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An Application of the Resource-Based Dynamic Process Model in the Context of Retirement Planning

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ABSTRACT

Retirement planning is a widely promoted activity to enhance wellbeing for aging populations. However, there is limited follow-up data to understand the antecedents of multi-dimensional retirement planning activities, the resources such activities produce or the explanatory mechanisms. This research draws on recent theorizing, which suggests that retirement planning may play a mediating role in explaining how pre-retirement antecedents are transformed into retirement resources. Antecedents, planning and retirement resources were examined using 3 waves of follow-up data collected in 2006, 2008, and 2014. Four hundred thirty-five people originally employed in 2008 and retired by 2014 participated in the study. Health, income, and a positive retirement attitude (T1) were the strongest predictors of retirement planning (T2), but job satisfaction and occupation also played smaller predictive roles. Financial planning (T2) predicted health, psychosocial, and financial resources in retirement (T3). However, health, lifestyle, and psychosocial planning played a minimal role in explaining retirement resources, and only financial planning demonstrated noteworthy evidence of mediation. Findings can help to inform policy decisions by identifying those at greatest risk of not planning, and to isolate the factors most likely to explain the longer-term effects of planning. Understanding which resources are predicted by different domains of planning will also help inform the targeting of interventions.

Unprecedented numbers of people will retire in the immediate future, but most remain unprepared for the transition (Adams & Rau, 2011). Retirement planning, its antecedents, and the resources resulting from planning have important implications for organizations and social policy. Understanding the antecedents of retirement planning supports employees to take preventative action prior to retirement and assists organizations to identify those who are less likely to plan. Recognizing the outcomes or resources derived from retirement planning supports planning activities and highlights those areas most likely to lead to wellbeing post-retirement. To assist older workers to prepare for retirement, employees, employers, and governments need sound information about the most beneficial ways to approach retirement planning and reliable evidence of its long-term benefits. A meta-analysis by Topa, Moriano, Depolo, Alcover, and Morales (2009) made significant progression towards understanding the antecedents and outcomes of retirement planning. The current research builds on their analysis, using the Resource-Based Dynamic Process model as the theoretical basis (Wang et al., 2011).

Topa et al. (2009) showed that the strongest predictors of retirement planning were job dissatisfaction and high levels of work involvement. In contrast, health, work conditions, and retirement attitudes showed no relationship with planning. However, research has identified a much broader range of antecedents that fall within one of four categories: socioeconomic (Noone et al., 2012), sociodemographic (Humble et al., 2012), psychosocial (Noone et al., 2010a), and health (Noone et al., 2012). Topa et al.'s analysis was also largely based on cross-sectional data and did not consider economic resources derived from planning or the effects of different types of planning on retirement resources. This is important because in the years since their analysis, the benefits of "non-financial" planning (e.g., psychosocial planning) are still largely unknown, and calls for research into a broader range of planning outcomes using prospective methods (Wang & Shultz, 2010) are still mainly unanswered. The current research therefore makes a new empirical contribution to the retirement planning literature by drawing on 8 years of follow-up data to examine a more comprehensive array of retirement planning antecedents, planning activities, and

planning outcomes (resources). Retirement planning is defined as the goal-directed thoughts and behaviors that promote good health and provide financial security, fulfilling lifestyles, and rewarding roles in retirement (Noone et al., 2010a, p. 522).

This research contributes to retirement theory by conceptualizing retirement planning within the Resource-Based Dynamic Process model for retirement adjustment (Wang et al., 2011). This model synthesizes five major theories of retirement adjustment to better understand the complexity of retirement adjustment process and quality. Adjustment quality is seen as a function of six domains of resources namely, physical, cognitive, motivational, financial, social, and emotional, whose fluctuations affect adjustment quality over time. Although previous studies using smaller samples (e.g., Leung & Earl, 2012; Yeung & Zhou, 2017) have pointed to a three-factor as opposed to a six-factor model, it is still possible that the theoretically derived model proposed by Wang explains some outcomes better than others. The advantage of exploring the six-factor model is that where relationships exist there may be important implications for more tailored or nuanced interventions.

In Wang et al.'s model, retirement planning is labeled a "transition variable," suggesting it may be a mechanism to explain how antecedents affect retirement resources. Successful retirement planning may promote resource accumulation over time and explain an increase in resources following the transition to retirement. In contrast, a lack of planning could explain resource deficits. This means that the outcomes or results of retirement planning can also be understood as the resources described in Wang et al.'s model. Likewise, retirement adjustment is an outcome of having sufficient resources. Expanding the Resource-Based Dynamic Process model to capture a more specific mediation role for retirement planning opens up new lines of inquiry.

Our review begins by examining the relationships between retirement planning and its socioeconomic, sociodemographic, and psychosocial antecedents. We then introduce the Resource-Based Dynamic Process model, outlining the physical, emotional, financial and

psychosocial resources that retirement planning is argued to produce. Wang et al.'s theory and empirical findings are used to motivate the research hypotheses, which are presented at the end of each subsection. An overall model for testing is presented in Figure 1.

Socioeconomic Antecedents of Retirement Planning

Education.

The literature suggests a weak positive relationship between education and retirement planning. Some research shows educational attainment is associated with financial and health planning (Noone et al., 2012). An earlier study also showed education was positively associated with aspects of health, lifestyle, and psychological planning for Hong Kong women (Lee & Law, 2004). While other scholars (Petkoska & Earl, 2009) have reported that education was a predictor of health planning behaviors, it did not predict work or financial planning. Likewise, Koposko, Kiso, Hershey, & Gerrans (2015) found that education was not a predictor of retirement savings.

Income.

Much of the literature suggests that people with lower incomes tend to undertake less financial planning (Chatterjee & Zahirovic-Herbert, 2010; Kock et al., 2012; Noone et al., 2012; Topa et al., 2012) and general retirement planning (Curl & Ingram, 2013; Ellen et al., 2012; Mansor et al., 2015). However, there are exceptions. An Australian study (Blackmore & Prendergast, 2011) showed that household income was not a key influencer in staying informed of financial matters (an aspect of financial planning). There is also limited evidence linking income with the other three planning domains. For example, Muratore and Earl (2010) found that household income was associated with aspects of financial planning but was not associated with lifestyle and health planning (labeled "Self-protection"). Similar results were reported by Noone et al. (2010a). Considered together, the research suggests that any effect of income on retirement planning may be restricted to the financial domain.
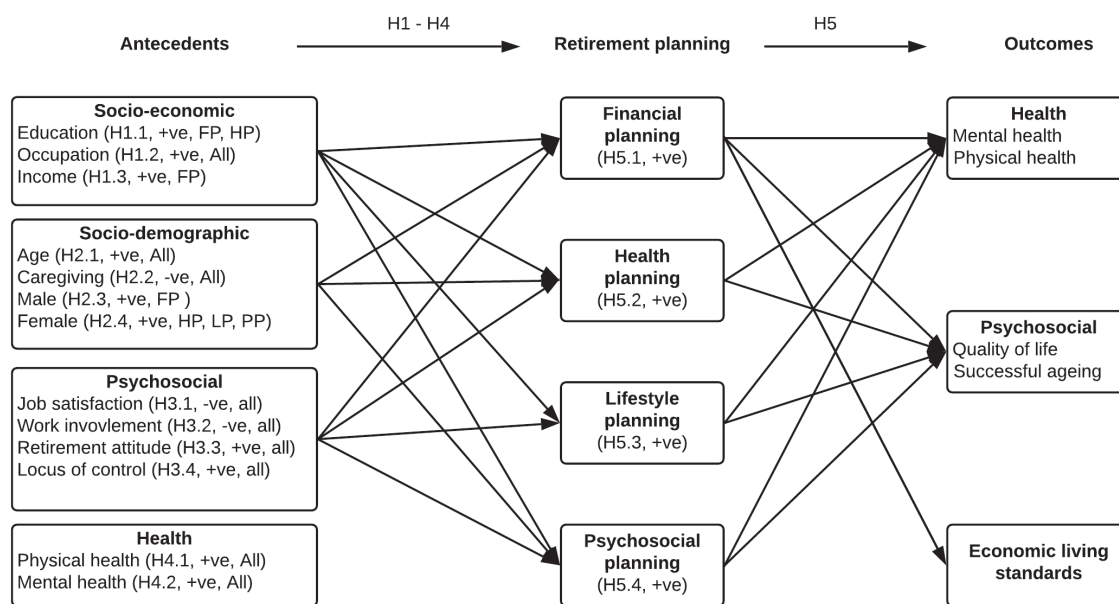

Figure 1. Path model of hypothesized relationships between the study variables.

Occupation.

There are relatively few studies that examine the direct link between retirement planning and occupational status, but insights from research into occupational status, education, income, and retirement timing can inform hypotheses. Fisher et al. (2016) argue that education is positively associated with later retirement. Greater educational attainment promotes the uptake of higher status occupations with greater remunerations benefits and better working conditions often associated with "white-collar" work. However, there is also a group of higher status workers that retire earlier because they can afford to. Lower status, blue-collar workers also tend to retire early (Fisher et al., 2016), partly due to their physically demanding work conditions (Johnson et al., 2011) and higher rates of poor health associated with their occupations (Clougherty et al., 2010). Critically, blue-collar workers appear to have less control over the retirement decision, which is associated with lower levels of general retirement planning (Noone et al., 2013; Wong & Earl, 2009) and no evidence was found to suggest that this effect would be domain-specific.

Wang et al.'s (2011) resource theory posits that antecedents (e.g., education, occupation, and income) are directly related to their corresponding resources (e.g., financial resources). However, it is worth noting that an antecedent may also *be* a resource, for those who are not yet retired. For example, a worker's income represents a resource for them at that point in time and an antecedent to their future financial resources in retirement. Although this creates an element of circularity, it helps to clarify the research hypotheses; people need certain resources to plan adequately for retirement (Leung & Earl, 2012). However, income may not drive non-financial forms of planning. This would explain the lack of empirical evidence for the relationship (Muratore & Earl, 2010). In contrast, education and occupational status, which could reflect multiple resources (cognitive, social, or financial), may have benefits for all forms of planning. Therefore, the following hypotheses are put forward for testing.

> *H1:* Higher levels of education (H1.1) and greater occupation status (H1.2) will have a positive effect on all planning domains. Higher income will have a positive effect on financial planning only (H1.3).

