

The New Zealand Longitudinal Study of Ageing

Summary Report

- Work and Retirement -

Jack Noone & Fiona Alpass

2014

A research collaboration between

The Health and
Ageing Research
Team, School of
Psychology,
Massey University

The
Family
Centre Social
Policy Research
Unit

The Foundation for
Research, Science
And Technology

CONTENTS

INTRODUCTION	4
WORK ABILITY	4
<i>Health</i>	5
<i>Job satisfaction</i>	5
<i>Effort-reward imbalance</i>	6
FINANCIAL EXPECTATIONS OF RETIREMENT	6
WORK, RETIREMENT AND CAREGIVING	6
ADJUSTMENT TO RETIREMENT	7
SUMMARY	7
ECONOMIC ACTIVITIES OF OLDER NEW ZEALANDERS.....	8
WORK ABILITY	10
HEALTH.....	10
JOB SATISFACTION	12
WORK EFFORT-REWARDS.....	14
FINANCIAL EXPECTATIONS FOR RETIREMENT	16
WORK, RETIREMENT AND CAREGIVING	18
EXPECTED TIME TO RETIREMENT	20
ADJUSTMENT TO RETIREMENT	21
CHANGE IN RETIREMENT STATUS.....	23
SUMMARY AND CONCLUDING COMMENTS.....	24
REFERENCES	27

LIST OF FIGURES

FIGURE 1. SELF-REPORTED ECONOMIC ACTIVITY.....	8
FIGURE 2. SELF-REPORTED ECONOMIC ACTIVITY ACCORDING TO AGE GROUP	9
FIGURE 3. SELF-REPORTED ECONOMIC ACTIVITY ACCORDING TO GENDER.....	9
FIGURE 4. SELF-REPORTED ECONOMIC ACTIVITY ACCORDING TO ETHNICITY.....	10
FIGURE 5. WORK STATUS ACCORDING TO MENTAL AND PHYSICAL HEALTH.....	11
FIGURE 6. PHYSICAL HEALTH ACCORDING TO WORK STATUS AND GENDER.....	11
FIGURE 7. REASONS FOR RETIREMENT.....	12
FIGURE 8. DISTRIBUTION OF JOB SATISFACTION IN THE NZLSA SAMPLE.....	13
FIGURE 9. JOB SATISFACTION ACCORDING TO AGE.	14
FIGURE 10. DISTRIBUTION OF WORK EFFORT SCORES.	14
FIGURE 11. DISTRIBUTION OF WORK REWARD SCORES	15
FIGURE 12. DISTRIBUTION OF OVER-COMMITMENT SCORES.....	15
FIGURE 13. WORK REWARD SCORES ACCORDING TO ETHNICITY.....	16
FIGURE 14. DISTRIBUTION OF ANTICIPATED RETIREMENT FINANCES SCORES.	17
FIGURE 15. ANTICIPATED FINANCES IN RETIREMENT BY ETHNICITY.	17
FIGURE 16. CAREGIVING COMMITMENTS ACCORDING TO WORK STATUS.....	18
FIGURE 17. CAREGIVING COMMITMENTS ACCORDING TO AGE GROUP.	19
FIGURE 18. MEAN MENTAL HEALTH SCORES ACCORDING TO CAREGIVING STATUS.....	20
FIGURE 19. CAREGIVING COMMITMENTS ACCORDING TO ETHNICITY.....	20
FIGURE 20. EXPECTED YEARS TO RETIREMENT.	21
FIGURE 21. DISTRIBUTION OF RETIREMENT ADJUSTMENT SCORES.	22
FIGURE 22. DIFFICULTY IN RETIREMENT ADJUSTMENT ACCORDING TO ETHNICITY.	22
FIGURE 23. DIFFICULTY IN RETIREMENT ADJUSTMENT ACCORDING TO ETHNICITY.	23
FIGURE 24. CHANGE IN ECONOMIC ACTIVITIES.....	24

Introduction

As with many industrialised nations, New Zealand's population and its workforce are ageing. By 2036 it is predicted that those over 65 will account for 23% of the population and 26% by 2061 (Bascand, 2012a). Statistics New Zealand (2004) project that by 2029 there will be more people not in the labour force than workers. However, along with this increase, will come a concomitant rise in the number aged over 65 who remain in the paid workforce, from 130,000 in 2012 to an estimated 370,000 in 2036 and 460,000 in 2061 (Bascand, 2012b).

Population ageing has and will continue to cause significant social and economic change. Concerns for the health and well-being of older New Zealanders due to the baby boomers' "exodus" from the workforce are now well established. The predicted loss of tax revenue will place pressure on pension and superannuation provision, health budgets and other expenditure related to older adults (Wilson & Rodway, 2006). As such, government is concerned not only with the health and well-being of older New Zealanders but also with prolonging the workforce participation of the baby boom generation to fund social welfare (see Jackson, Cochrane, & McMillan, 2013 for a review). For example, increasing attention is being paid to the "work ability" of older employees or the match between their resources and the demands of the job (Alavinia, van Duivenbooden, & Burdorf, 2007; Berg, Elders, Zwart, & Burdorf, 2009; El Fassi et al., 2013). Workers' health is a key component of work ability as are the psychosocial characteristics of the work place (Tuomi, Huuhtanen, Nykyri, & Ilmarinen, 2001; Tuomi, Vanhala, Nykyri, & Janhonen, 2004), which are reflected in varying levels of job satisfaction and effort-reward balance for employees.

For retirees, academic scrutiny has focused on promoting health and social integration (Berkman, Glass, Brissette, & Seeman, 2000) and understanding retirement decision making and adjustment to life outside the paid work force (Szinovacz & Davey, 2005). Caregiving responsibilities have also been shown to negatively impact on work force participation (Dentinger & Clarkberg, 2002) and mental and physical health (Pinquart & Sörensen, 2007). The intersection of work, health and care giving demands is therefore of consequence for both workers and retirees. The New Zealand Longitudinal Study of Ageing (NZLSA) seeks to identify and understand the factors that keep older workers happy and productive, and retirees healthy and independent. Each of these factors is reviewed below in the context of key demographic variables including age, gender and ethnicity.

Work Ability

Work ability is defined by the question "How good is the worker at present, in the near future, and how able is he or she to do his or her work with respect to the work demands, health and mental resources?" (Tuomi et al., 1991, p. 67). Greater work ability is associated with higher levels of workforce participation and productivity in older workers (Reiso, Nygård, Brage, Gulbrandsen, & Tellnes, 2001; Tuomi, Ilmarinen, Martikainen, Aalto, & Klockars, 1997). Foundations for work ability include health and functional capacity, worker competencies, values and attitudes, the psychosocial characteristics of the organization, and family life (Ilmarinen, Tuomi, & Seitsamo, 2005). Research has shown that the promotion of

each of these foundations can improve overall work ability (Müller, Weigl, Heiden, Glaser, & Angerer, 2012; Tuomi et al., 2001). While NZLSA does not include a measure of work ability per se, it does include questions on workers' health and psychosocial workplace characteristics such as job satisfaction and effort-reward balance. These three factors are key components of work ability and have been shown to influence workforce participation as described below.

Health. Poor mental and physical health has been identified as the main reason why people retire earlier than anticipated in both New Zealand and Australia (Australian Bureau of Statistics, 2011; Gorman, Scobie, & Towers, 2012). Approximately 20% of Australia's six million baby boomers are already retired—more than 40% of those due to poor health (Australian Bureau of Statistics, 2011). Approximately 64% of Australia's mature-aged workers (45-64) are now experiencing at least one of the top 20 work-limiting health conditions (D. J. Schofield, Fletcher, Earnest, Passey, & Shrestha, 2008) and a 50% increase in involuntary retirements is expected as a result (D. Schofield et al., 2009). New Zealand data indicates that approximately 17% of 55 – 70 year-olds have retired due to poor health (Gorman et al., 2012) while other research suggests that New Zealanders are also retiring to protect their health for their future retirement (Pond, Stephens, & Alpass, 2010). However, gender, age and ethnicity-based differences are under-studied in the New Zealand context and are therefore an important component of this report and the NZLSA study more generally.

Job satisfaction. Dissatisfaction with work is associated with the intention to retire in older workers (Dendinger, Adams, & Jacobson, 2005; Gorman et al., 2012), although important exceptions are apparent (Taylor & Shore, 1995). Satisfied workers are also more committed to the organisation than dissatisfied workers (Bhatti & Qureshi, 2007; Westover, Westover, & Westover, 2010) and are more productive in terms of fewer sick days (Hoogendoorn et al., 2002) and greater performance at work across multiple domains (see Judge, Thoresen, Bono, & Patton, 2001, for a review). These findings suggest that understanding how job satisfaction is distributed in the population of older workers is an important step for promoting workforce participation and productivity. One way this can be achieved is by examining how job satisfaction differs according to NZLSA's key demographic variables.

International research shows unequivocal findings when comparing age with job satisfaction (Hochwarter, Ferris, Perrewé, Witt, & Kiewitz, 2001) with older workers reporting consistently higher levels of job satisfaction than other age groups (Besen, Matz-Costa, Brown, Smyer, & Pitt-Catsoupes, 2013). However, a number of studies point to a U-shape distribution where the oldest and youngest workers are the most satisfied and middle-age workers the least (Clark, Oswald, & Warr, 1996; Gazioglu & Tansel, 2006). Research into gender and job satisfaction has also produced mixed findings, but studies of older workers point towards a gender-satisfaction paradox. While women tend to work in lower-status occupations and have lower salaries, they report greater job satisfaction than men in Anglo-Saxon countries (Alfonso Sousa-Poza & Sousa-Poza, 2000). However, a longitudinal study of British workers suggests that this gender-satisfaction paradox has reduced substantively over the last decade (A. Sousa-Poza & Sousa-Poza, 2003). Ethnic minorities also report lower levels of job satisfaction in the U.K. (Miller & Travers, 2005) and U.S. populations (Rode, 2004).

Effort-reward imbalance. According to Siegrist's seminal research (1996), high levels of worker stress emerge when the efforts put into work (e.g. work demands and obligations) are not matched by the rewards gained (e.g. money, self-esteem, and status). Effort-reward imbalance (ERI) and associated stress outcomes contribute to declines in mental and physical health (Chandola et al., 2008; Godin, Kittel, Coppieters, & Siegrist, 2005; Van Vegchel, De Jonge, Bosma, & Schaufeli, 2005) and resultant decreases in workforce participation for late-middle age adults, particularly those in lower status occupations (Blekesaune & Solem, 2005; Wahrendorf, Dragano, & Siegrist, 2012). Not surprisingly, ERI is also associated with low job satisfaction (e.g. Calnan, Wainwright, & Almond, 2000).

Financial Expectations of Retirement

As with health status, retirement finances are a consistent predictor of wellbeing in retirement (Pinquart & Schindler, 2007; Reitzes & Mutran, 2004). Gauging workers' financial expectations of retirement therefore provides a window into their future financial wellness, identifying those potentially at risk in later life. For instance, due to the often intermittent workforce participation occasioned by child-bearing and child-raising, women have reduced opportunities to accumulate wealth over their working lives compared to men (Moen, 1996). Women are more likely to work in part-time jobs with lower pay and have fewer opportunities for promotion (Glass, Conrad & Kilpatrick, 1998; Talaga & Beehr, 1995). This greatly reduces their potential retirement income (Haveman, 2003) and financial well-being in retirement (Noone, Stephens, & Alpass, 2010). Women also retire earlier than men (Dixon & Hyslop, 2008). Research also shows that Māori are considerably more financially disadvantaged than non-Māori as they reach retirement. (Stevenson et al., 2002, p. 6). These authors found that Māori most at risk of poor living standards in retirement tended to rely solely on New Zealand Superannuation (NZS) for income and had no savings or assets.

Work, Retirement and Caregiving

Approximately 8% of the New Zealand population is providing informal care for a sick or disabled person and two thirds of those carers are also in paid work (Statistics New Zealand, 2006). Meta-analyses have shown that informal caregiving can have a negative impact on mental and physical health (Pinquart & Sörensen, 2003; Vitaliano, Zhang, & Scanlan, 2003) while other findings indicate that caregiving commitments are an important factor in the decision to retire early, particularly for women (Dentinger & Clarkberg, 2002). Although caregiving carries health and financial costs, informal caregivers play a vitally important societal role due to the significant reductions in healthcare expenditure as result of their work (Arno, Levine, & Memmott, 1999). Promoting the well-being of New Zealand's informal caregivers is therefore of vital importance for individuals and society more generally.

Existing research suggests women tend to undertake more caregiving than men (Singer, Biegel, & Ethridge, 2010; Statistics New Zealand, 2006) and, as noted above, tend to retire earlier as a result. This impacts negatively on their financial preparations for retirement as well as their physical and mental health. New Zealand research also suggests that Māori carers report poor mental health than non-Māori carers (Alpass et al., 2013) compounding existing health disparities partly attributable

to their poorer socioeconomic circumstances (Dulin, Stephens, Alpass, Hill, & Stevenson, 2011). For a more in-depth analysis of the NZLSA caregiving data see Alpass, Keeling and Pond (2014).

