in this letter.

Thank you for your time.



Melanie C. Harper, Doctoral Student  
UNCG Department of Counseling and Educational Development

## Personal Wellbeing Index

### Personal Wellbeing Index

*Directions:* The following items describe common tasks. For each item, circle the number that best shows how satisfied you feel, on a scale of zero to 10. Zero means you feel completely dissatisfied. Ten means you feel completely satisfied. In the middle of the scale is 5, which means you feel neutral.

	0	1	2	3	4	5	6	7	8	9	10
	completely dissatisfied			mixed				completely satisfied			
How satisfied are you with...?											
1. your standard of living?	0	1	2	3	4	5	6	7	8	9	10
2. your health?	0	1	2	3	4	5	6	7	8	9	10
3. what you achieve in life?	0	1	2	3	4	5	6	7	8	9	10
4. your personal relationships?	0	1	2	3	4	5	6	7	8	9	10
5. how safe you feel?	0	1	2	3	4	5	6	7	8	9	10
6. feeling part of your community?	0	1	2	3	4	5	6	7	8	9	10
7. your future security?	0	1	2	3	4	5	6	7	8	9	10
8. Thinking about your own life and personal circumstances, how satisfied are you with your life as a whole?	0	1	2	3	4	5	6	7	8	9	10

This questionnaire is used with permission from R. A. Cummins (personal communication, February 5, 2005).

Australian Centre on Quality of Life. (2002, February). International Wellbeing Index, Version 2. <http://acqol.deakin.edu.au/instruments/AA-Index-CoreItems-Draft2PWI.doc> (retrieved 2/1/05)

## Retirement (Self-Efficacy) Questionnaire

### Retirement Questionnaire

*Directions:* The following items describe common retirement tasks. Imagine yourself in the early to middle years of your retirement. For each item, circle the number that best shows how sure you are that you will be able to do the retirement task.

	1	2	3	4	5
	not very sure				quite sure
<b>PHYSICAL HEALTH</b>					
1. Maintain your physical health	1	2	3	4	5
2. Eat adequately	1	2	3	4	5
3. Fill out health insurance forms	1	2	3	4	5
4. Obtain adequate health insurance	1	2	3	4	5
5. Maintain your current level of physical activity	1	2	3	4	5
6. Obtain adequate rest and sleep	1	2	3	4	5
7. Find suitable healthcare providers	1	2	3	4	5
<b>MENTAL HEALTH</b>					
8. Maintain your emotional health	1	2	3	4	5
9. Avoid excessive anxiety or worries	1	2	3	4	5
10. Avoid excessive stress	1	2	3	4	5
11. Maintain a positive outlook on life	1	2	3	4	5
12. Experience meaning or purpose in your life	1	2	3	4	5
<b>FINANCIAL</b>					
13. Have enough money for housing of your choice	1	2	3	4	5
14. Budget your money	1	2	3	4	5
15. Live within your retirement income	1	2	3	4	5
16. Have enough money for healthcare	1	2	3	4	5
17. Have enough money for leisure activities	1	2	3	4	5
18. Have enough money for good nutrition	1	2	3	4	5
19. Have enough money for any travel you want to do	1	2	3	4	5
20. Decide how much retirement income you should invest	1	2	3	4	5

41.	Maintain respect from others in your family	1	2	3	4	5
42.	Maintain respect from others in society	1	2	3	4	5
43.	Remain satisfied that you selected the best retirement time for you	1	2	3	4	5
44.	Adjust successfully to retirement	1	2	3	4	5

#### ADDITIONAL INFORMATION

Write down any other retirement-related tasks and state how sure you are that you will be able to deal with those challenges:

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This questionnaire was modified from Neuhs (1991) with permission.

Neuhs, H. P. (1991). Ready for retirement? Give this quiz to find out the retirement issues that can erode or threaten self-confidence in an elder's golden years. *Geriatric Nursing*, 12, 240-241.

## Retirement Observations Questionnaire

**Retirement Observations Questionnaire**

Please take a few moments to think about all the retired persons you have known, seen, or known about. You may not have known some retired persons personally, but you may feel that you have learned about their stories through reports from family members, friends, newspapers, magazines, books, television shows, or movies.

*Directions:* Circle the number indicating how many retired persons you have known in each category. If a person fits more than one category (for example, they are a friend and are also a business contact), count that person only once under the most important category to you.

	0	1	2	3	4	5	6
	none						six or more
1. Relatives (include immediate and extended family members, in-laws, current and former persons you regard as a relative, etc.).	0	1	2	3	4	5	6
2. Friends (include neighbors).	0	1	2	3	4	5	6
3. Business or professional contacts (include current or former co-workers, bosses, and customers).	0	1	2	3	4	5	6
4. Service providers (include people who currently or formerly provided you with a service, such as a doctor, dentist, realtor, hair dresser, store clerk, bank teller, etc.).	0	1	2	3	4	5	6
5. Members of organizations (include current or former fellow members of such organizations as civic clubs, health clubs, social organizations, religious groups, etc.).	0	1	2	3	4	5	6
6. Outsiders (include people you have heard about but who you do not know; these can be people in the news, advertisements, television programs, movies, books, games, etc.).	0	1	2	3	4	5	6
7. Others.	0	1	2	3	4	5	6

Please describe your relationship with these other retired persons: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

From the people you identified in the previous questions (1-7), choose the **one person** who most affected your views about retirement. If you do not think any retired person affected your views, choose the person who you observed during retirement more than the other retired persons.

Answer the rest of the questions with that person in mind.

*Directions:* Please circle the number that best shows how you think that retired person's abilities and resources at the time their retirement will compare with your abilities and resources at the time of your retirement. For example, if you think the retired person was much more physically fit when he/she retired than you will be when you retire, then you would circle 7 for item 8.

	1	2	3	4	5	6	7
	much less than me			similar to me		much more than me	
8. Physical abilities.	1	2	3	4	5	6	7
9. Mental abilities (for example, ability to figure out and understand things).	1	2	3	4	5	6	7
10. Emotional abilities (for example, ability to cope with uncertainty and change).	1	2	3	4	5	6	7
11. Interpersonal abilities (relating to other people).	1	2	3	4	5	6	7
12. Family resources (family members who might help you if you want or need help).	1	2	3	4	5	6	7
13. Social resources (friends who might help you if you want or need help).	1	2	3	4	5	6	7
14. Planning abilities.	1	2	3	4	5	6	7
15. Financial resources (for example, money, property and belongings, your sources of income, etc.).	1	2	3	4	5	6	7
16. Health resources (for example, medical insurance, doctors, health knowledge, etc.).	1	2	3	4	5	6	7
17. Interests, knowledge, or skills.	1	2	3	4	5	6	7

*Directions:* Please circle the number that best shows how successful this retired person has been in doing the following activities.