Sociodemographic Antecedents of Retirement Planning

Age.

The planning literature generally shows a positive relationship between age and financial planning (Koposko et al., 2015; Ng et al., 2011) and general planning (Curl & Ingram, 2013; Moorthy et al., 2012; Yeung, 2013). One study demonstrated a consistently increasing age gradient (age 30–80) across all four dimensions of planning (Kornadt & Rothermund, 2014). However, there are exceptions that show no relationship (Chou et al., 2015; Cochran et al., 2012; Noone et al., 2010a), and some suggest that the relationship between age and planning may be domain-specific. For example, research found a significant relationship between age and planning for social resources amongst retirees but not financial, health, cognitive, emotional, or motivational resources (Leung & Earl, 2012). However, the weight of the evidence and the likelihood that retirement increases with age suggests a positive relationship between age and planning.

Caregiving.

Unpaid caregiving carries significant economic benefits for societies (Feinberg et al., 2011), but both benefits and challenges for individuals (Roth et al., 2015). For example, caregiving is associated with lower rates of paid employment, which impacts negatively on retirement wealth accumulation (Nguyen & Connelly, 2014; O'Loughlin et al., 2017). It is not surprising then that caregiving was negatively associated with financial preparedness in studies of female caregivers. (Orel et al., 2007). Caregivers also tend to undertake less general retirement planning compared to those who do not have a caregiving role (Humble et al., 2012). Two qualitative studies showed caregivers felt unable to financially plan for retirement due to economic constraints, necessity to live day-to-day, and a perceived lack of control over future events (Arksey & Glendinning, 2008; Pope, 2012). Yet, most of caregivers in Pope's study (Pope, 2012) were still preparing for retirement across non-financial domains. Nevertheless, the relationships of caregiver burden with factors such social isolation (Adelman et al., 2014) and poor health (Bauer & Sousa-Poza, 2015) are well established. This means that those with more intensive caregiving roles may also lack the resources for health, lifestyle, and psychosocial planning for retirement.

Gender.

Evidence for gender differences in retirement planning is mixed. Studies suggest that women undertake less financial planning than men in Japan (Sekita, 2011), Russia (Klapper & Panos, 2011), and Australia (Ntalianis & Wise, 2011), and retire with significantly less personal wealth (Keegan et al., 2012). This is partly because women have historically spent more time out of paid work due to caregiving commitments at both the start and end of their careers (Charlesworth & Macdonald, 2015). However, women have also been shown to undertake more health and lifestyle planning than men (Muratore & Earl, 2010; Petkoska & Earl, 2009). Other research has found that women plan more than men across all domains (Earl et al., 2015), plan more for health (Wijeratne et al., 2018), and plan more for social interaction (Petkoska & Earl, 2009). Further studies have found no gender differences in financial planning (Noone et al., 2012) or any domain of planning (Mansor et al., 2015; Noone et al., 2010a).

Resource-Based Dynamic Perspective may shed light on the relationship between gender and retirement planning. In terms of financial planning, men's advantages in income and wealth accumulation provide a comparatively greater resource for financial planning. Yet, as noted above, financial resources may have no benefits for health, psychosocial, and lifestyle planning. In contrast, women tend to have larger social networks than men (Stephens et al., 2014), report more positive health behaviors and leisure planning (Petkoska & Earl, 2009) and have better health status (Peisah et al., 2019). This suggests women have stronger social and health resources for non-financial forms of planning.

Wang et al.'s (2011) model can also be applied to the other sociodemographic antecedents. For example, increasing levels of caregiving may prevent income generation, depleting economic and health resources. Older people are likely to plan more because they are closer to retirement. However, pre-retirees vary significantly in their resources and proposed retirement timing, which would explain why the relationship between age and planning can be relatively weak (Noone et al., 2010a). Based on theory and empirical findings, the following predictions are made:

H2: Age (H2.1) will have a positive effect, and caregiving a negative effect (H2.2), on all planning domains. Men will report higher levels of financial planning than women (H2.3), but lower levels across the other domains (H2.4).

Psychosocial Antecedents of Retirement Planning

Job satisfaction.

Topa et al. (2009) showed that dissatisfied workers undertake more general planning, perhaps so that they can leave the workforce sooner (Kautonen et al., 2012). However, more recent studies have shown the opposite effect with respect to health planning, financial planning (Choi & Choi, 2012), and general planning (Osman et al., 2013). One study found no relationship between satisfaction and planning (Cobb-Clark & Stillman, 2009). Despite these recent findings, low job satisfaction was the strongest predictor of retirement planning in Topa et al.'s meta-analysis, providing stronger support for a negative relationship. Moreover, the small, industry specific sample used by Choi and Choi (2012) suggests that their findings may not generalize to all older workers.

Perceived work involvement.

Work involvement is concerned with the perceived value of work in one's life (Kanungo, 1982) and, for the purposes of this review, encompasses similar constructs such as work centrality and work-role identity. Increasing involvement with work is arguably detrimental for retirement planning, as demonstrated in Topa et al.'s meta-analysis (Topa et al., 2009), one study of general planning (McCullough, 2012), and two studies of financial planning (Choi & Choi, 2012; Topa et al., 2012). However, there are also exceptions that show no relationship between work involvement and financial planning or general planning (Noone et al., 2010b). This may be because perceptions of work involvement do not necessarily lead to negative experiences past the early stages of retirement (Topa & Alcove; Wong & Earl, 2009). Nevertheless, the majority of studies reviewed suggest a higher level of work involvement is detrimental for planning activities.

Attitude to retirement.

Topa et al. (2009) found no relationship between retirement attitudes and planning after controlling for covariates. However, they did identify a positive bivariate relationship and more recent research shows a positive attitude towards retirement is associated with financial planning (Moorthy et al., 2012), composite measures of planning (Griffin et al., 2012), and general planning measures (Cochran et al., 2012).

Locus of control.

Wang et al. (2011) cite the lack of research into psychological antecedents as a significant gap in the literature. This research therefore considers the role of locus of control (Levenson, 1973) as an additional antecedent. Locus of control and related constructs such as mastery and self-efficacy have been positively associated with financial planning (Carr et al., 2015; Davis & Hustvedt, 2012; Heraty & McCarthy, 2015a, 2015b) as well as lifestyle, psychosocial, health, and composite measures (Earl & Archibald, 2014; Griffin et al., 2012). In theory, those who feel less in control of their lives may be less inclined to plan because these behaviors are likely to be perceived as futile.

Wang et al. (2011) argue that motivational resources in retirement are predicted by low work involvement, low job satisfaction, and retirement motivations (e.g., positive attitude). Given these relationships

and our antecedent/resource argument, these psychosocial antecedents may also function as pre-retirement motivational resources. This means that job satisfaction and work involvement may be motivational factors that encourage staying in work for longer and inhibit retirement planning, whereas a positive retirement attitude and a high locus of control are motivators of planning activities. The following hypotheses are therefore put forward.

H3: Greater job satisfaction (H3.1) and greater work involvement (H3.2) will have a negative effect on all planning domains. A positive retirement attitude (H3.3) and higher locus of control (H3.4) will have positive effects on all planning domains.

Health

Physical health.

Topa et al. (2009) argue that the relationship between health and retirement planning is ambiguous. Poor health could stimulate planning activities (a negative relationship) and this is supported by studies of financial planning (Samsi & Manthorpe, 2011; Topa et al., 2012) and general planning (Curl & Ingram, 2013; Gupta & Larsen, 2010). Other research shows that poor health may be detrimental with respect to financial planning (Choi & Choi, 2012; Cobb-Clark & Stillman, 2009; Noone et al., 2012) and general planning (Chatterjee & Zahirovic-Herbert, 2010). Topa et al. (2009) showed no relationship between health and planning. This finding is consistent with a recent Australian study (Earl et al., 2015) and an earlier study in New Zealand (Noone et al., 2010a). However, the association between poor health with unintended early retirement (e.g., Australian Bureau of Statistics, 2017) and the association between unintended retirement with less opportunity for planning (Noone et al., 2013), suggest that better physical health will benefit all forms of retirement planning.

Psychological health.

Most studies exploring the relationship between retirement planning and psychological health focus on planning promoting better psychological outcomes. Less attention has been devoted to psychological health as an antecedent of planning, although it would be expected that poor psychological health might impede planning in several ways. It might be expected, for example, that those with poor psychological health prefer more leisure time or they may attribute work as a cause of psychological problems, and plan to withdraw as a consequence. Other research has investigated the relationship between physical and psychological health and preferences for retirement (Lee et al., 2016). They reported that participants with depressive symptoms worried more about retirement and were not eager for leisure time. This might in turn be explained by a concern for financial security due to poorer earning capacity resulting from ill-health. As with physical health, an early retirement due to poor mental health (Olesen et al., 2012) may limit opportunities to plan across all planning domains.

With respect to Wang et al.'s theory, health has a pivotal role in people's ability to accumulate resources through retirement planning. Firstly, health plays a role in determining workplace exit. Those who are forced to leave work early due to poor health have less opportunity to save for retirement (financial planning) and socialize with the retirement role (psychosocial planning). Secondly, poor health can limit people's ability to stay active (health planning) and to develop the lifestyle they want for retirement (lifestyle planning). As such, it is hypothesized that

H4: Better physical health (H4.1) and better psychological health (H4.2) will have a positive effect on all planning domains.

Retirement Resources

Topa et al.'s (2009) meta-analysis showed that retirement planning has a positive effect on life satisfaction and health. However, one systematic review suggests positive outcomes from planning occurred in only 13 of the 23 studies reviewed (Barbosa et al., 2016). To shed light on this discrepancy, this section reviews the relationships between planning and resources in retirement that reflect the six resource categories proposed by Wang et al. (2011). In the current research, physical and emotional resources are reflected in health status (mental and physical) and financial resources are captured by economic living standards. Motivational, cognitive, and social resources (relabeled psychosocial resources) are captured by quality of life and self-perceptions of successful aging. These particular resources are put forward for testing because they represent the factors identified by older people as the most important for a good life in retirement (Ipsos, 2015; Leung & Earl, 2012). However, it should be noted that cognitive resources are relatively under-represented in the current research.

Physical and emotional resources.