Adjustment to Retirement

Research suggests that approximately 30% of retirees find either the retirement transition stressful or the state of being retired stressful (Matthews, Brown, Davis & Denton, 1982; Bosse, Aldwing, Levnson & Workman-Daniels, 1991; Brathwaite, Gibson & Bosly-Craft, 1986). Those who have little control over the decision to retire tend to find adjustment more difficult (van Solinge & Henkens, 2008) as do those with poor health, fewer financial resources, fewer social roles (e.g. volunteering), and those with strong work identities (see Wang, Henkens, & van Solinge, 2011, for a review).

Despite extensive research into retirement adjustment, uncertainty still surrounds how men and women may adjust differently to life after exiting the workforce. However, it appears that it is events across the entire life course, some of which are gendered (e.g., income adequacy), which influence retirement adjustment (Kim & Moen, 2002) rather than gender per se. Indeed, studies often find no substantive gender differences in adjustment at all (Reitzes & Mutran, 2004; Wong & Earl, 2009).

There has been little research investigating retirement experiences across cultural groups. Most studies have investigated racial differences in adjustment, particularly within the United States, on working class retirees (Price, 1998). While these studies tend to find differences in adjustment between black and white Americans (Fernandez, Multran, Reitzes & Sudha, 1998; McGoldrick, 1994; Richardson & Kilty, 1992) these differences can largely be accounted for by differences in finances and health between these groups (Price, 1998).

Summary

The continued economic productivity of New Zealand's older workers will be dependent on their health status, the psychosocial characteristics of their work and their caregiving commitments. Health, financial well-being, and care-giving responsibilities will, in turn, shape how retirees adjust to life outside of paid work. International research suggests that women and Māori may be disadvantaged in many of these areas. This report elucidates the relationships between these demographic variables and work and retirement factors in order to identify groups that may be at risk of negative outcomes, including the involuntary transition from worker to retiree.

This report firstly examines the economic activities of the NZLSA sample according to age, gender and ethnicity. These same demographic comparisons are made to then examine the relationships between work status and health followed by the predictors of work ability, care-giving, anticipated retirement finances, and adjustment to retirement. The report concludes by examining the characteristics of those who have transitioned from work to retirement during the years 2010 to 2012.

Economic Activities of Older New Zealanders

Respondents were asked to report their current employment status: full-time paid employment; part-time paid employment; retired, no paid work; full-time homemaker; full-time student; unemployed and seeking work; not in workforce for other reason. Figure 1 shows that 54% are undertaking paid work, 36% are retired, and 10% are not working for pay, but are not self-identified as retired.

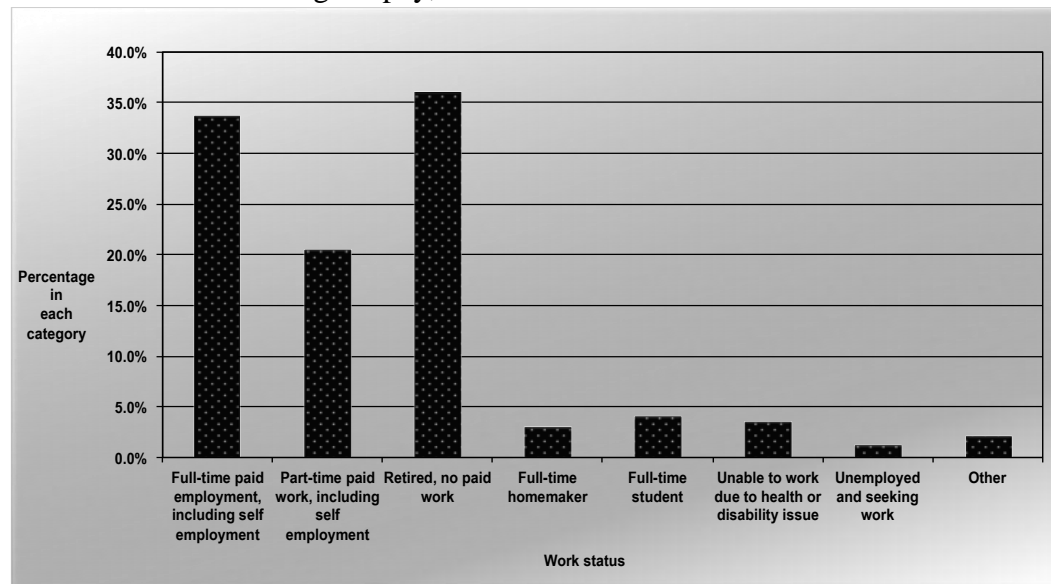


Figure 1. Self-reported economic activity.

When disaggregated by age, the expected pattern of higher rates of employment for younger participants is observed (Figure 2). Approximately 83% of the 48-59 year-olds are currently in paid employment compared to only 12.8% of the 70-90 year olds¹. The 60-69 year-old group shows more variation in economic activity, likely reflecting a transition period from work to retirement.

¹ Sampling procedures sought to recruit individuals aged 50 to 84. Due to the imprecision of the Electoral Roll's age-indicator which is based on participants 'birth year' rather than their specific birth-date a number of younger (n=32) and older participants (n=5) were sampled and these are included here. The oldest worker was 80 years of age.

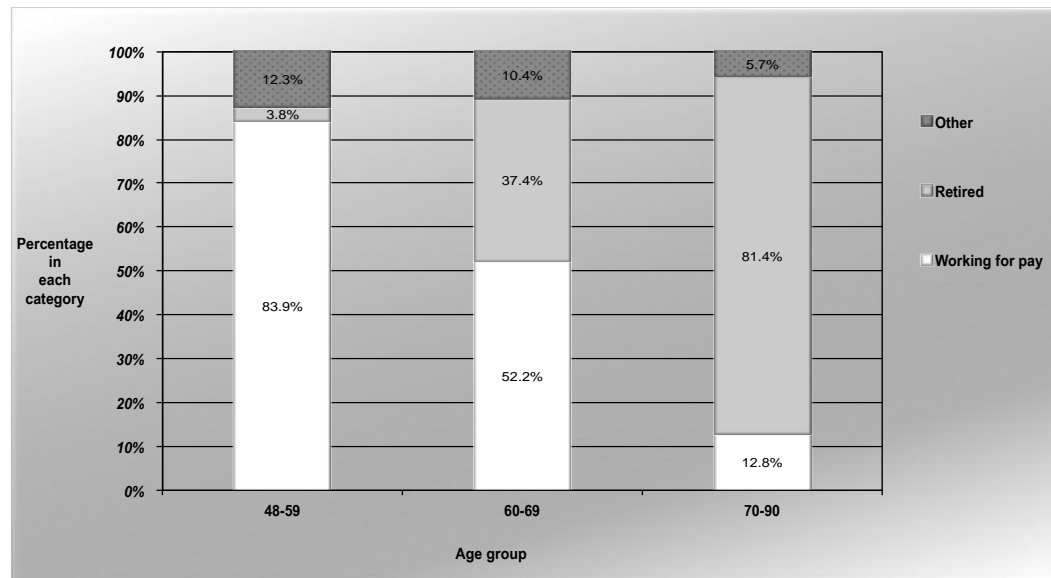


Figure 2. Self-reported economic activity according to age group

Figure 3 shows that women were only marginally less likely than men to be working for pay ($p=.001$). Further examination of the data indicated that there were no gender differences in economic activity for 48-59 year-olds, but men over the age of 60 were more likely to be working than women ($p<.001$). This is consistent with previous research that finds women retire earlier than men, but these effects do not appear until after age 60.

In terms of ethnic-based differences in economic activity, there were only minor differences for those in paid employment. However, Māori were more likely to fall in the other category (not retired or working) and less likely to be categorised as retired compared to Europeans, those identifying as European and Māori, and other ethnicities (Figure 4).

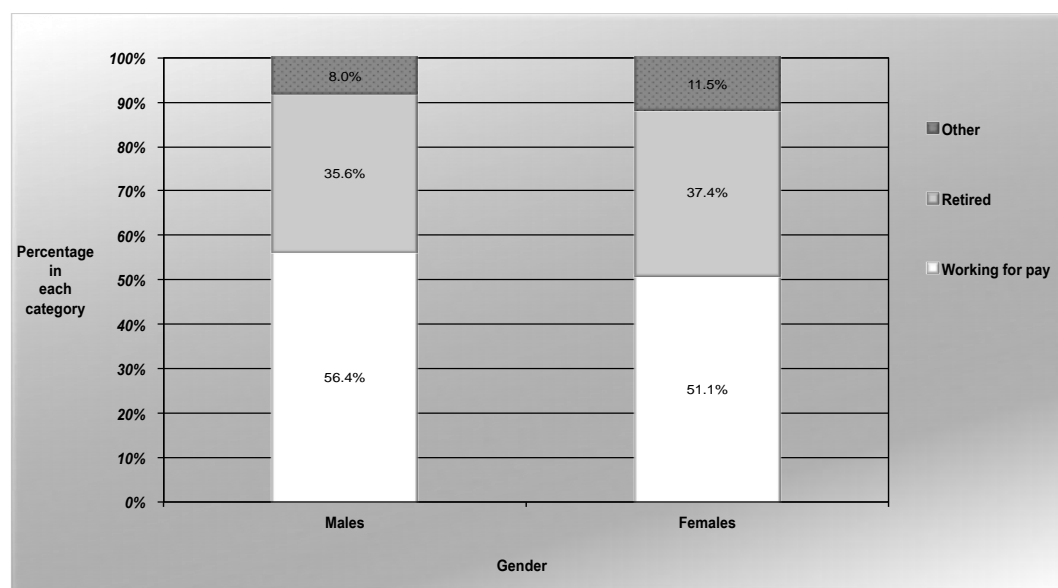


Figure 3. Self-reported economic activity according to gender.

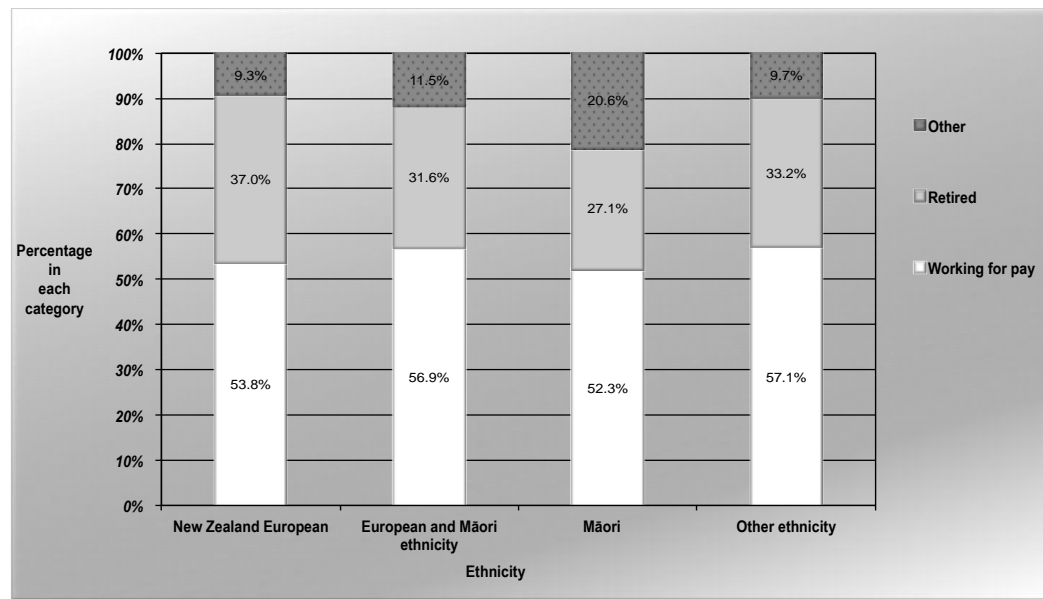


Figure 4. Self-reported economic activity according to ethnicity.

Work Ability

Health

As noted above, international research suggests that one of the main determinants of workforce participation is health status. In the current study, SF-12 health summary scores showed that workers reported significantly better physical health than retirees ($p < .001$) and those not currently working for pay ($p < .001$) after adjusting for age differences in physical health. However, retirees reported marginally better mental health than workers ($p = .004$) and substantively better mental health compared to those not currently working ($p < .001$), after the same age adjustments were made. The most striking findings illustrated in Figure 5 were the relatively large physical health advantages for workers compared to non-workers (black bars) and mental health disadvantages for those not currently working compared to employed and retired individuals (grey bars). Poorer physical health in retirees and those not working for pay is consistent with findings that injury and illness are major reasons for involuntary retirement (Gorman et al., 2012). Those not currently working may have poorer mental health because this is an undesirable status where people cannot find work but are too young to receive New Zealand Superannuation. In fact, a large proportion of this group self-reported as either, unemployed and looking for work or unable to work due to poor health.

