

ABSTRACT

Title of Dissertation: RETIREMENT PLANNING FROM A
CAREER SELF-MANAGEMENT
PERSPECTIVE: A TEST OF SOCIAL
COGNITIVE CAREER THEORY

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Counseling Psychology, 2019

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Although the retirement transition is a complex and multifaceted process for older workers, much of the existing research only examines retirement from a financial or “encore career” perspective (i.e., work after retirement, which represents only one of several possible retirement lifestyles). As the baby boomer generation nears retirement age, a more comprehensive understanding of retirement is needed to improve successful planning for this transition. The career self-management model of social cognitive career theory was used as the conceptual base for the current study. Based on this model, five new social cognitive measures of retirement planning (self-efficacy, outcome expectations, supports, anxiety, and decidedness) and a revised goal measure were developed and administered to 525 older workers anticipating retirement in the near future. Data from the first 200 participants in the sample were subjected to exploratory factor analysis and other analyses to estimate their reliability

and validity. Data from the remaining 325 participants were then subjected to confirmatory analysis and to path analyses to predict retirement planning anxiety, decidedness, and goals. The data provided good overall fit to the career self-management model, and support was found for most, though not all, predicted paths in the model. Implications of the findings for the career self-management model, as well as for future research and practice directions, are considered.

RETIREMENT PLANNING FROM A CAREER SELF-MANAGEMENT
PERSPECTIVE:
A TEST OF SOCIAL COGNITIVE CAREER THEORY

by

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Chapter 1: Introduction

As members of the baby-boomer generation continue to age, more individuals are nearing the traditional age for retirement (Wheaton & Crimmons, 2013). Defined as the process of reducing involvement in paid work in favor of supporting oneself through retirement savings and/or Social Security benefits (Fassbender & Deller, 2015a), retirement represents the end stage of the career self-management process (Freund & Baltes, 1998). For many, retirement provides an opportunity to volunteer (McMunn, Nazroo, Wahrendorf, Breeze, & Zaninotto, 2009; Wu, Tang, & Yan, 2005), find new forms of paid work (e.g., bridge employment; von Bonsdorff, Shultz, Leskinen, & Tansky, 2009; Wöhrmann, Deller, & Wang, 2013, 2014a, 2014b), travel (Lindquist & Golub, 2004), and/or spend more time with family.

Unfortunately, there is growing evidence that many retirees find the transition to retirement to be difficult. In one longitudinal study of nationally representative United States elder workers from the Health and Retirement Survey, Wang (2007) found that 25-30% of U.S. retirees from two samples ($n_1 = 994$; $n_2 = 1066$) were characterized as significantly low in psychological well-being (e.g., high depression, low happiness) during the initial years of retirement. These findings were also corroborated in a sample of German retirees (Pinquart & Schindler, 2007). Other studies show that retirees unprepared financially and psychologically to phase out of work show increased rates of anxiety and depression (Fretz, Klunge, Ossana, Jones, & Merikangas, 1989; van Solinge & Henkens, 2005; Wang, 2007), financial difficulties (Petoska & Earl, 2009; Taylor-Carter, Cook, & Weinberg, 1997), and lower rates of life satisfaction (Dingemans & Henkens, 2015; Foley & Lytle, 2015).

These retirement difficulties may further contribute to negative coping behaviors in retirees, such as alcoholism (Breslow, Castle, Chen, & Graubard, 2017; Dare, Wilkinson, Allsop, Waters & McHale, 2014; Kuerbis & Sacco, 2012). Bacharach, Bamberger, Sonnenstuhl and Vashdi (2004) found that, compared with older blue collar employees continuing to work, retirees who engaged in bridge employment consumed more drinks on average, and retirees who were fully detached from work were twice as likely to engage in periodic heavy drinking. The researchers cited social isolation and loss of work identity as stressors that may exacerbate these drinking behaviors (e.g., Ekerdt, De Labry, Glynn, & Davis, 1988; Perreira & Sloan, 2001).

In a review of the retirement literature, Milne (2013) discussed how the retirement transition itself can be a stressful life event for which many individuals are ill-prepared. Specifically, the retirement transition can signal a loss of sense of purpose and increased loneliness and regret (Fletcher & Hansson, 1991; Osborne, 2012; van Solinge & Henkens, 2008); newfound financial strain from loss of work income (Hershey, Henkens, & van Dalen, 2010); and comorbid physical health problems (Gould, O'Hara, Goldstein, & Beaudreau, 2016). Work may provide a buffer against physical and psychological difficulties by providing financial and social support, as well as opportunities for meaningful pursuits (Blustein, 2008). Disengaging from work may mean both disengaging from a role that defined a worker's life and challenging the new retiree to find new life roles (Ashforth, 2001; Burke, 1991; Thotis, 1992). While some workers view retirement as an opportunity to pursue family and community roles (Adams, Prescher, Beehr, & Lepisto, 2002),

others fear this transition and feel unprepared to leave work (Ekerdt, Hackney, Kosloski, & DeViney, 2001; Lusardi & Mitchell, 2007).

The Value of Retirement Planning

One indicator of feeling prepared for the retirement transition is engagement in retirement planning (Muratore & Earl, 2015). Retirement planning involves taking time to learn about the retirement transition and to shape future goals. Researchers and policy-makers have primarily examined financial planning for the transition to retirement (e.g., Neuhs, 1991; Petkoska & Earl, 2009; Stawski, Hershey, & Jacobs-Lawson, 2007). Financial planning contributes to how a retiree will shape his or her lifestyle in retirement, such as the frequency of traveling opportunities and whether or not they will continue to work (Wang & Shultz, 2010). Other researchers, though, have demonstrated that financial planning alone does not predict overall retirement satisfaction (Dendinger, Adams, & Jacobson, 2005; Taylor-Carter, Cook, & Weinberg, 1997).

According to Adams and Rau (2011), preparation during the preretirement phase falls not just within a domain of financial planning, but also psychological planning, which includes activity, housing, and relationship planning. Activity planning relates to hobbies and volunteer work (Bass & Caro, 2001; Beehr & Nielson, 1995) and can contribute to structuring one's time in retirement (e.g., Kleiber & Nimrod, 2008). Preparing ahead of time to remain in their current dwellings helps some retirees to maintain consistency in life and life satisfaction (AARP, 2006; Hendrick, Wells, & Falletti, 1982), while others are drawn to the social connections of retirement communities (De Jong, Wilmoth, Angel, & Cornwell,

1995). Relationship planning also involves how to maintain or supplement relationships with friends, co-workers, and family members at a time when patterns of interaction must adjust to new schedules (e.g., Dew & Yorgason, 2010; Dorfman, 2002). By addressing these questions before retirement, individuals can buffer against the change that results from work withdrawal and maintain life continuity.

Psychological planning has been associated with positive attitudes toward retirement in Chinese (Yeung, 2013) and U.S. samples (Fretz et al., 1989). In a sample of Canadians nearing retirement, MacEwan, Barling, Kelloway, and Higginbottom (1995, 2001) found that amount of financial and activity retirement planning was associated with lower degrees of retirement anxiety. Even general pre-retirement education has been linked to less psychological distress during the act of retirement (Sharpley & Layton, 1998). Life satisfaction, confidence, and retirement adjustment have also been shown to be higher in retirees who plan ahead of the transition (e.g., Earl, Gerrans, & Halim, 2015; Foley & Lytle, 2015; Muller Müller, Ziegelmann, Simonson, Tesch-Römer, & Huxhold, 2014; Noone, Stephens, & Alpass, 2009; Quick & Moen, 1998; Rosenkoetter & Garris, 2001; Spiegel & Shultz, 2003; Taylor-Carter, Cook, & Weinberg, 1997; Wu, Tang, & Yan, 2005).

Unfortunately, there is strong evidence that many workers do not engage in either financial or psychological retirement planning. For example, Ekerdt et al. (2001) found that 12% of their sample of workers aged 51 to 61 did not know and had not thought about when they would retire. Turner, Bailey, and Scott (1994) reported that 25% of their sample aged 40 to 65 had no plans regarding their location or employment during retirement. This is especially concerning, given the fact that

approximately 78 million U.S. baby boomers are nearing the traditional retirement age of 65 (Alley & Crimmons, 2007) and that the average retirement savings held by those between the ages of 55 and 64 is only \$100,000 (Purcell, 2009). It is important for both researchers and retirees to better understand the factors that support and hinder retirement planning. Further, the importance of psychological planning has prompted a call for researchers to examine retirement planning in a more cohesive way, beyond financial planning alone (Hayslip, Beyerlin, & Nichols, 1997; Taylor & Doverspike, 2003).

Social Cognitive Career Theory's (SCCT) career self-management model (Lent & Brown, 2013), with its emphasis on person, environment, and behavior factors, has been seen as a useful framework for studying the retirement process (Fassbender & Deller, 2015a, 2015b). With its emphasis on domain-specific variables (Lent & Brown, 2006), SCCT provides a helpful template for encompassing the four domains of retirement activity, finance, social, and housing plans. While other researchers have examined retirement through an SCCT lens, their focus has been on specific forms of retirement (e.g., bridge employment; Wohrmann et al., 2014b) rather than on the full range of retirement options and challenges. The proposed study is intended to contribute to the retirement planning literature by developing or adapting retirement-specific measures of social cognitive variables and using them to test a relatively comprehensive model of retirement planning, one that includes a focus on the four aspects of retirement planning. The following section presents an overview of SCCT and the development of the new career self-management (CSM) model.

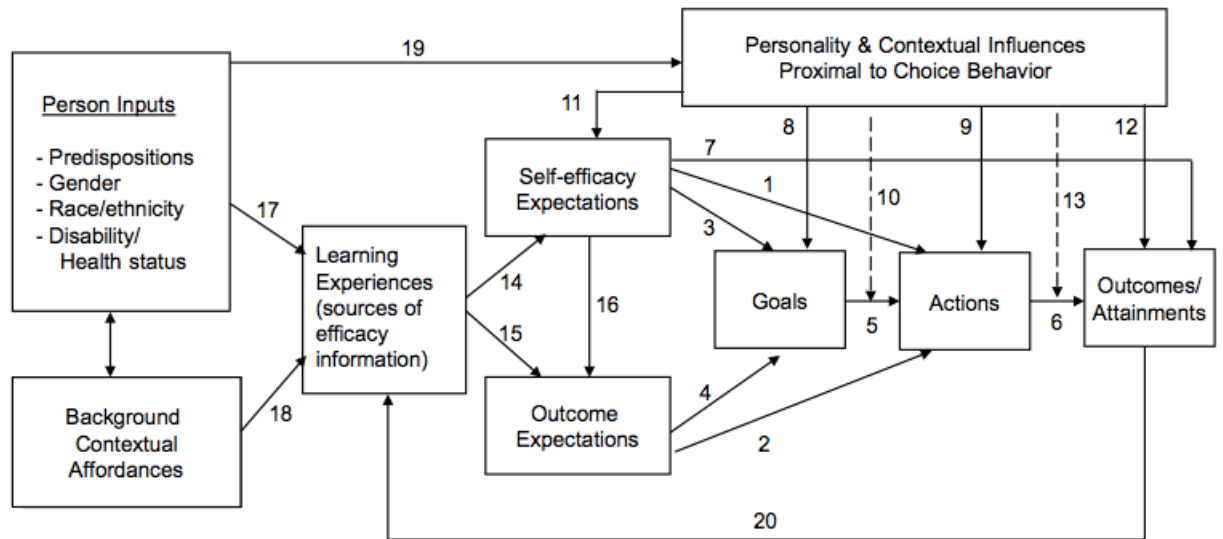
Social Cognitive Career Theory

SCCT may serve as an overarching framework for deriving hypotheses related to the joint roles of social-cognitive, contextual, personality, and behavioral variables in relation to retirement planning outcomes. Based on Bandura's Social Cognitive Theory (1986), SCCT emphasizes the predictive power of self-efficacy (i.e., beliefs about one's ability to perform actions) and outcome expectations (i.e., beliefs about the consequences of those actions) in relation to career interests, goals, and career behaviors. The SCCT model integrates a variety of predictors into a single framework (Lent & Brown, 2013; Lent, Brown, & Hackett, 2000) based on the assumption that social-cognitive variables do not function alone, but rather interact with other person, contextual, and behavioral variables (Lent, Brown, & Hackett, 1994).

Over the past two decades, SCCT has been applied to many outcomes, including career interest, choice, and performance (Lent et al., 1994), well-being and work satisfaction (Lent & Brown, 2008), and career decision-making and other career self-management processes (Lent & Brown, 2013; see Figure 1). Thus far, the CSM model has been applied to college students engaged in the career exploration process (Lent, Ezeofor, Morrison, Penn, & Ireland, 2016), unemployed workers navigating the job application process (Lim, Lent, & Penn, 2016), management of sexual identity in the workplace (Tatum, Formica, & Brown, 2016), and anticipated multiple role management (Roche, Daskalova, & Brown, 2017). Researchers have described the SCCT CSM model as a useful framework for studying the retirement process (Fassbender & Deller, 2015a, 2015b), and one research team has applied the CSM model to retirees planning to engage in bridge careers (Wohrmann et al., 2013, 2014a,

2014b). However, there is as yet an absence of research applying the model to the full range of retirement options.

Figure 1. SCCT Career Self-Management Model



Model of career self-management. Adapted from "Toward a unifying social cognitive theory of career and academic interest, choice, and performance," by R.W. Lent, S.D. Brown, & G. Hackett, 1994, *Journal of Vocational Behavior*, 45, p. 93. Copyright 1993 by R.W. Lent, S.D. Brown, & G. Hackett. Reprinted with permission.

Studies have tested some variables of the model in a retirement planning context, including outcome expectations (e.g., Wohrmann et al., 2013), goals (e.g., Petoska & Earl, 2009), and self-efficacy and social supports (e.g., Fretz et al., 1989). The current study applied a fuller set of the core variables of the SCCT CSM model to the retirement planning process among prospective retirees (See Figure 2). Given its cross-sectional nature, the current study focused on intentions that have been shown to be predictive of planning behavior (e.g., Hershey, Mowen, & Jacobs-Lawson, 2003; Rogers & Creed, 2011; Topa & Herrador-Alcaide, 2016), rather than on subsequent enactment of the planning behavior. The following two sub-sections will describe the core variables of the model that was tested.

(Bandura, 1997). Furthermore, Carter and Cook's (1995) review of retirement adjustment demonstrates the utility of self-efficacy as a predictor of long-term retirement adjustment.

Outcome expectations are judgments about the consequences of performing particular behaviors (Lent et al., 1994). They involve the question, "If I try doing this, what will happen?" (Lent, 2005). Specifically, individuals are more likely to perform a given action if they judge the outcome to be desirable. Outcome expectations can have positive or negative valence and can be categorized as social, material, or self-evaluative in nature (Bandura, 1986). For example, a student might think, "If I pursue an engineering degree, then I will make a lot of money" (i.e., positive and material). Researchers have primarily focused on the positive valence of outcome expectations (Lent & Brown, 2006) as a predictor of career-related interest, choice, and performance (e.g., Lent et al., 2001).

Goals are conceptualized as the intention to engage in a particular activity or to produce a particular outcome within the SCCT framework (Bandura, 1986). Goals help to direct efforts and are highly predictive of subsequent actions (Cantor & Sanderson, 1999; Elliot, Sheldon, & Church, 1997; Lent et al., 1994). Goals can be focused on choices (i.e., the type of activity one wishes to pursue) or performance (i.e., the quality of performance toward which one aspires) within a given domain (Lent et al., 1994). Within the CSM model, self-efficacy and outcome expectations are predicted to prompt actions both directly and indirectly through goals (Lent & Brown, 2013). In other words, having self-confidence and expecting positive results for performing an action will shape a particular goal/intention, which in turn predicts

a corresponding action (e.g., Gushue, Clarke, Pantzer, & Scanlan, 2006; Rogers & Creed, 2011; Sheu, Lent, Brown, Miller, Hennessy, & Duffy, 2010).

Contextual and personality factors. SCCT also acknowledges the roles of environmental and personality influences on career outcomes. Conceptualized as supports and barriers, environmental predictors are theorized to predict outcomes directly and indirectly through self-efficacy, outcome expectations, and goals (Lent & Brown, 2013). Lent and Brown (2006) conceptualized supports as anticipated “facilitative influences” in the pursuit of goals (p. 18), which can include resources such as role models or finances. In the presence of high supports, an individual is theorized to have higher self-efficacy, more favorable outcome expectations, clearer goals and, in turn, to be more likely to perform relevant career behaviors (Lent & Brown, 2013).

Stable personality factors, such as conscientiousness, also play a significant role in the prediction of career outcomes within SCCT. Costa and McCrae (1992) used factor analysis to identify conscientiousness as one of the Big Five personality factors. Individuals high in conscientiousness are likely to be goal-directed, persistent, self-disciplined, organized, and planful across situations (Brown & Hirschi, 2013). These qualities likely help them to approach career decisions methodically and with focus. Conscientiousness has been shown to be related to work performance (Barrick & Mount, 1991), self-directed learning (Lounsbury, Levy, Park, Gibson, & Smith, 2009), and motivation (Judge & Ilies, 2002).