Topa et al.'s meta-analysis (Topa et al., 2009) showed that general retirement planning was positively associated with reduced likelihood of mental and physical illness. Since then, Noone et al. (2009) used longitudinal data from the Health and Retirement Study (HRS) to show that general retirement planning is predictive of better health in retirement after controlling for income, reason for retirement, and demographic variables. Financial planning has also been linked to better psychological health (Irving, 2012) and general health improvements in a U.S. follow-up study (Gubler & Pierce, 2014). However, a small ($n = 90$) longitudinal study did show that psychosocial planning was unexpectedly associated with greater psychological distress (Yeung, 2013). Finally, the established link between social participation and health for older people (Holt-Lunstad et al., 2010), suggests that lifestyle and psychosocial planning may also have health benefits via the promotion of social roles in retirement.

Financial resources.

Economic living standards are a direct measure of the "consumption of goods and services necessary for wellbeing" and are affected by factors such as income and asset holdings (Jensen et al., 2005; Ministry of Health, 2010, p. 6). A significant body of evidence suggests that financial planning has positive benefits for living standards by increasing retirement wealth (Martin et al., 2016) and related factors such as perceived savings adequacy (Chou et al., 2014) and savings self-efficacy (Ellen et al., 2012). However, weak correlations between non-financial planning domains and living standards found by Noone et al. (Noone et al., 2010a), suggest that health, lifestyle, and psychosocial planning will have no effect on future economic living standards.

Psychosocial resources.

Wiggins et al. (2008) identify four QoL dimensions (Control, Autonomy, Self-realization, and Pleasure—CASP) that capture potential social and motivational resources derived from retirement planning. For example, financial planning can assist people to do the things they want to do (Autonomy), health planning may have positive benefits for energy levels (Pleasure), lifestyle planning may promote a sense that life is full of opportunities (Self-realization) and effective psychosocial planning may prevent retirees from being left out (Control) (Hyde et al., 2003, p. 194).

The model of "successful aging," described by John Rowe and Robert Kahn (1987) shifted the focus of the study of aging from disease and decline to one emphasizing health and growth. This influential model has shaped policy and intervention toward supporting older people to avoid disease and disability, maintain high mental and physical functioning, and remain socially engaged. Successful aging, therefore, captures all six of the resources put forward by Wang et al. (2011). The emphasis on achieving "success" in older age has influenced "retirement lifestyles, policy agendas, and anti-aging ideals" (Katz & Calasanti, 2014, p. 209). Pruchno and Carr (2017) note recent developments that include paying attention to the subjective assessments of successful aging made by older people in order to understand how to promote wellbeing in older age. Here, we consider how aspects of retirement planning can contribute to older people's own assessments of their ability to age successfully post retirement.

H5: Financial planning will have a positive effect on all retirement resources (H5.1). Health planning (H5.2), lifestyle planning (H5.3) and psychosocial planning (H5.4) will have a positive effect on all non-financial retirement resources.

This literature review identifies a broad array of potential antecedents to retirement planning and resources derived from planning activities, which have not been tested in a single model using follow-up data (Figure 1). The proposed model builds on the strengths of Topa et al.'s meta-analysis and explores the role of retirement planning as a mediator between antecedents and resources proposed in Wang et al.'s (2011) model *(H6.1)*.

MATERIALS AND METHODS

Participants and Procedures

Participants were drawn from respondents to the 2006, 2008, and 2014 waves of the New Zealand Health, Work, and Retirement study (Towers et al., 2015). The study is a biennial postal survey of older persons in New Zealand. In the initial 2006 survey, $n = 13,045$ persons aged 55–70 were randomly selected from the New Zealand electoral roll and approached for participation via post. An over-sample of persons identifying as being of Māori descent (Indigenous New Zealanders) was undertaken to ensure adequate representation of this group. Of the $n = 6,661$ persons who returned the 2006 questionnaire, $n = 3,135$ (47%) agreed to longitudinal follow-up. Items regarding retirement planning were included in the 2008 ($n = 2,474$ respondents) and 2014 ($n = 1,688$ respondents) survey waves. Of the $n = 1,562$ who responded to the 2006, 2008, and 2014 survey waves, $n = 435$ were selected for the current research. This represents people who were working for pay in 2008 but were fully retired by 2014. Data from 2014 was chosen over 2010 and 2012 in order to maximize the time since retirement.

The study was approved by the Massey University Human Ethics Committee.

Measures

Antecedents.

All antecedents were measured in 2006, with the exception of locus of control, which was measured in 2008.

Gender was measured with a dichotomous variable coded 1 for males (50.3% of the sample) and 2 for females (49.7%). This is comparable to census data that indicates women made up 51.6% of people aged 65–74 in 2013 (Statistics New Zealand, 2013). *Age* was measured continuously in years and ranged from 62 to 79 in 2014.

Education was measured as participants' highest level of educational attainment: No qualifications (1 [19.3%]); Secondary School (2 [17.5%]); Post-secondary/trade (3 [43%]); and Tertiary education (4 [20.2%]).

Income was assessed by self-reported personal income before tax in the past 12 months. There was 38.4% missing data for personal income and missing values were replaced with the mean.

Occupation was classified using the Australian and New Zealand Standard Classification for occupation (Trewin & Pink, 2006). Participants were asked to provide free text responses nominating their occupation (e.g., teacher) and responses were coded into one of eight nominal single-digit categories (i.e., managers [15.2%], professionals [25.3%], technicians and trade workers [14%], community and personal service workers [8.9%], clerical and administrative workers [17.1%], sales workers [5.8%], machinery operators and drivers [4.7%], Laborers [8.9%]). The codes were then transformed to occupational status score ranging from 18.5 (laborers) to 81.6 (professionals) approximating socioeconomic status of persons in that occupational group using the McMillan, Beavis, and Jones (2009) approach. There was 41% missing data for occupational SES and missing values were replaced with the mean.

Physical and mental health were measured using the physical and mental health component summary scores of the Medical Outcomes Study Short Form (SF-12 version 2) (Ware et al., 2002). Orthogonal physical and mental health component scores were calculated using normative scores for an older New Zealand population derived from the 2010 wave of the Health, Work, and Retirement survey and factor score coefficients derived from the 1996/97 New Zealand Health Survey (Sarfati et al., 1999). Factor score coefficients for physical health scores give higher positive weights to physical health related sub domains (e.g., physical functioning, role physical, bodily pain; sample item: "*Does your health now limit you in… climbing several flights of stairs?*") and coefficients for mental health scores give higher weight to mental health related sub domains (e.g., mental functioning, role emotional, vitality; sample item: "*In past four weeks how much of the time… have you felt downhearted and blue?*").

The average physical health score at T1 (2006) was 51.97 (SD = 8.80) and 47.82 at T3 (SD = 7.50). The average mental health score at T1 was 49.60 (SD = 7.50) and 50.57 at T3 (SD = 7.80). With respect to representativeness, SF-36 scores for the 4,309 Health, Work, and Retirement Study participants aged 55 to 64 were as follows. For 55 to 59-year-olds, the mean score for physical health was 51.22 (SD = 9.15) and 49.52 (SD = 9.65) for mental health. For 60- to 64-year-olds the mean physical health score was 50.00 (SD = 9.22) and 49.94 (SD = 9.55) for mental health (Stephens et al., 2010). Although not directly comparable to the SF-12 scores used in this research, the figures above suggest our sample is a reasonable representation of the entire study sample, with respect to health in 2006 (T1). As the 2006 data collection was based on a randomized sample of New Zealanders in this age group, we cautiously assume that our sample did not differ substantively from the population with respect to health in 2006.

Caregiving. Caregiving intensity was assessed in two stages. Firstly, participants indicated whether or not they were currently providing unpaid care for a relative or friend. Caregivers indicated how often they provided care. Items were coded to anchors as follows: Every day (5), 21.8%; Several times a week (4), 31.1%; Once a week (3), 20.2%; Once every few weeks (2) 17.6%; or Less often (1) 9.2%. Those that did not have a caregiving commitment were combined with the "Less often" group. The variable was then dichotomized to reflect those providing care several times a week or more (4 and 5) versus those providing care once a week or less (1, 2, and 3).

Locus of control was assessed with 9 items eliciting participant agreement to statements regarding their ability to influence the circumstances of their own life (Sapp & Harrod, 1993) on a scale of (1) *Strongly agree* to (5) *Strongly disagree* (coefficient alpha = .80; "*I feel like what happens in my life is mostly determined by powerful people*"). A higher total score, calculated as the sum of items, indicates a greater internal locus of control.

Job satisfaction was assessed using mean ratings of participant satisfaction with different aspects of their job across 15 items (Warr et al., 1979) on a scale of (1) "*Extremely unsatisfied*" to (7) "*Extremely satisfied*" (coefficient alpha = 0.85; sample item: "*The way the organization is managed*").

Work involvement was assessed by the Work Involvement Questionnaire (Kanungo, 1982) using mean ratings of participant agreement to six items on the importance of work in life on a scale of (1) "*Strongly disagree*" to (5) "*Strongly agree*" (coefficient alpha = 0.75; sample item: "*Individual's personal goals group be work oriented*").

Positive Attitude to retirement was assessed by mean ratings on the Expected Adjustment Scale (Taylor & Shore, 1995) using three items related to positive feelings about their capacity to adapt to retirement life on a scale of (1) "*Strongly disagree*" to (5) "*Strongly agree*" (coefficient alpha = 0.86; sample item: "*I don"t think I will have any trouble handling retirement*").

Retirement planning.

Retirement planning was measured in 2008 with a pilot-study of the multi-dimensional Process of Retirement Planning Scale (PRePs) (Noone et al., 2010a). The full scale conceptualizes retirement planning as a four-stage process ranging from planning thoughts/cognitions to a final, behavioral or "preparedness" stage. The items used in this research assess the final ("preparedness") stage across domains of participants' financial, health, lifestyle and psychosocial planning (Table 1). Items are endorsed by participants on a scale of (1) "*Not true for me at all*" to (5) "*Definitely true for me.*" Originally developed in New Zealand, the scale has also demonstrated reliability and validity in Turkish (Gunay, 2013), Korean (Kim et al., 2012), and Brazilian samples (Rafalski & Andrade, 2016).