	1	2	3	4	5	6	7
	little or no success		about as much success as failure			a lot of success	
18. Staying physically healthy during the early to middle years of retirement.	1	2	3	4	5	6	7
19. Staying emotionally healthy during the early to middle years of retirement.	1	2	3	4	5	6	7
20. Before retirement, preparing for his/her upcoming financial needs in retirement.	1	2	3	4	5	6	7
21. During the early to middle years of retirement, preparing for future financial needs.	1	2	3	4	5	6	7
22. Making plans for the future during the early to middle years of retirement.	1	2	3	4	5	6	7
23. Staying active during the early to middle years of retirement.	1	2	3	4	5	6	7
24. Establishing or maintaining meaningful relationships during the early to middle years of retirement.	1	2	3	4	5	6	7
25. Continuing to assist others or the community or in some way making a contribution during the early to middle years of retirement.	1	2	3	4	5	6	7
26. Keeping up-to-date on his/her skills and knowledge or learning new skills and knowledge during the early to middle years of retirement.	1	2	3	4	5	6	7
27. Enjoying life during the early to middle years of retirement.	1	2	3	4	5	6	7
28. Looking forward to the future during the early to middle years of retirement.	1	2	3	4	5	6	7
29. Maintaining his/her importance in his/her family or community during the early to middle years of retirement.	1	2	3	4	5	6	7

*Directions:* Please circle the description that best completes each of the following sentences.

30. The retired person I have described is:  
 The same sex as me The opposite sex from me
31. The retired person I have described is:  
 Similar to me in race/ethnicity Different from me in race/ethnicity
32. The retired person I have described is similar to me in the following important ways:  
 \_\_\_\_\_  
 \_\_\_\_\_
33. The retired person I have described is different from me in the following important ways:  
 \_\_\_\_\_  
 \_\_\_\_\_
34. To the best of my knowledge, the retired person I have described retired:  
 Before age 55 Between ages 55 and 60 Between ages 61 and 65  
 Between ages 66 and 70 At age 71 or later
35. My observations of or contact with this person:  
 Ended many years ago Ended two to ten years ago  
 Ended recently (up to two years ago) Continues today
36. If/when I retire, I would like my retirement to be:  
 More similar to this person's retirement More different from their retirement
37. My relationship to this retired person is described best as (select only one):  
 Relative Friend Business or professional contact  
 Service provider Member of an organization Outsider  
 Other: \_\_\_\_\_

*Directions:* Please provide any other information about this retired person that might help us to understand how this person has helped to shape your thoughts, feelings, or plans about retirement.

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## Demographic Questionnaire

**Demographic Questionnaire**

*Directions:* Write or circle the answer that best describes you.

1.	What is your date of birth? _____		
2.	What is your sex?		
	Female	Male	
3.	What is your race/ethnicity?		
	African-American	Asian-American	Caucasian
	Hispanic-American	Native-American	Pacific Islander
	Multiracial	Other: _____	
4.	Would you say that in general your health is:		
	Poor	Fair	Good
	Very good	Excellent	
5.	When do you expect to retire?		
	Within 1 years	In 1 to 5 years	In 6 to 10 years
	In 11 to 15 years	In more than 16 years	I have no idea when
	I do not expect to retire	I already am retired	
6.	When I think about my retirement, I feel:		
	No stress	A little stress	Some stress
	A fair amount of stress	A lot of stress	Considerable stress
7.	How have your retirement plans changed in the past 5 years?		
	I plan to retire earlier	I plan to retire later	My plans have not changed
8.	Which of the following retirement planning tasks have you done? (circle all that apply)		
	Read about retirement	Discussed retirement with family or significant others	
	Attended a retirement seminar	Saved money for retirement	
	Made plans for retirement	None. I have not planned at all for retirement	

9. How much education have you had?
- |  |                     |                  |
|--|---------------------|------------------|
| Less than high school                                  | High school diploma | Some college     |
| Two-year/associates degree or trade school certificate |                     | Bachelors degree |
| Masters degree   | Doctoral degree     |                  |
10. What type of job do you have?
- |         |       |
|---------|-------|
| Faculty | Staff |
|---------|-------|
11. If you identified your job as a staff position, which description best fits your work?
- |                                   |                                |                |
|-----------------------------------|--------------------------------|----------------|
| Professional and related          | Service                        | Construction   |
| Management, business, financial   | Office, administrative support | Transportation |
| Installation, maintenance, repair | Grounds keeping                | Production     |
| Sales and related                 | Housekeeping                   | Other: _____   |

## Raffle Ticket



# Thank You

As thanks for your participation in this study, \$50 cash prizes will be awarded to two lucky participants. Just drop this completed postcard in internal mail, and you will be entered in the raffle for these prizes. Good luck!

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

## APPENDIX B

### PILOT STUDY

In order to prepare for the main study, a two-phase pilot study was performed. The first phase of the pilot study consisted of development of the Demographic Questionnaire, modified RSE Scale, and ROQ and preliminary instrument reviews. The second phase of the pilot study involved the administration of the revised instruments that were planned for use in the main study. The following sections describe the purpose of the pilot study, participants, assessment instruments, procedures, results, and a discussion of how these results contributed to the development of the main study.

#### Purpose of the Pilot Study

The pilot study was designed to answer the following questions:

1. Are the instruments appropriate to the participants?
2. Does the instrument packet contain clear instructions and instrumentation?
3. Is the administration procedure effective for the instrument packet?
4. Are the instruments and their subscales reliable and valid?

The pilot study essentially was to determine whether the materials and procedures planned for use in the main study were adequate and to identify any changes needed in order to facilitate a better main study.

### First Phase of the Pilot Study

Three counseling research experts (one an expert on midlife and aging issues, including the retirement transition), two professional writers, one professional editor, and a worker with only a high school education reviewed preliminary instruments during the first phase of the pilot study. All reviewers in the first phase of the pilot study were between 45 and 60 years of age except the worker with only a high school education, who was in the mid thirties. Three of the reviewers were full-time UNCG employees. Reviewers were selected for their expertise.

The participants were provided descriptions of the study participants and instrument packets that contained drafts of the following instruments: Demographic Questionnaire, a modified version of the Retirement Self-Efficacy (RSE) Scale (Neuhs, 1991), the Retirement Observations Questionnaire (ROQ), and a pilot study feedback form. The reviewers were asked to provide feedback on clarity and content of the instruments. The content, wording, and layout changes to the instruments were made as a result of reviewer comments, and approval was sought from and granted by the Institutional Review Board (IRB) at the University of North Carolina at Greensboro (UNCG) for the second phase of the pilot study.