Some researchers have found support for the SCCT CSM model outside of the retirement domain. For example, Rogers, Creed, and Glendon (2008) examined self-

efficacy, outcome expectations, choice goals, supports, and personality as predictors of career planning. They found significant correlations between career planning behavior and conscientiousness ($\beta = .10$), self-efficacy ($\beta = .21$), goals ($\beta = .48$), and supports ($\beta = .19$). The authors also found an interaction effect between supports and goals, such that goals were more predictive of career planning in the presence of greater supports. In addition, they found strong support for self-efficacy and goals as mediating variables, in line with the CSM model's proposed pathways.

Lent et al. (2016) tested a similar model with two samples of college students. In the first sample, outcome expectations ($\beta = .57$) and conscientiousness ($\beta = .09$) were found to directly relate to exploratory goals, while self-efficacy and social support related to goals indirectly through outcome expectations. Self-efficacy was also shown to account for significant unique variance in decisional anxiety ($\beta = -.37$) and career decidedness ($\beta = .50$). The second sample produced stronger evidence for the model, with self-efficacy, social support, and outcome expectations producing significant relations with exploratory goals. Surprisingly, predictors such as conscientiousness and social support related only indirectly to decidedness and decisional anxiety through self-efficacy in the path analysis.

Finally, Lim et al. (2016) used the CSM model to study the job search process. They found support for the relations of self-efficacy ($\beta = .54$) and outcome expectations ($\beta = .13$) to job search goals, and indirect relations of social support and conscientiousness to goals through self-efficacy, in a sample of unemployed workers seeking employment. In a second sample of graduating college seniors, the authors

found that goals mediated the relations of self-efficacy, support, conscientiousness, and outcome expectations to job-search actions.

To the author's knowledge, only one research team has previously tested a reasonably full version of the SCCT CSM model within the domain of retirement planning. Wohrmann et al. (2014a) found that self-efficacy, interest, and outcome expectations accounted for 37% of the variance in postretirement work planning in a German sample. Specifically, occupational self-efficacy related to post-retirement work outcome expectations ($\beta = .53$) and interest in occupational-related activities ($\beta = .31$). Outcome expectations and interest related to post-retirement work intentions ($\beta = .44$ for outcome expectations and $\beta = .35$ for interest), which in turn predicted post-retirement work planning activities ($\beta = .30$). The indirect paths from self-efficacy through outcome expectations and interest to intentions, as well as outcome expectations and interest through intentions to planning activities, were all found to be significant. This study focused primarily on the one dimension of working after retirement. As Adams and Rau (2011) pointed out, planning for retirement extends beyond the mere intentions to continue or discontinue work; it also encompasses relationship, living arrangement, and activity planning. No previous study has tested the full SCCT CSM model for retirement planning within the broader context of retirement finances, activities, relationships, and living arrangements.

The Current Study

The changing landscape of retirement, the recent surge in retirement rates due to the baby-boomer generation, and the increasing life expectancy within the Western world call for a more comprehensive understanding of preparation for this late-career

stage. Lent and Brown (2013) presented a useful conceptualization for individuals navigating transitions across career stages in the form of the SCCT CSM model. The current study adapts this model to the retirement planning process to better capture the social-cognitive, contextual, and personality variables that have been shown to be predictive of goal-directed behavior in other contexts (e.g., Rogers et al., 2008). The proposed study will examine the roles that retirement planning self-efficacy, outcome expectations, supports, and conscientiousness play in relation to retirement planning goals, anxiety, and decidedness. In particular, the goals of this study are: (a) to estimate the reliability and validity of the new SCCT-based retirement planning variables, (b) to examine the relations of the SCCT predictors to retirement planning goals, anxiety, and decidedness, (c) to explore the relations among the predictor variables, (d) to test whether each variable accounts for unique predictive variance in the model, and (e) to determine whether the indirect paths within the proposed model are statistically significant.

The following hypotheses and research question are proposed in view of SCCT (CSM) theory and prior research:

Hypothesis 1: Self-efficacy will be related to (a) outcome expectations, (b) goals, (c) anxiety, and (d) decidedness.

Hypothesis 2: Outcome expectations will be related to goals.

Hypothesis 3: Supports will be related to (a) self-efficacy, (b) outcome expectations, (c) goals, (d) anxiety, and (e) decidedness.

Hypothesis 4: Trait conscientiousness will be related to (a) self-efficacy and (b) goals.

Hypothesis 5: A measurement model test will confirm that indicators of the constructs load on their expected factors and that the factors are distinct from but related to one another.

Hypothesis 6: A structural model including the CSM predictors and outcomes of retirement planning will produce adequate fit to the data.

Chapter 2: Methods

Participants

Five hundred twenty-five older workers completed the survey. The mean age was 60.73 years ($SD = 4.77$), the mean hours currently working was 35.58 ($SD = 11.91$), and the average years anticipated to retirement was 6.11 ($SD = 5.80$). Most (84.8%) reported that the decision to retire would be a voluntary one. The sample worked an average of 33.83 years full time ($SD = 10.87$) and 4.70 years part time ($SD = 7.70$) throughout their careers. The majority was female (61.7%) and White (88.4%), with 3.6% identifying as Black/African American, 3.2% as Asian, 1.9% as American Indian/Alaskan Native, 1.3% as Hispanic/Latino, and 1.6% as Multiracial/Other Race. In terms of income, 59% reported earning at least \$50K-\$100K per year, and a majority (69.7%) were homeowners. Participants indicated an average social class status of 6.34 out of 10 as measured by the MacArthur Scale of Subjective Social Status (Adler, Epel, Castellazzo, & Ickovics, 2000). The sample also expressed a range of educational attainment; 78.7% listed “Some College” or higher and 40.2% listed a “Bachelor’s Degree” or higher. They also indicated an average subjective health status of 3.83 out of 5, suggesting positive health. The Qualtrics Sampling Service split the sample nearly evenly between participants from the United States (50.1%) and Canada (49.9%). Participants were located in a range of states and provinces.

Older workers anticipating retirement within the next decade are an ideal population on which to study the retirement decision-making process. With incentives like Social Security in the United States and the Canadian Pension and Old Age

Security plans set to take effect for workers at or around age 65, many begin to plan actively for retirement in their late fifties/early sixties (Ekerdt et al., 2001; Turner, Bailey, & Scott, 1994). All participants read and agreed to the informed consent form and were presented with the survey instructions, which are shown in Appendices A and B, respectively.

To determine the sample size for the exploratory factor analysis phase of the study, the “fair” guideline of 200 participants recommended by Williams, Onsman, and Brown (2010) was used. The majority of the sample ($N=325$) was reserved for use in the cross-validation and model testing phase of the study. Hu and Bentler (1999) have shown that the 2-index method of determining adequacy of model-data fit is appropriate for samples of this size. According to this strategy, fit may be considered adequate if SRMR values $\leq .08$ in combination with CFI values $\geq .95$ or RMSEA values $\leq .06$.

Procedure and Instruments

Participants were individuals who signed up to take online surveys recruited through a Qualtrics Online Sample Service niche recruitment campaign. Participants were allowed to choose an incentive of their choice: frequent flier miles with a major airline company, credit at major retailers, or credit toward gift cards. Samples recruited through Qualtrics have been shown to be comparable to national demographics, including race, age, religion, marital status, income, and population density (Boas, Christenson, & Glick, 2018). Qualtrics panels have been used to recruit for a range of topics, including sexual behaviors (Beymer, Holloway, & Grov, 2018), exercise preferences in depressed individuals (Busch, Ciccolo, Puspitasari,

Nosrat, Whitworth, & Stults-Kolehmainen, 2016), and smoking attitudes (Cataldo, 2016) using random sampling from a known probability of selection.

The present panel was composed of older workers who were informed of their compensation determined by the sampling service prior to beginning the survey. In order to participate, they needed to be at least 55 years old and currently working at least 20 hours per week. Approximately 10% of qualified participants activated the link and completed the survey, with an average completion time of 12.5 minutes. After completing the informed consent form, participants were presented with a survey consisting of demographics and work history questions, along with the theoretical predictors and criterion variables. The latter included six measures that were designed or adapted for use in this study and five established measures that were used for validity purposes. Qualtrics utilized IP address checks, third-party verification, and de-duplication technology to enhance the quality of the survey responses.

In developing each new scale, I first conducted a literature review to determine content areas for the retirement preparedness process. Based on Adams and Rau's (2011) review, I constructed items based on their conceptualization of four key questions: *What will I do (i.e., in retirement)?* *How will I afford it?* *Where will I live?*, and *Who will I share it with?* These questions were used to inform item development more generally and to ensure adequacy of construct representation rather than to create four factors per construct, which would have produced a prohibitively long total survey. As such, I did not expect to see four factors for each scale. For all measures, total scores were calculated by summing item responses and

dividing by the number of items on the scale.

After determining that existing measures would not fit this study's research objectives (e.g., most were aimed at retirement adjustment or at planning only for certain types of retirement activities, like bridge work or financial saving; Petkoska & Earl, 2009; Stawski, Hershey, & Jacobs-Lawson, 2007; Wohrmann, Deller, & Wang, 2013, 2014b), items were generated via a review of the retirement planning literature and in collaboration with a research team consisting of three doctoral students and a senior researcher in counseling psychology. Using Hinkin, Tracey, and Enz's recommendation (1997), as many items as possible were generated for each scale; group consensus and psychometric testing were then used to determine which items to retain. In addition to representing Adams and Rau's (2011) four domains of retirement planning, the items were designed to be applicable to a broad range of racial, cultural, and socioeconomic statuses.

Pilot Study. Following the initial round of measure development, the new scales were administered to a pilot sample of 48 workers recruited through the Amazon Mechanical Turk (MTurk) online task marketplace. The sample reported an average age of 60.70 years ($SD = 4.11$) and reported a mean amount of years predicted until retirement of 6.82 ($SD = 4.90$). Based on examination of descriptive statistics and correlational and reliability analyses, some of the measures were revised (e.g., the format of the outcome expectations was redesigned to reduce negative skew; an existing goal measure was repurposed and expanded to replace the newly designed measure of this construct). Due to the limited number of responses, a new platform for recruiting the main sample was sought. The revised survey was then administered

to the new Qualtrics sample, which was divided into two sub-samples, as described below, for use in the study's measurement validation and model testing phases.

Self-Efficacy. The retirement planning self-efficacy scale initially contained 15 items reflecting the activities, finances, living arrangement, and social connection retirement sub-domains cited by Adams and Rau (2011) as well as self-efficacy at coping with difficult conditions in retirement (Appendix C). The latter used Lent et al.'s (2016) coping self-efficacy with career decision-making hurdles as a guide. Example items include: "Anticipate the financial costs of retirement" (Finances), and "Find things to do in retirement that are enjoyable" (Activities). Participants were asked to rate each item on a scale of "0" (i.e., "No confidence at all") to "4" (i.e., "Complete confidence"), and all items were summed and divided by the total number to achieve an average score.

To determine convergent validity, the overall scale score was correlated with the Generalized Self-Efficacy Scale (Baessler & Schwarzer, 1996; Schwarzer & Jerusalem, 1995). The latter assesses self-efficacy at being able to handle daily tasks and at adapting to stressful life events generally (see Appendix D). A sample item is, "It is easy for me to stick to my aims and accomplish my goals." The Generalized Self-Efficacy Scale has demonstrated adequate reliability estimates (e.g., $\alpha = .92$, Valero & Topa, 2015; $\alpha = .83$, Juarez & Conteras, 2008) and has been found to correlate significantly with self-efficacy scales for retirement adjustment (Valero & Topa, 2015).

Outcome Expectations. A 9-item retirement planning outcome expectations scale was designed to measure perceived benefits of planning actively for retirement

(see Appendix E). Participants were asked to indicate the degree to which they agree or disagree with various outcomes of “planning actively for my retirement” using a scale ranging from “1” (Strongly Disagree) to “5” (Strongly Agree). Higher scores indicate a stronger belief that specific planning steps will lead to better retirement planning outcomes. A sample item is: “If I were to plan actively for retirement, I would most likely figure out how I will spend my time in retirement.”

To estimate the scale’s validity, it was correlated with the Life Orientation Test – Revised (LOT-R; Scheier, Carver, & Bridges, 1994; see Appendix F). The LOT-R is a measure of general optimism and pessimism, and the optimism subscale asks participants to indicate their level of agreement with three items (e.g., “I’m always optimistic about my future”). Patton, Bartrum, and Creed (2004) found the LOT-R Optimism scale to correlate significantly with a measure of career outcome expectations. The 3-item optimism subscale has produced internal reliability estimates of .71 (Patton et al., 2004) to .82 (Chiesi, Galli, Primi, Borgi, & Bonacchi, 2013) in other career studies.

Supports. The new retirement planning supports scale asks participants to identify how much support they could count on from significant others to help them explore retirement options or make retirement decisions (see Appendix G). One sample item is, “I would have access to a professional helper (e.g., financial advisor, career counselor).” Participants indicate their degree of agreement on a scale of “1” (No support at all) to “5” (A great deal of support), with higher scores indicating greater levels of perceived support.

To estimate validity, this scale was correlated with the Multidimensional

Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet & Farley, 1988; See Appendix H), a generalized measure of social support (e.g., “My friends really try to help me”). Zimet et al.’s scale has produced adequate reliability estimates in prior research (e.g., $\alpha = .80$, Zimet, Powell, Farley, Werkman, & Berkoff, 1990; $\alpha = .94$, Stanley, Beck, & Zebb, 1998) and has been linked to positive academic adjustment (Decker, Dona, & Christenson, 2007), coping strategies (Hudek-Knezčević & Kardum, 2000), and retirement satisfaction (López-Ramos, Juan, Navarro-Pardo, & Murphy, 2017). The retirement scale had been expected to correlate substantially with the general measure of social support but also to reflect unique variance.

Goals. A pre-existing measure of retirement planning goals, the General Goal Clarity Scale (Stawski, Hershey, & Jacobs-Lawson, 2007), was used as the basis for measuring retirement planning goals (see Appendix I). Based on the pilot study, the 5-item General Goal Clarity Scale yielded higher correlations with the other predictor variables, including self-efficacy and supports, than did a goals scale specifically designed for this study. The Goal Clarity scale reflects general goals for retirement and asks participants to indicate their level of agreement on a scale of “1” (Strongly Disagree) to “7” (Strongly Agree) with five statements concerning retirement planning activities. Directions for the Goal Clarity Scale were revised from a retrospective aim (i.e., “during the past 12 months”) to reflect the prospective aim of retirement planning (i.e., “during the next 12 months”). A sample item is, “Set clear goals for gaining information about retirement.” Stawski et al. found that the scale produced a coefficient alpha estimate of .90 and correlated significantly with

retirement planning activities and savings contributions.

In order to enhance construct representation, the five original Goal Clarity items were supplemented with the five highest loading items from the new goal scale used in the pilot study, generating a revised 10-item scale (see Appendix I). New items were adapted to conform to the format of the Goal Clarity scale (e.g., Removing item stems like “I intend to” and increasing the time from “the next two months” to “the next twelve months”). Sample supplemental items include “Commit to learning more about retirement activities that would best match my interests” and “Research the steps for a backup retirement plan.” In order to estimate the validity of the revised goal scale, I examined its correlations with the retirement planning self-efficacy and supports scales.

Anxiety. The retirement planning anxiety scale asks participants to indicate their degree of negative emotional reaction to engaging in the retirement planning process (See Appendix J). Specifically, participants indicate on a scale of “1” (Strongly Disagree) to “5” (Strongly Agree) how much they agree with statements like, “I am uncomfortable thinking about retirement.” The items were modeled after the Choice/Commitment Anxiety subscale of the Career Indecision Profile (CIP; Brown et al. (2012), which taps anxiety and emotional discomfort with the career decision-making process. Higher scores indicate more negative feelings about the retirement planning process. Validity was estimated by correlating the new retirement planning anxiety scale with both the Positive Affect and Negative Affect scales of the Positive and Negative Affect Schedule Short Form (PANAS-SF; Thompson, 2007) (see Appendix K). High scores on the Positive Affect scale characterize feelings of

ease or comfort and are theorized to be negatively correlated with anxiety within the SCCT CSM model. The Negative Affect scale is considered a reliable indicator of general feelings of discomfort and has been found to correlate negatively with retirement adjustment and engagement in post-retirement activities (Earl, Gerrans, & Halim, 2015).

Decidedness. Level of decidedness has been used as an outcome variable to reflect career decision-making status in previous studies (e.g., Lent et al., 2016; Penn & Lent, 2018). A six-item measure was developed to assess level of decidedness regarding one's retirement plans (see Appendix L). The measure was informed by Adams and Rau's (2011) retirement planning domains. Participants indicated how much they agree with each statement on a scale of "1" (Strongly Disagree) to "5" (Strongly Agree), with higher scores indicating a higher degree of overall decidedness regarding one's plans for retirement. A sample item is: "I have decided where I want to live when I retire."