Table 1. *Measurement Model: Reliability and Convergent Validity for PRePS*

Latent variable	Indicator	Lambda	Composite reliability	AVE
Financial planning (T2)	By the time I retire I will have sufficient income, investments, and/or superannuation to ensure the standard of living I want in retirement	0.91	.84	.73
	By the time I retire, I will own a house without a mortgage	0.79		
Health planning (T2)	I only eat foods that will benefit my long-term health	0.61	.73	.47
	I try to keep physically active (e.g., by taking regular walks, playing sport, or doing yoga etc.)	0.74		
	I avoid unhealthy behaviors such as excessive drinking and cigarette smoking	0.69		
Lifestyle Planning (T2)	I am actively developing ways to spend my time when or if I retire	0.82	.77	.53
	There are many things I could do with my time if I was forced to retire today	0.70		
	I have recently taken up new interests, activities, or hobbies	0.66		
Psychosocial Planning (T2)	I am separating myself from my work	0.78	.73	.48
	I am reducing or will soon reduce my work hours	0.66		
	I often speak to retired people about their experiences of retirement	0.63		

Retirement resources.

All outcomes were measured in 2014.

Physical health and *mental health* were measured using the composite scores from the SF-12 and calculated using the same method applied to the 2006 health variables.

Successful aging was by responses to the question, "*how successfully do you consider yourself to be ageing?*" on a scale of (1) *Extremely unsuccessfully* to (5) *Extremely successfully.*

Quality of Life (QoL) was assessed with a 12-item version of the CASP (Wiggins et al., 2008). The CASP-12 is non-health-based assessment of quality of life developed for older persons and assesses aspects of control, autonomy, self-realization, and pleasure (sample item: "*I feel that the future looks good for me*").

Economic living standards were measured with the Economic Living Standards Index (ELSI, Jensen et al., 2005). The ELSI total score is categorized into seven levels, with increasing values indicating a better economic living standard: (1) Severe hardship (2) Significant hardship (3) Some hardship (4) Fairly comfortable (5) Comfortable (6) Good (7) Very good.

Analysis

Smart PLS 2.0 was used to test the psychometric properties of the PRePS scale (reliability, discriminant and convergent validity, factor structure) to ensure it was performing as intended. *AMOS v22* was then used to test the overall fit of the model (model fit statistics are not available in *Smart PLS*) and to test the study hypotheses with Structural Equation Modeling (SEM). The indirect unstandardized effects of the antecedents on retirement resources via retirement planning were also examined for statistical significance using bootstrapping techniques (2,000 runs) (Hayes, 2009).

To test the factor structure of the PRePS, the proposed four-factor model (Table 1) was fitted to the data using *Smart PLS* 2.0 (Ringle et al., 2005). PLS works efficiently with small sample sizes and makes no assumptions about the underlying data, such as data distributions. This estimation procedure is highly recommended when the primary

aims of applying SEM is to explain the variance of the constructs (Hair et al., 2014). We also used the bootstrapping method to test the significance of the items' loadings. Statistical significance was established by bootstrapping 5,000 samples with 435 cases, resulting in a critical value of $t = 1.96$, $p < .05$.

According to the rules of thumb for the evaluation of measurement models, outer (factor) loadings between .40 and .60 should be considered for removal (Hair et al., 2014). Composite reliability is the preferred alternative to Cronbach's Alpha as a measure of internal consistency, and the score obtained should be higher than .70. Analysis showed that items for the health planning dimension showed inadequate composite reliability. Two health planning measures assessing frequency of checkups and medical screening were removed due to low outer loading and because they had performed sub-optimally in previous research (Noone et al., 2010a). Table 1 displays the results of the outer model, showing that the constructs of Financial Planning, Health Planning, Lifestyle Planning, and Psychosocial Planning, exceed the minimum requirements. Observed items' scores were used for the four factors.

Convergent and discriminant validity.

These tests were undertaken to ensure that items within each dimension (e.g., financial planning) converged sufficiently and that each dimension adequate diverges from the others (e.g., financial planning diverges from health, lifestyle and psychosocial planning). Average variance extracted (AVE) is the recommended criterion and should be higher than .50 (Hair Jr et al., 2014), although if composite reliability is higher than .60, the convergent validity of the construct is adequate (Fornell & Larcker, 1981). As shown in Table 1, the AVE combined with the composite reliability for each construct was satisfactory. In regard to discriminant validity among constructs, the square root of AVE for each construct is greater than its highest correlation with any other construct (Fornell & Larcker, 1981, see Table 2) suggesting good discriminant validity between the constructs assessed in the model.

Structural Equation Analysis was performed using AMOS.22 to test the hypotheses. The fit of the model was assessed using chi-square

Table 2. Descriptive Statistics and Correlation Matrix

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Age (T1)	61.57	3.80	1																			
2. Gender (T1)	-	-	-.07	1																		
3. Education (T1)	-	-	-.05	-.05	1																	
4. Income (T1)	35567.6	22795.6	-.14**	-.23**	.09**	1																
5. Occupation (T1)	-	-	.04	-.17**	.42**	.18**	1															
6. Physical Health (T1)	51.97	8.80	-.06	-.04	.08	.09	.05	1														
7. Mental Health (T1)	49.60	7.50	.11*	-.12*	.04	.10*	.08	.04	1													
8. Caregiving (T1)	-	-	.10*	.05	-.02	.00	.02	-.11*	.01	1												
9. Work involvement (T1)	2.66	0.51	.16**	-.07	-.13**	-.09	.00	-.05	-.07	.06	1											
10. Job Satisfaction (T1)	5.20	0.99	.14**	.00	.03	.09	.15**	-.02	.24**	-.03	.10*	1										
11. Positive attitudes (T1)	3.90	0.85	-.04	-.05	.07	.06	.07	.11*	.17**	.04	-.09	.11*	1									
12. Locus of control (T2)	3.80	3.80	-.06	.04	.07	.12*	.14**	.06	.11*	.02	-.14**	.10*	.15**	1								
13. Lifestyle plan (T2)	3.25	1.00	-.04	.03	.08	-.03	.07	-.02	.03	.01	-.03	.07	.23**	.04	.85							
14. Health plan (T2)	3.70	0.86	-.03	-.06	.08	.10*	.04	.09	-.01	.12*	-.05	.09	.10*	.07	.22**	.69						
15. Financial plan (T2)	3.73	1.20	-.01	-.05	.11*	.33**	.20**	.16**	.03	-.08	.02	.12**	.15**	.15**	.17**	.26**	.73					
16. Psychosocial Plan (T2)	2.32	0.75	.10*	.04	.11*	-.09	.09	-.05	.02	-.06	-.00	-.04	.11*	.36**	.14**	.15**	.14**	.69				
17. ELSI 2014 (T3)	5.56	1.30	-.05	-.11*	.05	.21**	.14**	.14**	.20**	-.05	.19**	.25**	.10*	.22**	.15**	.12*	.47**	.04	1			
18. Physical health (T3)	47.82	10.10	-.10*	-.00	.09	.09	.14**	.45**	.15**	-.12*	-.13**	.03	.11*	.15**	-.00	.10*	.22**	.04	.36**	1		
19. Mental health (T3)	50.57	7.80	-.06	-.01	.08	.08	.11*	.15**	.38**	-.03	-.07	.12*	.14**	.14**	.01	.14**	.20**	-.04	.32**	.14**	1	
20. Success aging (T3)	3.91	0.63	-.01	.06	.05	.05	.08	.21**	.27**	.06	-.07	.18**	.17**	.10*	.13**	.13**	.26**	.04	.35**	.35**	.38**	1
21. Quality of life (T3)	28.99	5.40	-.09	.04	.15**	.15**	.18**	.26**	.28**	-.09	-.06	.14**	.19**	.21**	.07	.14**	.29**	-.04	.51**	.36**	.53**	.49**

Note: *N* = 435; Gender coded as 1 = Male, 2 = Female; Income = Net personal Annual income, Wave 1; ELSI: Economic Living Standards Index. Values in the diagonal for the four PRePS factors are the root square of Average Variance Explained.

*p < .01, **p < .001.

and the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI) and the root mean square error approximation (RMSEA). The procedure of re-specification of the model, taking into account the critical ratios associated with the parameters and the modification indexes, indicated that changes in the model that would improve its fit. The initial model has nine endogenous variables and 10 exogenous variables. The observed values (age, gender, income, and occupation) or the mean of the scales have been used as an indicator for the model.

Our initial model showed only a limited fit to the data, $\chi^2(87) = 818.37$, CMIN/DF= 9,41; GFI = .79, AGFI = .54, RMSEA = .140. The statistical fit was improved when we eliminated relationships without statistical significance, based on their lower *critical ratios*. Also, we eliminated the antecedent locus of control and caregiving, due to their non-significant statistical influence, and we imposed three additional direct relationships between antecedents and resources: Physical health T1 → Physical health (T3), Mental Health (T1) → Mental Health (T3), and Gender → Financial Wellbeing T3. The final model showed better statistical fit, $\chi^2(92) = 186.2$, CMIN/DF=2,02; GFI = .96, AGFI = .92, RMSEA = .04. All remaining paths were significant, and their standardized estimates are presented in Figure 2.

RESULTS

Correlation coefficients are presented in Table 2.

Hypotheses 1.1–1.3

Income (ß = .29, $p < .001$) and occupation (ß = .09, $p < .05$) were associated with financial planning, but not other domains of planning. Education was not associated with any domain of planning.

Hypotheses 2.1–2.4

Age was only associated with psychosocial planning (ß = .13, $p < .01$). Gender and caregiving showed no association with the retirement planning domains.

Hypotheses 3.1–3.4

Decreased job satisfaction predicted only psychosocial planning (ß = −.10, $p < .05$). A positive attitude towards retirement predicted financial planning (ß = .10, $p < .05$), lifestyle planning (ß = .22, $p < .001$) and psychosocial planning (ß = .10, $p < .05$). Work involvement and locus of control did not predict any of the planning domains.

Hypotheses 4.1–4.2

Physical health predicted financial planning (ß = .13, $p < .01$) and health planning (ß = .10, $p < .05$). Mental health predicted health planning (ß = .12, $p < .01$).

Hypotheses 5.1–5.4

Financial planning predicted physical health (ß = .15, $p < .001$), mental health (ß = .20, $p < .001$), QoL (ß = .28, $p < .001$), perceptions of successful aging (ß = .20, $p < .001$), and economic living standards (ß = .46, $p < .001$). Health planning had a positive effect on physical health (ß = .10, $p < .05$). Psychosocial and lifestyle retirement planning showed no independent relationships with retirement resources.