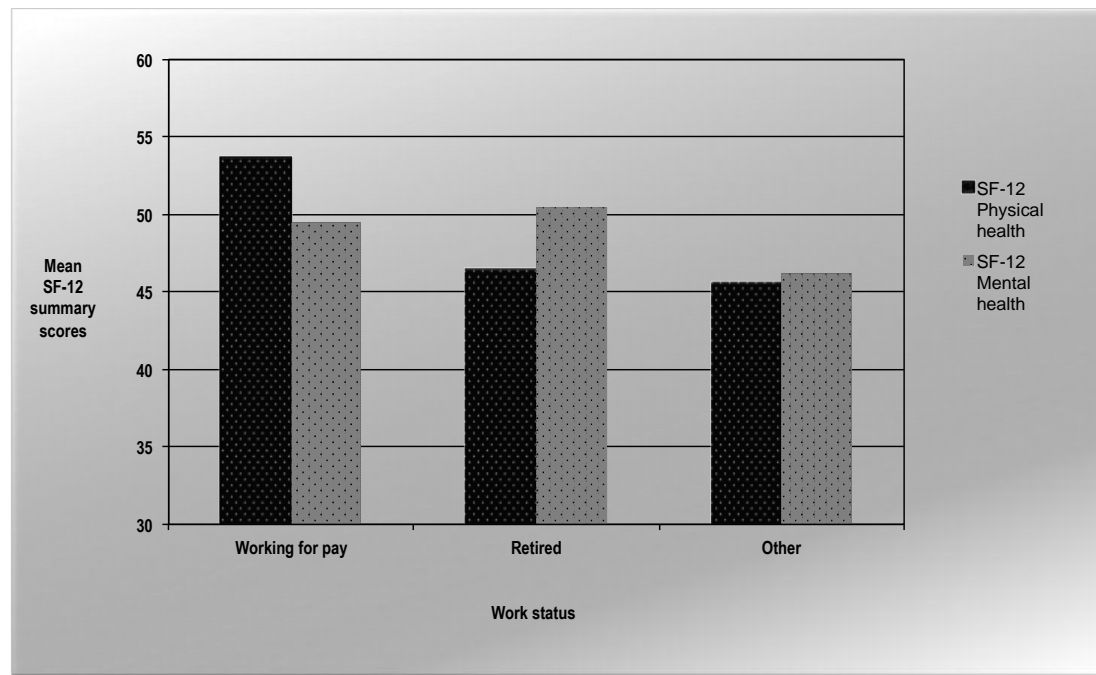


Figure 5. Work status according to mental and physical health.

Statistical tests showed that, after adjusting for age, the relationship between work status and mental health did not differ for men and women. However, we did identify an interaction ($p=.006$) between gender, work status and physical health as shown in Figure 6. Women and men who were working for pay did not differ in terms of their physical health. However, retired males reported better physical health than retired females while females who were not currently working for pay reported better physical health than males not currently working. There were insufficient numbers to test the same interactions based on ethnicity.

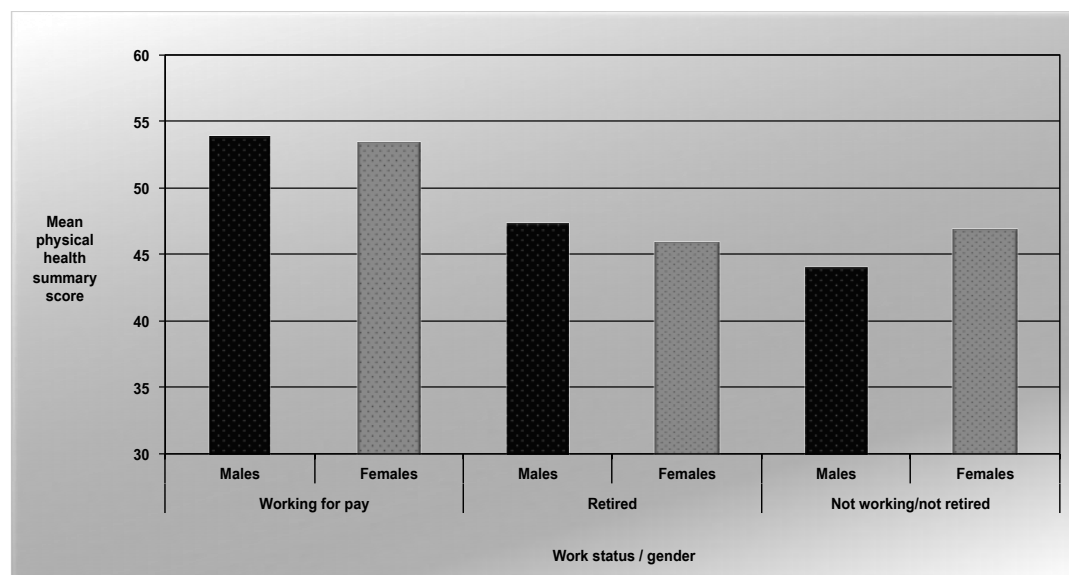


Figure 6. Physical health according to work status and gender.

Examining the reasons why NZLSA participants retired suggest that health-induced retirements are perhaps not as prevalent in New Zealand compared to other countries (see Figure 7). Only 15% of the sample retired due to poor health or injury

compared to approximately 40% of Australians in the same age group (Australian Bureau of Statistics, 2011). In contrast, the most prevalent reasons for retirement were either voluntary (wanted to do other things, felt it was time to retire) or based on age (eligible for NZ Super). Of note, only 4% retired due to caregiving commitments and 8% retired due to redundancy. Eligibility for NZ Superannuation remains a significant driver of retirement decisions.

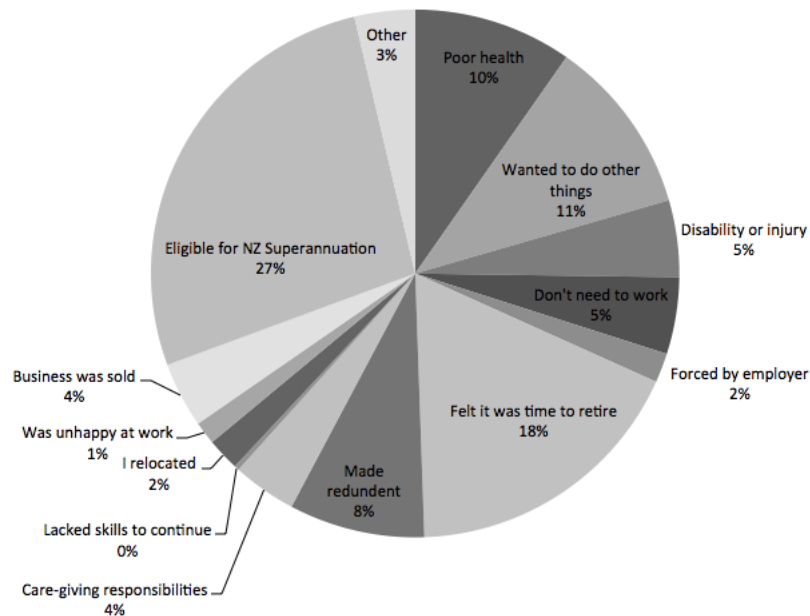


Figure 7. Reasons for retirement.

Reasons for retirement identified in Figure 7 were categorised as either voluntary (e.g. wanted to do other things) or involuntary (e.g. forced by employer) in order to examine group differences based on gender and ethnicity. Retiring due to caregiving was categorised as involuntary while reaching the age for New Zealand Superannuation (NZS) and other reasons were categorised as voluntary. Based on these categorisations, approximately 30% of retired respondents had retired involuntarily and 70% had retired voluntarily. Statistical tests showed that men were marginally more likely to retire involuntarily than women (31.3% versus 26.3%, $p = .03$). Those identifying only as Māori reported higher rates of involuntary retirement (45.5%) compared to Europeans (26.5%), those identifying as Māori and European (39%), and compared to those with other ethnicities (38%, $p < .001$). These findings indicate Māori are disadvantaged in terms of their rates of workforce participation and their choices to remain in paid work. However, the relationship between gender and work status is more complicated because although women retire earlier than men, they do so with a higher degree of choice.

Job Satisfaction

Job satisfaction (Brayfield & Rothe, 1951) was measured with 15 items. Participants indicated the extent to which they agreed with statements including “Most days I am enthusiastic about my work”, “I am often bored with my job”, and “I find real enjoyment in my work”. Scores were summated with a theoretical range of 15 to 75. Higher scores reflect greater satisfaction with one’s job. The distribution of

job satisfaction scores shown in Figure 8 suggests that the majority of the NZLSA sample were very satisfied in their work.

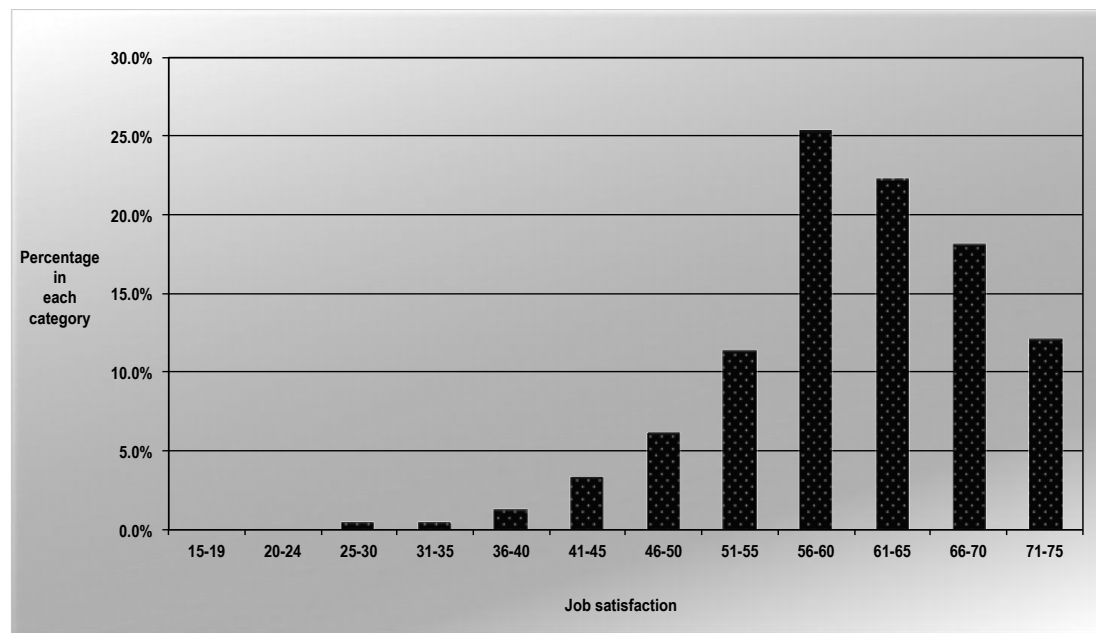


Figure 8. Distribution of job satisfaction in the NZLSA sample.

Job satisfaction increased slightly from late-middle age onward as shown in Figure 9, which is supportive of the U-shaped distribution identified in previous research (Gazioglu & Tansel, 2006). These authors have argued that job satisfaction starts high for younger workers (e.g. school leavers), is lowest for mid-age workers (35-45) and then increases again with age. When the effects of age were accounted for, no gender differences in job satisfaction were evident, but differences according to ethnicity did emerge. Those from other ethnicities reported lower job satisfaction scores ($m=57.6$) compared to Europeans ($m=61.0$, $p<.001$), but not Māori ($m=59.4$) and those identifying as Māori and European ($m=60.6$). There were no differences in job satisfaction among Europeans and Māori.

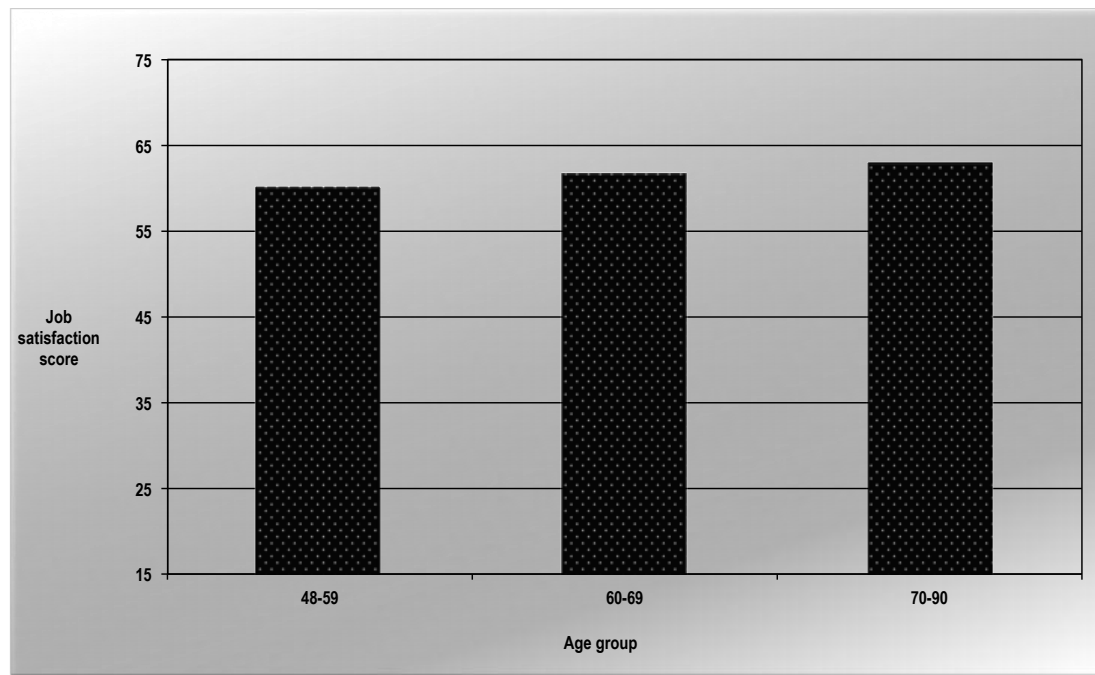


Figure 9. Job satisfaction according to age.