To estimate validity, the retirement planning decidedness scale was correlated with the Conscientiousness subscale (See Appendix M) and the Positive Affect scale. It was reasoned that individuals high in trait conscientiousness are more likely to report greater levels of decidedness due to their planfulness and goal-directed behaviors. Previous studies have found moderate correlations between career decidedness and Conscientiousness (e.g., Brown et al., 2012; Feldt et al., 2011; Hirschi & Hermann, 2013; Penn & Lent, 2018). It was also reasoned that the scores on the Positive Affect scale and the new Decidedness measure will be positively correlated, given the sense of accomplishment associated with decidedness.

Conscientiousness. The Big Five Mini-Markers Subscale of Conscientiousness was used to index the general tendency to be organized and planful (Saucier, 1994). The Big Five Mini-Markers Scales ask participants to rate the extent to which they identify with adjectives measuring the Five Factor traits (See Appendix M). Items are rated on a Likert scale ranging from 1 (*extremely inaccurate*) to 9 (*extremely accurate*). For the purposes of this study, only the Conscientiousness subscale was used. This subscale contains 8 items. Two sample items are: “Systematic” and “Careless” (the latter is reverse-scored). Higher scores reflect stronger levels of conscientiousness.

The initial coefficient alpha estimate for the Conscientiousness scale of the Big-Five Mini-Markers measure was .86 (Saucier, 1994). Palmer and Loveland (2004) reported a correlation of .75 between the corresponding measures of Conscientiousness on the Mini-Markers and Big Five Questionnaires, an alternative measure of the Big Five traits. The authors also found that the Mini-Markers Conscientiousness scale correlated with Life Satisfaction and Emotional Intelligence measures to a degree similar to the Conscientiousness scale of the Big Five Questionnaire. Mooradian and Nezlek (1996) compared the Mini-Markers to the NEO Five-Factor Inventory and found correlations of .68 for the two Conscientiousness scales.

Demographics Measures. Demographic information was gathered using a set of single-item indicators (See Appendix N). This included participant education level, gender, projected years until retirement, duration of work life (in terms of years of full- and part-time work), age, current yearly income, status of home ownership,

current job title, race/ethnicity, state or province of residence, and whether or not retirement will be a voluntary choice or forced decision. Job titles were classified according to job families using the O'NET Online classification system (ONETonline.org/find/family). These 21 job families are “groups of occupations based upon work performed, skills, education, training, and credentials”. The full classification of the 525 participants is available in Appendix O. Of note, the Management job family was cited most frequently, with 95 job titles, followed by Business and Financial Operations with 68 job titles.

Subjective health status was measured using a two-item scale developed by Wohrmann et al. (2014a) based on qualitative interviews with 22 workers approaching retirement. Higher average scores indicate more positive subjective health reports with a maximum score of “5.” Wohrmann et al. reported a Cronbach alpha of .74 for the measure and also found that it correlated significantly with outcome expectations and intentions to engage in post-retirement work. Social class was assessed with the MacArthur Scale of Subjective Social Status (Adler et al., 2000). This measure asks participants to indicate where they believe they fall on a 10-rung social ladder representing a hierarchy of society. The highest rung represents the most financially successful and educated level, while the bottom rung represents the least successful. This measure correlates moderately with composite scores of socioeconomic status ($r = .40$; Adler et al., 2000).

Data Analysis

To achieve the goals of both validating new SCCT measures of retirement planning and testing the proposed model of retirement decision-making, the data were

analyzed in two phases. In the first phase, data from the first 200 participants of the main sample were used to conduct an exploratory factor analysis and other initial psychometric analyses. For the second phase, responses from the remaining 325 participants were used for validation and model testing of parcels based on factor loadings from the first phase. Each phase is described below.

Initial Measurement Validation Phase. The purpose of this phase was to provide initial estimates of reliability and validity for the novel scales before using them in model testing. Data from the first 100 U.S. and the first 100 Canadian participants were used to assess the factor structures of the new retirement decision-making self-efficacy, outcome expectations, social support, goals, anxiety, and decidedness scales. Specifically, responses were subjected to principal axis factoring and oblimin oblique rotation (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Gorsuch, 1997) using SPSS 24. Cronbach's alpha reliability coefficients, descriptive statistics, and intercorrelations were then examined based on the factor-derived scales.

Measurement and Structural Model Testing Phase. Data of the remaining 325 participants were used to test the measurement and structural models. These models were tested with the MLM estimation procedure of Mplus 7.4 (Muthen & Muthen, 1998-2015) and items parcels derived from exploratory factor analyses with the first part of the sample ($N = 200$). Specifically, parcels were created using the balancing method described by Little, Rhemtulla, Gibson, and Schoemann (2013). Three parcels were constructed for the retirement planning self-efficacy, outcome expectations, anxiety, goals, and decidedness scales, as well as the established

conscientiousness scale. These parcels were formed by averaging the items with higher and lower loadings within a scale until all items are assigned to one of the three parcels. Although self-efficacy had produced a two-factor structure in exploratory factor analysis, the two factors were highly related, suggesting substantial overlap. Three parcels were used to model self-efficacy in the measurement model given the advantages of just-identified measurement structures (Little et al., 2013). Finally, to incorporate financial as well as social supports into the model, the Social Ladder variable was added to the three parcels from the retirement planning supports measure. As Little et al. (2013) note, the use of item parcels offers several advantages, such as testing models with fewer parameter estimates and reduced sources of sampling error. The measurement model (confirmatory factor analysis) tested a 7-factor representation of the data. The structural model tested the hypothesized paths predicting retirement planning anxiety, decidedness, and goals, as shown in Figure 2.

Chapter 3: Results

The results of the initial measurement validation and model testing phases are described in this section.

Initial Measurement Validation

Each proposed scale was subjected to principal axis factoring and oblimin oblique rotation (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Gorsuch, 1997) and each scale's factor structure was determined using scree plot and factor interpretability criteria based on eigenvalues > 1 . Using the pattern matrix, items that yielded loadings above .40 on a primary factor and that cross-loaded minimally on other factors were retained (see Costello & Osborne, 2016; Matsunaga, 2010).

Retained items had a difference $\geq .10$ between the primary factor and other factors.

Exploratory factor analyses. The factor analysis of the retirement planning self-efficacy items suggested a 2-factor solution, accounting for 63% of the total variance (see Table 2). Based on the common themes across items, the two factors were labeled (a) planning to structure time (10 items, 51.7% of the variance) and (b) planning for financial security (5 items, 11.6% of the variance; see Table 1). The Kaiser-Meyer-Olkin Test (KMO) was .92 and Bartlett's Test of Sphericity was significant. The first factor was made up of items related to spending time with others and replacing one's former work structure with other activities (e.g., "Cope with the loss of a routine work schedule"). The second factor encompassed items related to saving money and planning living arrangements for retirement life (e.g., "Manage your financial resources so you do not run out of money"). Both subscales

were strongly correlated ($r = .56$), suggesting support for a conception of retirement planning self-efficacy that subsumes life structure and retirement planning elements. The internal consistency Cronbach's alpha estimates for the two subscales were, respectively, .92 and .87, and the Cronbach's alpha for the total scale was .93.

Table 1

Retirement Planning Self-Efficacy – Items and Factor Loadings in Study 1

Self-Efficacy Factor/Item	Factor 1	Factor 2
1. Life Structure Planning Factor		
How much confidence do you have in your ability to...		
...Cope with the loss of a routine work schedule (D)	.86	-.15
...Make a smooth adjustment to a different daily schedule (e.g., one not centered only on work) (D)	.85	-.12
...Have a meaningful social life in retirement (S)	.81	.00
... Find satisfying ways to structure your time (or keep busy) in retirement (D)	.80	.04
...Find things to do in retirement that are enjoyable (D)	.73	.03
...Handle any sense of loss about leaving the workplace (e.g., missing your colleagues or the work itself) (D/S)	.71	.01
...Find ways to stay involved with people you feel close to (S)	.70	.15
...Find people with similar interests to spend time with (S)	.57	.22
...Decide which living options will be best for you in retirement (e.g., stay where you live now or move to a different living arrangement) (L)	.51	.34
...Figure out where you will want to live in retirement (L)	.51	.19
2. Planning for Financial Security Factor		
How much confidence do you have in your ability to...		
...Manage your financial resources so that you do not run out of money (A)	-.13	.93
...Find solutions to unexpected setbacks in your retirement planning (C)	.16	.71
...Take steps to prepare for living arrangements during retirement (L)	.18	.71
...Anticipate the financial costs of retirement (A)	-.04	.70
...Obtain additional sources of income (like part-time work), if necessary (A)	.28	.46

Note: Values in bold type indicate the primary factor on which a given item loaded. D= What will I do?; A= How will I afford it?; L= Where will I live?; S= Who will I share it with? C= How will I cope with it?

The exploratory factor analysis for the 9-item Retirement Planning Outcome

Expectations Scale suggested a 1-factor solution, which explained 58% of the total variance. All items were retained, and the Kaiser-Meyer-Olkin Test ($KMO = .89$) and the Bartlett's Test of Sphericity for the item scores ($p > .001$) were acceptable. Factor loadings on the factor matrix ranged from .58 ("Get my finances in order to better support myself in retirement") to .81 ("Increase my chances of having a satisfying retirement"; See Table 2). The internal consistency estimate for the scale was $\alpha = .90$.

Table 2

Retirement Planning Outcome Expectations – Items and Factor Loadings in Study 1

Outcome Expectations Items	Factor
If I were to plan actively for my retirement, I would most likely...	
...Increase my chances of having a satisfying retirement	.81
...Be pleased with myself	.81
...Figure out how I will spend my time in retirement (D)	.79
...Feel better, or more relaxed, about the idea of retiring	.78
...Figure out a housing situation I like (L)	.74
...Come up with ways to avoid feeling lonely or missing work once I retire (S)	.71
...Come up with retirement plans that I hadn't considered before	.65
...Make my friends or loved ones happy (S)	.63
...Get my finances in order to better support myself in retirement (A)	.58

Note: Values in bold type indicate the primary factor on which a given item loaded. D= What will I do?; A= How will I afford it?; L= Where will I live?; S= Who will I share it with?

The factor analysis of the proposed retirement planning social supports scale identified a single factor solution explaining 50% of the total variance. All items were retained, and the KMO and Bartlett's Tests were within acceptable limits (i.e., $KMO = .87$; $p > .001$). Item loadings ranged from .46 ("...information on retirement that I could find in print form or on the Internet") to .80 ("...a mentor or someone I could use as a sounding board"; See Table 3). The Cronbach's alpha was .89, suggesting adequate internal consistency reliability.

Table 3**Retirement Planning Supports – Items and Factor Loadings in Study 1**

Retirement Supports Items	Factor
If you wanted support for retirement planning, how much support could you get from each of the following?	
...A mentor or someone you could use as a sounding board	.80
...At least one former colleague or friend who has successfully retired	.79
...At least one friend	.72
...Social contacts who would let me question them about their retirement	.70
...Community members (e.g., religious leaders, club coordinators)	.70
...A current or past employer	.67
...At least one family member	.66
...A professional helper (e.g., a career or general counselor)	.61
...A financial advisor	.50
...Information on retirement that I could find in print form or on the Internet	.46

Note: Values in bold type indicate the primary factor on which a given item loaded.

The 9 items of the proposed Retirement Planning Anxiety Scale all loaded on a single factor and explained 60% of the total variance. The KMO and Bartlett's test results were adequate ($KMO = .88$; $p > .001$). Item loadings ranged from .62 ("I am uncomfortable thinking about retirement") to .81 ("Retirement feels like it's coming too fast to prepare for it adequately"; See Table 4), and the internal consistency statistic was $\alpha = .91$.

Table 4**Retirement Planning Anxiety – Items and Factor Loadings in Study 1**

Retirement Anxiety Items	Factor
Read each statement carefully and indicate how well it describes you, using the disagree/agree scale to select your answer.	
1. Retirement feels like it's coming too fast to prepare for it adequately	.81
2. I'm worried that I won't have enough financial resources to survive in retirement (A)	.80
3. I often feel discouraged about having to make retirement decisions	.79

4. I'm feeling uncertain about whether retirement will be a positive experience	.77
5. I'm nervous about being able to figure out what I'll do in retirement (D)	.74
6. I have been putting off planning for retirement because it makes me nervous	.74
7. I'm concerned that my financial needs may change after I decide on a retirement direction (A)	.69
8. I'm concerned that my retirement goals may change after I start planning for retirement	.69
9. I am uncomfortable thinking about retirement	.62

Note: Values in bold type indicate the primary factor on which a given item loaded. D= What will I do?; A= How will I afford it?; L= Where will I live?; S= Who will I share it with?

To measure retirement planning goals, the 5-item Retirement Goal Clarity Scale (Stawski, Hershey, & Jacobs-Lawson, 2007) was supplemented with five new items in order to enhance construct representation and ensure that the scale corresponded appropriately with content on the other social cognitive measures. The ten total items loaded on a single factor, and loadings ranged from .62 (“Discuss retirement plans with a spouse, friend, or significant other”) to .90 (“Spend more time thinking about how to put retirement plans into action”; See Table 5). The KMO score was .93, and the Bartlett’s Test of Sphericity was adequate ($p > .001$). The 1-factor solution explained 68% of the total variance, and the internal consistency of the scale was strong ($\alpha = .95$).

Table 5

General Retirement Goal Clarity Scale (Adapted) – Items and Factor Loadings in Study 1

Retirement Goal Clarity Items	Factor
Indicate the extent to which you agree or disagree with each of the following statements in reference to actions you plan to take during the next 12 months.	
1. <i>Spend time thinking about how to put retirement plans into action</i>	.90
2. <i>Research the steps for a backup retirement plan</i>	.88

3. <i>Spend time comparing the financial advantages and disadvantages of different retirement options (A)</i>	.87
4. <i>Commit to learning more about retirement activities that would best match my interests (D)</i>	.85
5. <i>Spend more time learning about retirement options (e.g., jobs, volunteer activities) (D)</i>	.84
6. Set specific goals for how much will be needed to be saved for retirement (A)	.81
7. Think a great deal about quality of life in retirement (L/A)	.77
8. Set clear goals for gaining information about retirement	.76
9. Have a clear vision of how life will be in retirement	.74
10. Discuss retirement plans with a spouse, friends or significant other (S)	.62

Note: Italicized items represent supplemental items from the pilot study. Values in bold type indicate the primary factor on which a given item loaded. D= What will I do?; A= How will I afford it?; L= Where will I live?; S= Who will I share it with?

The 6-item retirement planning decidedness scale was subjected to exploratory factor analysis, yielding a 1-factor solution which accounted for 61% of the total variance (See Table 6). All items were retained, and the KMO and Bartlett's validity tests were adequate (KMO = .87; $p > .001$). The 6-item scale produced a Cronbach's alpha estimate of .87.

Table 6
Retirement Planning Decidedness – Items and Factor Loadings in Study 1

Retirement Decidedness Items	Factor
Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements at this point in time.	
1. I have a pretty good idea of when I will retire	.78
2. I have a clear plan for how I will pay for expenses in retirement (A)	.76
3. My overall retirement plans at this time are decided	.74
4. I know how I will spend my time in retirement (D)	.71
5. I am sure of the people with whom I will spend my retirement (S)	.71
6. I have decided where I want to live when I retire(L)	.67

Note: Values in bold type indicate the primary factor on which a given item loaded. D= What will I do?; A= How will I afford it?; L= Where will I live?; S= Who will I share it with?

All items were retained in each proposed scale. Scale scores were then computed by adding the item responses and dividing by the total number of items on each scale. Table 7 contains means, standard deviations, Cronbach's alpha estimates, range of scale scores, and skew and kurtosis estimates for all scales, including scales used to estimate validity. Alpha estimates were adequate, and skew and kurtosis values suggested that the scale scores were generally distributed normally (West, Finch, & Curran, 1995), though negative affect scores were somewhat positively skewed and kurtotic.

Table 7.
Descriptive Statistics for Phase 1.

Variable	M	SD	α	Skew	S. SE	Kurt	K. SE	Min	Max
1. Retirement SE	2.63	.72	.93	-.45	.17	.68	.34	.00	4.00
2. General SE	3.17	.47	.91	-.41	.17	.77	.34	1.40	4.00
3. Retirement OE	4.03	.61	.90	-.54	.17	.55	.34	2.00	5.00
4. LOT-R Optimism	3.72	.85	.86	-.65	.17	.23	.34	1.00	5.00
5. Retirement Sup	3.02	.83	.89	-.22	.17	-.20	.34	1.00	5.00
6. Perceived Soc Sup	5.26	1.31	.96	-.91	.17	.73	.34	1.00	7.00
7. Conscientiousness	4.19	.66	.86	-.75	.17	-.02	.34	2.13	5.00
8. Retirement Anx	3.29	1.20	.91	.06	.17	-.67	.34	1.00	6.00
9. PANAS NA	1.65	.67	.83	1.3	.17	1.6	.34	1.00	4.00
10. PANAS PA	3.77	.78	.86	-.49	.17	-.08	.34	1.40	5.00
11. Retirement Goals	5.03	1.17	.95	-.41	.17	-.07	.34	1.20	7.00
12. Retirement Dec	3.65	.88	.87	-.54	.17	.03	.34	1.00	5.00
13. Health Status	3.91	.86	.86	-.87	.17	.83	.34	1.00	5.00
14. Social Ladder	6.24	1.81	--	-.46	.17	-.31	.34	2.00	10.00

Note. $N = 200$. Retirement SE = Retirement Planning Self-Efficacy; General SE = Generalized Self-Efficacy Scale; Retirement OE = Retirement Planning Outcome Expectations; LOT-R Optimism = Life Orientation Test-Revised Optimism Scale; Retirement Sup = Retirement Planning Supports; Perceived Soc Sup = Multidimensional Scale of Perceived Social Support (MSPSS); Retirement Anx = Retirement Planning Anxiety; PANAS NA = Positive and Negative Affect Schedule Short Form, Negative Affect Scale; PANAS PA = Positive and Negative Affect Schedule Short Form, Positive Affect Scale; Retirement Goals = Retirement Planning Goals; Retirement Dec = Retirement Planning Decidedness; Health Status = Subjective Health Status; Social Ladder = MacArthur Scale of Subjective Social Status.