### Participants

Approximately 45 UNCG employees who were between 45 and 60 (inclusive) years of age, who worked a minimum of 20 hours per week, and who worked in or near Curry Building on the UNCG campus were invited to participate in the second part of the

pilot study in an effort to get a target of 30 employees to complete the pilot study assessments. Of those invited to participate in the pilot study, 23 chose to participate.

In Table 13, demographic information for the second phase pilot study participants is presented. Among the 21 participants who provided age information on the demographic questionnaire, ages ranged from 46 to 59 years with a mean age of 52.76 years and a standard deviation of 4.15 years. All of the 22 participants who provided other demographic information on the questionnaire reported working 40 or more hours per week for UNCG.

Table 13. Frequency Distribution of Demographic Characteristics of Second Phase Pilot Study Participants.

Demographic Characteristic	<i>n</i> = 23	%
Gender		
Female	17	73.9
Male	5	21.7
Not reported	1	4.3
Race/ethnicity		
African-American	5	21.7
Caucasian	17	73.9
Not reported	1	4.3

Demographic Characteristic	<i>n</i> = 23	%
Education level		
High school diploma	2	8.7
Some college	2	8.7
Two-year/associates degree or trade school certificate	1	4.3
Bachelors degree	2	8.7
Bachelors degree	3	13.0
Masters degree	12	52.2
Doctoral degree	1	4.3
Not reported		
Job type		
Staff	8	34.8
Faculty	14	60.9
Not reported	1	4.3
Retirement plans		
Retire within 1 year	0	0.0
Retire in 1 to 5 years	5	21.7
Retire in 6 to 10 years	4	17.4
Retire in 11 to 15 years	8	34.8
Retire in more than 16 years	0	0
No idea of retirement time	3	13.0
No expectation of retiring	1	4.3
Already retired	0	0
Not reported	2	8.7

Demographic Characteristic	<i>n</i> = 23	%
Participation in retirement planning activities		
Read about retirement	15	65.2
Discussed retirement with family or significant others	15	65.2
Attended a retirement seminar	5	21.7
Saved money for retirement	16	69.6
Made plans for retirement	6	26.1
Has not participated in retirement planning activities	2	8.7

Although the demographics of the participants in the pilot study varied somewhat from the study population of midlife UNCG employees, the participants were representative enough for assessment of the study materials and procedures. The age range of participants (46 to 59 years) spanned close to the target age range for the main study of 45 to 60 years. A higher percentage of women (73.9%) participated in the pilot study than is represented in the population (58%; Carrigan, 2004), and a higher percentage of minorities (21.7%) participated in the study than is represented in the population (17%). Comparisons in education levels between the pilot study participants and the larger population of midlife workers at UNCG is more difficult because of the lack of clear information concerning the education levels of UNCG employees. In the 2003 census of UNCG employees, 24% of the midlife workers did not report their education levels (Carrigan, 2004). In the pilot study, only one participant (4.3%) did not report an education level. A higher percentage of pilot study participants reported having a doctoral degree

(52.2%), compared with 33% of the midlife workers at UNCG who reported this level of academic achievement in 2003. On the lower end of education levels, 8.7 percent of the pilot study participants reported attaining a high school diploma as their highest level of education, and only approximately 2% of the midlife workers at UNCG reported a similar level of educational attainment in the 2003 university census. All other education levels were represented in the pilot study except less than a high school diploma, which was not a reported category in the 2003 university census. Faculty was over represented in the pilot study (60.9%), as compared with the faculty members in the 2003 university census (38%). Although no participant reported plans to retire within 1 year or in more than 16 years, a wide range of plans were reported. The diversity in age, gender, race/ethnicity, education level, job type, and retirement plans was representative enough of the midlife worker population at UNCG for adequate evaluation of study materials and procedures.

### Instruments

Participants in the second phase of the pilot study completed revised forms of the instruments used in the first phase of the pilot study. Copies of these instruments are included at the end of this Appendix, and full descriptions of the instruments are available in Chapter 3. In addition to the instruments that were designed for use in the main study, the pilot study feedback form was designed for use with the pilot study only. The pilot study feedback form contained three items requesting information about unclear or difficult directions, wording in the instructions and the consent form that was unclear or hard to understand, and general suggestions for improving the instructions, consent form,

instruments, or any other part of the study. Information gathered through this form was used to verify the appropriateness of the instrument packet for the full study.

### Procedures

The second phase of the pilot study was conducted with 23 midlife workers at UNCG. The focus of this phase of the pilot study was on assessing the clarity of the instrument packet and identifying the reliability of the planned instruments. Participants were contacted in person to obtain agreement for their participation in the pilot study and were invited to an on-campus sandwich and salad buffet-style lunch. Four participants requested and were given instrument packets to complete at their convenience prior to the lunch, and the other 19 participants completed and returned their instrument packets during the lunch. No formal presentation was given at the lunch. Participants were allowed to come and go during the lunch according to their schedule needs.

Each study packet for the second phase of the pilot study contained an Invitation to Participate in the Pilot Study, two copies of a Consent to Act as a Human Participant form, a raffle ticket postcard, an addressed return envelope, an instrument booklet containing the modified RSE Scale, the ROQ, and the Demographic Questionnaire in that order, and a feedback form. In Invitation to Participate in the Pilot Study, the participants were instructed on how to participate in the pilot study. The instructions explained that participation was voluntary, that data would be kept confidential, that participants must complete the consent form and all surveys in order to participate, and that participants should mark any questions or comments directly on the forms. The participants were instructed to complete all forms, keep one copy of the consent form for personal reference,

place the completed consent form, instrument booklet, and feedback form in the addressed return envelope, and deposit the addressed return envelope in a box marked “Completed Surveys.” Instructions also explained that incentive raffle ticket should be completed and placed in the box labeled “Raffle Tickets” in order to be entered in the raffle drawing for two \$50 prizes to be awarded at the end of the completed study. During the second phase of the pilot study, the study administrator made notes of questions asked and comments made by the participants.

## Results

The data analyses for the pilot study included descriptive analysis of the participants, of the participants’ responses to instrument items, of differences in responses between male and female participants, and of differences in responses between minority and non-minority participants. Reliability measurements of the instruments also were calculated. Instruction and instrument clarity and effectiveness of administration procedures were examined through review of the verbal comments from the participants to the researcher, the notes written by the participants on the study materials, and the participants’ responses on the pilot study feedback form.