In addition, physical health at T1 predicted physical health at T3 (ß = .36, $p < .001$), mental health at T1 predicted mental health at T3 (ß = .25, $p<.001$) and female gender at T1 predicted lower economic living standards at T3 (ß=-.12, $p<.01$).
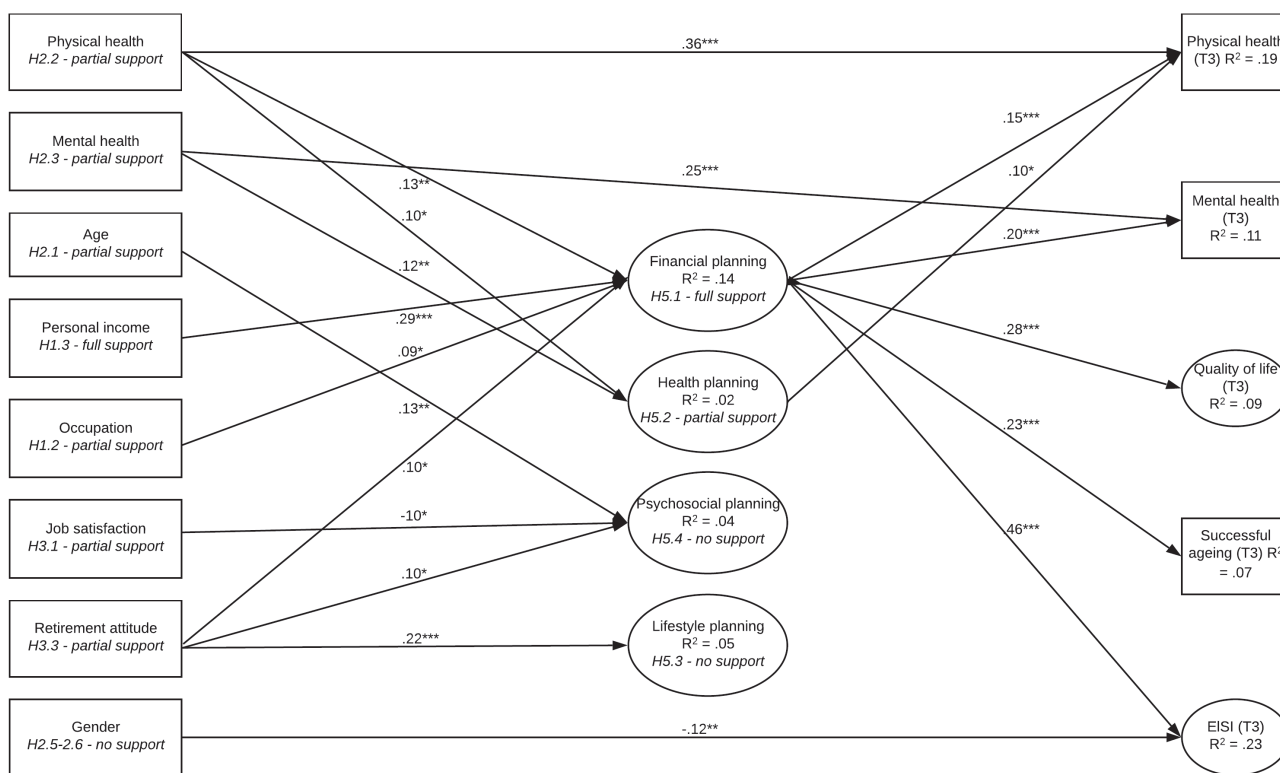

Figure 2. Path model of statistically significant relationships between the study variables. *$p < .05$, **$p < .01$, ***$p < .001$.

Hypothesis 6.1

In terms of the indirect effects, physical health had an indirect effect on all retirement resources ($p < .001$) except quality of life, via financial planning (see Table 3 for unstandardized and standardized indirect effects). The same pattern of results was found for retirement attitude, but the relationships were only significant at the $p < .05$ level. Income had significant indirect effects on all resources via financial planning ($p < .001$). Finally, physical and mental health in 2006 had indirect effects on physical health in 2014 via health planning ($p < .05$).

DISCUSSION

Findings provided some support for the proposed model of planning antecedents and the resources that planning activities promote. Overall, income (H1.3), a positive retirement attitude (H3.3), and physical health (H4.1) were notable antecedents to retirement planning. However, mental health (H4.2), age (H2.1), occupation (H1.2), and job (dis)satisfaction (H3.1) also played minor roles in predicting planning behaviors. In turn, financial planning had a positive effect on all retirement resources (H5.1) and health planning predicted better physical health resources in retirement, partly supporting hypothesis 5.2. There was also partial evidence for the mediating role of financial planning in explaining the relationship of physical health, income, and retirement attitudes with retirement resources (H6.1). However, the other domains of planning showed no substantive mediation effects.

The pattern of antecedents differed to those found by Topa et al. (Topa et al., 2009), but the resources that flowed on from planning are reasonably consistent across the two studies. Financial planning and health planning (to a lesser extent) may partly promote the transformation of pre-retirement antecedents into post-retirement resources. This means that some people with limited socioeconomic resources and a negative perception of retirement may need assistance with these planning activities to promote resources in retirement.

Antecedents of Planning

Findings suggest there are potential socioeconomic barriers to financial planning, which is consistent with previous research (Chatterjee & Zahirovic-Herbert, 2010; Kock et al., 2012; Noone et al., 2012; Topa et al., 2012). However, the fact that socioeconomic status (SES), health, and retirement attitudes only predicted 14% of the variance in financial planning, suggests that a substantial proportion of people experiencing financial disadvantage are still able to undertake planning behaviors. Future research needs to better understand the factors that facilitate planning for lower socioeconomic groups. In their study of financial literacy, Blackmore and Prendergast (2011) found that financial planning activities were predicted by financial attitudes (e.g., financial self-efficacy) after controlling for the effects of socioeconomic variables. Moreover, the effects of financial attitudes on planning activities were more consistent, and in most cases stronger, than the effects of SES. This means that a positive sense of financial self-efficacy has the potential to facilitate financial planning, even for those of lower SES.

In this research, planning behaviors were driven more by positive retirement attitudes than perceptions of current employment and

Table 3. Unstandardized Indirect Effects, Significance Levels, and Standardized Indirect Effects

Indirect effects			Unstandardized estimate (p)	Standardized estimate
T1 variable →	T2 variable →	T3 variable		
Physical health	Financial planning	Physical health	.021 ($p<.001$)	.0195
		Mental health	.021 ($p<.001$)	.026
		Quality of life	*ns*	
		Successful aging	.002 ($p<.001$)	.029
		ELSI	.009 ($p<.001$)	.138
Physical health	Health planning	Physical health	.011 ($p<.05$)	.010
Mental health	Health planning	Physical health	.015 ($p<.05$)	.012
Income	Financial planning	Physical health	.000 ($p<.001$)	.042
		Mental health	.000 ($p<.001$)	.058
		Quality of life	.000 ($p<.001$)	.081
		Successful aging	.000 ($p<.001$)	.067
		ELSI	.000 ($p<.001$)	.133
Occupation	Financial planning	Physical health	*ns*	
		Mental health	*ns*	
		Quality of life	*ns*	
		Successful aging	*ns*	
		ELSI	*ns*	
Retirement attitude	Financial planning	Physical health	.166 ($p<.05$)	.015
		Mental health	.165 ($p<.05$)	.020
		Quality of life	*ns*	
		Successful aging	.017 ($p<.05$)	.023
		ELSI	.071 ($p<.05$)	.046

perceived control. Job satisfaction and work involvement had virtually no effect on planning, which was counter to our hypotheses (and Topa et al.'s meta-analysis), but not surprising given similar findings in other research (Cobb-Clark & Stillman, 2009; Noone et al., 2010a). The discrepant findings may be an artifact of different sampling techniques (e.g., samples from organizations vs. broader population samples), different measures for the same antecedents, follow-up versus cross-sectional data, or using domain-specific rather than general measures of planning. Therefore, differences between the two studies should be taken with caution and explored further.

Good health is a potential antecedent for retirement planning, but its reach appears to be relatively weak, domain specific, and its mechanisms remain unclear. There was evidence to suggest good health was associated with higher levels of health planning and financial planning, which is consistent with other studies (Choi & Choi, 2012; Cobb-Clark & Stillman, 2009; Noone et al., 2012; Topa et al., 2009). However, health did not predict lifestyle or psychosocial planning. This is not surprising given the ambiguity in the literature (Topa et al., 2009). Yet, as Topa et al. argue, poor health may hinder or encourage planning and it is possible that other factors may influence the direction of this relationship.

The null effects of locus of control on the planning domains were unexpected given the relatively consistent findings in the literature (Davis & Hustvedt, 2012; Earl & Archibald, 2014; Griffin et al., 2012). However, this may relate to the way control was measured. Donaldson, Earl, & Muratore (2010) argue that measures of mastery (Pearlin & Schooler, 1978) that place less emphasis on the perceived power of others, are preferable over locus of control measures used in this research. Future research would benefit from using locus of control variables more directly related to retirement (Davis & Hustvedt, 2012; Griffin et al., 2012) as it would provide more specific information for educational initiatives.

Of the other sociodemographic antecedents, gender, age, and caregiving had limited influence on retirement planning. Although our gender hypotheses were not supported, the null finding is consistent with other studies (Chou et al., 2014; Noone et al., 2010a), suggesting that more detailed research is warranted. Future studies with larger samples could determine if men and women undertake different levels of financial, health, lifestyle, and psychosocial planning according to their socioeconomic characteristics. The null finding for age was unexpected; however, this may be because of the limited variability in age ($M = 61.6$, SD = 3.8). Age effects could have been identified if the sample represented people in their 40s and early 50s. The level of care provided to others also had no impact on planning. One reason for this lack of association could be the way caregiving was measured. Although the measure captured the intensity of the caregiving role, it did not measure the potential burden associated with caregiving nor its duration. It may be that caregiver burden is a stronger (negative) predictor retirement planning than the intensity of the role.

Retirement Resources Derived From Planning

Financial preparedness for retirement had positive effects on all resources, supporting previous claims for the benefits of financial planning (Adams & Rau, 2011; Wang & Shultz, 2010). Health planning also had positive benefits for physical health in retirement, which is a relatively novel finding in the literature, although the benefits of health planning for retirement satisfaction have been noted previously (Lee & Law, 2004).