Correlations among the scales are displayed in Table 8. Consistent with Cohen's (1988) rules of thumb, correlations $\geq .10$, $\geq .30$, and $\geq .50$ will be considered, respectively as small, medium, and large in size. The new retirement

planning self-efficacy scale scores correlated strongly with the General Self-Efficacy Scale ($r = .68$), suggesting that it is capturing a similar orientation toward personal agency. The new outcome expectations scale correlated moderately with the optimism subscale of the Life Orientation Test-Revised ($r = .43$), suggesting that retirement planning outcome expectations partly reflect a positive future orientation. The new retirement planning supports scale also correlated highly with the Multi-dimensional Scale of Perceived Social Support ($r = .58$), suggesting that retirement planning support overlaps with access to general social support. The new retirement anxiety scale correlated substantially with the Negative Affect Subscale ($r = .53$) and the Positive Affect Subscale of the PANAS ($r = -.43$). Thus, worry about retirement may partly reflect a general tendency to experience more negative affect and less positive affect. The modified goal scale also correlated with the retirement planning self-efficacy ($r = .45$) and supports ($r = .38$) scales in theory-consistent ways. Finally, the Decidedness scale correlated, as expected, with the retirement planning self-efficacy ($r = .61$) scale and the Positive Affect Subscale ($r = .43$), though its correlation with conscientiousness was more modest than expected ($r = .24$).

In sum, the items for each proposed scale were retained and produced relatively simple factor structures, and the descriptive statistics and validity and internal consistency estimates suggested that the novel scales yielded promising psychometric characteristics. The decision was, therefore, made to proceed to the confirmatory factor analysis and model testing phases of the study. The results of those analyses are presented next.

Table 8.
Correlations for Phase 1.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Retirement SE	--												
2. General SE	.68*	--											
3. Retirement OE	.67*	.53*	--										
4. LOT-R Optimism	.51*	.61*	.43*	--									
5. Retirement Sup	.40*	.26*	.40*	.34*	--								
6. Perceived Soc Sup	.55*	.40*	.49*	.41*	.58*	--							
7. Conscientiousness	.29*	.37*	.28*	.25*	.12	.16	--						
8. Retirement Anx	-.59*	-.54*	-.44*	-.50*	-.30*	-.39*	-.33*	--					
9. PANAS NA	-.35*	-.44*	-.23*	-.44*	-.11	-.30*	-.32*	.53*	--				
10. PANAS PA	.48*	.53*	.45*	.54*	.27*	.41*	.49*	-.43*	-.37*	--			
11. Retirement Goals	.45*	.38*	.57*	.36*	.38*	.42*	.24*	-.25*	-.09	.32*	--		
12. Retirement Dec	.61*	.45*	.55*	.42*	.37*	.48*	.24*	-.57*	-.27*	.43*	.59*	--	
13. Health Status	.40*	.40*	.36*	.38*	.34*	.35*	.35*	-.38*	-.42*	.50*	.19*	.39*	--
14. Social Ladder	.41*	.38*	.37*	.29*	.35*	.34*	.11	-.39*	-.13	.31*	.37*	.46*	.28*

Note. $N = 200$. $*p < .01$. Retirement SE = Retirement Planning Self-Efficacy; General SE = Generalized Self-Efficacy Scale; Retirement OE = Retirement Planning Outcome Expectations; LOT-R Optimism = Life Orientation Test-Revised Optimism Scale; Retirement Sup = Retirement Planning Supports; Perceived Soc Sup = Multidimensional Scale of Perceived Social Support (MSPSS); Retirement Anx = Retirement Planning Anxiety; PANAS NA = Positive and Negative Affect Schedule Short Form, Negative Affect Scale; PANAS PA = Positive and Negative Affect Schedule Short Form, Positive Affect Scale; Retirement Goals = Retirement Planning Goals; Retirement Dec = Retirement Planning Decidedness; Health Status = Subjective Health Status; Social Ladder = MacArthur Scale of Subjective Social Status.

Testing the Measurement and Structural Models

Data from the remaining 325 participants were used to test the measurement and structural models. These tests involved item parcels (three for each construct, except retirement planning support, which contains four parcels including Social Ladder) that were based on the loadings of the single-factor solutions in the initial phase of the study. Hu and Bentler's (1999) dual-index strategy was used to assess adequacy of model-data fit.

Measurement model. The measurement model tested the tenability of a 7-factor correlated model. This model fit the data well: SRMR = .04, CFI = .97, RMSEA = .05, $\chi^2(188, N = 325) = 360.76, p > .001$. As shown in Table 9, all parcels loaded highly on their corresponding constructs. Latent variable correlations, displayed in Table 10, indicate that most of the variables were significantly interrelated, except for Conscientiousness and Supports, Conscientiousness and

Goals, and Goals and Anxiety. On balance, then, results of measurement model testing supported the representation of the theoretical predictors and dependent variables as distinct yet mostly related latent constructs. Table 11 presents the observed scale score correlations among the constructs with the second sub-sample.

Table 9. Standardized Parcel-Construct Loadings from the Measurement Model Test

	Estimate	S.E.	Est./S.E.	P-Value
Self-Efficacy				
SE P1	0.943	0.011	83.434	0.000
SE P2	0.921	0.011	81.612	0.000
SE P3	0.869	0.014	62.823	0.000
Outcome Expectations				
OE P1	0.900	0.018	48.799	0.000
OE P2	0.779	0.029	26.800	0.000
OE P3	0.874	0.020	43.567	0.000
Supports				
SUP P1	0.841	0.019	43.629	0.000
SUP P2	0.917	0.014	64.323	0.000
SUP P3	0.872	0.017	50.255	0.000
SOCLAD	0.416	0.045	9.174	0.000
Conscientiousness				
CON P1	0.816	0.028	29.098	0.000
CON P2	0.864	0.021	40.698	0.000
CON P3	0.926	0.023	40.178	0.000
Anxiety				
ANX P1	0.864	0.016	52.825	0.000
ANX P2	0.944	0.012	76.196	0.000
ANX P3	0.878	0.020	44.390	0.000
Goals				
GOAL P1	0.928	0.010	94.464	0.000
GOAL P2	0.958	0.007	131.054	0.000
GOAL P3	0.961	0.007	133.158	0.000
Decidedness				
RDEC P1	0.780	0.026	29.492	0.000
RDEC P2	0.859	0.019	44.645	0.000
RDEC P3	0.821	0.023	35.585	0.000

Note. P1 = Parcel 1; P2 = Parcel 2; P3 = Parcel 3; SE = Retirement Planning Self-Efficacy; OE = Retirement Planning Outcome Expectations; SUP = Retirement Planning Supports; SOCLAD = Social Ladder; CON = Conscientiousness; ANX =

Retirement Planning Anxiety; GOAL = Retirement Planning Goals; RDEC = Retirement Planning Decidedness.

Table 10. Correlations among the Latent Variables in the Measurement Model Test

Variable	1	2	3	4	5	6
1. Retirement Planning Self-Efficacy	--					
2. Retirement Planning Outcome Expectations	.63*	--				
3. Retirement Planning Supports	.40*	.43*	--			
4. Conscientiousness	.32*	.30*	.07	--		
5. Retirement Planning Anxiety	-.60*	-.30*	-.25*	-.27*	--	
6. Retirement Planning Goals	.28*	.51*	.46*	.11	-.01	--
7. Retirement Planning Decidedness	.75*	.57*	.44*	.33*	-.62*	.43*

Note. * $p < .05$.

Table 11. Correlations, Means, Standard Deviations, and Internal Consistency Estimates for the Observed Scale Scores in Phase 2

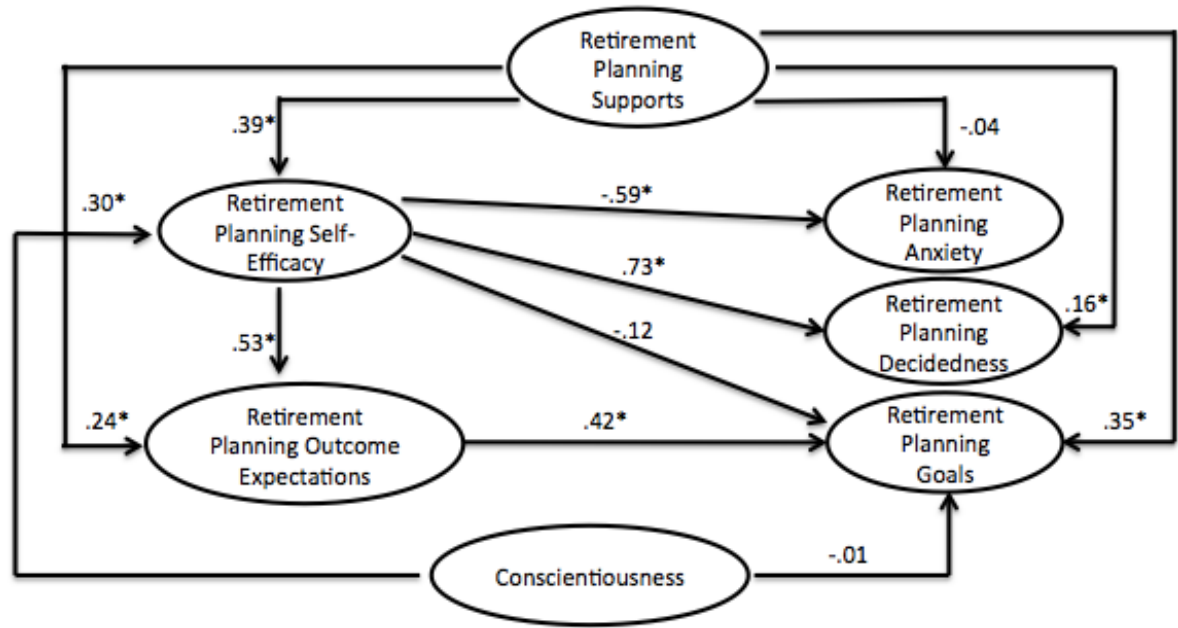
Variable	1	2	3	4	5	6	7	M	SD	α
1. Self-Efficacy	--							2.61	.76	.94
2. Outcome Expectations	.59*	--						3.97	.62	.89
3. Supports	.40*	.43*	--					3.06	.85	.88
4. Conscientiousness	.31*	.28*	.09	--				4.11	.74	.89
5. Anxiety	-.57*	-.30*	-.26*	-.27*	--			3.32	1.26	.93
6. Goals	.27*	.50*	.46*	.09	-.04	--		4.97	1.33	.96
7. Decidedness	.72*	.56*	.41*	.28*	-.58*	.38*	--	3.55	.88	.84
8. Social Ladder	.32*	.25*	.40*	.19*	-.36*	.28*	.41*	6.40	1.72	--

Note. * $p < .05$

Structural Model. A path analysis with latent variables was next used to test the hypothesized paths among the constructs. This analysis produced the following fit indices: SRMR = .06 and CFI = .97; RMSEA = .06, $\chi^2 (193, N = 325) = 380.10, p < .001$. These findings suggest that the structural model offers good fit to the data. Although a Satorra-Bentler scaled chi-square difference test (Satorra & Bentler, 2010) indicated that it did not fit the data as well as the measurement model, $\Delta\chi^2 (5) = 19.05, p < .05$, the difference in fit did not appear to be practically significant ($\Delta\text{CFI} = 0.00$).

As shown in Figure 3, supports and conscientiousness both produced significant paths to self-efficacy ($R^2 = .25$), and self-efficacy and supports were both significantly predictive of outcome expectations ($R^2 = .44$). Self-efficacy and supports each contributed significant paths to decidedness ($R^2 = .59$) but self-efficacy alone was a significant predictor of anxiety ($R^2 = .36$). Finally, outcome expectations and supports, though not self-efficacy or conscientiousness, yielded significant paths to goals ($R^2 = .32$).

Figure 3. Standardized Path Coefficients in the Structural Model Test



* $p < .05$

Indirect effects in the model were tested using 5,000 bias-corrected bootstrap samples and a 95% confidence interval in Mplus. As shown in Table 12, twelve pathways were examined, and ten indirect paths were found to be significant (i.e., confidence intervals that do not include 0). It was found that self-efficacy mediated the pathways from both conscientiousness and retirement planning supports to retirement planning outcome expectations, anxiety, and decidedness. Meanwhile, outcome expectations was a key mediator of paths leading to goals. In particular, self-efficacy was linked to retirement planning goals only indirectly, via outcome expectations. Supports were related to goals via both outcome expectations and the self-efficacy to outcome expectations path. Likewise, conscientiousness was linked to goals through the pathway from self-efficacy to outcome expectations. The path from conscientiousness to goals through self-efficacy and the path from supports to

goals through self-efficacy failed to reach statistical significance. This is likely due to the insignificant direct path from self-efficacy to goals in the model.

Table 12. Indirect effects in the path model relationships.

Ind. Var.	Med. Var(s).	Dep. Var.	β	B	Std. Error B	95% CI	
						Lower	Upper
Sup→	SE→OE→	Goal	.08	.14	.04	.049	.136
Sup→	OE→	Goal	.09	.14	.05	.041	.146
Con→	SE→ OE→	Goal	.07	.13	.04	.039	.111
SE→	OE→	Goal	.22	.40	.09	.141	.325
Con→	SE→	Goal	-.03	-.06	.05	-.079	.014
Sup→	SE→	Goal	-.04	-.06	.05	-.100	.020
Sup→	SE→	Dec	.26	.27	.05	.183	.336
Con→	SE→	Dec	.21	.24	.05	.134	.288
Sup→	SE→	Anx	-.22	-.36	.07	-.303	-.153
Con→	SE→	Anx	-.18	-.33	.07	-.254	-.113
Sup→	SE→	OE	.21	.17	.03	.143	.281
Con→	SE→	OE	.17	.15	.03	.104	.237

Note. Bootstrap estimates are based on 5,000 bootstrap samples. Sup = supports; SE = self-efficacy; OE = outcome expectations; Con = conscientiousness; Goal = goals; Dec = decidedness; Anx = anxiety; Std. Error = standard error.

In sum, the measurement model test confirmed the tenability of a 7-factor correlated representation of the theoretical constructs, and the path analysis findings indicated that the structural model provided good fit to the data, accounting for roughly a third of the variance in retirement planning goals and anxiety and two-thirds of the variance in level of retirement planning decidedness. In addition, support was found for most of the indirect pathways in the model. However, not all of the hypothesized paths conformed to the CSM. For example, contrary to expectations, neither conscientiousness nor self-efficacy produced significant direct paths to goals, though they were linked to goals indirectly via outcome expectations.

Multiple-group Analyses.

In order to test for gender and country differences in the retirement planning process, the measurement and structural models were compared separately by gender and country. To test measurement invariance, a model in which the factor loadings were allowed to vary by group was compared with a model in which the factor loadings were constrained to be equal across the grouping variable (e.g., country). If the two model versions did not yield substantially different fit, then it was assumed that the variables were being measured comparably across groups. A similar method was used to test for structural invariance, such that the fit of a model in which both factor loadings and the structural paths were constrained to equality across groups was compared to a model in which the loadings were constrained, but the structural paths were allowed to vary by group. In order to ensure adequate power, the entire sample (n=525) was used for these analyses. The multiple-group analyses are presented in Table 13.

Table 13. Fit indices for the multiple-group analyses.

Model	S-B χ^2	df	Δ S-B χ^2	Δ df	RMSEA ^a	CFI ^a	SRMR
Grouping variable: Country							
Measurement model without constraints	711.01*	376	-	-	.058	.963	.058
Measurement model with constraints on all loadings	718.12*	391	5.63	15	.056	.964	.058
Structural models without constraints	760.72*	401	-	-	.058	.960	.066
Structural model with constraints on all structural paths	773.99*	413	13.99	12	.058	.960	.072
Grouping variable: Gender							
Measurement model without constraints	647.35*	376	-	-	.052	.970	.055
Measurement model with constraints on all loadings	655.05*	391	6.52	15	.051	.971	.056
Structural model without constraints	685.367*	401	-	-	.052	.968	.062
Structural model with constraints on all structural paths	692.76*	413	8.80	12	.051	.969	.070

Note. ^a Derived from robust maximum likelihood estimation; * $p < .05$.