Demographic information was analyzed for frequencies, means, modes, and standard deviations in order to describe the participants and the sample. Means and standard deviations were computed for the instruments and the subscales that are planned for use in the main study. Pearson Product-Moment correlations between total scores on each instrument and subscales were computed. Reliability measurements of the modified RSE Scale and of the subscales of the ROQ also were performed. Cronbach’s alpha was

used as the method of reliability measurement. Covariance was computed for total scores on each instrument and subscales. Descriptive and correlational analyses were conducted using the Statistical Package for the Social Sciences (SPSS for Windows Release 11.5.0, 2002). The following table describes the means and standard deviations for the RSE, the subscales of the ROQ, and the two quantitatively analyzable questions from the Feedback form for female and male participants, minority and non-minority participants, and for total participants.

Table 14. Means and Standard Deviations for Female and Male, Minority and Non-minority, and Total Pilot Study Participants.

Variable	Female		Male		Minority		Non-Minority		Total	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
RSE (Total)	156.83	28.94	171.23	20.12	160.13	34.81	160.50	26.44	160.31	26.58
ROQ										
Variety	22.64	10.32	14.50	0.71	20.25	8.92	22.08	10.66	21.96	9.13
Ability/ Resource Similarity	0.14	8.83	4.50	6.36	-8.00	13.34	3.58	3.70	1.23	7.50
Attribute Similarity	1.80	0.45	1.533	0.13	1.33	0.58	1.65	0.49	1.62	0.50
Success	71.05	11.41	64.81	17.08	51.25	21.87	69.84	12.48	66.28	15.50
FEEDBACK										
Directions clear?	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Anything unclear?	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

The following table describes the Pearson Product-Moment correlations between total scores on each instrument and subscale planned for use in the main study. Reliability measurements of the instruments and subscales are included on the diagonal. Reliability is not reported for the Similarity of Attributes subscale of the ROQ because of the lack of variability in one of the two questions that comprise this subscale.

Table 15. Correlation Matrix for Pilot Study Instruments.

	RSE	Variety	Ability/Resource Similarity	Attribute Similarity	Success
RSE	<b>.956</b>				
Variety	.339	<b>.772</b>			
Ability/Resource Similarity	.307	.393	<b>.798</b>		
Attribute Similarity	-.301	-.334	.256	<b>NR</b>	
Success	.479*	.716**	.638**	-.067	<b>.960</b>

Reliabilities are listed on the diagonal, and correlations are listed on the off diagonals.

\*  $p < .05$ ; two tailed

\*\*  $p < .001$ ; two tailed

Item analysis was performed on all the RSE Scale and the subscales of the ROQ.

The greatest positive effect that removal of any item would have on the alpha coefficient of any instrument was .014.

### Discussion

One purpose of the study was to assess whether the instruments were appropriate to the participants. As described earlier in the Participants section, the pilot study sample contained a wide enough range of diversity to test the appropriateness of the study materials. Although the sample varied somewhat from the population of midlife workers at UNCG, the range of diversity in such key areas as age, sex, race/ethnicity, education level, and job function provided the researcher with evidence that the materials are appropriate.

Comments from the participants indicate that the instruments had good face validity, and some comments indicated enthusiasm for the experience of participating in the study. These comments included: “I would love to share this with others!!” “Excellent study . . . Hope to hear about findings.”

The pilot study also was designed to evaluate whether the instrument packet contained clear instructions and instrumentation and whether the administration procedures were effective for the instrument packet. All participants who completed the item “Were the directions clear and easy to follow?” circled “Yes” ( $n = 22$ ). For the question about whether anything in the instructions or consent form was not understood or was difficult to understand, all participants who completed this item circled “No” ( $n = 22$ ). Additional comments, such as “All questions were very clear and concise,” and “Great job, very thorough and easy to follow” further supported the clarity of the instructions and instrumentation and ease of the procedures.

Although data entered on the Feedback form and comments were overwhelmingly positive and indicated that the study materials were clear and easy to use, most participants failed to complete at least one question. Items in the Variety of Models subscale of the ROQ (items 1 through 7) were left incomplete at a greater frequency than items in other sections of the instrument packet. All participants except one completed multiple items in this subscale, but 14 participants (61%) did not complete all items of this subscale. Most often, item 7, “Others,” was left unanswered. Some participants may have considered no response to an item in this subscale as a response of 0. After careful consideration, the researcher decided to code incomplete responses in the Variety of Models subscale as 0 if

the participant completed any of the items in that subscale. In a sporadic pattern, questions in other instruments and subscales were left incomplete. Tolerance levels for missing data and methods for imputing missing data were established and are documented in the Data Analysis/Analysis of Hypotheses section. Processes for coding multiple answers also were established and are documented in the Data Analysis/Analysis of Hypotheses section.

After consideration of the study data, some instrumentation changes and model conceptualization changes were made. An additional factor, life satisfaction, was added to the model, and this factor will be measured using the PWI (Australian Centre on Quality of Life, 2002). Addition of this factor is expected to strengthen the study findings by more closely aligning the study to the literature on retirement. The invitation to participate in the study was modified to reflect the inclusion of this instrument. Based on suggestions from participants, the following items were added to the RSE:

1. Adjust to changing employment status
2. Cope with changing physical and emotional needs of immediate family members (for example, caregiving needs)
3. Cope with changing expectations from family members

In response to one participant's written comment asking for highlighting of "one" [person] in the instructions preceding item 8 of the ROQ, "one person" was converted to boldface italicized type. The item concerning hours currently worked each week for UNCG was removed from the demographic questionnaire. Only participants identified by UNCG Human Resource Services as working at least 20 hours per week will be invited to participate in the study, so this item was determined unnecessary. In the last question of the

demographic questionnaire, “Housekeeping” was added as a job category. These changes to the study materials are anticipated to strengthen the study and make the completion of study materials easier for the participants.

A final purpose of the study was to determine whether the instruments and their subscales were reliable and valid. The range of alpha coefficients ( $\alpha = .77$  to  $.96$ ) for the RSE and the Variety of Models, Success of Models and Similarity of Abilities and Resources subscales of the ROQ indicated that these scales had acceptable to high degrees of internal consistency. In the Similarity of Attributes subscale of the ROQ, the more limited set of two binary-response items and the lack of any response variability for one of those items made generating an alpha coefficient for that scale and performing item analysis on questions in that scale useless. This factor was removed from the model hypothesized for the main study. Instead of being evaluated as part of the model, the factor was identified as data appropriate to possible post hoc testing.

Overall, the pilot study provided evidence that the instructions, instruments, and procedures were appropriate for the participants and were clear and easy to understand and follow. Imputing decisions were made to standardize coding procedures, and one factor was reassessed and removed from the model. A few items were changed or added to provide even more valid results, and an instrument was added to strengthen the model concept and link the model more closely with retirement literature.

### Pilot Study Materials

The following sections contain the materials used in the pilot study. These materials include the Invitation to Participate, Consent to Act as a Human Participant,

Retirement (Self-Efficacy) Questionnaire, Retirement Observations Questionnaire, Demographic Questionnaire, Feedback form, and the raffle ticket.