Work Effort-Rewards

Siegrist's (1996) work stress model comprises three subscales: work rewards, work effort and work over-commitment. Example items include "Considering all my efforts and achievements, I receive the respect and prestige I deserve" (reward subscale) and "I have constant time pressure due to a heavy work load" (over-commitment subscale). Distributions for each subscale show that the NZLSA sample reports a diverse array of workplace experiences. The majority of scores fell around the middle of the work effort scale (Figure 10), but were slightly higher for the work rewards subscale (Figure 11). In contrast, scores on the over-commitment subscale showed a more negative skew with more than half the sample scoring below the scale's mid-point (Figure 12).

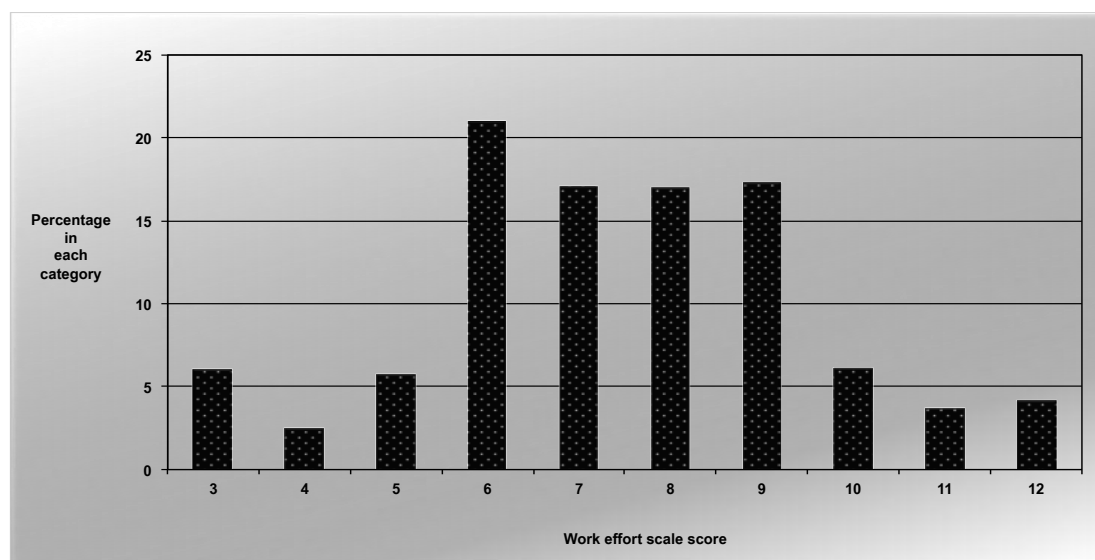


Figure 10. Distribution of work effort scores.

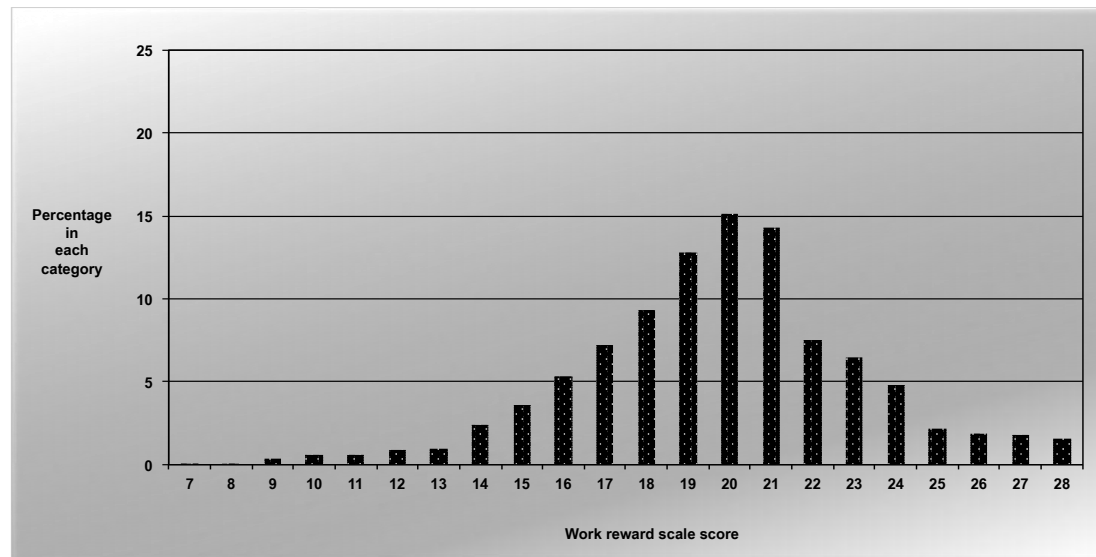


Figure 11. Distribution of work reward scores

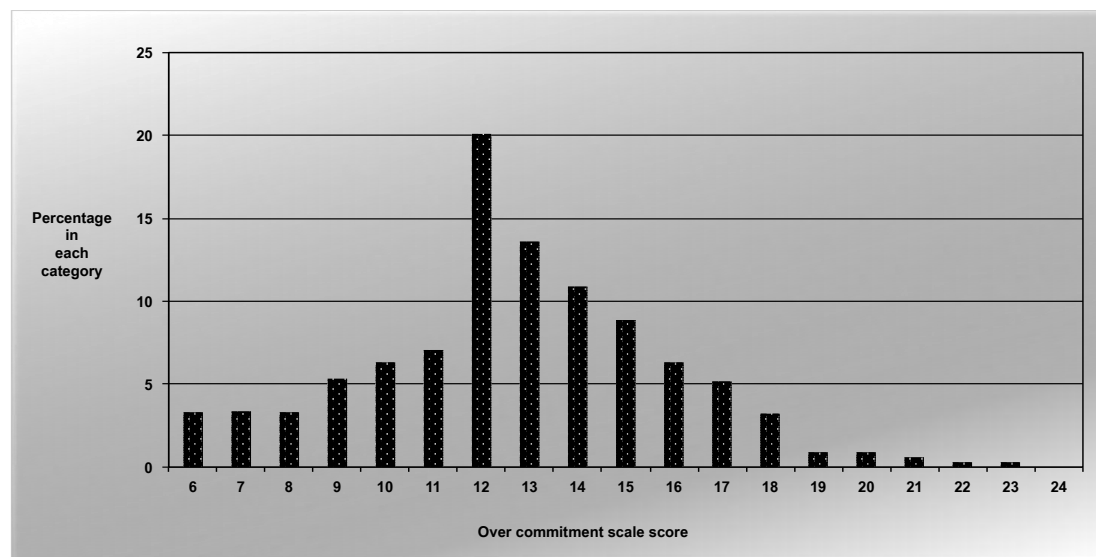


Figure 12. Distribution of over-commitment scores.

Workers over 70 years of age ($N=86$) reported lower levels of work effort ($m=6.1$) compared to 60-69 year old workers ($m=7.1$) and 48-59 year-old workers ($m=7.8$, $p<.001$). They also reported higher levels of work rewards ($m=20.8$) compared to the youngest group ($m=19.6$, $p=.007$), but similar levels to the 60-69 year-olds. There were no differences in levels of over-commitment according to age. After controlling for age differences, statistical tests showed no gender differences in any of the three work-reward subscales. Findings also revealed no significant ethnicity-based differences in the effort or over-commitment scales. However, Figure 13 shows that Europeans and those identifying as Māori and European reported slightly higher levels of work reward compared to Māori and those from other ethnicities ($p=.02$).

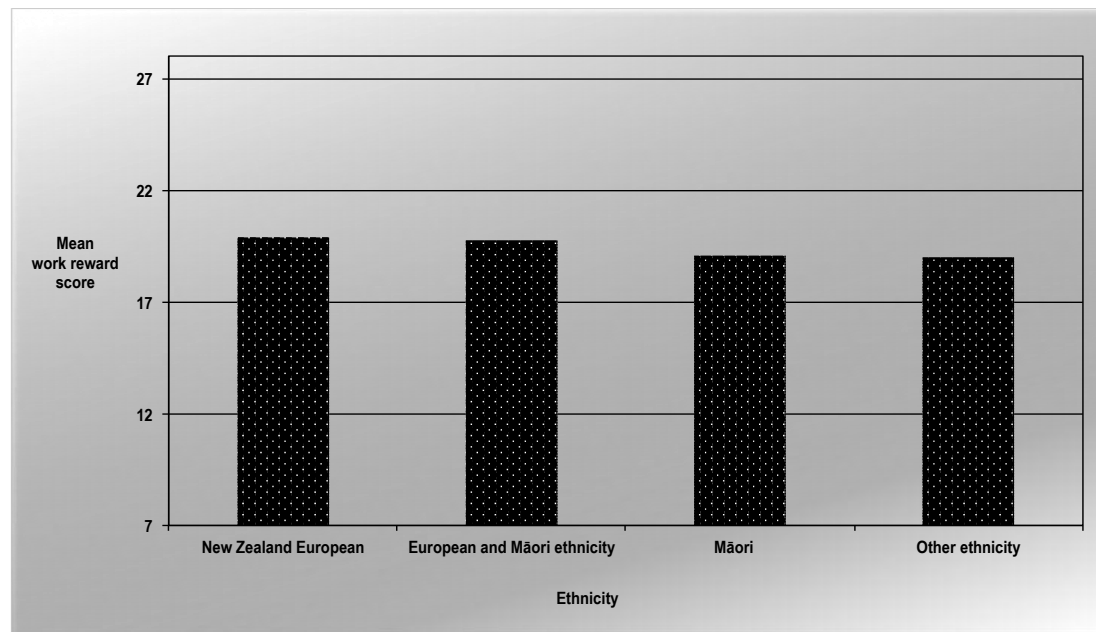


Figure 13. Work reward scores according to ethnicity

The bivariate correlations indicate that those in better physical health reported slightly higher levels of job satisfaction ($r=.12$, $p<.01$) and work reward ($r=.13$, $p<.01$). However, mental health was a much stronger correlate of the work ability variables. Better mental health was associated with greater job satisfaction ($r=.34$, $p<.01$) and work reward ($r=.29$, $p<.01$) and less work effort ($r=-.18$, $p<.01$) and over-commitment at work ($r=-.33$, $p<.01$). In other words, those in better health tend to work in more positive psychosocial workplace environments. Those more satisfied with their work tended to report greater work-related rewards ($r=.51$, $p<.01$) and lower levels of over-commitment ($r=-.21$, $p<.01$). However job satisfaction did not vary according to perceptions of work-related effort.

Financial Expectations for Retirement

The participants' perceptions of their retirement finances were assessed with five variables. Items measured the extent to which people worried about their financial future, satisfaction with expected financial position in retirement, and whether or not they could afford to retire now (Adams & Beehr, 1998). Scores range from 5 to 35 with higher scores reflecting a more positive outlook of one's future financial position in retirement. The distribution of scores shown in Figure 14 shows that the majority of the NZLSA sample is not confident about their future financial position. This was particularly apparent for the younger group ($m=15.1$) compared to the 60-69 year-olds ($m=17.9$) and the 70-90 year olds ($m=20.0$, $p<.001$).

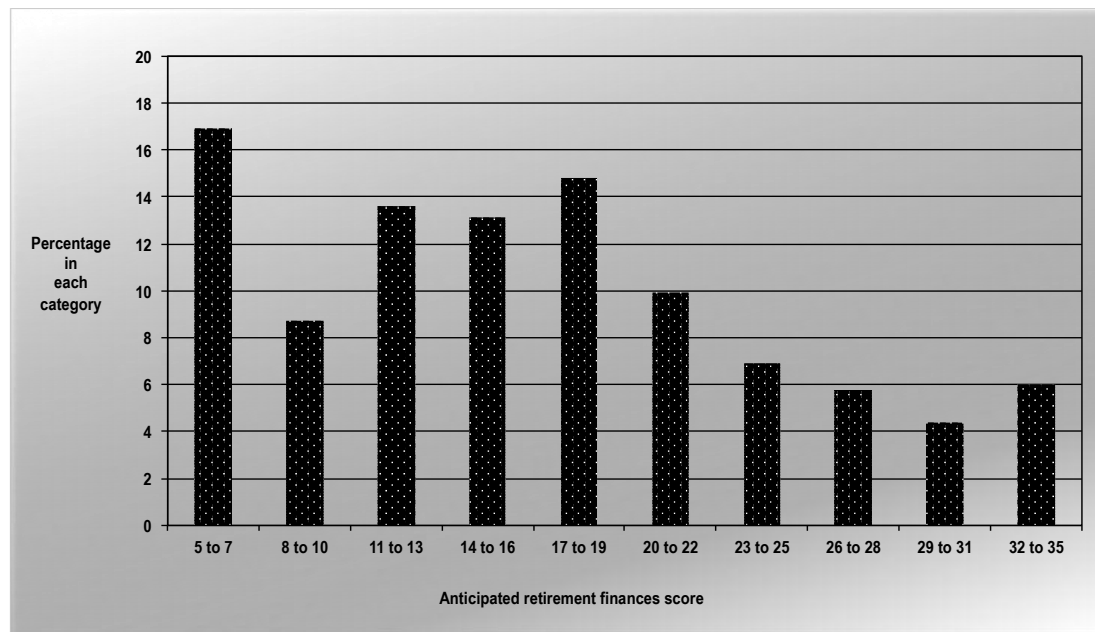


Figure 14. Distribution of anticipated retirement finances scores.