Model fit by country. The measurement and structural models each achieved adequate fit to the data separately in the United States and Canada. The measurement model fit indices are as follows: for the United States sample, CFI=0.958, RMSEA=0.064, SRMR=0.060, S-B scaled χ^2 (188, N=263)=388.411, $p < .05$; and for the Canadian sample, CFI=0.968, RMSEA=0.053, SRMR=0.055, S-B scaled χ^2 (188, N=262)=324.054, $p < .05$.

The results for the United States structural model were CFI=0.956, RMSEA=0.064, SRMR=0.066, S-B scaled χ^2 (193, N=263)=401.028, $p < .05$; for the Canadian sample, they were CFI=0.962, RMSEA=0.056, SRMR=0.065, S-B scaled χ^2 (193, N=262)=353.954, $p < .05$. The structural model accounted for relatively large amounts of variance in retirement planning goals, anxiety, and decidedness for the United States ($R^2 = .38, .44$, and $.59$, respectively) and Canadian samples ($R^2 = .31, .30$, and $.60$, respectively). As shown in Table 13, the measurement and structural models did not differ statistically (i.e., $\Delta S-B\chi^2$) or practically (i.e, significant difference in CFI values) between the constrained and non-constrained conditions. There is therefore evidence to support a similar latent structure and similar relationships between the constructs across the United States and Canadian samples.

Model fit by gender. Adequate model fit was also achieved in measurement and structural models when analyzed by gender. The measurement model produced the following fit indices among women: CFI=0.970, RMSEA=0.051, SRMR=0.057, S-B scaled χ^2 (188, N=324)=348.465, $p < .05$; and for men: CFI=0.970, RMSEA=0.054, SRMR=0.052, S-B scaled χ^2 (188, N=201)=298.280, $p < .05$. The structural model for women produced the following indices: CFI=0.967,

RMSEA=0.053, SRMR=0.065, S-B scaled χ^2 (193, N=324)=368.628, $p < .05$; and the structural model for men produced: CFI=0.969, RMSEA=0.055, SRMR=0.058, S-B scaled χ^2 (193, N=201)=308.243, $p < .05$. The structural model accounted for relatively large amounts of variance in retirement planning goals, anxiety, and decidedness for the female ($R^2 = .31, .40$, and $.54$, respectively) and male samples ($R^2 = .40, .34$, and $.70$, respectively). Based on the results shown in Table 13, measurement invariance across gender can be inferred due to the fact that the constrained measurement model did not differ significantly from the unconstrained model. Similarly, the structural model with constraints on all paths did not produce a differential fit relative to the unconstrained structural model, suggesting structural invariance across gender.

Chapter 4: Discussion

The present study sought to examine the retirement planning process through the lens of SCCT's career self-management model (Lent & Brown, 2013). The sample consisted of 525 older workers from the United States and Canada. Retirement planning self-efficacy, outcome expectations, supports, and trait conscientiousness were examined as predictors of retirement planning goals, anxiety, and decidedness. The measurement validation and model testing findings are discussed below.

Measurement Validation

The retirement planning self-efficacy, outcome expectations, supports, goals, anxiety, and decidedness scales were specifically developed or modified for use in the current study because fully adequate pre-existing social cognitive measures of these constructs could not be located in the literature. Each scale incorporated items designed to reflect the four sub-domains of retirement as outlined by Adams and Rau (2011): *How will I spend my time? Who will I spend my time with? Where will I live?* and *How will I pay for it?* The responses from the first 200 participants were used to examine the factor structures of each scale as well as their correlations with established measures of conceptually related constructs.

Each new scale was found to yield a single-factor structure, except for self-efficacy, which contained two highly related factors: (a) confidence regarding how to structure one's time and activities in retirement and (b) management of one's finances and living situation. The new scales also produced adequate reliability estimates and generally correlated in theory-consistent ways with established trait measures or with

the other new retirement-specific measures. For example, the retirement planning self-efficacy measure correlated highly with a generalized self-efficacy scale. Likewise, correlations of outcome expectations with trait optimism, domain-specific support with general social support, and retirement planning anxiety with trait positive and negative affectivity, were all moderate to large in magnitude. One exception was that the Decidedness scale did not correlate as strongly with Conscientiousness ($r = .24$) as had been expected. However, Decidedness did relate to other variables in the predictive model (e.g., self-efficacy, social support) in ways consistent with correlations among similar constructs in the career decision-making literature (e.g., Lent et al., 2016). Overall, the findings obtained in the measurement development phase suggested that the psychometric properties of the new scales were sufficiently adequate to move on to the next phase, that is, confirmatory factor analysis and testing of the structural path model.

Model Testing

In order to re-assess the stability of the factors identified in the first phase, a 7-factor measurement model was tested which included three to four item parcels corresponding to each construct. Results of this analysis suggested a seven variable model in which each construct is distinct, yet most of them are interrelated. One exception was the small, non-significant correlation between conscientiousness and retirement planning goals. The structural model was also found to provide good overall fit to the data, and most of the expected direct paths were supported by the analysis. In particular, self-efficacy significantly predicted anxiety, both self-efficacy and supports predicted decidedness, and supports and outcome expectations predicted

goals. Surprisingly, the direct paths from supports to anxiety and from self-efficacy and conscientiousness to goals failed to reach statistical significance.

In addition, many significant indirect paths were observed. For example, self-efficacy served as a mediator of the relation of supports to decidedness, anxiety, and outcome expectations. Self-efficacy also mediated the relation of conscientiousness to decidedness, anxiety, and outcome expectations. In addition, outcome expectations mediated the relation of self-efficacy to goals. In other words, supports, conscientiousness, and self-efficacy were related to outcome expectations which, in turn, was linked to retirement planning goals. Overall, the structural model explained 35% of the variance in retirement planning goals, 36% of the variance in retirement planning anxiety, and 66% of the variance in retirement planning decidedness. Both the measurement and structural models were also found to be invariant across gender and country.

This study is the first full model test of the links between the social-cognitive predictors and the outcomes of retirement planning. While many previous studies have built evidence for individual paths in the model and for subsets of the retirement population (e.g., bridge employees, early retirees), the current findings suggest that the career self-management model offers a viable way to understand retirement planning more generally. Further, it is evident that the paths not only contribute individually toward retirement planning, but operate jointly to predict retirement planning decidedness, goal-setting, and decisional anxiety. By conceptualizing retirement planning within an SCCT framework, the current study has linked retirement planning to a larger body of findings on adaptive career behavior across

the lifespan (Lent & Brown, 2013). By demonstrating the utility of the social-cognitive variables, especially self-efficacy and outcome expectations, in the structural model, this study may offer a more targeted direction for increasing preparedness for retirement.

Comparison with Prior Findings

According to the SCCT CSM model (Lent & Brown, 2013), social supports were expected to relate to the outcome variables both directly and indirectly through self-efficacy and outcome expectations. The current study partly supports these assumptions. In particular, supports were linked to goals and decidedness directly and indirectly through either self-efficacy or outcome expectations (see Robbins, Lee, & Wan., 1994 for related findings). Conversely, supports were related to anxiety only indirectly through self-efficacy, a finding consistent with that of Fretz et al. (1989) in their study of anxiety in pre-retirement workers. Supports were also only indirectly related to goals and actions in a longitudinal study of college major decision-making (Lent et al., 2018). Wohrmann et al. (2013, 2014a) found that supports correlated with intentions (e.g., goals) to engage in post-work bridge employment and moderated the relation between outcome expectations and intentions. The consistency of its role across these studies suggests that supports may play a nuanced role in decision-making outcomes.

The role of conscientiousness in this study was limited to its significant path to self-efficacy and indirect paths to goals via self-efficacy and outcome expectations and to decidedness and anxiety via self-efficacy. Foley and Lytle (2015) found a similar phenomenon, such that conscientiousness was related to work self-efficacy

but not to the outcome of work satisfaction (e.g., continued work) in retirees who decide to continue to work. Within other studies of the SCCT CSM model, conscientiousness also plays a similar indirect role (e.g., Lent et al., 2016). In one exception, Penn and Lent (2018) found that conscientiousness played both a direct and indirect role relative to the outcome of decisional discomfort but related only indirectly to decidedness through the mediator of self-efficacy.

Lent et al. (1994) and Lent and Brown (2013) conceptualized a significant direct relationship between domain-specific self-efficacy and goals based on the theories of Bandura (1986). The results of the current study indicated that retirement planning self-efficacy was only indirectly related to retirement planning goals through the mediator of outcome expectations. This finding is consistent with Wohrmann et al.'s (2014b) study, in which occupational self-efficacy is only related to postretirement career intentions through postretirement career outcome expectations. In relation to the other outcome variables, including anxiety and decidedness, self-efficacy behaved in ways that were consistent with theory and prior findings (Fretz et al., 1989). In a meta-analysis by Choi et al. (2012), career decision-making self-efficacy was found to be correlate highly with other decision-making outcome variables, such as career indecision (inverse relationship). Lent et al. (2016) and Lent, Morris, Penn, & Penn (2017) found a small, yet statistically significant unique relation of career decision-making self-efficacy (beyond outcome expectations) to exploratory goals in two samples of college students. Conversely, Lim et al. (2016) found that self-efficacy but not outcome expectations related significantly to job search intentions in a sample of unemployed job seekers. This may suggest that self-

efficacy and outcome expectations may play somewhat different (e.g., indirect vs. direct) roles in the CSM model depending on developmental considerations and the nature of the outcome variable (e.g., decision-making vs. job finding tasks).

Limitations and Implications for Future Research

One of the major limitations of the study relates to the sample's demographic makeup. Although recruited evenly from the United States and Canada, the sample is largely white and skewed toward middle to upper levels of SES and education. For instance, 70% of the sample reported owning a home. Thus, caution is needed in generalizing the current findings to persons with lower income, lower levels of education, and from non-European American or Canadian cultures. The economic resources available to the sample imply that certain challenges in retirement planning, such as where to live and how to afford retirement, may be less acute for many of this study's participants than they may be for persons with less financial wherewithal. This limitation highlights the need to assess the extent the findings will replicate with samples who are more diverse with respect to culture, geography, education, and economic resources.

A second limitation involves the use of novel measures in model testing. On the one hand, the scales were carefully designed to comply with SCCT measurement prescriptions (Lent & Brown, 2006) and to incorporate Adams and Rau's (2011) four sub-domains of retirement planning. They also exhibited promising reliability and validity estimates. On the other hand, the factor structure and other properties of the measures, though cross-validated, were assessed based on two halves of a single

sample. This highlights the need for further study of their psychometric properties in new samples, such as international workers or workers in specific occupations.

Third, the findings are limited by the cross-sectional nature of the study's design. Thus, the findings do not imply causation or allow for inferences regarding the temporal flow among the variables. While the findings offered preliminary support for the measurement and structural models, further research is needed to assess the relations among the variables with longitudinal designs. Such research should also extend the temporal frame of the study such that it is possible to study how retirement planning goals are transformed into actions. Experimental studies are also needed to confirm causal assumptions and to provide a firmer foundation for retirement planning interventions linked to the CSM model.

A fourth limitation relates to the mono-method and mono-source nature of the data. Fifth, the survey reflected only a select range of CSM variables. Elements such as learning experiences that, theoretically, inform self-efficacy and outcome expectations, were not included in the study. Such elements (e.g., relevant mastery experiences, models) could be relevant to the composition of interventions and, thus, deserve attention in future research.

Several additional directions for future research could be cited. For example, workers from specific industries or organizations may face unique retirement transitions, including military personnel. Indeed, many employees of the military retire after only 20 years or less, have unique retirement benefits packages, and face cultural barriers to transitioning to civilian culture (Spiegel & Shultz, 2003). Validating the current study's retirement planning scales to military populations may

help military retirees plan more successfully for this transition. In addition, the successful test of the proposed CSM model for retirement planning may inform potential intervention studies aimed at retirement planning. For example, workshops or educational materials aimed at enhancing retirement planning self-efficacy and outcome expectations in the areas conceptualized by Adams and Rau (2011) may lead to greater retirement adjustment or satisfaction than existing retirement preparation resources (see Taylor-Carter et al., 1997 for one example).

Implications for Practice

Several practical implications may be derived from the findings, albeit tentatively given the early stage of research applying the CSM model to retirement planning and the limitations of the study (e.g., cross-sectional design) noted above. First, the Adams and Rau (2011) conceptual scheme can be used to structure retirement planning interventions beyond financial preparedness alone, focusing as well on the importance of planning for how to structure one's time, how to build and maintain social contact, and where to live.

Second, the results suggest the potential value of attending to self-efficacy and outcome expectations regarding retirement planning. For example, outcome expectations produced the largest path coefficient to goals, suggesting that efforts to bolster positive outcome expectations may be a useful way to promote planning behavior. In addition, self-efficacy was most highly related to anxiety (negatively) and decidedness. Thus, bolstering retirement planning self-efficacy may offer a direct route to calming fears about retirement and encouraging engagement in retirement decision-making activities. The findings also suggest that social support

may aid retirement planning both directly and indirectly, via self-efficacy and outcome expectations. The contribution of conscientiousness may, by contrast, be only indirect, via self-efficacy.

According to Bandura (1986), increases in self-efficacy may be aided by experiences involving task mastery, verbal persuasion, modeling, and facilitative affective states. SCCT suggests that these same types of experiences may also promote outcome expectations. Thus, retirement planning interventions may profit from intentional use of methods designed to promote success at planning behaviors (and to promote recall of relevant past planning and decisional successes), to provide access to demographically similar models, to offer verbal encouragement for retirement planning and, where necessary, to ease untoward levels of anxiety about retirement.

The behavioral aspects of conscientiousness could be unbundled to provide a structure for promoting mastery experiences, and efforts may be made to help clients to attribute successes to internal and stable causes (Lent & Brown, 2013). Moreover, efforts to reduce anxiety may entail counseling focused on existential concerns (e.g., worries about aging and mortality) as well as on affective distress. Finally, verbal encouragement and social support could involve conjoint involvement of spouses or relationship partners in the retirement planning intervention, thereby building in opportunities to magnify and sustain the support offered by the intervention itself.

In sum, the study demonstrates the need for a more nuanced understanding of planning for retirement beyond financial or bridge employment. As evidenced by the results of the factor analyses, questions like *How will I spend my time?* and *Who I will*

I spend my retirement with? play an important role in the retirement planning process and contribute toward explaining variance in outcomes like retirement planning goals, anxiety, and decidedness. By further broadening the understanding of factors that influence retirement planning, researchers can better understand the amorphous nature of retirement. Second, this study contributes to research in retirement planning through its creation or modification of six scales for the retirement planning process: retirement planning self-efficacy, outcome expectations, supports, goals, anxiety, and decidedness. While future validation is still necessary, the preliminary analysis and validation of these six scales may ease the barriers for other researchers to study retirement planning. Third, the study contributes a nuanced understanding of the social-cognitive predictors of retirement planning. Specifically, the analysis of indirect effects demonstrates the usefulness of including variables like retirement planning supports and conscientiousness within model testing.

Appendices

Appendix A: Consent Form

Project Title	Retirement Planning
Purpose of the Study	<p>This research is being conducted by Lee Penn and Dr. Robert Lent, Department of Counseling, Higher Education, and Special Education, at the University of Maryland, College Park. We are inviting you to participate in this research project because you are at least 55 years old, are currently working at least 20 hours/week, might expect to retire in the foreseeable future and no more than 10-15 years from now, and may be in the process of deciding what you will want to do when you retire.</p> <p>The purpose of this research is to better understand the process of retirement planning and decision-making. The measures used in this study will enable us to examine factors involved in the process of planning for (or avoiding planning for) retirement.</p>
Procedures	You will be asked to complete a brief survey. It should require about 15-20 minutes of your time. The survey will ask you about your attitudes toward retirement planning and personal characteristics.
Potential Risks and Discomforts	There are no known risks associated with participating in this research study.
Potential Benefits	The survey is not designed to benefit you directly, though it is possible that some participants may benefit from the opportunity to think about their retirement plans and the steps that can help them to make retirement decisions. The study may also help counselors to develop ways to help older workers to plan for retirement.
Confidentiality	In order to participate in this study, you are required to meet screening criteria related to your age and pre-retirement status. Apart from this, you will not be required to provide any information that may link your identity to your survey responses. We will do our best to minimize any potential loss of confidentiality. The data will be collected via an online survey provider and stored in the survey provider's database, which is only accessible with a password. Once the information is downloaded from the online survey provider, it will be stored in a password-protected computer. Permission will

	only be given to the investigators to access the data. Any reports based on the survey information will only present the results in aggregate form (e.g., group averages). Individual survey responses will never be reported. If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.
Compensation	As a result of your participation, you will be eligible for payment. Payment will only be awarded to those who complete the entire survey.
Right to Withdraw and Questions	<p>Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time by closing your browser. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.</p> <p>If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please feel free to contact the investigator(s): Lee Penn at Penntlee@gmail.com; 3207 Benjamin Building, University of Maryland, College Park, MD 20742; (301) 405-2878 Dr. Robert Lent, Ph.D. at boblent@umd.edu; 3207 Benjamin Building, University of Maryland, College Park, MD 20742; (301) 405-2878</p>
Participant Rights	<p>If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:</p> <p style="text-align: center;"> University of Maryland College Park Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742 E-mail: irb@umd.edu Telephone: 301-405-0678 </p> <p>This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.</p>
Statement of Consent	By selecting your choice below you are indicating your right to consent or not consent electronically.