*Invitation to Participate in the Pilot Study*

**INVITATION TO PARTICIPATE IN THE PILOT STUDY**

**Retirement modeling: An Exploration of the Effects of Retirement Role Model Characteristics on Retirement Self-efficacy in Midlife Workers**

You are invited to participate in a project that is designed to improve the materials that will be used in a future study. The future study will examine midlife workers' observations of people who have retired and the workers' anticipated abilities to perform retirement tasks. By participating in this project, you will have an opportunity to assess your expectations associated with your possible future retirement and to review your observations of others who have retired. This assessment of expectations and review of observations may lead to increasing your awareness of retirement tasks, abilities, and resources. It will take approximately 30 minutes of your time to complete the Retirement Questionnaire, the Retirement Observations Questionnaire, the Demographic Questionnaire, and the Feedback form.

If you choose to participate in this project, please do the following:

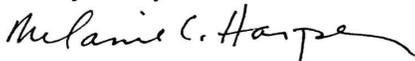
1. Read this invitation and the consent form, sign one copy of the consent form, and keep the invitation and second copy of the consent form as a record of your consent to participate in the study. Have a witness also sign the consent form, and place the completed consent form in the box labeled "Consent Forms."
2. Complete the Retirement Questionnaire, the Retirement Observations Questionnaire, the Demographic Questionnaire, and the Feedback form. If you have any questions or comments as you complete these surveys, please write your questions or comments directly on the forms. Place the completed surveys in the addressed return envelope, and deposit the envelope in the box labeled "Completed Surveys."
3. If you wish to be entered into a drawing for two \$50 cash prizes, complete the postcard raffle ticket, and place the raffle ticket in the box labeled "Raffle Tickets." Winning raffle tickets will be drawn at the conclusion of the retirement study, which is anticipated to occur late this spring.

There are no risks associated with participating in this project. Your participation in this project is strictly voluntary and you are free to withdraw from participating at any time. Your scores will be maintained in a database with all personal identifying information removed. Scores will be used in examining aggregate data only and no individual scores will be reported for any reason to any audience. Raw data will be retained for five years, after which papers containing data will be shredded, data stored on computer disk will be erased, and any portable computer disks (such as CDs) containing data will be mangled.

The research and this consent form have been approved by the University of North Carolina at Greensboro Institutional Review Board, which insures that research involving people follows federal regulations. Questions regarding your rights as a participant in this project can be answered by calling Mr. Eric Allen at (336) 256-1482. Questions regarding the research itself will be answered by calling Melanie Harper at (336) 334-3421. Any new information that develops during the project will be provided to you if the information might affect your willingness to continue to participate in the project.

By signing the consent form, you are agreeing to participate in the project described to you in this letter.

Thank you for your time.



Melanie C. Harper, Doctoral Student  
UNCG Department of Counseling and Educational Development

*Consent to Act as a Human Participant*

THE UNIVERSITY OF NORTH CAROLINA  
**GREENSBORO**

**CONSENT TO ACT AS A HUMAN PARTICIPANT: SHORT FORM WITH INVITATION**

Project Title: Retirement modeling: An exploration of the effects of retirement role model characteristics on retirement self-efficacy in midlife workers

Project Director: Melanie C. Harper, M.A.

Participant's Name: \_\_\_\_\_

Melanie Harper has explained in the preceding invitation to participate the procedures involved in this research project including the purpose and what will be required of you. Any benefits and risks were also described. Melanie Harper has answered all of your current questions regarding your participation in this project. You are free to refuse to participate or to withdraw your consent to participate in this research at any time without penalty or prejudice; your participation is entirely voluntary. Your privacy will be protected because you will not be identified by name as a participant in this project.

The research and this consent form have been approved by the University of North Carolina at Greensboro Institutional Review Board, which insures that research involving people follows federal regulations. Questions regarding your rights as a participant in this project can be answered by calling Mr. Eric Allen at (336) 256-1482. Questions regarding the research itself will be answered by Melanie Harper by calling (336) 334-3421. Any new information that develops during the project will be provided to you if the information might affect your willingness to continue participation in the project.

By signing this form, you are agreeing to participate in the project described to you by Melanie Harper. Please retain the invitation to participate in the study and a copy of this form as a record of your consent to participate in the study.

\_\_\_\_\_  
 Participant's Signature

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Witness\* to Reading of Invitation and Participant's Signature

\*Investigators and data collectors may not serve as witness. Subjects, family members, and persons unaffiliated with the study may serve as witness.

*Retirement (Self-Efficacy) Questionnaire*

**Retirement Questionnaire**

*Directions:* The following items describe common retirement tasks. Imagine yourself in the early to middle years of your retirement. For each item, circle the number that best shows how sure you are that you will be able to do the retirement task.

	1	2	3	4	5
	not very sure			quite sure	
<b>PHYSICAL HEALTH</b>					
1. Maintain your physical health	1	2	3	4	5
2. Eat adequately	1	2	3	4	5
3. Fill out health insurance forms	1	2	3	4	5
4. Obtain adequate health insurance	1	2	3	4	5
5. Maintain your current level of physical activity	1	2	3	4	5
6. Obtain adequate rest and sleep	1	2	3	4	5
7. Find suitable healthcare providers	1	2	3	4	5
<b>MENTAL HEALTH</b>					
8. Maintain your emotional health	1	2	3	4	5
9. Avoid excessive anxiety or worries	1	2	3	4	5
10. Avoid excessive stress	1	2	3	4	5
11. Maintain a positive outlook on life	1	2	3	4	5
12. Experience meaning or purpose in your life	1	2	3	4	5
<b>FINANCIAL</b>					
13. Have enough money for housing of your choice	1	2	3	4	5
14. Budget your money	1	2	3	4	5
15. Live within your retirement income	1	2	3	4	5
16. Have enough money for healthcare	1	2	3	4	5
17. Have enough money for leisure activities	1	2	3	4	5
18. Have enough money for good nutrition	1	2	3	4	5
19. Have enough money for any travel you want to do	1	2	3	4	5
20. Decide how much retirement income you should invest	1	2	3	4	5