In the NZLSA data, women were more likely to be concerned about their future financial situation than men, even when the effect of age on anticipated finances was accounted for ($p < .001$). Those identifying as Māori reported significantly poorer anticipated finances compared to the other three ethnic groups ($p < .05$). However, anticipated retirement finances did not differ across the Europeans, those identifying as Māori and European, and other ethnicities (Figure 15).

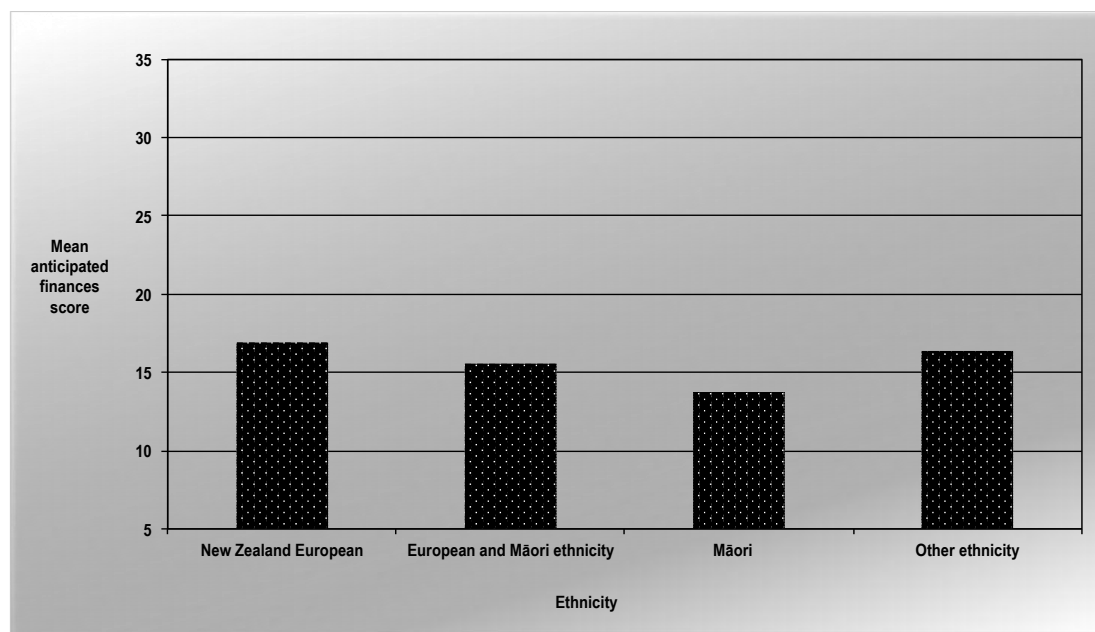


Figure 15. Anticipated finances in retirement by ethnicity.

Bivariate correlations show that perceptions of retirement finances were more pessimistic for those in poor physical ($r = .11$, $p < .001$) and mental health ($r = .25$, $p < .001$). One explanation for this finding is that those in poor health may feel that they will not be able to stay in the workforce long enough to generate sufficient

wealth for retirement. Levels of job satisfaction were also lower for those with negative perceptions of their financial future ($r=.25$, $p<.001$). Individuals may be dissatisfied with work because they perceive that their salary is too low relative to their work efforts and skills. In turn, relatively low salaries may make it difficult for workers to prepare financially for retirement. Therefore it is not surprising that expectations of future finances improve with increasing work rewards ($r=.38$, $p<.001$), decreasing work effort ($r=-.24$, $p<.001$) and work over-commitment ($r=-.23$, $p<.001$).

Work, Retirement and Caregiving

The NZLSA survey includes a number of questions on long-term caregiving for someone with a long-term illness, disability or frailty (looked at in more detail in Alpass, Keeling and Pond (2014)). However, this report focuses on a single item assessing how often caregiving activities are undertaken. Approximately 80% of the sample do not have caregiving commitments for an ill, disabled, or frail person. However, 13.1% of the sample provide care to someone every day, 4.4% provide care several times a week, 2.2 % one a week, 1% once every few weeks and 0.6% provide care less than once every few weeks². These categories were further collapsed into three: caregiving every day (13.1%), caregiving less than everyday (8.2%) and no caregiving (78.8%).

As noted above only 4% of the retirees in the sample retired due to caregiving demands. However, rates of employment did differ according to caregiving commitments. Figure 16 shows that of those providing care every day, 43.8% were retired compared to only 35.5% of those not providing care at all ($p<.001$). Comparing workers (part- and full-time) with non-workers (retirees and those not currently) also indicates that caregiving increases as workforce participation decreases. Nevertheless, it is important to note that nearly a quarter of those caregiving everyday were also in full-time employment and 16% were working part-time.

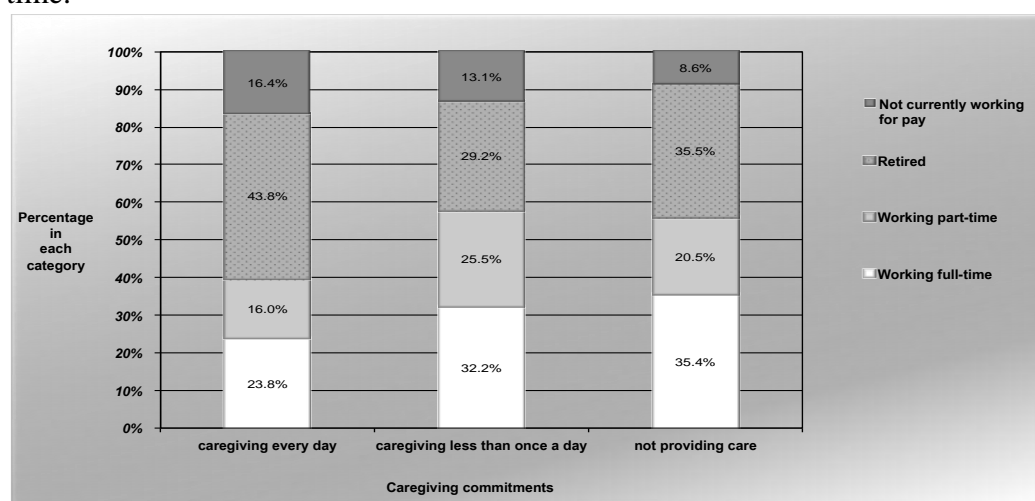


Figure 16. Caregiving commitments according to work status.

² Percentages of caregivers differ from Alpass, Keeling and Pond (2014) due to the different definitions of carers used.

Caregiving commitments appeared to increase with age, but the differences were only apparent for those providing care once a day or less than once a day ($p < .001$). Figure 17 shows that each age group was equally likely to not be providing care. However, proportionally more of the 70-90 year olds were providing care daily (17.3%) compared to the youngest group (11.3%), while proportionally more of the youngest group were providing care less than once a day (10.5%) compared to the oldest group (5.3%). One explanation for this finding could be the older group are caring for people, probably an older spouse, who have greater demands compared to the care recipients of the younger group, most likely an older parent. Looking after an aged spouse is likely to be everyday arrangement due to co-habitation, whereas caregiving for a parent may be less likely to require everyday care.

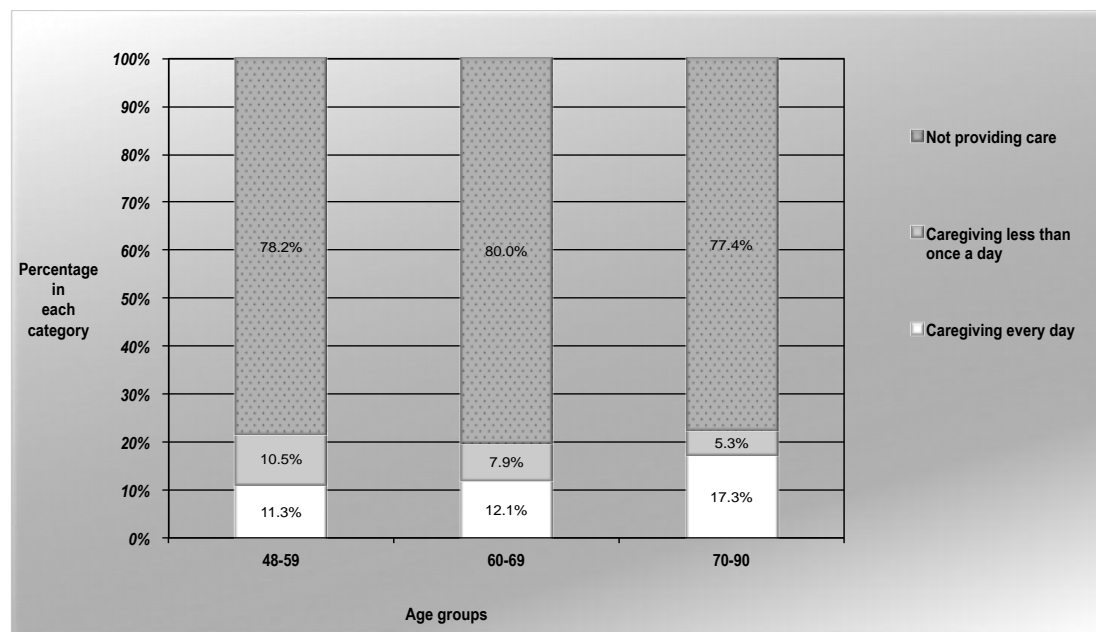


Figure 17. Caregiving commitments according to age group.

After accounting for the effects of age, those with everyday care commitments reported poorer physical health ($m=47.5$) compared to those caring less than once a day ($m=50.3$) or not caregiving at all ($m=50.7$, $p < .001$). Figure 18 shows the same pattern for mental health ($p < .001$).

As found in previous research (Singer et al., 2010), women were more likely to be caregiving than men ($p < .001$). Approximately 16% of women were caring every day compared to only 9.5% of men. This compares to 85% of men who were not providing care at all versus only 74% of women. Women were also more likely to be caring for someone less than every day. Small differences in rates of caregiving were also found across ethnicities ($p < .05$). According to Figure 19, Māori were more likely to be caring for someone every day (21.1%) particularly compared to Europeans (12.6%) and other ethnicities (10.5%).

Levels of job satisfaction, work rewards, work effort, and work over-commitment did not differ according to caregiving commitments after adjusting for age.

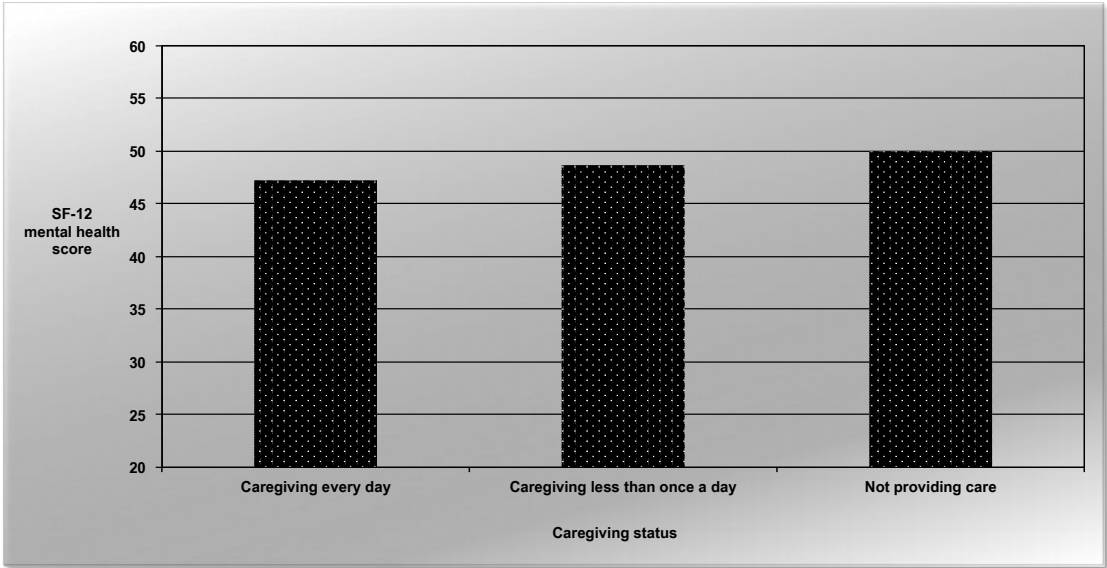


Figure 18. Mean mental health scores according to caregiving status.