	<p>Selecting “Yes, I Consent” and clicking on the “Continue” button below indicates that you are at least 55 years old and have read and understand the terms of this study and thus voluntarily agree to participate.</p> <p>If you do NOT wish to participate in this study, please select “No, I DO NOT Consent” and click “Continue” to decline participation.</p>
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Appendix B: Survey Instructions

This is a survey about retirement planning. By *retirement planning*, we mean making plans to stop paid work or to reduce the number of hours you devote to it. We are especially interested in retirement planning that occurs later in people's work lives and that most often involves the decision to support oneself at least partly through retirement savings and/or Social Security benefits.

Retirement can include many different lifestyle options, such as continuing to work at a reduced number of hours, traveling, participating in volunteer activities, spending more time at leisure activities or hobbies, or assisting with the care of family members. We do not have a single retirement lifestyle in mind. We are interested in the types of plans that most people consider when they think about retiring from work.

Appendix C: Retirement-Planning Self-Efficacy

The following is a list of activities involved in planning for retirement. Please indicate how much confidence you have in your ability to do each one successfully. Use the 0 to 9 scale to indicate your degree of confidence.

How much confidence do you have in your ability to:

No confidence at all	Very little confidence	Moderate confidence	Much confidence	Complete confidence
0	1	2	3	4

1. Anticipate the financial costs of retirement
2. Find things to do in retirement that are enjoyable
3. Cope with the loss of a routine work schedule
4. Have a meaningful social life in retirement
5. Take steps to prepare for living arrangements during retirement
6. Make a smooth adjustment to a different daily schedule (e.g., one not centered only on work)
7. Figure out where you will want to live in retirement
8. Find ways to stay involved with people you feel close to
9. Obtain additional sources of income (like part-time work), if necessary
10. Handle any sense of loss about leaving the workplace (e.g., missing your colleagues or the work itself)
11. Find people with similar interests to spend time with
12. Find solutions to unexpected setbacks in your retirement planning
13. Manage your financial resources so that you do not run out of money
14. Find satisfying ways to structure your time (or keep busy) in retirement
15. Decide which living options will be best for you in retirement (e.g., stay where you live now or move to a different living arrangement)

Appendix D: General Self-Efficacy Scale

True	Not at all true	Hardly True	Moderately True	Exactly True
<p>Please indicate how accurate the following items are to you.</p>	1	2	3	4

1. I can always manage to solve difficult problems if I try hard enough.
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution.
10. I can usually handle whatever comes my way.

Do you have the ability to adjust to retirement?

1. Yes
2. No

What do you believe are the chances, out of 100, that you will be able to adjust to retirement?

1-100 Scale

Appendix E: Retirement Outcome Expectations

Instructions: This scale is concerned with your beliefs about the usefulness of doing retirement planning in the near future (e.g., things like reviewing your finances, considering where you'd like to live, or how you might like to spend your time in retirement).

Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1	2	3	4	5

If I were to plan actively for my retirement, I would most likely...

- 1...Feel better or more relaxed, about the idea of retiring.
- 2...Increase my chances of having a satisfying retirement.
- 3...Get my finances in order to better support myself in retirement.
- 4...Figure out how I will spend my time in retirement.
- 5...Make my friends or loved ones happy.
- 6...Be pleased with myself.
- 7...Come up with retirement plans that I hadn't considered before.
- 8...Come up with ways to avoid feeling lonely or missing work once I retire.
- 9...Figure out a housing situation I like.

Appendix F: Life Orientation Test – Revised (LOT-R) Optimism Subscale

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer. (1-5, I disagree a lot to I agree a lot)

1. In uncertain times, I usually expect the best.
2. I'm always optimistic about my future.
3. Overall, I expect more good things to happen to me than bad.

Appendix G: Retirement Supports

Instructions: Below are some resources that people often rely on when they want to explore retirement options or make a retirement decision. Assuming that you wanted assistance with retirement planning, we would like to know how much you could rely on the following resources for support. Use the scale below to indicate how much support you would expect to receive from each of the following:

No support at all	A little support	Unsure	A good amount of support	A great deal of support
1	2	3	4	5

If you wanted support for retirement planning, how much support could you get from each of the following?

1. ... at least one family member
2. ... at least one friend
3. ... at least one former colleague or friend who has successfully retired
4. ... a current or past employer
5. ... a professional helper (e.g., a career or general counselor)
6. ... a mentor or someone you could use as a sounding board
7. ... a financial advisor
8. ... information on retirement that I could find in print form or on the Internet
9. ... social contacts who would let me question them about their retirement
10. ... community members (e.g., religious leaders, club coordinators)

Appendix H: Multidimensional Scale of Perceived Social Support

Instructions: We are interested in how you feel about the following statements. Read each statement carefully.

Indicate how you feel about each statement.

Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
1	2	3	4	5	6	7

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.

Appendix I: General Retirement Goal Clarity Scale (Adapted)

Instructions: Below are planning activities that you may engage in. Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements in reference to actions you plan to take during the next 12 months.

Strongly Disagree	Disagree	Somewhat Disagree	Unsure	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. Set clear goals for gaining information about retirement.
2. Think a great deal about quality of life in retirement.
3. Set specific goals for how much will need to be saved for retirement.
4. Have a clear vision of how life will be in retirement.
5. Discuss retirement plans with a spouse, friend, or significant other.
6. *Commit to learning more about retirement activities that would best match my interests.*
7. *Spend time comparing the financial advantages and disadvantages of different retirement options.*
8. *Spend more time learning about retirement options (e.g., jobs, volunteer activities)*
9. *Spend time thinking about how to put retirement plans into action.*
10. *Research the steps for a backup retirement plan.*

Note. Italics indicates supplemental items.

Appendix J: Retirement Planning Anxiety

Instructions: Read each statement carefully and indicate how well it describes you, using the disagree/agree scale to select your answer.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1	2	3	4	5	6

1. I am uncomfortable thinking about retirement
2. I'm concerned that my retirement goals may change after I start planning for retirement
3. I'm concerned that my financial needs may change after I decide on a retirement direction
4. I often feel discouraged about having to make retirement decisions
5. I have been putting off planning for retirement because it makes me feel anxious
6. I'm worried that I won't have enough financial resources to survive in retirement
7. I'm feeling uncertain about whether retirement will be a positive experience
8. Retirement feels like it's coming too fast to prepare for it adequately
9. I'm nervous about being able to figure out what I'll do in retirement

Appendix K: The International Positive and Negative Affect Schedule Short Form (I-PANAS-SF)

Thinking about yourself and how you normally feel, to what extent do you generally feel:

Very Slightly or Not At All	A Little	Moderately	Quite a Bit	Extremely
1	2	3	4	5

1. Upset
2. Hostile
3. Alert
4. Ashamed
5. Inspired
6. Nervous
7. Determined
8. Attentive
9. Afraid
10. Active

Appendix L: Decidedness

Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements at this point in time.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1	2	3	4	5

1. I have a pretty good idea of when I will retire.
2. I have decided where I want to live when I retire.
3. I know how I will spend my time in retirement.
4. I have a clear plan for how I will pay for expenses in retirement.
5. I am sure of the people with whom I will spend my time in retirement
6. My overall retirement plans at this time are decided.

Appendix M: Big-Five Mini-Markers *Conscientious* Subscale

Please use this list of common human traits to describe yourself as accurately as possible. Describe yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same sex and of roughly your same age.

Before each trait, please indicate which number most accurately describes you, using the following scale:

Inaccurate				Accurate				
Extremely	Very	Moderately	Slightly	Slightly	Moderately	Very	Extremely	
1	2	3	4	5	6	7	8	9

- ___ Organized
- ___ Efficient
- ___ Systematic
- ___ Practical
- ___ Disorganized
- ___ Sloppy
- ___ Inefficient
- ___ Careless

Appendix N: Demographics

Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1	2	3	4	5

1. I think my state of health will allow me to work as long as I want
2. I anticipate my health condition to be good when I retire

Education Level

Please indicate which option best describes your highest acquired level of education.

Less than high school

High school graduate (or equivalent)

Some college (1-4 years, no degree)

Associate's degree (including occupational or academic degrees)

Bachelor's degree (BA, BS, AB, etc)

Master's degree (MA, MS, MENG, MSW, etc)

Professional school degree (MD, DDC, JD, etc)

Doctorate degree (PhD, EdD, etc)

Duration of Work

Approximately how many years have you worked full-time up until this point after finishing school? _____

Approximately how many years have you worked part-time up until this point after finishing school? _____

Projected Retirement Year

In approximately how many years do you plan to retire ("0" if less than 1 year)?

Voluntary

Would you say that your choice to retire in the coming years is voluntary (i.e., entirely up to you)?

-Yes

-No

Income

Please select which income bracket best describes your current level of income (approximately)

Less than 10k

10k to 15k
15k to 25k
25k to 50k
50k to 100k
100k to 150k
150k to 200k
200k or more

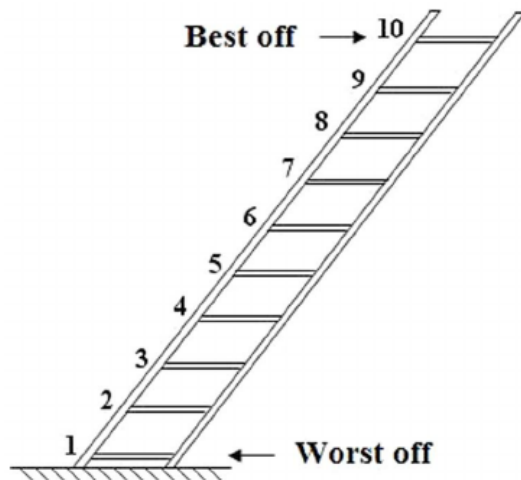
Social Class

Imagine that this ladder pictures how American society is set up.

At the **top** of the ladder are the people who are the best off—they have the most money, the highest amount of schooling, and the jobs that bring the most respect.

At the **bottom** are people who are the worst off—they have the least money, little or no education, no job or jobs that no one wants or respects.

Now think about your own standing. Please tell us where you think you would be on this ladder.



Home Ownership

Are you a home owner or a co-home owner?

Yes

No

Yes, but my household is still paying the mortgage

Current Career

What is your current occupation or job title? _____

What Is Your Race/Ethnicity?

-American Indian or Alaska Native

-Asian Indian; Chinese; Filipino; Japanese; Korean; Vietnamese; Other Asian

-Black/African American

-Hispanic, Latino, or Spanish Origin

-Native Hawaiian; Guamanian or Chamorro; Samoan; Other Pacific Islander

-White/Caucasian

- Multiracial
- Some Other Race

Gender

Male

Female

Not Specified

Other

Location

Please write which U.S. State or Canadian province best describes where you currently reside. _____

Appendix O: Sample Job Family Classification

Job Family	Total Number
Architecture and Engineering	6
Arts, Design, Education, and Sports Media	12
Building and Grounds Cleaning and Maintenance	19
Business and Financial Operations	68
Community and Social Service	9
Computer and Mathematical	39
Construction and Extraction	18
Education, Training, and Library	40
Farming, Fishing, and Forestry	6
Food Preparation and Serving Related	16
Healthcare Professionals and Technical	15
Healthcare Support	10
Installation, Maintenance, and Repair	5
Legal	10
Life, Physical, and Social Science	2
Management	95
Office and Administrative Support	51
Personal Care and Service	11
Production	7

Protective Services	10
Sales and Related	39
Transportation and Material Moving	20
“Self-Employed”	16

Appendix P: Extended Literature Review

As members of the baby-boomer generation continue to age, more individuals are nearing the traditional age for retirement (Wheaton & Crimmins, 2013). Defined as the process of reducing involvement in paid work in favor of supporting oneself through retirement savings and/or Social Security benefits (Fassbender & Deller, 2015a), retirement represents the end stage of the career self-management process (Freund & Baltes, 1998). For many, retirement provides an opportunity to volunteer (McMunn et al., 2009; Wu et al., 2005), find new forms of paid work (e.g., bridge employment; von Bonsdorff et al., 2009; Wöhrmann et al., 2013, 2014a, 2014b), travel (Lindquist & Golub, 2004), and/or spend more time with family.

Theoretical Perspectives

Two theories studied in the social psychology literature help to clarify the components of the retirement transition process (Wang, 2007). The first, known as Role Theory, posits that individuals perceive themselves as fulfilling many roles in life, often simultaneously (Ashforth, 2001). These can include the roles of family member, community member, and worker. In this way, reducing a worker role in retirement in favor of pursuing other roles can be characterized as a role transition (Riley & Riley, 1994). Individuals place different degrees of importance and self-identity on each role, and so losing the work role during retirement can feel distinctly disruptive for many individuals (Burke, 1991; Thotis, 1992). In other words, an individual who highly identifies with his or her job role will feel a great loss of identity in retirement. On the other hand, those who identify less strongly with the worker role will likely view retirement as an opportunity to pursue more fulfilling

activities through other roles, such as family and community roles (Adams et al., 2002).

The second theory, known as Continuity Theory (Atchley, 1999a), proposes that individuals adjust well during times of transition when they can maintain consistency in social and lifestyle patterns. Individuals work to maintain these patterns by applying strategies from familiar domains, such as past transition events. In the context of retirement, this would mean maintaining the structure, community, and acquaintances previously provided by work. For example, a recent retiree might devote herself to a new hobby or plan lunch dates with old co-workers. As another example, some people attempt to maintain continuity by continuing to work at a reduced capacity in retirement (Kim & Feldman, 2000).

Developmental perspectives also inform the retirement adjustment process. For example, Erik Erikson's theory of psychosocial development proposes that the "Adulthood" stage (40-64 years old) is a time for individuals to work on contributing in a lasting way to society (Erikson & Erikson, 1998). This sense of "generativity" can take the form of raising a family, making significant contributions at work, or making a positive impact on future generations (Slater, 2003). Adjusting to physical changes and maintaining healthy life patterns are important challenges for workers in the adulthood stage. These considerations may influence when a worker decides to retire, as well as which activities he or she will pursue in retirement.

Donald Super's Life-Span, Life-Space developmental theory proposes the maintenance (Age 45-64) and decline/disengagement (Age 65+) stages of career development (Super, Savickas, & Super, 1996). In the maintenance stage, individuals

are still discovering new interests, striving to improve their positions, and making plans for growth in retirement. During the prototypical decline/disengagement stage, individuals are progressively reducing work hours, distinguishing tasks to continue versus tasks to eliminate, and coping with unforeseen stresses and conflicts in retirement life (Super, 1990). Retirement is seen as a developmental stage that is not a single event, but a period of ongoing adjustment. For many, retirement is a vehicle for meeting the developmentally appropriate goals within the “Maintenance” and “Decline/Disengagement” stages.

One general theory that may inform the retirement decision-making process is the Theory of Planned Behavior (TPB; Ajzen & Fishbein, 1980). The TPB emphasizes cognitive factors that motivate the performance of lifestyle behaviors, such as choosing to exercise more (Nguyen, Potvin, & Otis, 1997) and selecting healthier dietary options (Connor, Kirk, Cade, & Barrett, 2003). Such cognitive factors include perceived outcome of the behavior (i.e., attitudes), pressure to perform the behavior (i.e., subjective norms), self-perceptions of control over the behavior (i.e., perceived behavioral control), and motivation to perform the behavior (i.e., intentions) in a given behavioral domain (Ajzen, 2002).

TPB posits that attitudes, norms, and control prompt intentions, which in turn direct specific actions. In a career-relevant application of TPB to job search behaviors (e.g., van Hooft & De Jong, 2009), unemployed persons’ attitudes toward the positive outcomes of searching and applying for jobs were associated with greater intentions to submit applications (van Hooft & Noordzij, 2009). These cognitive predictors of behavior may also predict intentions and behaviors within the retirement adjustment

process. For example, perceived behavioral control has been examined as a predictor of retirement savings behavior (Davis & Hustvedt, 2012). A study of 346 Dutch employees found that spouse pressure (e.g., subjective norms), retirement attitude, and perceived control over the retirement decision affected intentions to retire from the workforce before the traditional age of 65 (van Dam, van der Vorst, van der Heijden, 2009). Criticism of TPB points to the fact that TPB predictors account for only a modest amount of variance in actions taken (Orbell & Sheeran, 1998; Sniehotta, Pesseau, & Araujo-Soares, 2014).

Many theories of retirement planning focus primarily on predictors of retirement savings. McCarthy (1996) conceptualizes retirement financial planning as a series of six steps: collecting personal financial data, defining goals, identifying problems, planning, implementing the plan, and monitoring and revising the plan. Life-cycle models calculate annual earnings, market behaviors, cultural norms for when to retire, and financial literacy as predictive variables of when and why individuals choose to retire (Bernheim, Douglas, Skinner, & Weinberg, 2001; Campbell, Cocco, Gomes, & Maenhout, 1999; Szinovacz, 2013). These models have utility for predicting retirement financial well-being, but other outcomes, such as anxiety about retirement and goals for retirement life, are neglected from the paradigm.