2

	1	2	3	4	5
	not very sure			quite sure	
<b>ACTIVITIES</b>					
21. Remain physically independent	1	2	3	4	5
22. Remain active at home	1	2	3	4	5
23. Remain active when away from home	1	2	3	4	5
24. Attend meetings and organizations as desired	1	2	3	4	5
25. Maintain current meaningful relationships with friends or family members	1	2	3	4	5
26. Establish new meaningful relationships with others	1	2	3	4	5
27. Maintain any current skills or knowledge that you want to maintain	1	2	3	4	5
28. Broaden your skills or knowledge	1	2	3	4	5
29. Use any skills or knowledge that you want to use	1	2	3	4	5
<b>GOVERNMENT, PENSIONS, AND INSURANCE</b>					
30. Apply for Social Security, pension benefits, withdrawals from retirement savings accounts, or whatever other sources of income you plan to use	1	2	3	4	5
31. Apply for Medicare or whatever other health insurance you plan to use	1	2	3	4	5
32. Decide on the most appropriate pension benefit plan or insurance package for you	1	2	3	4	5
33. Decide on a time for retirement that is best for you	1	2	3	4	5
<b>RETIREMENT ITSELF</b>					
34. Cope with changes in retirement	1	2	3	4	5
35. Plan leisure time	1	2	3	4	5
36. Decide where to live during retirement	1	2	3	4	5
37. Decide if and when to downsize (move to a smaller place to live or reduce possessions)	1	2	3	4	5
38. Maintain respect from others in your family	1	2	3	4	5
39. Maintain respect from others in society	1	2	3	4	5
40. Remain satisfied that you selected the best retirement time for you	1	2	3	4	5
41. Adjust successfully to retirement	1	2	3	4	5

**ADDITIONAL INFORMATION**

**Write down any other retirement-related tasks and state how sure you are that you will be able to deal with those challenges:**

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**This questionnaire was modified from Neuhs (1991) with permission.**

**Neuhs, H. P. (1991). Ready for retirement? Give this quiz to find out the retirement issues that can erode or threaten self-confidence in an elder's golden years. *Geriatric Nursing*, 12, 240-241.**

*Retirement Observations Questionnaire*

4

**Retirement Observations Questionnaire**

Please take a few moments to think about all the retired persons you have known, seen, or known about. You may not have known some retired persons personally, but you may feel that you have learned about their stories through reports from family members, friends, newspapers, magazines, books, television shows, or movies.

*Directions:* Circle the number indicating how many retired persons you have known in each category. If a person fits more than one category (for example, they are a friend and are also a business contact), count that person only once under the most important category to you.

	0	1	2	3	4	5	6
	none						six or more
1. Relatives (include immediate and extended family members, in-laws, current and former persons you regard as a relative, etc.).	0	1	2	3	4	5	6
2. Friends (include neighbors).	0	1	2	3	4	5	6
3. Business or professional contacts (include current or former co-workers, bosses, and customers).	0	1	2	3	4	5	6
4. Service providers (include people who currently or formerly provided you with a service, such as a doctor, dentist, realtor, hair dresser, store clerk, bank teller, etc.).	0	1	2	3	4	5	6
5. Members of organizations (include current or former fellow members of such organizations as civic clubs, health clubs, social organizations, religious groups, etc.).	0	1	2	3	4	5	6
6. Outsiders (include people you have heard about but who you do not know; these can be people in the news, advertisements, television programs, movies, books, games, etc.).	0	1	2	3	4	5	6
7. Others.	0	1	2	3	4	5	6

Please describe your relationship with these other retired persons: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

From the people you identified in the previous questions (1-7), choose the one person who most affected your views about retirement. If you do not think any retired person affected your views, choose the person who you observed during retirement more than the other retired persons. Answer the rest of the questions with that person in mind.

*Directions:* Please circle the number that best shows how you think the retired person's abilities and resources at the time their retirement will compare with your abilities and resources at the time of your retirement. For example, if you think the retired person was much more physically fit when he/she retired than you will be when you retire, then you would circle 7 for item 8.

	1	2	3	4	5	6	7
	much less than me		similar to me			much more than me	
8. Physical abilities.	1	2	3	4	5	6	7
9. Mental abilities (for example, ability to figure out and understand things).	1	2	3	4	5	6	7
10. Emotional abilities (for example, ability to cope with uncertainty and change).	1	2	3	4	5	6	7
11. Interpersonal abilities (relating to other people).	1	2	3	4	5	6	7
12. Family resources (family members who might help you if you want or need help).	1	2	3	4	5	6	7
13. Social resources (friends who might help you if you want or need help).	1	2	3	4	5	6	7
14. Planning abilities.	1	2	3	4	5	6	7
15. Financial resources (for example, money, property and belongings, your sources of income, etc.).	1	2	3	4	5	6	7
16. Health resources (for example, medical insurance, doctors, health knowledge, etc.).	1	2	3	4	5	6	7
17. Interests, knowledge, or skills.	1	2	3	4	5	6	7

*Directions:* Please circle the description that best completes each of the following sentences.

30. The retired person I have described is:  
 The same sex as me The opposite sex from me
31. The retired person I have described is:  
 Similar to me in race/ethnicity Different from me in race/ethnicity
32. The retired person I have described is similar to me in the following important ways:  
 \_\_\_\_\_  
 \_\_\_\_\_
33. The retired person I have described is different from me in the following important ways:  
 \_\_\_\_\_  
 \_\_\_\_\_
34. To the best of my knowledge, the retired person I have described retired:  
 Before age 55 Between ages 55 and 60 Between ages 61 and 65  
 Between ages 66 and 70 At age 71 or later
35. My observations of or contact with this person:  
 Ended many years ago Ended two to ten years ago  
 Ended recently (up to two years ago) Continues today
36. If/when I retire, I would like my retirement to be:  
 Similar to this person's retirement Different from their retirement
37. I identified this retired person on page 4 as a:  
 Relative Friend Business or professional contact  
 Service provider Member of an organization Outsider  
 Other: \_\_\_\_\_

*Directions:* Please provide any other information about this retired person that might help us to understand how this person has helped to shape your thoughts, feelings, or plans about retirement.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6

*Directions:* Please circle the number that best shows how successful this retired person has been in doing the following activities.

	1	2	3	4	5	6	7
	little or no success		about as much success as failure				a lot of success
18. Staying physically healthy during the early to middle years of retirement.	1	2	3	4	5	6	7
19. Staying emotionally healthy during the early to middle years of retirement.	1	2	3	4	5	6	7
20. Before retirement, preparing for his/her upcoming financial needs in retirement.	1	2	3	4	5	6	7
21. During the early to middle years of retirement, preparing for future financial needs.	1	2	3	4	5	6	7
22. Making plans for the future during the early to middle years of retirement.	1	2	3	4	5	6	7
23. Staying active during the early to middle years of retirement.	1	2	3	4	5	6	7
24. Establishing or maintaining meaningful relationships during the early to middle years of retirement.	1	2	3	4	5	6	7
25. Continuing to assist others or the community or in some way making a contribution during the early to middle years of retirement.	1	2	3	4	5	6	7
26. Keeping up-to-date on his/her skills and knowledge or learning new skills and knowledge during the early to middle years of retirement.	1	2	3	4	5	6	7
27. Enjoying life during the early to middle years of retirement.	1	2	3	4	5	6	7
28. Looking forward to the future during the early to middle years of retirement.	1	2	3	4	5	6	7
29. Maintaining his/her importance in his/her family or community during the early to middle years of retirement.	1	2	3	4	5	6	7

## Demographic Questionnaire

8

## Demographic Questionnaire

*Directions:* Write or circle the answer that best describes you.