There was insufficient evidence to conclude that lifestyle and psychosocial planning have benefits in retirement. For psychosocial planning, this may be because the measures were not specific enough to capture preparation for new social roles in retirement. That is, two items captured exit from the worker role while the third assessed the extent participants discussed retirement experiences with retirees. Neither the psychosocial or lifestyle questions capture planning for change in social networks, which given the known benefits of social contacts in older age (Holt-Lunstad et al., 2010), may be a fruitful area for future research.

Another reason for the lack of association could be that expectations of retirement lifestyle and social relationships derived from planning activities were not realized when participants eventually retired. Although argued that retirement planning functions by clarifying expectations (Earl et al., 2015), this may not be true of everyone, particularly given the planning data was collected just before the Global Financial Crisis, which depleted retirement wealth. Alternatively, achieving good health, quality of life, and successful aging may be too heavily dependent on wealth in the New Zealand context for non-financial planning to have an effect. This speculation is supported by strong positive association between economic living standards and quality of life in this research. However, the financial context of older New Zealanders also needs to be considered to better understand the non-significant finding.

New Zealand adults aged 65+ are a materially advantaged group relative to younger age cohorts (Perry, 2013), with around 7% reporting experiences of material hardship (Krishnan, Jensen, & Ballantyne, 2002; Perry, 2013). A universal non-means tested public pension scheme, NZ Super, set at around just 40% of the national average wage, is available to adults aged 65+ who meet minimum residency criteria. This represents a key source of income (Perry, 2018), with only 12% of adults aged 65+ deriving income from other pension schemes (Statistics New Zealand, 2015). Average ELSI scores for the current participants ($M = 5.56$, SD = 1.30, range = 1–7) suggest that the majority of the sample were financially comfortable. It is therefore also possible that resources which could have been gained through non-financial planning activities had already been accrued by virtue of being relatively financially secure from earlier in life. This could explain why non-financial planning activities did not have a significant impact on resource accrual. Future research is therefore needed to better understand the mechanisms that link antecedents with planning and planning with resources, for people who have fewer material resources.

LIMITATIONS

There are some limitations that should be considered. Although the research uses follow-up data, it still cannot make claims of cause and effect. The research could also not account for all known predictors of financial planning. Our sample was also relatively small, the gender balance and levels of physical and mental health were reasonably comparable to the older NZ adult population in the same age group (Statistics New Zealand, 2013; Stephens et al., 2010). As this research considers the effects of retirement planning on resources up to six years into retirement, it is also not placed to understand the long-term

benefits. We were also not able to determine whether participants were forced (or not) into an early retirement. Future research may be better placed if it can examine established and emerging antecedents of retirement planning in context of choice around the decision to retire. We also note that cognitive resources were not examined in this research. Cognitive decline is related to early retirement (Hudomiet et al., 2018) and reduced physical functioning, life satisfaction and psychological wellbeing (Yeung, 2018), suggesting that future research is warranted. Finally, this research was unable to examine the quality of retirement adjustment as an outcome of retirement resources due to sample size restrictions. We focused instead on the relationship between planning and retirement resources, due to their relevance for policy and practice. However, future research could explore, for example, the role of retirement resources in mediating the relationship between planning and adjustment quality. An important factor to consider in this analysis would be the moderating role of time since retirement, as it is likely to influence resources and how people adjust to retirement. Recent research has shown either ambiguous findings (Barbosa et al., 2016) or treated time since retirement as a control variable only (Wetzel et al., 2019). Further research is therefore needed.

IMPLICATIONS

An important aspect of financial preparedness considered in this research was anticipated mortgage-free home ownership, a factor long promoted in New Zealand policy (Murphy, 2014). Although housing ownership in many developed countries is decreasing (Arundel & Doling, 2017), studies of housing tenure and health consistently show that owner-occupants have better mental and physical health, higher quality of life and wellbeing, more social ties, and a lower mortality rate than renters and this becomes more important in older age (Szabo et al., 2017). Longitudinal research indicates that tenure becomes even more important in older age (Howden-Chapman et al., 2011). Wang et al. (Wang et al., 2016) have argued that pre-retirees with fewer socioeconomic resources will require more government support as retirement systems shift towards self-funded retirements. Our findings support this argument, particularly with respect to maintaining housing affordability and the protection of economic living standards.

Findings support the continued provision of financial literacy education. Financial literacy has been identified as a driver of financial planning behaviors (Blackmore & Prendergast, 2011; Lusardi & Mitchell, 2011). However, financial literacy interventions have questionable effectiveness, particularly over longer periods of time (Fernandes et al., 2014). Xu and Zia (2012) argue that interventions may be more effective if they focus initially on raising awareness of financial products and services, promote positive attitudes towards financial matters, and leverage social networks to promote spillover effects to peers. Not surprisingly, interventions should be targeted to the specific needs of at-risk groups and specific topics of interest (Xu & Zia, 2012).

The results also support strategies designed to promote positive attitudes towards retirement at both the population- and, paradoxically, workplace-level. Newman et al. (Newman et al., 2013) identify 14 factors that influence retirement attitudes, including work, financial situation, family, level of social interaction, and health. They suggest that a combination of positive and negative attitudes creates a complex picture, which makes it difficult to produce generalized intervention strategies. However, policy focus on affordable housing, health care, aged care, and guaranteed minimum retirement income levels could reduce retirement anxieties, particularly for middle-income groups (Colic-Peisker et al., 2015; Mansvelt et al., 2014). Organizations also have a role to play. According to Cochran et al. (2012), age management policies such as the provision of flexible work arrangements, additional training and phased retirement, promote preparedness for retirement, which in turn leads to a more positive attitude towards retirement. While this may actually lead to earlier retirements, which may be problematic for some employers, effective age management policies could help to attract older workers looking for more sustainable employment to fund their retirement (Cochran et al., 2012).

Findings suggest that financial and health planning may facilitate the transformation of pre-retirement antecedents and post-retirement resources. Here, antecedents are directly related to their relevant resource (e.g., physical health prior to retirement predict physical health resources in retirement). However, the mediatory role of retirement planning also links antecedents with qualitatively *different* post-retirement resources. For example, health at baseline (antecedent) predicted health planning, which predicted health in retirement (physical resources). However, financial planning appeared to promote all resources and was influenced by a range of socioeconomic, sociodemographic, and psychosocial antecedents. Although further research is needed, findings suggest that financial retirement planning may play a specific transitional role in the Resource-Based Dynamic Process model (Wang et al., 2011).

This study sought to extend the earlier work by Topa et al. (2009) and explore the role of planning as a transition variable. By knowing antecedents in advance, we can use these to encourage planning and tailor interventions. Some types of planning are more accessible to different groups than others. The challenge is to design interventions that "engage" the "least engaged." If, for example, positive attitude to retirement is a predictor of planning, it may be necessary to start there rather than assuming that all people will plan. Understanding the outcomes of planning can improve engagement at a micro, meso, and macro level. If having a good financial plan will influence a range of positive outcomes, then this provides the impetus for planning programs to be provided by organizations and by government. The solution to better retirement outcomes is not necessarily the exclusive domain of the individual, solutions may also exist at the meso and macro level.

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REFERENCES

Adams, G. A., & Rau, B. L. (2011). Putting off tomorrow to do what you want today: Planning for retirement. *The American Psychologist*, 66(3), 180–192.

Adelman, R. D., Tmanova, L. L., Delgado, D., Dion, S., & Lachs, M. S. (2014). Caregiver burden: A clinical review. *The Journal of the American Medical Association*, 311(10), 1052–1060.

Arksey, H., & Glendinning, C. (2008). Combining work and care: carers' decision-making in the context of competing policy pressures. *Social Policy and Administration,* 42(1), 1–18.

Arundel, R., & Doling, J. (2017). The end of mass homeownership? Changes in labour markets and housing tenure opportunities across Europe. *Journal of Housing and the Built Environment*, 32(4), 649–672.

Australian Bureau of Statistics. (2017). *Retirement and retirement intentions (Report Number 6238.0).* Retrieved from http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6238.0Main+Features1July%202016%20to%20June%202017?OpenDocument

Barbosa, L. M., Monteiro, B., & Murta, S. G. (2016). Retirement adjustment predictors—A systematic review. *Work, Aging and Retirement,* 2(2), 262–280. doi:10.1093/workar/waw008

Bauer, J. M., & Sousa-Poza, A. (2015). Impacts of informal caregiving on caregiver employment, health, and family. *Journal of Population Ageing,* 8(3), 113–145.

Blackmore, D., & Prendergast, S. (2011). *Adult financial literacy in Australia*. Retrieved from Canberra: http://www.financialliteracy.gov.au/media/465153/2011-adult-financial-literacy-full.pdf.pdf

Carr, N. A., Sages, R. A., Fernatt, F. R., Nabeshima, G. G., & Grable, J. E. (2015). Health information search and retirement planning. *Journal of Financial Counseling and Planning,* 26(1), 3–16.

Charlesworth, S., & Macdonald, F. (2015). Women, work and industrial relations in Australia in 2014. *Journal of Industrial Relations,* 57(3), 366–382.

Chatterjee, S., & Zahirovic-Herbert, V. (2010). Retirement planning of younger baby-boomers: Who wants financial advice. *Financial Decisions,* 22(2), 1–12.

Choi, M., & Choi, S. (2012). Relations among personal, occupational characteristics and preparation for the old age-focused on the workers in the Banwol Siwha Industrial Complex. *The Journal of the Korea Contents Association,* 12(6), 249–264. doi:10.14400/jdc.2014.12.11.33

Chou, K., Yu, K., Chan, W., Chan, A., Lum, T., & Zhu, A. (2014). Social and psychological barriers to private retirement savings in Hong Kong. *Journal of Aging & Social Policy*, 26(4), 308–323. doi:10.1080/08959420.2014.939840

Chou, K. L., Yu, K. M., Chan, W. S., Wu, A. M., Zhu, A. Y., & Lou, V. W. (2015). Perceived retirement savings adequacy in Hong Kong: An interdisciplinary financial planning model. *Ageing and Society,* 35(8), 1565–1586.