Finally, Wang and Shi (2014) conceptualize retirement planning within a larger model known as the Temporal Process Model of Retirement. From this view, workers begin to shape expectations and prepare resources for retirement life during a retirement planning phase. In the planning phase, both financial and cognitive

expectations begin to form (Taylor-Carter et al, 1997). Following, workers nearing their desired age for retirement enter the decision-making stage, where they begin to phase out of their occupations and set their retirement plans into action (Feldman & Beehr, 2011). As workers assume the label of “retiree,” they enter the retirement transition and adjustment phase. Here, retirees restructure their time and cope with changes to financial and social resources lost from full-time employment. One avenue that retirees pursue for managing the transition successfully is to continue paid work in a limited capacity, known as “bridge employment” (Wang & Shultz, 2010). Within the Temporal Process Model of Retirement, the first stage of retirement planning is theorized to predict engagement in the decision-making process and subsequent adjustment to retirement. Unfortunately, there are no known theories that comprehensively explain how retirees can successfully plan for the decision-making and transition stages.

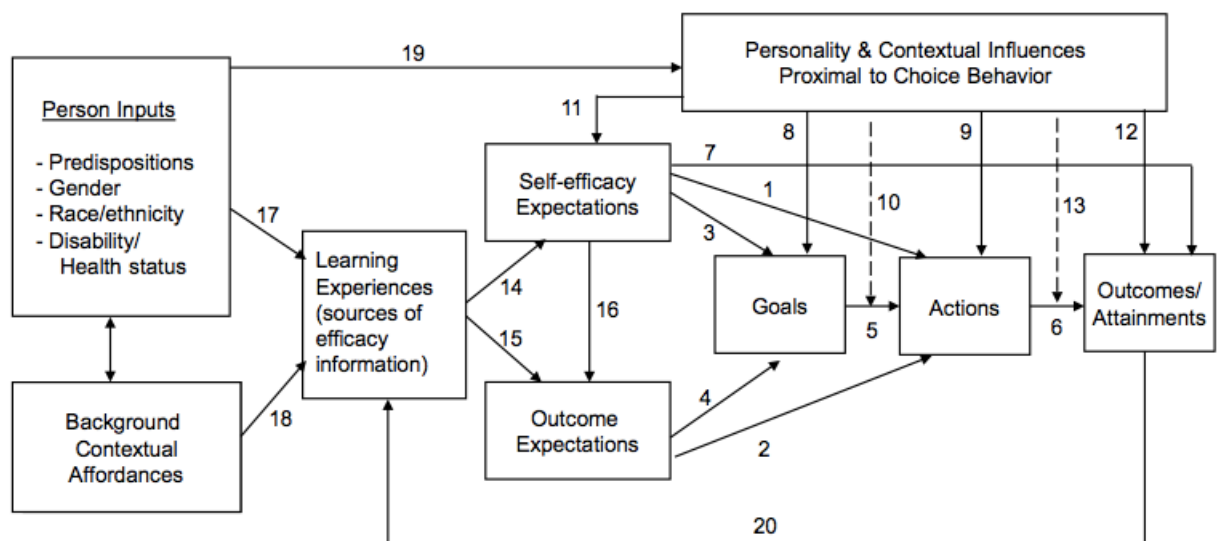
Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT) is a promising theory of motivation and behavior that can be applied to the retirement planning and decision-making process. Although it has traditionally been used to study decisions in early and mid-careers, researchers propose that SCCT may be a helpful framework for studying the retirement transition process (e.g., Fassbender & Deller, 2015a; Lent & Brown, 2013). SCCT incorporates not just cognitive predictors, but also social and contextual variables (Lent et al., 1994). Research has typically found medium to large correlations between predictors and outcomes (e.g., Choi et al., 2012; Lent, Sheu, Miller, Cusick, Penn, & Truong, 2018). These variables include self-efficacy,

outcome expectations, intentions, social supports, and personality as predictors in the domain of career outcomes (Lent, 2013). Supports are environmental conditions that affect goal pursuit. Intentions are goals related to particular behaviors (Bandura, 1986). Outcome expectations are beliefs about what will result from performing a certain action (Lent et al., 1994). More details on SCCT, its variables, and their relations are presented in a later section.

SCCT has been widely studied within career domains, both in the United States (e.g., Lent, Lopez, Sheu, & Lopez, 2011; Lent, Ezeofor, Morrison, Penn, & Ireland, 2016) and internationally (e.g., Lent & Sheu, 2010; Lent, Taveira, & Lobo, 2012). Recently, Lent and Brown (2013) proposed a new SCCT self-management model to better conceptualize adaptive career behaviors (See Figure 1).

Figure 1. SCCT Career Self-Management Model.



Model of career self-management. Adapted from "Toward a unifying social cognitive theory of career and academic interest, choice, and performance," by R.W. Lent, S.D. Brown, & G. Hackett, 1994, *Journal of Vocational Behavior*, 45, p. 93. Copyright 1993 by R.W. Lent, S.D. Brown, & G. Hackett. Reprinted with permission.

organized, and planful behaviors. Retirement planning self-efficacy is defined as an individual's confidence in his or her ability to plan for retirement. Retirement planning outcome expectations are beliefs about the consequences of engaging in retirement planning. Retirement planning goals are defined as intentions to engage in retirement planning activities. Retirement planning anxiety is defined as an aversion or hesitancy to engage in the retirement planning process and negative affect that arises during planning. Finally, retirement planning decidedness is defined as level of certainty regarding one's retirement plans. While actions are an important outcome, they will not be examined due to the cross-sectional nature of the current study. More proximal decision outcomes, such as intentions (or goals) to engage in retirement planning behaviors, have been shown to predict later actions (e.g., Lent, Morris, Penn, & Ireland, 2017).

The following section will provide an overview of research relevant to the process of retirement planning within the new SCCT career self-management model. Because a full version of the SCCT model of retirement planning has yet to be formally tested, this review will examine subsets of the SCCT model related to retirement planning outcomes.

Retirement Planning

Historically, retirement was defined as a complete withdrawal from work. Recent developments in the world of work – such as the increasing number of different jobs that an average worker will hold before age 40 (Bureau of Labor Statistics, 2017), the decline in retirement pensions, fluctuations in the stock market, and the rising life expectancy of Western geriatric populations – have broadened the

scope of options for retirement. For instance, the average American family has approximately \$100,000 saved for retirement, with a disheartening median of \$5000 (Morrissey, 2016), signaling an increased need to work beyond the traditional retirement age of 65 years old. Indeed, surveys show that work beyond retirement, called “bridge employment” (Wang & Shultz, 2010) or “encore careers” (Simpson, Richardson, & Zorn, 2012), is on the rise (e.g., Eurofound, 2012).

Some retirees do continue to pursue a traditional termination of work in order to travel, spend more time with family members, or pursue hobbies (e.g., Bevil, O’Connor, & Mattoon, 1994; Pressman et al., 2009; Sener, Terzioglu, & Karabulut, 2007). Finally, some retirees will choose a hybrid solution, working at reduced hours to provide the means of better enjoying retirement activities (Maestas, 2010; Shultz, 2001; Wang, Adams, Beehr, & Shultz, 2009). With the range of retirement lifestyles, a more comprehensive definition in Western culture has arisen (Wang & Shultz, 2010), namely, a dynamic process of gradual withdrawal from work typically signaled by receiving post-work benefits (e.g., Social Security) and ending with complete work termination (Adams & Rau, 2011; Fassbender & Deller, 2015b).

As individuals negotiate transitions, psychological changes in well-being can occur (Kwan, Love, Ryff, & Essex, 2003). Evidence shows that the degree of success in transitioning to retirement (i.e., “retirement adjustment”) is variable among retiring populations. Indeed, Wang (2007) found that 25% of U.S. retirees showed an initial decline in psychological well-being upon retiring, while 5% improved and 70% remained relatively stable. These findings were replicated in a German sample (Pinquart & Schindler, 2007). Other researchers have found associations between

retirement transition and increased anxiety (e.g., Fletcher & Hansson, 1991; Skarborn & Nicki, 2000), depression, or both (Butterworth, Gill, Rodgers, Anstey, Villamil, & Melzer, 2006; Zenger, Braehler, Berth, & Strobel-Richeter, 2011).

Tuohy, Knussen, and Wrennall (2005) proposed an inverse relationship between age and anxiety, with older individuals expected to report lower levels of general anxiety than younger individuals. The authors suggest that thoughts about retirement at a younger age correspond to thoughts about involuntary retirement, which has been shown to be highly correlated with anxiety (van Solinge & Henkens, 2008). They also found increased rates of depression over time with increased age. This is likely because disengagement from work can signal a loss of personal identity, life structure, and social relationships through work (Blustein, 2008; Fletcher & Hansson, 1991; Osborne, 2012; van Solinge & Henkens, 2008), as well as a loss of financial security (e.g., Hershey, Henkens, & van Dalen, 2010). Furthermore, rates of anxiety and depression can be compounded by comorbid physical health diagnoses (Gould, O'Hara, Goldstein, & Beaudreau, 2016).

Psychological problems throughout the retirement adjustment process can lead to further negative impacts. Depression can exacerbate comorbid pain symptoms in older populations (Calvo-Perxas, Vilalta-Franch, Turro-Garriga, Lopez-Pousa, & Garre-Olmo, 2015), and a study of wellness in retirement showed that depressive symptoms and attitudes toward retirement accounted for 38% of the variance in wellness scores (Foster, 2009). Specific forms of anxiety, including worry about retirement activities, self-comparison to other retirees, and retirement status, have been shown to have a significant positive relationship with retirement adjustment

difficulty (van Solinge & Henkens, 2005, 2008). In the conceptualization of continuity theory, individuals maintain levels of life satisfaction by maintaining life patterns across transitions (Atchley, 1989, 1999b).

One promising avenue of intervention to help individuals maintain psychological health during the retirement transition process is retirement planning. Psychological planning was associated with positive attitudes toward retirement in Chinese (Yeung, 2013) and U.S. samples (Fretz et al., 1989). In a sample of Canadians nearing retirement, MacEwan et al. (1995) found that amount of financial and activity retirement planning was associated with lower degrees of retirement anxiety. Even general pre-retirement education has been linked to less psychological distress during the act of retirement (Sharpley & Layton, 1998). Life satisfaction and retirement adjustment have also been shown to be higher in retirees who plan ahead of the transition (e.g., Earl et al., 2015; Foley & Lytle, 2015; Muller et al., 2014; Quick & Moen, 1998; Spiegel & Shultz, 2003; Taylor-Carter et al., 1997; Wu et al., 2005). Through retirement planning, a worker can scaffold a structure of retirement activities that can provide a means of replacing the life structure lost due to work disengagement (e.g., Drentea, 2002; Nuttman-Schwartz, 2008).

In their review of retirement planning, Adams and Rau (2011) discuss four common challenges that workers face in preparing for retirement: activity planning, financial preparation, retirement housing planning, and relationship planning. Activity planning involves hobbies and volunteer work (Bass & Caro, 2001; Beehr & Nielson, 1995) and can contribute to structuring one's time (e.g., Kleiber & Nimrod, 2008). Financial planning contributes to how a retiree will shape his or her lifestyle in

retirement, such as the frequency of traveling opportunities and whether or not they will continue to work (Wang & Shultz, 2010). Preparing ahead of time to remain in their current dwelling helps some retirees to maintain consistency in life and life satisfaction (AARP, 2006; Hendrick et al., 1982), while others are drawn to the social connections of retirement communities (De Jong et al., 1995). Relationship planning involves how to maintain or supplement relationships with friends, co-workers, and family members at a time when patterns of interaction must adjust to new schedules (e.g., Dew & Yorgason, 2010; Dorfman, 2002). By addressing these questions before retirement, individuals can buffer against the change that results from work withdrawal and maintain life continuity.

Although Adams and Rau (2011) emphasize the importance of four types of retirement planning, the predominant focus in the retirement literature has historically been on financial planning (e.g., Neuhs, 1991; Petkoska & Earl, 2009; Stawski et al., 2007; Taylor & Doverspike, 2003; Topa, Lunceford, & Boyatzis, 2018). Other researchers have found that financial planning alone did not significantly predict retirement satisfaction in retirement samples (Dendinger et al., 2005; Taylor-Carter et al., 1997). There is a call to incorporate other dimensions of the retirement planning experience into research conceptualizations, such as activities, housing, and social plans (Hayslip et al., 1997; Taylor & Doverspike, 2003).

Application of SCCT to Retirement Planning

The SCCT career self-management model (Lent & Brown, 2013), with its emphasis on person, environment, and behavior factors, has already been conceptualized as a useful framework for studying the retirement process (Fassbender

& Deller, 2015a, 2015b). With its emphasis on domain-specific variables (Lent & Brown, 2006), SCCT provides a helpful template for studying the four domains of retirement activity, finance, social, and housing plans. The current study is intended to contribute to the retirement planning literature by developing or adapting retirement-specific measures of social cognitive variables and using them to test a relatively cohesive model of retirement planning, one that is informed by the four aspects of retirement planning. This section presents an overview of SCCT and the development of the new career self-management (CSM) model.

Over the past two decades, SCCT has been applied to many outcomes, including career interest and choice (Lent et al., 1994), well-being and work satisfaction (Lent & Brown, 2008), and career decision-making and self-management (CSM) processes (Lent & Brown, 2013). Thus far, the CSM model has been applied to college students engaged in the career exploration process (Lent et al., 2016), unemployed workers navigating the job application process (Lim et al., 2016), management of sexual identity in the workplace (Tatum et al., 2016), and anticipated multiple role management (Roche et al., 2017). So far, only one research team has applied the CSM model to retirees planning to engage in bridge careers (Wohrmann et al., 2013, 2014a, 2014b). However, researchers have yet to apply the CSM process perspective to retirement options beyond bridge careers.

Studies have already tested some variables of the model in a retirement planning context, including outcome expectations (e.g., Wohrmann et al., 2013), goals (e.g., Petoska & Earl, 2009, Stawski et al., 2007), and self-efficacy and social supports (e.g., Fretz et al., 1989). The proposed study will apply a fuller set of the

core variables of the SCCT CSM model to the retirement planning process among prospective retirees. The following two sections will describe these variables.

Social-cognitive elements of SCCT. Based on Albert Bandura's Social Cognitive Theory (1986), there are three primary social-cognitive predictors of domain-specific behavior: self-efficacy, outcome expectations, and goals. Self-efficacy is defined as a person's judgments of his or her ability to organize and execute behaviors required to perform certain tasks (Bandura, 1986). Conceptualized within the domain of career outcomes, self-efficacy is a key factor in selecting academic and work-related options and in persisting at them in the face of obstacles (Lent et al., 1994). Indeed, self-efficacy has been shown to be a significant predictor of such outcomes as career interest, choice goals (Lent et al., 1994), work satisfaction (Lent & Brown, 2008), and career performance (e.g., Lent et al., 1984; Lopez et al., 1997). This is likely because confidence provides the individual with a sense of agency and directs him or her toward achievable goals (Bandura, 1997). Furthermore, Carter and Cook's (1995) review demonstrates the utility of self-efficacy as a predictor of long-term retirement adjustment.

Outcome expectations are judgments about the consequences of performing particular behaviors (Lent et al., 1994). They involve the question, "If I try doing this, what will happen?" (Lent, 2005). Individuals are more likely to perform a given action if they judge the outcome to be desirable. Outcome expectations can have positive or negative valence and can be categorized as social, material, or self-evaluative (Bandura, 1986). For example, a student might think, "If I pursue an engineering degree, then I will make a lot of money" (i.e., positive and material).

Researchers have primarily focused on the positive valence of outcome expectations (Lent & Brown, 2006) as a predictor of career-related interest, choice, and performance (Lent et al., 2001).

Goals are conceptualized as the intention to engage in a particular activity or to produce a particular outcome within the SCCT framework (Bandura, 1986). Goals help to direct efforts and are highly predictive of subsequent actions and behaviors (Cantor & Sanderson, 1999; Elliot et al., 1997; Lent et al., 1994). Goals can be focused on choices (i.e., the type of activity one wishes to pursue) or performance (i.e., the level of performance toward which one aspires) within a given domain (Lent & Brown, 2006). Within the CSM model, self-efficacy and outcome expectations are predicted to prompt actions both directly and indirectly through goals (Lent & Brown, 2013). In other words, having self-confidence and expecting positive results for performing an action will shape a given goal/intention which, in turn, predicts a corresponding action (e.g., Sheu et al., 2010).

Contextual and personality factors. SCCT acknowledges the roles of environmental and personality factors on career outcomes. Conceptualized as supports and barriers, environmental predictors are theorized to predict outcomes both directly and indirectly through self-efficacy, outcome expectations, and goals (Lent & Brown, 2013). For the purposes of this study, only supports were used to represent environmental predictors. Lent and Brown (2006) conceptualized supports as anticipated “facilitative influences” in the pursuit of goals (p. 18). Supports can include resources such as role models or finances. In the presence of high supports, an individual is theorized to have higher self-efficacy, more favorable outcome

expectations, clearer goals and, in turn, to be more likely to perform relevant career behaviors (Lent & Brown, 2013).