1. What is your age? \_\_\_\_\_
2. What is your sex?  

Female	Male
--------	------
3. What is your race/ethnicity?  

African-American	Asian-American	Caucasian
Hispanic-American	Native-American	Pacific Islander
Multiracial	Other: _____	
4. How many hours do you work for UNCG each week? (If full-time, circle "40 or more hours.")  

Less than 20 hours	20 to 39 hours	40 or more hours
--------------------	----------------	------------------
5. When do you expect to retire?  

Within 1 years	In 1 to 5 years	In 6 to 10 years
In 11 to 15 years	In more than 16 years	I have no idea when
I do not expect to retire	I already am retired	
6. Which of the following retirement planning tasks have you done? (circle all that apply)  

Read about retirement	Discussed retirement with family or significant others
Attended a retirement seminar	Saved money for retirement
Made plans for retirement	None. I have not planned at all for retirement
7. How much education have you had?  

Less than high school	High school diploma	Some college
Two-year/associates degree or trade school certificate	Bachelors degree	
Masters degree	Doctoral degree	
8. What type of job do you have?  

Faculty	Staff
---------	-------

9. If you identified your job as a staff position, which description best fits your work?

Professional and related

Service

Construction

Management, business, financial

Office, administrative support

Transportation

Installation, maintenance, repair

Grounds keeping

Production

Sales and related

Other: \_\_\_\_\_

*Feedback Form***Feedback**

**Directions:** Please answer these questions as completely as you can, so that I can create a study that is as clear and useful as possible.

1. Were the directions clear and easy to follow?

Yes            No

If no, please describe what was not clear or easy to follow.

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2. Was there anything in the instructions or consent form that you did not understand or found unclear or hard to understand?

Yes            No

If yes, please write those words or sentences.

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3. Please share any other suggestions about ways to improve the instructions, consent form, questions, or any other part of this study.

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*Raffle Ticket*

# Thank You

As thanks for your participation in this study, \$50 cash prizes will be awarded to two lucky participants. Just drop this completed postcard in internal mail, and you will be entered in the raffle for these prizes. Good luck!

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

## APPENDIX C

### ORIGINAL RSE SCALE AND APPROVAL FOR ITS USE

This appendix contains a copy of the original Retirement Self-Efficacy Scale (Neuhs, 1991) and the letter granting permission for the modification and use of this instrument for this study.

## Original RSE Scale

## RETIREMENT QUESTIONNAIRE

Directions: For each item, circle the number that best indicates how much confidence you have about doing each of the following when you retire or now that you have retired.

	1	2	3	4	5
	very little				quite a lot
<b>HEALTH</b>					
1. Maintaining your physical health	1	2	3	4	5
2. Eating adequately	1	2	3	4	5
3. Filling out health insurance forms	1	2	3	4	5
4. Obtaining adequate health insurance	1	2	3	4	5
5. Maintaining your current activity level	1	2	3	4	5
6. Obtaining adequate rest and sleep	1	2	3	4	5
<b>FINANCIAL</b>					
7. Maintaining a comfortable residence	1	2	3	4	5
8. Budgeting money	1	2	3	4	5
9. Living within your retirement income	1	2	3	4	5
10. Having adequate money for health problems	1	2	3	4	5
11. Having adequate money for good nutrition	1	2	3	4	5
12. Having adequate money for leisure activities	1	2	3	4	5
13. Having adequate money for travel	1	2	3	4	5
14. Deciding how much retirement income to allocate for investments	1	2	3	4	5
<b>ACTIVITIES</b>					
15. Remaining physically independent	1	2	3	4	5
16. Remaining active at home	1	2	3	4	5
17. Remaining active away from home	1	2	3	4	5
18. Attending meetings of organizations	1	2	3	4	5

**GOVERNMENTAL AND PENSION REGULATIONS**

19. Applying for Social Security	1	2	3	4	5
20. Applying for pension benefits	1	2	3	4	5
21. Applying for Medicare	1	2	3	4	5
22. Deciding on the most appropriate pension benefit plan for you	1	2	3	4	5
23. Deciding on appropriate time for retirement	1	2	3	4	5

**RETIREMENT ITSELF**

24. Coping with changes in retirement	1	2	3	4	5
25. Structuring leisure time	1	2	3	4	5
26. Being satisfied that you selected the most appropriate retirement time for you	1	2	3	4	5
27. Making a successful adjustment in retirement	1	2	3	4	5

This instrument was copied from the following source with permission from the instrument's copyright owner:

Neuhs, H. P. (1991). Ready for retirement? Give this quiz to find out the retirement issues that can erode or threaten self-confidence in an elder's golden years.

*Geriatric Nursing, 12, 240-241.*

Letter Granting Permission for Modification and Use of the RSE Scale

**Permission for Use and Modification of the Retirement Self-Efficacy Scale**

I, Thomas Corr, as the holder of the copyright for Helen Patricia Neuhs' Retirement Self-Efficacy (RSE) Scale, grant Melanie Claire Harper, a doctoral student in counseling and counselor education at the University of North Carolina at Greensboro, permission to use and modify the RSE Scale for research related to her dissertation, which is tentatively titled **Retirement Modeling: An Exploration of the Effects of Retirement Role Model Characteristics on Retirement Self-Efficacy in Midlife Workers**. I understand that the modifications to the RSE Scale will include changes to items to reflect the more varied forms of retirement income and insurance options that have become common in the past decade or so, addition of some items measuring self-efficacy related to retirement tasks not measured by the original RSE Scale but described in current retirement literature, and clarification of any items necessitated by comments from reviewers.

Helen P. Neuhs will be credited in the dissertation and any derivative works with authorship of the original RSE Scale, and the dissertation will detail changes made to the original RSE Scale. A copy of the modified RSE Scale will appear in the dissertation. The RSE Scale for which I am granting use and modification permission is described in:

Neuhs, H. P. (1991). Ready for retirement? Give the quiz to find out the retirement issues that can erode or threaten self-confidence in an elder's golden years. *Geriatric Nursing*, 12, 240-241.