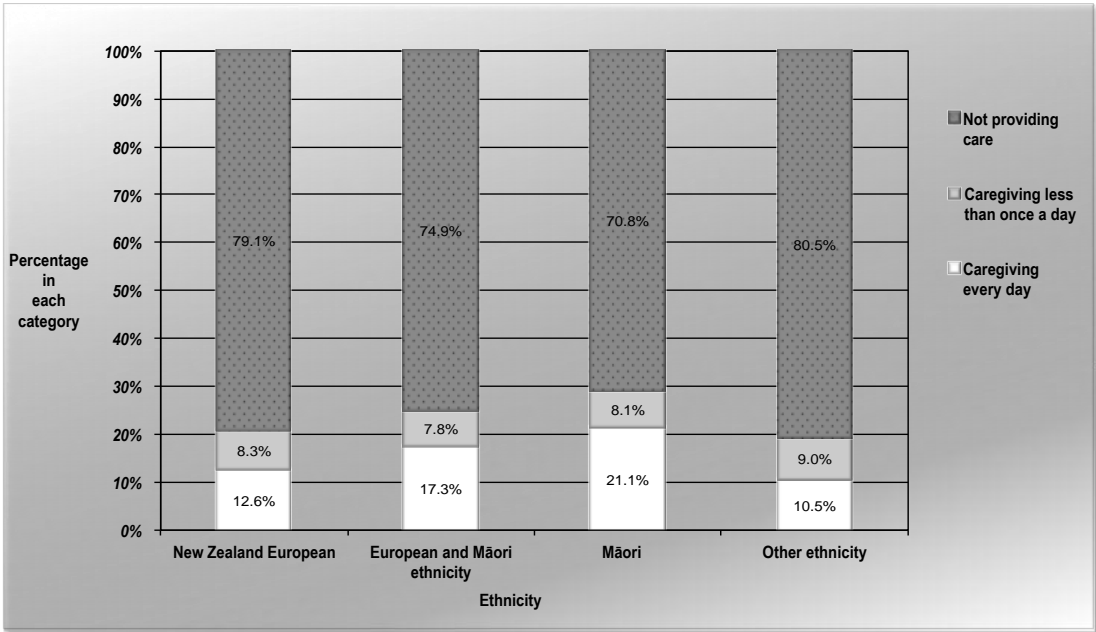


Figure 19. Caregiving commitments according to ethnicity.

Expected Time to Retirement

Up to this point we have discussed some of the factors that previous research has linked to levels of workforce participation. This section examines the relationships between how long the participants expect to continue working with their health status, the indicators of work ability, and their caregiving commitments and

anticipated finances. Figure 20 shows that the approximately half the employed NZLSA sample expects to retire in the next 8 years.

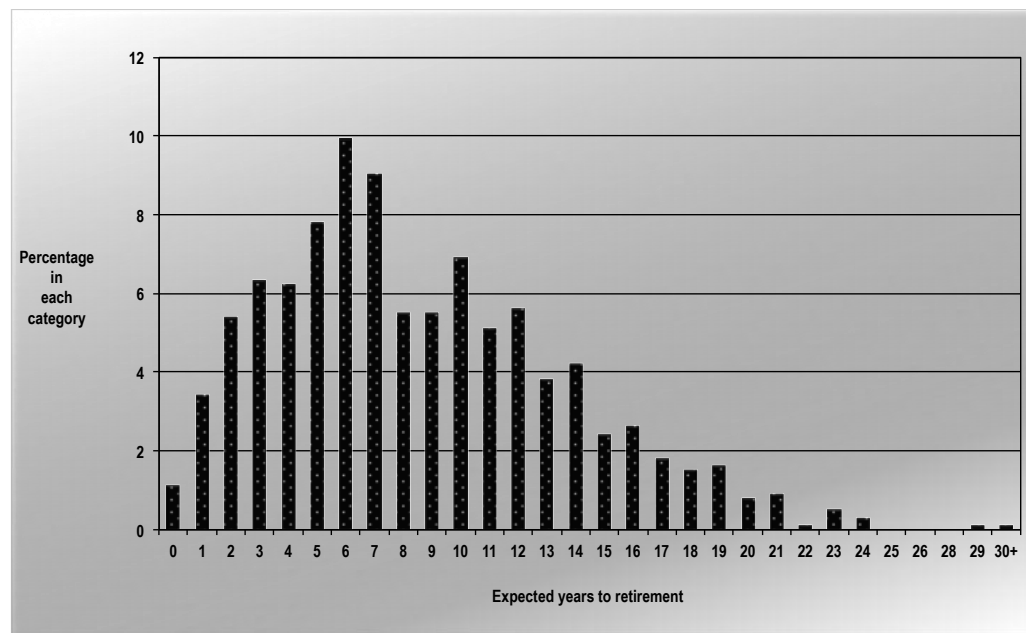


Figure 20. Expected years to retirement.

There was a moderate-to-strong association between age and expected years to retirement ($r=.51$, $p<.001$), indicating that older workers expected to retire sooner than younger workers. Therefore it was necessary to control for the effects of age, to better understand how work-related factors may influence retirement decisions. After adjusting for age, there was no association between expected years to retirement and gender, ethnicity, mental health, physical health, job satisfaction, work-effort, work reward, or caregiving commitments. However, a longer period of time before retirement was associated with increasing levels of over-commitment (partial correlation = $.05$, $p<.05$) and more pessimistic perceptions of retirement finances (partial correlation = $-.10$, $p<.001$). These small relationships suggest that financial and stress-related disadvantage may leave people little choice but to stay in retirement, perhaps to generate retirement wealth. Expected time to retirement's moderate-to-strong relationship with age and lack of association with the other variables also suggests a lack of choice in the decision of when to retire. For many, it appears that reaching age-eligibility for NZS may drive retirement decisions. Indeed 27% of NZLSA's retirees left the workforce for this reason and we turn to this group now to examine how they have adjusted since retirement.

Adjustment to Retirement

Approximately one third of the NZSLA sample self-reported as retired. Figure 21 shows the distribution of responses to the question "how difficult has it been to adjust to retirement?" The responses (scored on a five-point scale) indicate that the majority of the sample has adjusted well to retirement. There were no differences in adjustment according to age.

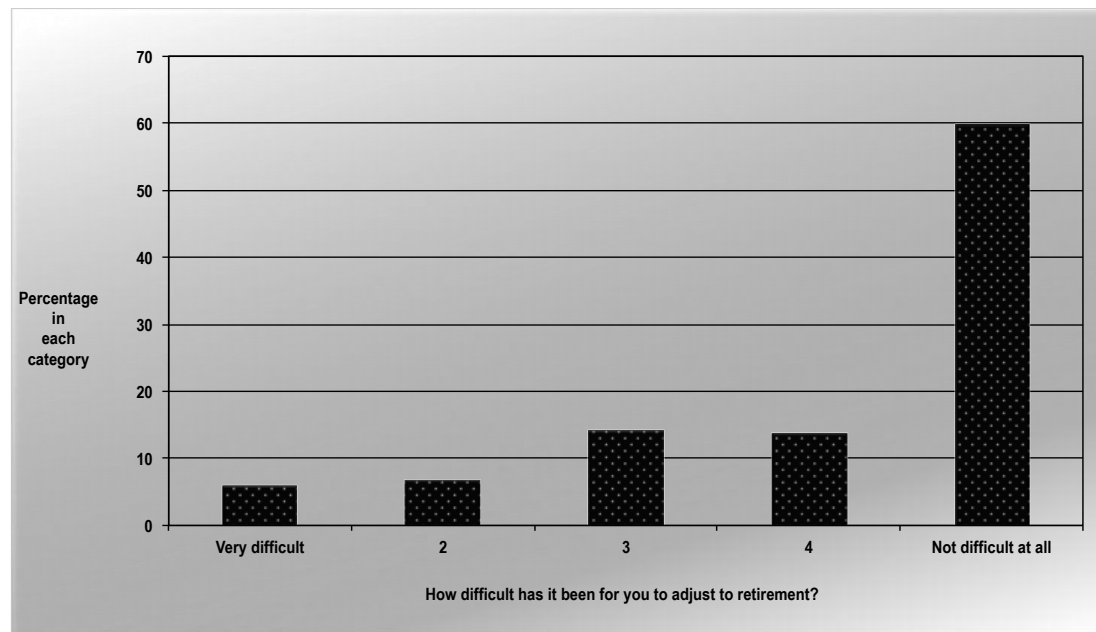


Figure 21. Distribution of retirement adjustment scores.

Both males and females had adjusted equally well but differences based on ethnicity were found ($p < .001$). According to Figure 22, a greater proportion of Māori found it very difficult to adjust to retirement (20.6%) compared to Europeans (4.9%) and those identifying as European and Māori (6.7%). Those with other ethnicities were excluded due to low numbers.

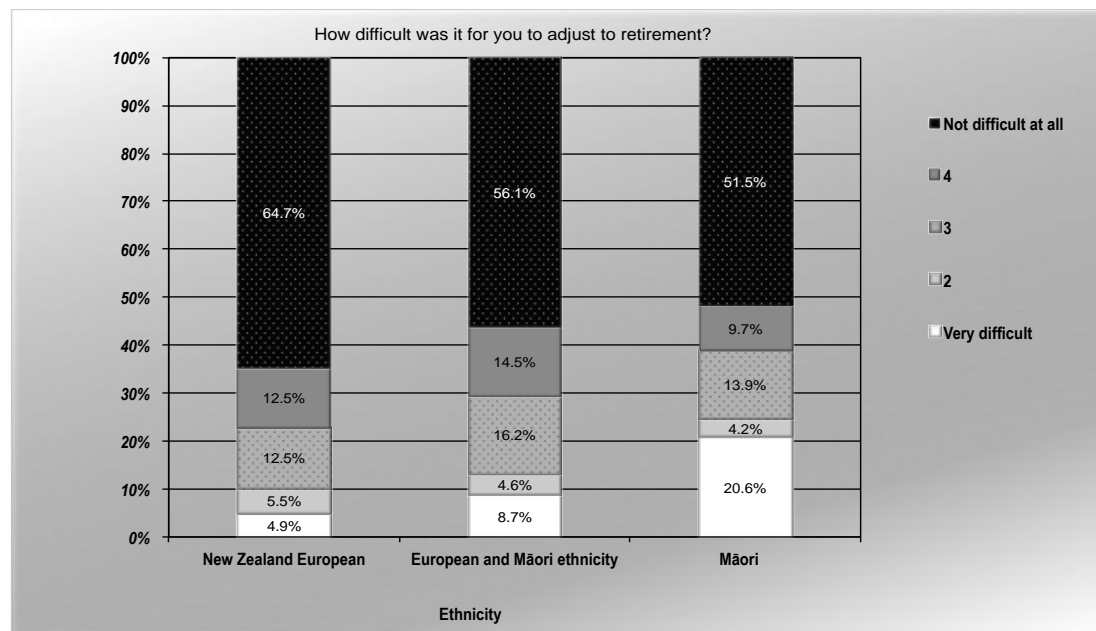


Figure 22. Difficulty in retirement adjustment according to ethnicity.

Participants were also asked how long it took them to adjust to retirement (see Figure 23). The majority appear to have adjusted reasonably quickly, which corroborates the finding of ease in retirement adjustment. In other words, the majority of the retirees adjust quickly and easily to retirement. The correlation coefficient of $r = -.68$ ($p < .001$) also supports this conclusion. Both men and women and people of

varying ages took equally long to adjust to retirement. However, those identifying as Māori took longer to adjust to retirement compared to the other three ethnic groups ($p < .001$).