Stable personality factors, such as conscientiousness, also play a significant role in the prediction of career outcomes within SCCT. Costa and McCrae (1992) used factor analysis to identify conscientiousness as one of the Big Five personality factors. Individuals high in conscientiousness are likely to be goal-directed, persistent, self-disciplined, organized, and planful across situations (Brown & Hirschi, 2013). These qualities likely help them to approach career decisions methodically and with focus. Conscientiousness has been shown to be related to work performance (Barrick & Mount, 1991), self-directed learning (Lounsbury et al., 2009), motivation (Judge & Ilies, 2002), and career decision-making (Hirschi & Herrmann, 2013; Lent et al., 2015).

Some researchers have found support for the SCCT CSM model outside of the retirement domain. For example, Rogers et al. (2008) examined self-efficacy, outcome expectations, choice goals, supports, and personality as predictors of career planning. They found significant correlations between career planning behavior and conscientiousness, self-efficacy, goals, and supports. The authors also found an interaction effect between supports and goals, such that goals were more predictive of career planning in the presence of greater supports. In addition, in line with CSM's proposed pathways, they found support for self-efficacy as a mediator between conscientiousness and goals; they also found goals as a mediator between self-efficacy and career exploration.

Lent et al. (2016) tested a similar model with two samples of college students. In the first sample, outcome expectations and conscientiousness were found to directly relate to exploratory goals, while self-efficacy and social support related to goals indirectly through outcome expectations. Self-efficacy was also shown to account for significant unique variance in decisional anxiety and career decidedness. The second sample produced stronger evidence for the model, with self-efficacy, social support, and outcome expectations producing significant relations with exploratory goals. Predictors such as conscientiousness and social support related to decidedness and decisional anxiety indirectly, through self-efficacy.

Finally, Lim et al. (2016) used the CSM model with two samples engaged in the job search process. They found support for direct relations of self-efficacy and outcome expectations to job search goals, and indirect relations of social support and conscientiousness to goals through self-efficacy, in a sample of unemployed persons seeking employment. In a second sample of graduating college seniors, the authors found that goals mediated the relations of self-efficacy, support, conscientiousness, and outcome expectations to job-search actions.

The Career Self-Management model. The SCCT CSM model focuses on the processes and mechanisms that are assumed to direct career behavior. Specifically, the CSM model targets internal and external factors that lead people to enact behaviors that, in turn, aid their own educational/occupational progress, such as planning behaviors (Lent & Brown, 2013). Complementing SCCT models that focus on career “content” outcomes (e.g., field of occupational choice), the CSM model examines variables that encourage or discourage individuals to engage in such

adaptive processes as career exploration, educational decision-making, coping with negative events (e.g., layoffs), transitioning careers, and adjusting to retirement. While acknowledging more distal (e.g., economic) factors that influence career outcomes, the CSM model highlights adaptive behaviors that are at least partly modifiable, subject to personal control, and therefore relevant to counseling and educational interventions.

Retirement is a multifaceted process with varied degrees and indicators of success (Wang, 2007). This study applied Lent and Brown's (2013) CSM model to factors predictive of retirement planning intentions, anxiety, and decidedness. SCCT factors such as retirement planning self-efficacy, outcome expectations, and supports, along with trait conscientiousness, were hypothesized to relate, individually and jointly, to retirement planning intentions, anxiety, and decidedness.

To my knowledge, only one research team has thus far tested a reasonably full version of a SCCT model within the domain of retirement planning. Wohrmann et al. (2014a) found that self-efficacy, interest, and outcome expectations accounted for 37% of the variance in postretirement activities planning (i.e., bridge careers). Specifically, occupational self-efficacy related to post-retirement career outcome expectations and interest in occupation-related activities. Outcome expectations and interests related to post-retirement career intentions which, in turn, predicted post-retirement career planning activities. The indirect paths from self-efficacy through outcome expectations and interest to intentions were significant. The indirect paths from outcome expectations and interest through intentions to planning activities were also found to be significant. No study, however, has tested the full SCCT CSM model

for retirement planning within the broader context of retirement activities, finances, relationships, and living arrangements.

One class of existing measures predominantly focuses on specific aspects of retirement adjustment, such as bridge employment, and excludes workers who are more broadly exploring retirement possibilities. Another class of existing measures captures elements of retirement adjustment and is designed for studies occurring after the retirement transition. Retirement planning provides proactive benefits to workers before the retirement transition (i.e., Adams & Rau, 2011); therefore, one purpose of this study was to design new measures with item content geared toward a broad array of workers who are considering retirement options. For example, these new measures were intended to be appropriate for use with workers considering post-retirement work, volunteer, leisure, and family activities.

The following sections will review studies that have examined selected paths of the CSM model (rather than the full model) in the context of retirement planning. With the exception of the conscientiousness and goals measures, an argument for validating new measures to be used in model testing will be provided in each section.

Retirement planning self-efficacy. Retirement planning self-efficacy is defined as one's confidence in his or her ability to successfully plan for retirement. Self-efficacy is one of the best social-cognitive predictors of setting and pursuing behavioral goals (Bandura, 1997). In other words, thinking that one *can* meet a goal makes it more likely that an individual will *attempt* a goal. Self-efficacy incorporates both beliefs about specific goals or tasks, such as creating a financial plan for retirement, and beliefs about coping with difficulties, such as how to reevaluate one's

budget when one's health status changes. In the context of the SCCT CSM model, self-efficacy involves confidence in one's ability to engage with career processes and goals, such as successful retirement.

Generalized (as opposed to domain-specific) self-efficacy has been shown to have a negative relationship with retirement adjustment difficulties above and beyond other predictors, such as financial status, health status, and leisure activities (van Solinge & Henkens, 2005). In a sample of 129 employees from a large technological agency nearing retirement, self-efficacy regarding retirement adjustment was found to have a significant positive relation with social support, attitudes, and planning behaviors for retirement, and a significant negative relation with anxiety (Fretz et al., 1989). Generalized self-efficacy has also been linked to lower ages for retirement (Taylor & Shore, 1995; Topa & Alcover, 2015) and higher life satisfaction (Valero & Topa, 2015). In Noone et al. (2010), a brief measure of financial and social retirement decisional self-efficacy was a significant predictor of perceptions of retirement lifestyle preparedness in a sample of healthcare workers.

While self-efficacy scales within the retirement domain exist (e.g., Valero & Topa, 2015), each one either focuses on self-efficacy for retirement adjustment or captures self-efficacy for one specific form of retirement planning (e.g., bridge employment, financial savings). Therefore, one thrust of this study involved developing a measure of self-efficacy that incorporates a wide range of activities and options encompassed by retirement planning (cf. Adams & Rau, 2011). Such a measure would have utility for all workers confronting upcoming retirement and not just those considering a specific path.

Retirement planning outcome expectations. Outcome expectations are beliefs about the outcomes one will receive from performing a given action. Whereas self-efficacy focuses on *what* the individual believes he/she can do, outcome expectations focus on *why* the individual is performing it. In retirement planning, outcome expectations can be indexed as beliefs about how beneficial it will be to plan for retirement. Some workers likely perceive the act of planning or thinking about retirement as a helpful way to prepare for the transition. Others may believe that planning for retirement is unlikely to be useful or that it might even be futile. The former group would be more likely to engage in retirement planning behaviors, while the latter group would be less likely to do so.

Studies examining outcome expectations for retirement planning have been limited to post-retirement work options. Taylor, Shultz, Spiegel, Morrison, and Greene (2007) found outcome expectations to account for 21% of the general adjustment (i.e., how they feel about their present life) of retiring Navy personnel seeking encore careers. Wohrmann et al. (2014b) found a strong relation between outcome expectations and post-retirement career intentions ($\beta = .59$), especially in the presence of high social approval ($\beta = .15$) in a sample of employees 50 and older of an aerospace company. Wohrmann et al. (2013) also found that outcome expectations were related to same-employer post-retirement work intentions ($\beta = .34$) as well as to post-retirement work planning actions ($\beta = .26$). Wohrmann et al. (2014a) found that post-retirement career outcome expectations correlated with post-retirement career planning activity only indirectly, through post-retirement career intentions. In other words, outcome expectations may contribute to goals which, in

turn, predict subsequent actions for bridge employment careers. Because retirement savings, social connections, living situations, and non-work activities are also contributing factors to successful retirement planning, it is important to design a measure that captures outcome expectations beyond just post-retirement work outcomes.

Retirement planning supports. Supports can be interpreted as subjective or objective and mainly involve access to resources (e.g., social or financial support, advice). Supports make it more likely for an individual to attempt career process actions. Within the domain of retirement planning, supports may come in the form of helpful coworkers, financial advisors, or family members who can facilitate preparation for the upcoming retirement transition.

Some studies have examined the links between social support and the retirement decision-making process. Chiesa and Sarchielli (2008) examined the support networks of 250 employees at least 48 years old and nearing the retirement transition. They found that social support may relate positively or negatively with retirement planning anxiety depending on the source of the support. In this study, work supervisors' social support was associated with an increase in retirement transition anxiety because retirees likely perceived retirement as a loss of this support. Family support for the retirement transition, on the other hand, was related to lowered anxiety. Indeed, feeling closer to others may help retirees feel a sense of “mattering” to the larger world, fostering higher positive affect and better retirement adjustment (Froidevaux, Hirschi, & Wang, 2016). In this way, retirement supports may buffer the loss of social connections resulting from work disengagement.

Fretz et al. (1989) found a positive relation between social support and planning behaviors and a negative relation of support with anxiety. Wohrmann et al. (2013) found a positive moderating effect of social support on the relation between post-retirement work outcome expectations and intentions to work for the same employer into retirement in a sample of German workers, such that the relation between outcome expectations and intentions was strengthened in the presence of greater social support. This demonstrates the multifaceted relationship between social support and other predictor variables in the CSM model.

Conscientiousness. Unlike the social-cognitive and contextual variables within the SCCT framework, conscientiousness is conceptualized as a stable personality construct that is fairly constant across domains. Because of the planful, focused, and organized nature of conscientiousness, it is a very relevant quality for career processes related to information acquisition, vocational identity development, and decision-making (Hirschi & Hermann, 2013). Indeed, Feldt et al. (2011) found that high levels of conscientiousness characterized their subsample group of “Very Decided” college students. Brown et al.’s (2012) meta-analysis demonstrated that low trait conscientiousness was a significant indicator of the Lack of Readiness career indecision factor. It is likely that the organized and deliberate nature of conscientiousness helps individuals to be more informed and feel more confident when making decisions.

Few studies have examined conscientiousness in relation to retirement outcomes. Robinson, Demetre, and Corney (2010) found that conscientiousness correlated with “aspirational” reasons for retirement (a kind of outcome expectation;

e.g., “I am planning to retire to pursue new opportunities outside of work”) and higher life satisfaction after the retirement transition. Mike, Jackson, and Oltmanns (2014) found that, in two samples, retirees high in conscientiousness were more likely to seek out satisfying activities in retirement, such as volunteering. However, Foley and Lytle (2015) found that the correlation between self-efficacy to continue working in retirement and conscientiousness was insignificant. Because of the significant relations of conscientiousness to career success throughout the lifespan (e.g., Kern, Friedman, Martin, Reynolds, & Luong, 2009), it was predicted that conscientiousness would relate significantly to retirement planning self-efficacy and intentions.

Retirement planning intentions. Intentions refer to one’s goals to engage in a particular behavior or to produce desirable outcomes (Bandura, 1986). Bandura conceptualized individuals as agentic beings, where meeting goals provides a sense of accomplishment and self-actualization. Furthermore, intentions are typically considered a potent predictor of subsequent actions within the SCCT framework (Lent & Brown, 2013). Retirement planning intentions are goals to engage in the retirement planning process and can be represented, for example, by plans to meet with a financial advisor or to think about where one wants to live in retirement.

Intentions are a significant predictor of preparedness for navigating a transition. Noone, Stephens, and Alpass (2010) examined goal clarity in 1532 aging workers and found it to be a significant predictor in four retirement planning domains: financial, health, lifestyle, and psychosocial planning actions (e.g., thinking about finances or talking with family about retirement possibilities). Petoska and Earl (2009) found that the number of spontaneously generated goals by participants

predicted their engagement in financial/general planning ($\beta = .15$), health planning ($\beta = .23$), interpersonal/leisure planning ($\beta = .16$), and post-retirement work planning ($\beta = .15$) in 377 workers aged 50 years or older. Stawski et al. (2007) found that general retirement goal clarity correlated with financial savings tendencies in a sample of 100 workers preparing for retirement. In one study of early retirees, the consistency of goals for retirement over time correlated significantly with retirement adjustment in the form of leisure quality and life satisfaction in retirement (Robbins, Lee, & Wan, 1994).

Two existing measure of intentions for retirement planning have been identified via a literature search. Wohrmann et al. (2014b) created a three-item measure of intentions to continue working into retirement. The second, general retirement goal clarity scale by Stawski et al. (2007), is a more comprehensive measure of intentions that captures plans related to finances, living arrangements, social engagements, and non-work activities. The goal clarity scale is hypothesized to relate positively to self-efficacy, outcome expectations, social supports, and conscientiousness in ways similar to goal/intention variables in other career domains.

Retirement planning anxiety. Anxiety, or the feeling of worry or unease about an upcoming event or process, can be a significant hindrance to engaging in planning. In fact, anxiety can be associated with a feeling of paralysis and avoidance behaviors (e.g., Segel-Karpas, Bamberger, & Bacharach, 2013). Retirement planning anxiety, therefore, is conceptualized as a feeling of unease about planning for the retirement transition. Thoughts about retirement can be anxiety arousing, likely because retirement is a novel concept for most workers (Anderson, Burkhauser, &

Quinn, 1986; Thériault, 1994). Anxious thoughts may include, “Can I afford to stop working?” and “What will I do with my time without work?” Low levels of retirement planning anxiety allow workers to feel comfortable with thinking about retirement plans and therefore encourage engagement in planning. Whereas retirement planning intentions refer to actions that an individual wishes to take, retirement planning anxiety indicates the degree of comfort with taking those actions.

MacEwan et al. (1995) found that anxiety about the retirement planning process related to lower levels of locus of control (a variable related to self-efficacy) and retirement planning actions for activities and finances. They also reported that retirement anxiety specific to lost relationships was correlated with lower levels of expected retirement financial and activities satisfaction as well as overall well-being. Fretz et al. (1989) found a negative correlation between levels of generalized anxiety in workers nearing retirement and generalized self-efficacy, general social support, and retirement planfulness. Thus, retirement planning anxiety is expected to be related negatively with retirement planning self-efficacy. The anxiety scales used in these two studies were either very specific (e.g., Social Components of Retirement Anxiety; MacEwan et al., 1995) or very broad (General Anxiety subscale of the Multiple Affect Adjective Checklist; Fretz et al., 1989). For the purposes of this study, a new measure of retirement planning anxiety was constructed. This measure was designed to reflect a range of anxiety stimuli and to be consistent with Lent and Brown’s (2006) recommendations for domain-specific item content.

Retirement Planning Decidedness. Deciding and committing to plan for retirement is a significant struggle for many older workers. A U.S. national survey of

4161 workers by the Transamerica Center for Retirement Studies (2016) suggests that economic problems of the 2008 Great Recession, concerns about the permanence of Social Security, and overall difficulties with saving enough money to retire compound this struggle to address retirement planning. On top of financial difficulties is the difficulty of deciding among multiple retirement options, including how to spend one's time, who to spend it with, and where to live (Adams & Rau, 2011). Some older workers may not have the time or may be unable or unwilling to plan for retirement (Schlossberg, 2009).

Level of decidedness in the retirement planning process as represented with single-item measures has been shown to produce strong benefits for older workers in the forms of retirement decision-making and transition success (e.g., Noone, et al., 2009; Sharpley & Layton, 1998; Wong & Earl, 2009). Some studies have examined decidedness within the SCCT CSM context with multi-item scales. Penn and Lent (2018) found career decision-making self-efficacy and trait conscientiousness in college students to be moderately related to career decidedness, with self-efficacy partially mediating the relationship between conscientiousness and decidedness. Lent et al. (2016) found a strong positive relation between self-efficacy and career decidedness. Furthermore, self-efficacy fully mediated the relationship between social supports and career decidedness. Therefore, retirement planning self-efficacy was expected to relate moderately to a multi-item scale of retirement decidedness in this study.

Summary

The changing landscape of retirement, the recent surge in retirement rates due to the aging of the baby-boomer generation, and the increasing life expectancy within the Western world all call for a more cohesive understanding of preparation for this late-career stage. Lent and Brown (2013) presented a useful conceptualization for individuals navigating transitions across career stages in the form of the SCCT CSM model. The previous individual studies on retirement planning generally provide evidence for the paths of the CSM model. As of yet, no study has examined the SCCT CSM model in its entirety within the context of retirement planning. The current study was therefore intended to further clarify the individual and joint roles of retirement planning self-efficacy, outcome expectations, supports, and conscientiousness in relation to retirement planning intentions, anxiety, and decidedness. The goals of this study were, specifically, (a) to validate new measures of SCCT retirement planning variables, (b) to examine the relations of the SCCT predictors to retirement planning goals, anxiety, and decidedness, (c) to explore the relations among the predictor variables, (d) to test whether each variable accounts for unique predictive variance in the model, and (e) to determine whether the indirect paths within the proposed model are statistically significant.

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