Thomas Corr  
85-50 Eton Street  
Jamaica, NY 11432



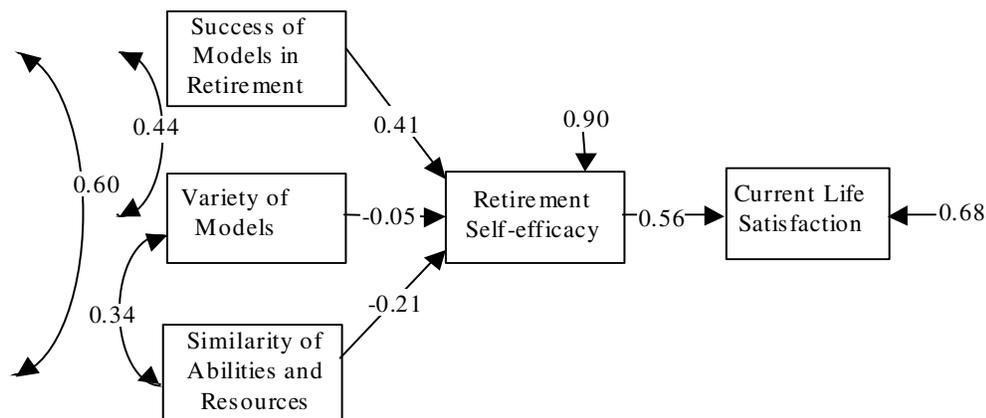
Date

## APPENDIX D

## GENDER AND RACE/ETHNICITY MODELS FOR PRELIMINARY ANALYSIS

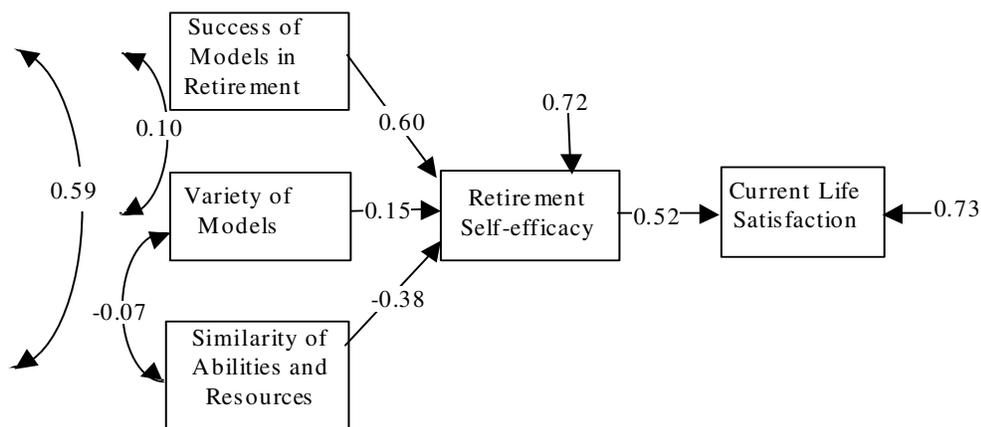
The following four models were constructed for preliminary analysis of Hypotheses Three and Four. Although these figures are included, no evaluation of the models was conducted due to the inadequate sample sizes. Further research with larger male, female, minority, and non-minority groups is needed before representative models can be created and tested for these groups.

Figure 14. Expected Three-factor Model of Retirement Role Modeling for Male Midlife Workers



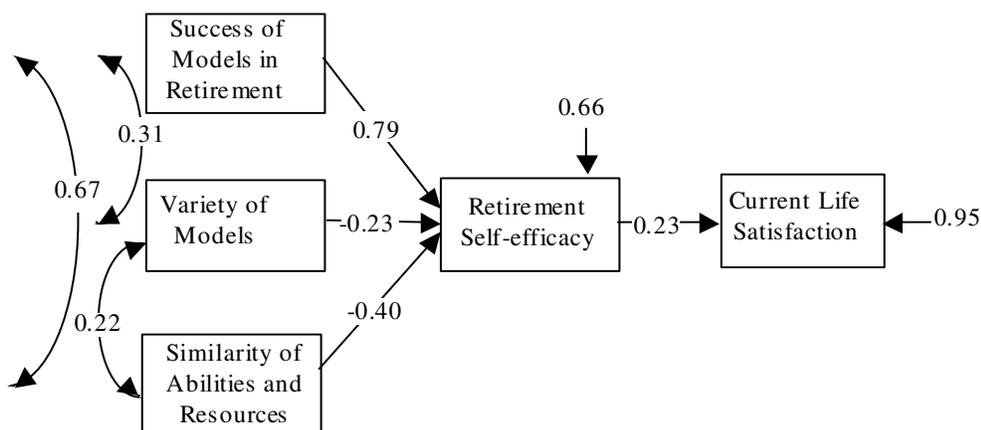
Chi-Square=6.29 df=3, P-value=0.09837, RMSEA=0.140

Figure 15. Expected Three-factor Model of Retirement Role Modeling for Female Midlife Workers



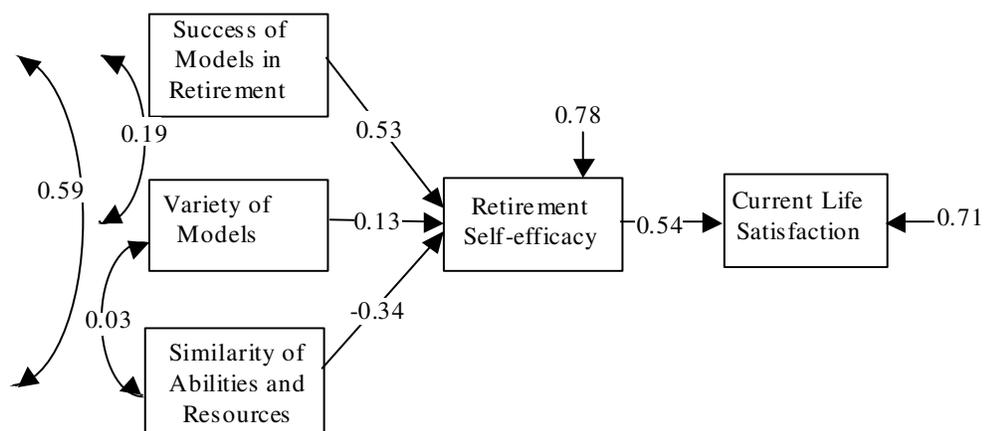
Chi-Square=9.03 df=3, P-value=0.02895, RMSEA=0.120

Figure 16. Expected Three-factor Model of Retirement Role Modeling for Minority Midlife Workers



Chi-Square=2.48 df=3, P-value=0.47853, RMSEA=0.000

Figure 17. Expected Three-factor Model of Retirement Role Modeling for Caucasian Midlife Workers



Chi-Square=14.77 df=3, P-value=0.00202, RMSEA=0.148