Clougherty, J. E., Souza, K., & Cullen, M. R. (2010). Work and its role in shaping the social gradient in health. *Annals of the New York Academy of Sciences*, 1186(1), 102–124.

Cobb-Clark, D. A., & Stillman, S. (2009). The retirement expectations of middle-aged Australians. *Economic Record*, 85(269), 146–163. doi:10.1111/j.1475-4932.2009.00543.x

Cochran, J., Crowne, K. A., & Carpenter, C. E. (2012). Impact of older-worker-friendly organizational policies on retirement attitudes and planning. *Organization Management Journal,* 9(3), 170–178.

Colic-Peisker, V., Ong, R., & Wood, G. (2015). Asset poverty, precarious housing and ontological security in older age: An Australian case study. *International Journal of Housing Policy,* 15(2), 167–186. doi:10.1080/14616718.2014.984827

Curl, A. L., & Ingram, J. G. (2013). Anticipatory socialization for retirement: A multilevel dyadic model. *Clinical Gerontologist,* 36(4), 375–393. doi:10.1080/07317115.2013.788117

Davis, K., & Hustvedt, G. (2012). It's a matter of control: saving for retirement. *International Review of Social Sciences and Humanities,* 3(2), 248–261.

Donaldson, T., Earl, J. K., & Muratore, A. M. (2010). Extending the integrated model of retirement adjustment: Incorporating mastery and retirement planning. *Journal of Vocational Behavior,* 77(2), 279–289.

Earl, J. K., & Archibald, H. (2014). Retirement planning is more than just accumulating resources. *European Journal of Management,* 14(2), 21–36.

Earl, J. K., Bednall, T. C., & Muratore, A. M. (2015). A matter of time: why some people plan for retirement and others do not. *Work, Aging and Retirement,* 1(2), 181–189. doi:10.1093/workar/wau005.

Ellen, P. S., Wiener, J. L., & Fitzgerald, M. P. (2012). Encouraging people to save for their future: Augmenting current efforts with positive visions of the future. *Journal of Public Policy and Marketing,* 31(1), 58–72. doi:10.1509/jppm.09.089

Feinberg, L., Reinhard, S. C., Houser, A., & Choula, R. (2011). *Valuing the invaluable: 2011 update, the growing contributions and costs of family caregiving* (Vol. 51, pp. 1–28). Washington, DC: AARP Public Policy Institute.

Fernandes, D., Lynch Jr, J. G., & Netemeyer, R. G. (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science,* 60(8), 1861–1883.

Fisher, G. G., Chaffee, D. S., & Sonnega, A. (2016). Retirement timing: A review and recommendations for future research. *Work, Aging and Retirement,* 2(2), 230–261.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research,* 18(1), 39–50.

Griffin, B., Loe, D., & Hesketh, B. (2012). Using proactivity, time discounting, and the theory of planned behavior to identify predictors of retirement planning. *Educational Gerontology,* 38(12), 877–889.

Gubler, T., & Pierce, L. (2014). Healthy, wealthy, and wise: Retirement planning predicts employee health improvements. *Psychological Science*, 25(9), 1822–1830. doi:10.1177/0956797614540467

Gunay, G. (2013). Turkish reliability and validity study of the process of retirement planning scale: The example of Karabuk University. *Turkish Journal of Geriatrics,* 16(1), 84–94.

Gupta, N., & Larsen, M. (2010). The impact of health on individual retirement plans: Self-reported versus diagnostic measures. *Health Economics*, 19(7), 792–813. doi:10.1002/hec.1523

Hair Jr, J., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review,* 26(2), 106–121.

Hayes, A. F. (2009). Beyond Baron and Kenny: statistical mediation analysis in the new millennium. *Communication Monographs,* 76(4), 408–420.

Heraty, N., & McCarthy, J. (2015a). Unearthing psychological predictors of financial planning for retirement among late career

older workers: Do self-perceptions of aging matter? *Work, Aging and Retirement*. 1(3), 274–283. doi:10.1093/workar/wav008. Retrieved from http://workar.oxfordjournals.org/workar/early/2015/04/22/workar.wav008.full.pdf

Heraty, N., & McCarthy, J. (2015b). Unearthing psychological predictors of financial planning for retirement among late career older workers: Do self-perceptions of aging matter? *Work, Aging and Retirement*, 1(3), 274–283.

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine*, 7(7), e1000316.

Howden-Chapman, P. L., Chandola, T., Stafford, M., & Marmot, M. (2011). The effect of housing on the mental health of older people: The impact of lifetime housing history in Whitehall II. *BMC Public Health*, 11(1), 682–690.

Hudomiet, P., Parker, A. M., & Rohwedder, S. (2018). Cognitive ability, personality, and pathways to retirement: an exploratory study. *Work, Aging and Retirement*, 4(1), 52–66.

Humble, Á. M., Keefe, J. M., & Auton, G. M. (2012). Caregivers' retirement congruency: A case for caregiver support. *International Journal of Aging & Human Development*, 74(2), 113–142. doi:10.2190/ag.74.2

Hyde, M., Wiggins, R. D., Higgs, P., & Blane, D. B. (2003). A measure of quality of life in early old age: The theory, development and properties of a needs satisfaction model (CASP-19). *Aging & Mental Health*, 7(3), 186–194.

Ipsos, M. (2015). *Later life in 2015: An analysis of the views and experiences of people aged 50 and over*. London, UK: Centre for Ageing Better.

Irving, K. (2012). The financial life well-lived: psychological benefits of financial planning. *Australasian Accounting, Business and Finance Journal*, 6(4), 47–59.

Jensen, J., Spittal, M., & Krishnan, V. (2005). *ELSI short form: User manual for a direct measure of living standards*. Wellington, New Zealand: Ministry of Social Development.

Johnson, R. W., Mermin, G. B., & Resseger, M. (2011). Job demands and work ability at older ages. *Journal of Aging & Social Policy*, 23(2), 101–118.

Kanungo, R. N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology*, 67(3), 341–349. doi:10.1037/0021-9010.67.3.341

Katz, S., & Calasanti, T. (2014). Critical perspectives on successful aging: Does it "appeal more than it illuminates"? *The Gerontologist*, 55(1), 26–33.

Kautonen, T., Hytti, U., Bögenhold, D., & Heinonen, J. (2012). Job satisfaction and retirement age intentions in Finland: Self-employed versus salary earners. *International Journal of Manpower*, 33(4), 424–440.

Keegan, M., Harding, A., & Kelly, S. (2012). A growing divide? Retirement incomes by gender in Australia. Paper presented at the 32nd General Conference of the International Association for Research in Income and Wealth, Boston, MA.

Kim, Y., Kim, B., & Kim, E. (2012). Korea-the process of retirement planning scale: K-PRePS. *Counseling Studies*, 13(5), 2099–2117.

Klapper, L., & Panos, G. A. (2011). Financial literacy and retirement planning: The Russian case. *Journal of Pension Economics and Finance*, 10(4), 599–618. doi:10.1017/s1474747211000503

Kock, T. H., Yoong, F. J., & Fatt, C. K. (2012). Age cohort effect on financial planning preparation. *Journal of Management and Sustainability*, 2(2), 18–34. doi:10.5539/jms.v2n2p18.

Koposko, J. L., Kiso, H., Hershey, D. A., & Gerrans, P. (2015). Perceptions of retirement savings relative to peers. *Work, Aging and Retirement*, 2(1), 65–72.

Kornadt, A. E., & Rothermund, K. (2014). Preparation for old age in different life domains: Dimensions and age differences. *International Journal of Behavioral Development*, 38(3), 228–238.

Krishnan, V., Jensen, J., & Ballantyne, S. (2002). *New Zealand Living Standards 2000: chapter 3: An overview of the living standards of the total population*. Wellington, New Zealand: Centre for Social Research and Evaluation, Ministry of Social Development.

Lee, W. J., Chen, L. K., Peng, L. N., Chiou, S. T., & Chou, P. (2016). Personal mastery attenuates the adverse effect of frailty on declines in physical function of older people: A 6-year population-based cohort study. *Medicine*, 95(34), e4661–e4668.

Lee, W. K. M., & Law, K. W. K. (2004). Retirement planning and retirement satisfaction: The need for a national retirement program and policy in Hong Kong. *Journal of Applied Gerontology*, 23(3), 212–233.

Leung, C. S., & Earl, J. K. (2012). Retirement resources inventory: Construction, factor structure and psychometric properties. *Journal of Vocational Behavior*, 81(2), 171–182.

Levenson, H. (1973). Multidimensional locus of control in psychiatric patients. *Journal of Consulting and Clinical Psychology*, 41(3), 397–404.

Lusardi, A., & Mitchell, O. S. (2011). *Financial literacy and planning: Implications for retirement wellbeing*. National Bureau of Economic Research working paper No. w17078. Retrieved from https://www.nber.org/system/files/working_papers/w17078/w17078.pdf.

Mansor, M. F., Hong, C. C., Abu, N. H., & Shaari, M. S. (2015). Demographic factors associated with retirement planning: A study of employees in Malaysian health sectors. *Asian Social Science*, 11(13), 108–116.

Mansvelt, J., Breheny, M., & Stephens, C. (2014). Pursuing security: economic resources and the ontological security of older New Zealanders. *Ageing and Society*, 34(10), 1666–1687.

Martin, T., Guillemette, M. A., & Browning, C. M. (2016). Do retirement planning strategies alter the effect of time preference on retirement wealth? *Applied Economics Letters*, 23(14), 1003–1005.

McCullough, J. B. (2012). The influence of positive psychological factors on small business owners' retirement planning activities. *Financial Services Review*, 21(1), 1–18.

McMillan, J., Beavis, A., & Jones, F. L. (2009). The AUSEI06 A new socioeconomic index for Australia. *Journal of Sociology*, 45(2), 123–149.

Ministry of Health. (2010). *Living Standards and Health: New Zealand 2006/07*. Wellington: Ministry of Health.

Moorthy, M. K., Chelliah, T. D., Chiau, S. S., Lai, C. L., Ng, Z. K., Wong, C. R., & Wong, Y. T. (2012). A study on the retirement planning behavior of working individuals in Malaysia. *International Journal of Academic Research in Economics and Management Sciences*, 1(2), 54–72.

Muratore, A., & Earl, J. (2010). Predicting retirement preparation through the design of a new measure. *Australian Psychologist*, 45(2), 98–111.