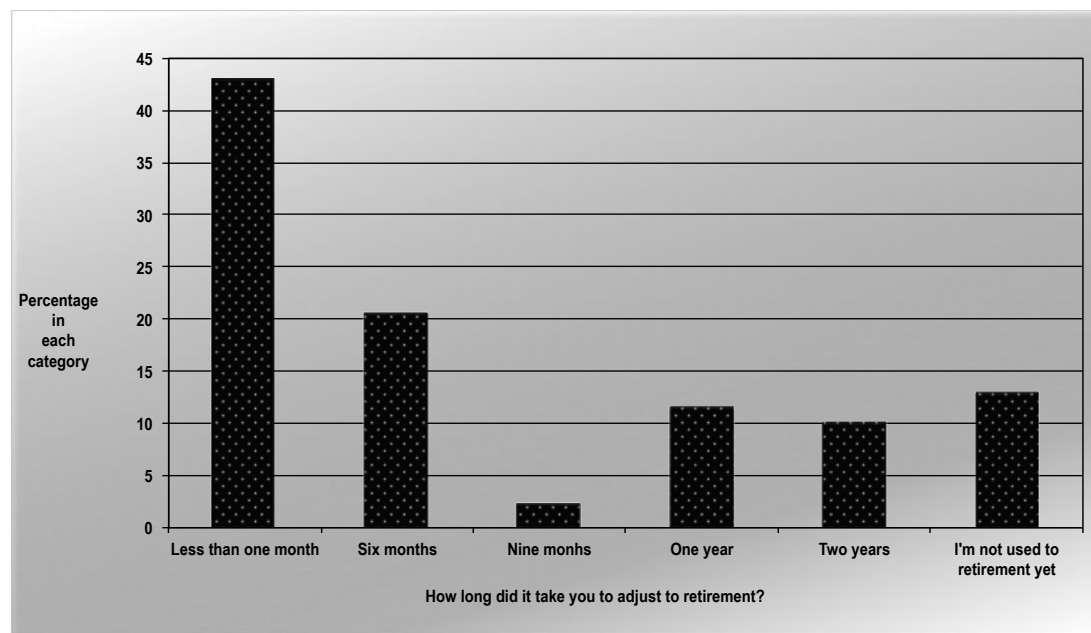


Figure 23. Length of time taken to adjust to retirement.

The majority of retirees were very satisfied in their *previous* job. However, levels of previous job satisfaction were not associated with degree of adjustment or time taken to adjust. This result coincides with the equivocal findings in the job satisfaction literature. Major theorists indicate that happy workers make happy retirees (Atchley, 1999, 2003) while others argue that happy workers tend not to adjust well to retirement due to the loss of work status and identity (Burke, 1991; Thoits, 1992). Finally, degree of caregiving was not associated with either measure of retirement adjustment.

Change in Retirement Status

The participants' economic activities in 2010 and 2012 were compared to track their transitions from paid employment to retirement and vice versa. Figure 24 shows that the majority of the sample (84.9%) remained in the same circumstances over this two-year period. Only 6.5% of the sample transitioned from work to retirement and 1% transitioned from not working to retired. In contrast, approximately 1% transitioned from retirement back to the paid workforce.

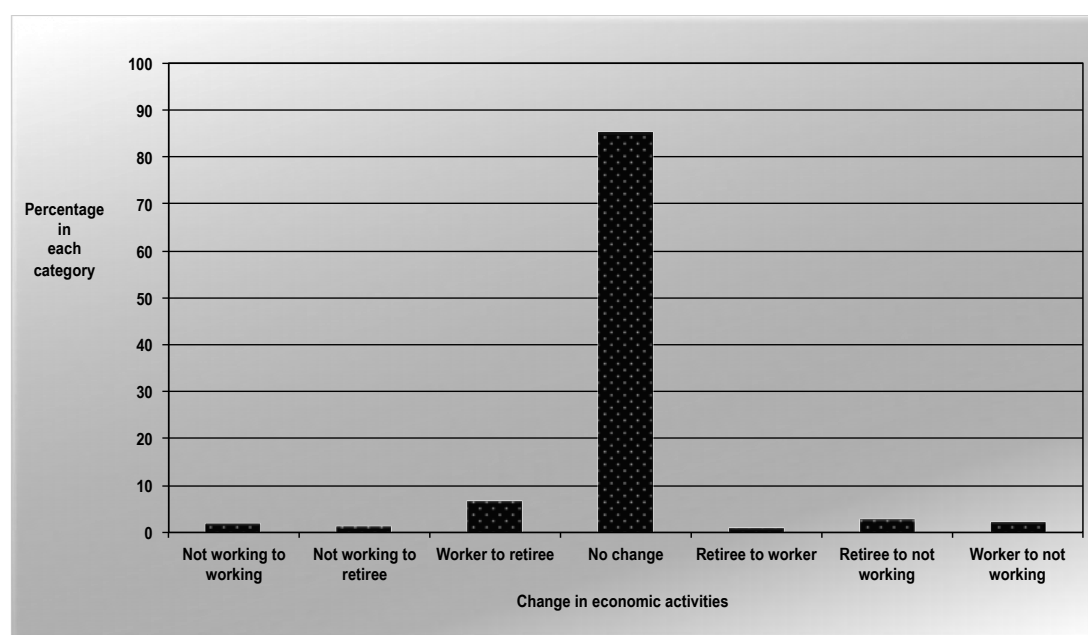


Figure 24. Change in economic activities.

Due to the small sample sizes for the majority of these categories, this report focuses only on those transitioning from work to retirement in comparison to those who have remained in paid work. Statistical tests showed that the transition to retirement was more prevalent for older workers (27.9%) compared to the 60-69 year-olds (15.5%) and 48-59 year-olds (1.9%, $p < .001$). However the likelihood of transitioning from worker to retiree did not differ according to gender or ethnicity. After adjusting for age, the likelihood of remaining in the paid workforce in 2012 increased with higher levels of job satisfaction (Odds Ratio=1.03, $p = .006$) and perceived work reward (Odds Ratio=1.20, $p = .006$) in 2010. In other words, happy workers in 2010 tended to stay working in 2012. Poorer financial expectations of retirement in 2012 decreased the likelihood of transitioning from work to retirement (Odds Ratio=.97, $p = .02$). This suggests that people tended to only retire if they could afford to. Indeed, work effort, work over-commitment and caregiving responsibilities had no impact on change in economic activities.

Summary and Concluding Comments

Approximately 55% of NZLSA's 48-90 year olds were in either part- or full-time paid employment and 36% had retired. This left just under 10% who were not in paid work, but have not yet reached retirement age or haven't classified themselves as retired. The majority of these people have been injured and cannot work or are currently unemployed but looking for work. This was a group over-represented by Māori. Being in paid employment was associated with better physical health, but workers and retirees shared the similar levels of mental health. Findings also indicated that women do retire earlier than men, which is consistent with the literature (Dixon & Hyslop, 2008), but only after age 60. In contrast, men retired with less choice than women.

NZLSA's workers report a diverse psychosocial work environment with the majority being reasonably satisfied at work and moderate levels of work rewards, work-effort and over commitment. Older workers appeared the happiest at work, as did those with better health. In contrast, psychosocial workplace characteristics did not vary substantively according to gender or ethnicity.

Workers' financial expectations of retirement tell a different story. Most were pessimistic about their projected financial status in retirement, and this was particularly apparent for the younger workers. Women and Māori also reported poorer financial expectations as did those with low job satisfaction and negative perceptions of their rewards at work. Those with poor health also reported the most pessimistic views of their future finances, possibly because they feel they may not be able to work long enough to generate sufficient retirement wealth.

Approximately 13% of the sample was providing care to a sick or disabled person every day and 8% provided care to a lesser extent. Caregiving was associated with lower levels of workforce participation, but a substantial proportion (24%) of those who provide care every day is also working full-time. This is a group that requires special attention due to the combination of potential caregiver over-burden and work-related stress. As in the international and national research (Singer, Biegel, & Ethridge, 2010; Statistics New Zealand, 2006), women were more likely to be informal caregivers.

As Atchley (2003) has noted, most people adjust well to retirement, and this is supported by our findings. However, Māori have found it the most difficult to adjust to retirement. This is not surprising given that the poorer health and lower standards of living reported by these groups in the current study are factors consistently related to poorer adjustment.

Over half of the sample expects to retire in the next eight years, reflecting a large decrease in levels of economic activities in New Zealand more generally. Age was by far the biggest predictor of retirement, but other factors did emerge. Those with more positive workplace environments expected to stay working for longer and were less likely to retire compared to those in less positive work environments. This suggests that organisations can play an important role in promoting workforce participation. One European scholar has argued that this can be achieved through effective age management which recognises the strengths and weaknesses of both younger and older workers (Ilmarinen, 2006). Those who had poor financial expectations for retirement expected to stay working longer than those with a more optimistic perspective.

When looking at actual retirement behavior from 2010 to 2012, age was again the strongest predictor of transition from worker to retiree. Those dissatisfied with work in 2010 were also more likely to retire in 2012 compared to satisfied workers. Finally, those with pessimistic financial expectations were also more likely to stay in paid employment.

The strong relationship between poor physical health and lower workforce participation, suggest that the promotion of workers' health is a vitally important step towards promoting economic activity in older workers. Numerous studies have shown

that health promotion initiatives undertaken in the workplace are effective in promoting health outcomes and resultant increases in workforce participation and productivity and even a better retirement experience (Müller, Weigl, Heiden, Glaser, & Angerer, 2012; Tuomi et al., 2001). In addition to the obvious health benefits, improving workforce participation through health promotion will have benefits for individuals, by allowing them more time to prepare financially for retirement, and for government through the maintenance of tax revenue.

As found in previous research, Māori were disadvantaged in many areas studied here. However, there were fewer gender disparities than expected. It is likely that women's work, health and caregiving commitments are as heterogeneous as men's. The categories of male and female may therefore be too broad to capture important gender differences. Instead, we should look to gendered life courses (e.g. Moen, 1996) to understand how men and women's differential exposures to work and family life may shape their lives from late-middle age and beyond.

Finally, New Zealand Superannuation has been widely regarded for its simplicity and effectiveness as an anti-poverty measure in older adults (John & Wilmore, 2001). Our findings also suggest that it also plays an important role in shaping work and retirement behaviour. Reaching age 65 was by far the most common reason for retirement and age was the strongest predictor of retirement expectations and retirement behaviour. However, those who cannot work but have not yet reached age 65 are at a particular disadvantage. Social welfare for those not at retirement age (e.g. the sickness benefit) is approximately half the level provided by superannuation (Work and Income New Zealand, 2013). This was the situation facing 10% of our sample—those not working for pay, but not yet retired. As noted above, this group was over-represented by Māori, but all its constituents are an at-risk group requiring further support and research. These and other at-risk groups will be the continuing focus of our research as we continue to examine the individual and social factors that promote health and well-being later in life.

References

- Adams, G. A., & Beehr, T. A. (1998). Turnover and retirement: A comparison of their similarities and differences. *Personnel Psychology*, 51, 643-665.
- Alavinia, S. M., van Duivenbooden, C., & Burdorf, A. (2007). Influence of work-related factors and individual characteristics on work ability among Dutch construction workers. *Scandinavian journal of work, environment & health*, 351-357.
- Alpass, F., Keeling, S., & Pond, R. (2014). *Caregiving. Summary report for the New Zealand Longitudinal Study of Ageing*. Palmerston North: Massey University.
- Alpass, F., Stevenson, B., Pond, R., Stephens, C., Keeling, S., & Towers, A. (2013). The influence of ethnicity, gender and caregiving on the health of older New Zealanders. *Journal of Gerontology: Social Sciences Series B: Psychological Sciences and Social Sciences*, 68(5), 783-793.
- Arno, P. S., Levine, C., & Memmott, M. M. (1999). The economic value of informal caregiving. *Health Affairs*, 18(2), 182-188. doi: 10.1377/hlthaff.18.2.182
- Atchley, R. C. (1999). *Continuity and adaptation in aging*. Baltimore, Maryland: The John Hopkins University Press.
- Atchley, R. C. (2003). Why most people cope well with retirement. In J. L. Ronch & J. A. Goldfield (Eds.), *Mental wellness in aging. Strength-based approaches* (pp. 123-138). Baltimore: Health Professional Press.
- Australian Bureau of Statistics. (2011). Retirement and retirement intentions. Canberra.
- Bascand, G. (2012a). National Population Projections: 2011(base)–2061, from http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/NationalPopulationProjections_HOTP2011.aspx
- Bascand, G. (2012b). National Labour Force Projections: 2006(base)–2061, from http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/NationalLabourForceProjections_HOTP06-61Augupdate.aspx
- Berg, T. I. J. v. d., Elders, L. A. M., Zwart, B. C. H. d., & Burdorf, A. (2009). The Effects of Work-Related and Individual Factors on the Work Ability Index: A Systematic Review. *Occupational and Environmental Medicine*, 66(4), 211-220. doi: 10.2307/27733104
- Berkman, L., Glass, T., Brissette, I., & Seeman, T. (2000). From social integration to health: Durkheim in the new millennium. *Social Science and Medicine*, 51(6), 843-857.
- Besen, E., Matz-Costa, C., Brown, M., Smyer, M. A., & Pitt-Catsoupes, M. (2013). Job characteristics, core self-evaluations, and job satisfaction: What's age got to do with it? *The International Journal of Aging and Human Development*, 76(4), 269 – 295.
- Bhatti, K. K., & Qureshi, T. M. (2007). Impact of employee participation on job satisfaction, employee commitment and employee productivity. *International Review of Business Research Papers*, 3(2), 54-68.
- Blekesaune, M., & Solem, P. E. (2005). Working Conditions and Early Retirement A Prospective Study of Retirement Behavior. *Research on Aging*, 27(1), 3-30.