Murphy, L. (2014). "Houston, we"ve got a problem': The political construction of a housing affordability metric in New Zealand. *Housing Studies,* 29(7), 893–909.

Newman, D. A., Jeon, G., & Hulin, C. L. (2013). Retirement attitudes: Considering etiology, measurement, attitude-behavior relationships, and attitudinal ambivalence. In M. Wang (Ed.), *Oxford library of psychology. The Oxford handbook of retirement* (p. 228–248). Oxford, UK: Oxford University Press.

Ng, T. H., Tay, W. Y., Tan, N. L., & Lim, Y. S. (2011). Influence of investment experience and demographic factors on retirement planning intention. *International Journal of Business and Management,* 6(2), 196–203.

Nguyen, H. T., & Connelly, L. B. (2014). The effect of unpaid caregiving intensity on labour force participation: Results from a multinomial endogenous treatment model. *Social Science & Medicine*, 100, 115–122.

Noone, J., O'Loughlin, K., & Kendig, H. (2012). Socioeconomic, psychological and demographic determinants of Australian baby boomers' financial planning for retirement. *Australasian Journal on Ageing*, 31(3), 194–197. doi:10.1111/j.1741-6612.2012.00600.x

Noone, J., O'Loughlin, K., & Kendig, H. (2013). Australian baby boomers retiring 'early': Understanding the benefits of retirement preparation for involuntary and voluntary retirees. *Journal of Aging Studies*, 27(3), 207–217.

Noone, J., Stephens, C., & Alpass, F. (2009). Preretirement planning and well-being in later life: A prospective study. *Research on Aging,* 31(3), 295–317.

Noone, J., Stephens, C., & Alpass, F. (2010a). The process of retirement planning scale (PRePS): Development and validation. *Psychological Assessment*, 22(3), 520–531.

Noone, J., Stephens, C., & Alpass, F. (2010b). Do men and women still differ in their retirement planning? Testing a theoretical model of gendered pathways to retirement preparation. *Research on Aging,* 32(6), 715–738.

Ntalianis, M., & Wise, V. (2011). Role of financial education in retirement planning. *Australasian Accounting, Business and Finance Journal,* 5(2), 23–37.

O'Loughlin, K., Loh, V., & Kendig, H. (2017). Carer characteristics and health, wellbeing and employment outcomes of older Australian baby boomers. *Journal of Cross-Cultural Gerontology*, 32(3), 339–356.

Olesen, S. C., Butterworth, P., & Rodgers, B. (2012). Is poor mental health a risk factor for retirement? Findings from a longitudinal population survey. *Social Psychiatry and Psychiatric Epidemiology*, 47(5), 735–744.

Orel, N., Landry, M., & Spence, M. (2007). Women's caregiving careers and retirement financial insecurity. *Adultspan Journal,* 6(1), 49–62.

Osman, Z., Ahmad, I., Mohidin, R., & Sang, L. T. (2013). Bridge employment: the moderating effect of job satisfaction on retirement planning. *European Journal of Business and Management,* 5(3), 140–151.

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, 19(1), 2–21.

Peisah, C., Luscombe, G. M., Earl, J. K., & Wijeratne, C. (2019). Aging women and men in the medical profession: the effect of gender and marital status on successful aging and retirement intent in Australian doctors. *Journal of Women and Aging*, 31(2), 95–107.

Perry, B. (2013). *The material wellbeing of older New Zealanders: background paper for the Retirement Commissioner's 2013 review.* New Zealand: Ministry of Social Development.

Perry, B. (2018). *The material wellbeing of New Zealand households: Trends and relativities using non-income measures, with international comparisons.* Wellington, New Zealand: Ministry of Social Development.

Petkoska, J., & Earl, J. K. (2009). Understanding the influence of demographic and psychological variables on retirement planning. *Psychology and Aging*, 24(1), 245–251.

Pope, N. D. (2012). Female caregivers' plans for late life. *Qualitative Social Work,* 12(3), 507–522.

Pruchno, R., & Carr, D. (2017). Successful aging 2.0: Resilience and beyond. *The Journals of Gerontology: Series B,* 72(2), 201–203.

Rafalski, J. C., & Andrade, A. L. d. (2016). Planejamento da aposentadoria: Adaptação brasileira da PRePS e influência de estilos de tomada de decisão. *Revista Psicologia Organizações e Trabalho,* 16(1), 36–45.

Ringle, C., Wende, S., & Will, A. (2005). *Smart-PLS Version 2.0 M3*. Hamburg, Germany: University of Hamburg.

Roth, D. L., Fredman, L., & Haley, W. E. (2015). Informal caregiving and its impact on health: A reappraisal from population-based studies. *The Gerontologist*, 55(2), 309–319.

Rowe, J. W., & Kahn, R. L. (1987). Human aging: Usual and successful. *Science*, 237(4811), 143–149.

Sarfati, D., Scott, K., Haslett, S., Johnston, G., & Hodges, I. (1999). *Taking the pulse: the 1996/97 New Zealand health survey.* Wellington: Ministry of Health.

Samsi, K., & Manthorpe, J. (2011). "I live for today": A qualitative study investigating older people's attitudes to advance planning. *Health and Social Care in the Community,* 19(1), 52–59. doi:10.1111/j.1365-2524.2010.00948.x

Sapp, S. G., & Harrod, W. J. (1993). Reliability and validity of a brief version of Levenson's locus of control scale. *Psychological Reports,* 72(2), 539–550. doi:10.2466/pr0.1993.72.2.539

Sekita, S. (2011). Financial literacy and retirement planning in Japan. *Journal of Pension Economics and Finance,* 10(4), 637–656. doi:10.1017/s1474747211000527

Statistics New Zealand. (2015). *2013 Census QuickStats about people aged 65 and over.* Accessed August 22, 2020 from http://archive. stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-65-plus.aspx#gsc.tab=0

Statistics New Zealand. (2015). *Income.* Wellington, New Zealand.

Stephens, C., Alpass, F., Baars, M., Towers, A., & Stevenson, B. (2010). SF-36v2 norms for New Zealanders aged 55–69 years. *The New Zealand Medical Journal*, 123(1327), 47–57.

Stephens, C., Noone, J., & Alpass, F. (2014). Upstream and downstream correlates of older people's engagement in social networks: What are their effects on health over time? *International Journal of Aging & Human Development*, 78(2), 149–169.

Szabo, A., Allen, J., Alpass, F., & Stephens, C. (2017). Longitudinal trajectories of quality of life and depression by housing tenure status. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 72(6), gbx028.

Taylor, M., & Shore, L. (1995). Predictors of planned retirement age: an application of Beehr's model. *Psychology and Aging,* 10(1), 76–83.

Topa, G., & Alcover, C. (2015). Psychosocial factors in retirement intentions and adjustment: a multi-sample study. *Career Development International,* 20(4), 384–408.

Topa, G., Moriano, J., Depolo, M., Alcover, C., & Morales, J. (2009). Antecedents and consequences of retirement planning and decision-making: a meta-analysis and model. *Journal of Vocational Behavior,* 75(1), 38–55.

Topa, G., Moriano, J., & Moreno, A. (2012). Psychosocial determinants of financial planning for retirement among immigrants in Europe. *Journal of Economic Psychology,* 33(3), 527–537. doi:10.1016/j.joep.2012.01.003

Towers, A., Stevenson, B., Breheny, M., & Allen, J. (2015). Health, work, and retirement longitudinal study. In A. N. Pachana (Ed.), *Encyclopedia of Geropsychology* (pp. 1–9). Singapore: Springer Singapore.

Trewin, D. J., & Pink, B. N. (2006). *ANZSCO: Australian and New Zealand Standard Classification of Occupations.* (0642232008). Canberra, Australia: Australian Bureau of Statistics/Statistics New Zealand.

Wang, H., Koo, B., & O'Hare, C. (2016). Retirement planning in the light of changing demographics. *Economic Modelling,* 52, 749–763.

Wang, M., Henkens, K., & van Solinge, H. (2011). Retirement adjustment: A review of theoretical and empirical advancements. *American Psychologist,* 66(3), 204.

Wang, M., & Shultz, K. (2010). Employee retirement: A review and recommendations for future investigation. *Journal of Management,* 36(1), 172–206. doi:10.1177/0149206309347957.

Ware, J. E., Kosinski, M., Turner-Bowker, D. M., & Gandek, B. (2002). *How to score version 2 of the SF-12 Health Survey.* Lincoln, RI: QualityMetric Incorporated.

Warr, P., Cook, J., & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology,* 52(2), 129–148.

Wetzel, M., Bowen, C. E., & Huxhold, O. (2019). Level and change in economic, social, and personal resources for people retiring from paid work and other labour market statuses. *European Journal of Ageing,* 16(4), 439–453.

Wiggins, R. D., Netuveli, G., Hyde, M., Higgs, P., & Blane, D. (2008). The evaluation of a self-enumerated scale of quality of life (CASP-19) in the context of research on ageing: A combination of exploratory and confirmatory approaches. *Social Indicators Research,* 89(1), 61–77.

Wijeratne, C., Peisah, C., Earl, J., & Luscombe, G. (2018). Occupational determinants of successful aging in older physicians. *The American Journal of Geriatric Psychiatry,* 26(2), 200–208.

Wong, J. Y., & Earl, J. K. (2009). Towards an integrated model of individual, psychosocial, and organizational predictors of retirement adjustment. *Journal of Vocational Behavior,* 75(1), 1–13. doi:10.1016/j.jvb.2008.12.010

Xu, L., & Zia, B. (2012). *Financial literacy around the world: An overview of the evidence with practical suggestions for the way forward.* Retrieved from https://ssrn.com/abstract=2094887

Yeung, D. Y. (2013). Is pre-retirement planning always good? An exploratory study of retirement adjustment among Hong Kong Chinese retirees. *Aging & Mental Health,* 17(3), 386–393. doi:10.1080/13607863.2012.732036

Yeung, D. Y. (2018). Adjustment to retirement: Effects of resource change on physical and psychological well-being. *European Journal of Ageing,* 15(3), 301–309.

Yeung, D. Y. & Zhou, X. (2017). Planning for retirement: Longitudinal effect on retirement resources and post-retirement well-being. *Frontiers in Psychology,* 8, Article 1300. doi: 10.3389/fpsyg.2017.01300