- Bosse, R., Alwin, C. L., Levenson, M. R., & Workman-Daniels, K. (1991). How stressful is retirement? Findings from the Normative Aging Study. *Journal of Gerontology*, 46, P9-P14.
- Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of applied psychology*, 35(5), 307.
- Brathwaite, V. A., Gibson, D. M., & Bosly-Craft, R. (1986). An exploratory study of poor adjustment styles among retirees. *Social Science and Medicine*, 23(5), 493-499.
- Burke, P. J. (1991). Identity processes and social stress. *American Sociological Review*, 836-849.
- Calnan, M., Wainwright, D., & Almond, S. (2000). Job strain, effort-reward imbalance and mental distress: a study of occupations in general medical practice. *Work & Stress*, 14(4), 297-311.
- Chandola, T., Britton, A., Brunner, E., Hemingway, H., Malik, M., Kumari, M., . . . Marmot, M. (2008). Work stress and coronary heart disease: what are the mechanisms? *European Heart Journal*, 29(5), 640-648. doi: 10.1093/eurheartj/ehm584
- Clark, A., Oswald, A., & Warr, P. (1996). Is job satisfaction U- shaped in age? *Journal of Occupational and Organizational Psychology*, 69(1), 57-81.
- Dendinger, V. M., Adams, G. A., & Jacobson, J. D. (2005). Reasons for working and their relationship to retirement attitudes, job satisfaction and occupational self-efficacy of bridge employees. *The International Journal of Aging and Human Development*, 61(1), 21-35.
- Dentinger, E., & Clarkberg, M. (2002). Informal caregiving and retirement timing among men and women gender and caregiving relationships in late midlife. *Journal of Family Issues*, 23(7), 857-879.
- Dixon, S., & Hyslop, D. (2008). The Employment and Retirement Transitions of New Zealanders Aged in their 60s: Evidence from LEED1. Wellington, New Zealand: Statistics New Zealand.
- Dulin, P. L., Stephens, C., Alpass, F., Hill, R. D., & Stevenson, B. (2011). The impact of socio-contextual, physical and lifestyle variables on measures of physical and psychological wellbeing among Māori and non-Māori: the New Zealand Health, Work and Retirement Study. *Ageing Soc.*
- El Fassi, M., Bocquet, V., Majery, N., Lair, M. L., Couffignal, S., Mairiaux, P., & Statistics, S. (2013). Work ability assessment in a worker population: comparison and determinants of Work Ability Index and Work Ability score. *Bmc Public Health*, 13(1), 305.
- Fernandez, M. E., Multran, E. J., Reitzes, D. C., & Sudha, S. (1998). Ethnicity, gender and depressive symptoms in older workers. *The Gerontologist*, 38(1), 71-79.
- Gazioglu, S., & Tansel, A. (2006). Job satisfaction in Britain: individual and job related factors. *Applied Economics*, 38(10), 1163-1171. doi: 10.1080/00036840500392987
- Glass, J., Conrad, J., & Kilpatrick, B. (1998). Financial planning for retirement: An imperative for baby boomer women. *Educational Gerontology*, 24(6), 595-617.
- Godin, I., Kittel, F., Coppieters, Y., & Siegrist, J. (2005). A prospective study of cumulative job stress in relation to mental health. *Bmc Public Health*, 5(1), 67.
- Gorman, E., Scobie, G. M., & Towers, A. (2012). Health and retirement of older New Zealanders: New Zealand Treasury.

- Haveman, R. (2003). Social security, age of retirement, and economic well-being: intertemporal and demographic patterns among retired-worker beneficiaries. *Demography*, 40(2), 369-394.
- Hochwarter, W. A., Ferris, G. R., Perrewé, P. L., Witt, L. A., & Kiewitz, C. (2001). A Note on the Nonlinearity of the Age-Job-Satisfaction Relationship. *Journal of Applied Social Psychology*, 31(6), 1223-1237. doi: 10.1111/j.1559-1816.2001.tb02671.x
- Hoogendoorn, W., Bongers, P., De Vet, H., Ariens, G., Van Mechelen, W., & Bouter, L. (2002). High physical work load and low job satisfaction increase the risk of sickness absence due to low back pain: results of a prospective cohort study. *Occupational and Environmental Medicine*, 59(5), 323-328.
- Ilmarinen, J., Tuomi, K., & Seitsamo, J. (2005). *New dimensions of work ability*. Paper presented at the International congress series.
- Ilmarinen, J. (2006). The ageing workforce—challenges for occupational health. *Occupational Medicine*, 56(6), 362-364. doi: 10.1093/occmed/kql046
- Jackson, N., Cochrane, B., & McMillan, R. (2013). Workforce participation of older workers as an element of New Zealand's Retirement Income Framework.
- John, S. S., & Willmore, L. (2001). Two legs are better than three: New Zealand as a model for old age pensions. *World Development*, 29(8), 1291-1305.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological bulletin*, 127(3), 376.
- Kim, J. E., & Moen, P. (2002). Retirement transitions, gender, and psychological well-being: A life-course, ecological model. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*, 57(3), 212-222.
- Matthews, A. M., Brown, K. H., Davis, C. K., & Denton, M. A. (1982). A crisis assessment technique for the evaluation of life events: Transition to retirement as an example. *Canadian Journal on Aging*, 1(3 & 4), 28-39.
- McGoldrick, A. E. (1994). The impact of retirement on the individual. *Reviews in Clinical Gerontology*, 4(2), 151-160.
- Miller, G., & Travers, C. (2005). Ethnicity and the experience of work: Job stress and satisfaction of minority ethnic teachers in the UK. *International Review of Psychiatry*, 17(5), 317-327.
- Moen, P. (1996). A Life Course Perspective on Retirement, Gender, and Well-Being. *Journal of Occupational Health Psychology* April, 1(2), 131-144.
- Müller, A., Weigl, M., Heiden, B., Glaser, J., & Angerer, P. (2012). Promoting work ability and well-being in hospital nursing: The interplay of age, job control, and successful ageing strategies. [Article]. *Work*, 41, 5137-5144.
- Noone, J. H., Stephens, C. V., & Alpass, F. M. (2010). 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.
- Pinquart, M., & Schindler, I. (2007). Changes of life satisfaction in the transition to retirement: A latent-class approach. *Psychology and aging*, 22(3), 442.
- Pinquart, M., & Sörensen, S. (2003). Differences between caregivers and noncaregivers in psychological health and physical health: a meta-analysis. *Psychology and aging*, 18(2), 250.
- Pinquart, M., & Sörensen, S. (2007). Correlates of physical health of informal caregivers: a meta-analysis. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 62(2), P126-P137.

- Pond, R., Stephens, C., & Alpass, F. (2010). How health affects retirement decisions: three pathways taken by middle-older aged New Zealanders. *Ageing and Society*, 30(3), 527.
- Price, C. A. (1998). *Women and retirement: The unexplored transition*. New York, Garland Publishing Inc.
- Reiso, H., Nygård, J. F., Brage, S., Gulbrandsen, P., & Tellnes, G. (2001). Work ability and duration of certified sickness absence. *Scandinavian Journal of Public Health*, 29(3), 218-225.
- Reitzes, D. C., & Mutran, E. J. (2004). The transition to retirement: Stages and factors that influence retirement adjustment. *International Journal of Aging and Human Development*, 59(1), 63-84.
- Richardson, V., & Kilty, K. M. (1992). Retirement intentions among black professionals: Implications for practice with older black adults. *The Gerontologist*, 32(1), 7-16.
- Rode, J. C. (2004). Job satisfaction and life satisfaction revisited: A longitudinal test of an integrated model. *Human Relations*, 57(9), 1205-1230. doi: 10.1177/0018726704047143
- Schofield, D., Passey, M., Earnest, A., Percival, R., Kelly, S., Shrestha, R., & Fletcher, S. (2009). Health&WealthMOD: a microsimulation model of the economic impacts of diseases on older workers. *The International Journal of Microsimulation*, 2(2), 58-63.
- Schofield, D. J., Fletcher, S. L., Earnest, A., Passey, M. E., & Shrestha, R. N. (2008). Where are older workers with chronic conditions employed? *Medical Journal of Australia*, 188(4), 231.
- Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of occupational health psychology*, 1(1), 27-41.
- Singer, G. H., Biegel, D. E., & Ethridge, B. L. (2010). Trends impacting public policy support for caregiving families. *Journal of Family Social Work*, 13(3), 191-207.
- Sousa-Poza, A., & Sousa-Poza, A. A. (2000). Taking Another Look at the Gender/Job-Satisfaction Paradox. *Kyklos*, 53(2), 135-152. doi: 10.1111/1467-6435.00114
- Sousa-Poza, A., & Sousa-Poza, A. A. (2003). Gender differences in job satisfaction in Great Britain, 1991–2000: permanent or transitory? *Applied Economics Letters*, 10(11), 691-694. doi: 10.1080/1350485032000133264
- Statistics New Zealand. (2006). QuickStats about unpaid work Retrieved June 16th, 2013
- Statistics New Zealand. (2004). *National Labour Force Projections 2001 (base) - 2051 update: Commentary*. Retrieved 21/08/06, from <http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/7cf4>.
- Statistics New Zealand. (2005a). *National Labour Force Projections 2001 (base) - 2051 update*. Retrieved 21/08/06, from <http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/7cf4>.
- Statistics New Zealand. (2007a). *Employment and Unemployment (Labour Market) Tables*. Retrieved 7/12/07, from <http://www.stats.govt.nz/products-and-services/table-builder/table-builder-labour-market.htm>
- Statistics New Zealand. (2007b). *New Zealand Income Survey*. Retrieved 12/12/07, from <http://wdmzpub01.stats.govt.nz/wds/TableViewer/tableView.aspx>
- Statistics New Zealand. (2005b). *Demographic Trends 2005*. Wellington: Statistics New Zealand.

- Stevenson, B., Fitzgerald, E., Cunningham, C., Durie, M., Fergusson, D., Hong, B., . . . Rochford, M. (2002). Nga ahuatanga noho o te hunga pakeke Māori. Living standards of older Māori. Wellington: Ministry of Social Development.
- Szinovacz, M. E., & Davey, A. (2005). Predictors of Perceptions of Involuntary Retirement (Vol. 45, pp. 36-47).
- Talaga, J., & Beehr, T. (1995). Are there gender differences in predicting retirement decisions? *Journal of Applied Psychology*, 80(1), 16-28.
- Taylor, M. A., & Shore, L. M. (1995). Predictors of planned retirement age: An application of Beehr's model. *Psychology and Aging*, 10(1), 76-83.
- Thoits, P. A. (1992). Identity structures and psychological well-being: Gender and marital status comparisons. *Social Psychology Quarterly*, 236-256.
- Tuomi, K., Huuhtanen, P., Nykyri, E., & Ilmarinen, J. (2001). Promotion of work ability, the quality of work and retirement. *Occupational Medicine*, 51(5), 318-324.
- Tuomi, K., Ilmarinen, J., Eskelinen, L., Järvinen, E., Toikkanen, J., & Klockars, M. (1991). Prevalence and incidence rates of diseases and work ability in different work categories of municipal occupations. *Scandinavian journal of work, environment & health*, 67-74.
- Tuomi, K., Ilmarinen, J., Martikainen, R., Aalto, L., & Klockars, M. (1997). Aging, work, life-style and work ability among Finnish municipal workers in 1981—1992. *Scandinavian journal of work, environment & health*, 58-65.
- Tuomi, K., Vanhala, S., Nykyri, E., & Janhonen, M. (2004). Organizational practices, work demands and the well-being of employees: a follow-up study in the metal industry and retail trade. *Occupational Medicine*, 54(2), 115-121. doi: 10.1093/occmed/kqh005
- van Solinge, H., & Henkens, K. (2008). Adjustment to and satisfaction with retirement: two of a kind? *Psychology and aging*, 23(2), 422-434.
- Van Vegchel, N., De Jonge, J., Bosma, H., & Schaufeli, W. (2005). Reviewing the effort-reward imbalance model: drawing up the balance of 45 empirical studies. *Social Science & Medicine*, 60(5), 1117-1131.
- Vitaliano, P. P., Zhang, J., & Scanlan, J. M. (2003). Is caregiving hazardous to one's physical health? A meta-analysis. *Psychological bulletin*, 129(6), 946.
- Wahrendorf, M., Dragano, N., & Siegrist, J. (2012). Social Position, Work Stress, and Retirement Intentions: A Study with Older Employees from 11 European Countries. *European Sociological Review*. doi: 10.1093/esr/jcs058
- Wang, M., Henkens, K., & van Solinge, H. (2011). Retirement Adjustment. *American Psychologist*, 66(3), 204-213.
- Westover, J. H., Westover, A. R., & Westover, L. A. (2010). Enhancing long-term worker productivity and performance: The connection of key work domains to job satisfaction and organizational commitment. *International Journal of Productivity and Performance Management*, 59(4), 372-387.
- Wilson, P., & Rodway, P. (2006). Ageing and the long-term fiscal position. In J. Boston and J. A. Davey (Eds.), *Implications of population ageing: Opportunities and risks* (pp. 99-126). Wellington: Institute of Policy Studies, Victoria University.
- 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.

Work and Income New Zealand. (2013). Sickness benefit. Retrieved from www.workandincome.govt.nz/individuals/forms-and-brochures/sickness-benefit.html