Research Brief Series : 5

To Work or Not to Work - Retirement and Health Among Older Singaporeans

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To Work or Not to Work - Retirement and Health Among Older Singaporeans

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Key Findings:

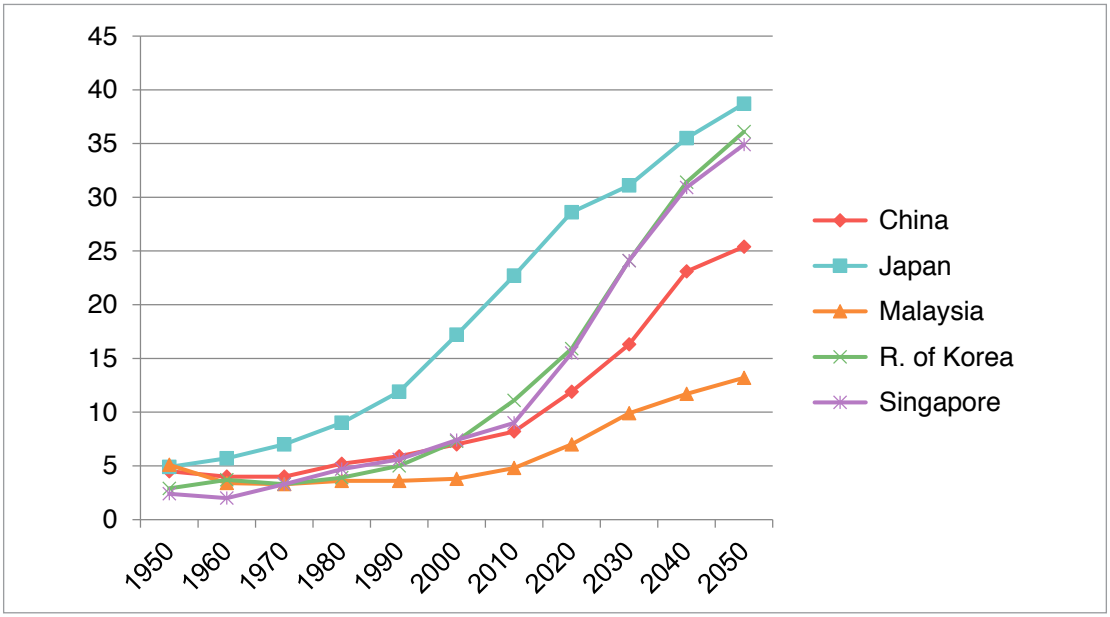
- Over six years (from year 2009 to 2015), 40% of the studied older employees became retirees whereas 60% remained in the workforce.
- Compared with those remaining in the workforce, retired older adults felt lonelier, had more depressed mood and exhibited poorer cognitive function.
- In addition, retirees reported having more chronic diseases, limitations in activities of daily living (ADL) and instrumental activities of daily living (IADL).
- Overall, retirees reported a significant deterioration in health over time.

Introduction

The world's population is ageing at an unprecedented rate. In Asia, Singapore is one of the fastest ageing societies (Figure 1). In order for Singaporeans to age successfully, we need to understand the effects of various life course transitions on the population. This information can be used to guide policy-making that facilitates successful adaptations to ageing in a rapidly changing socio-economic environment.

Population ageing has numerous social and economic consequences. One of the major consequences is the change in the proportion of time individuals spend in work and in retirement. While the proportion of older Singaporeans, aged 60 and above in the labour force is rising (e.g. from 5.5% in 2006 to 12% in 2015 [1]), they will also spend a larger proportion of their time in retirement as their overall lifespan increases. At the current minimum retirement age of 62 and the average life expectancy of 84 years old, an older Singaporean could expect to spend 22 years in retirement. As such, research on issues associated with retirement, including its impact on health and well-being, is imperative for proactive national planning.

Figure 1: Percentage of population aged 60+ in Asia



Source: The United Nations Department of Economic and Social Affairs (2010) [2]

The transition to retirement can be a stressful life event and may lead to negative health consequences [3]. One of the main reasons for this is the disruption of one's social ties upon retirement. Engagement in social relationships is a fundamental human need [4] and its deprivation is detrimental to one's well-being [5]. A large body of research has documented poor social relationships as a risk factor for comorbidity [6;7]. Social isolation is also associated with higher prevalence of limitations in activities of daily living (ADL) [8]. Workplaces offer various opportunities for individuals to socialise and interact with colleagues, business partners and customers. After retirement, individuals are more likely to have fewer social ties and experience loneliness, and hence develop poor health conditions. Whether an older person can cope with the challenges that can arise as a result of retirement is dependent on the individual's personal resilience. It is also contingent on contextual factors such as culture, policies and the healthcare system [9].

In this brief, utilising longitudinal data from a nationally representative sample (n=4990) of older Singaporeans (≥ 60 years), we address the impact of retirement versus remaining in the workforce on their well-being. This study extends prior local research [10] in three aspects. First, our dataspans a relatively long period of time (six years), which provides strong evidence for temporally causal relationships. Second, we include a wide range of health variables. Third, we study the significance of change in employment status. Specifically, we focus on working older adults at baseline, who either remained in the workforce or became retirees six years later, and look at how their health conditions vary as a result of a change in their employment status.

Our analysis showed that retirement has an impact on the health of older Singaporeans. The findings indicate that retirees developed poorer psychological, physical and functional health over time compared with individuals who remained in the workforce, thus suggesting that there are major benefits to continued employment in old age.

Method

Data for the study is drawn from the Panel on Health and Ageing among Singaporean Elderly (PHASE) - a longitudinal, national survey tracking the physical, social and mental conditions of community-dwelling older adults in Singapore over time. At PHASE Wave 1 (2009), a single-stage stratified (by age, gender and ethnicity) random sampling method was adopted to recruit participants (≥ 60 years), and 4990 survey interviews (including proxy interviews) were conducted. At PHASE Wave 2 (2011), 3103 follow-up interviews were conducted. A total of 1764 follow-up interviews were conducted for PHASE Wave 3 in 2015, six years after Wave 1.

For our purposes, we utilise PHASE Wave 1 and Wave 3 data comprising a total of 1417 older adults who provided direct responses (i.e., not through proxies). Among them, 347 older adults were employees at Wave 1 and they served as the current study sample. At Wave 3, 209 (60.2%) individuals from the sample remained in the workforce whilst 138 (39.8%) of them became retirees. Overall, working older adults and retirees at Wave 3 had similar baseline demographic characteristics. On average, both groups were over 65 years old (65.2 vs. 67.6). In both groups, the majority was male (65.1% vs. 60.1%), Chinese (71.3% vs. 73.9%), had received primary or secondary education (76.0% vs. 71.7%), lived in ≥ 4 room public or private housing (66.0% vs. 63.8%), married (78.0% vs. 79.0%) and lived with someone (94.3% vs. 96.4%).

We conducted within-subjects ANOVA and simple effect analysis to examine the impact of retirement versus remaining in the workforce on health on the 347 sampled older Singaporeans. A total of seven health-related outcome variables were assessed namely:

Psychological Health

i) *Loneliness (score range = 0 to 12) [11].*

ii) *Depressive symptoms (score range = 0 to 22) [12].*

iii) *Cognitive function (score range = 0 to 10) [13].*

Physical Health

iv) The number of 10 chronic diseases such as heart attack, cerebrovascular disease and high blood pressure.

Functional Health

v) Number of limitations in the six activities of daily living (ADL) (e.g., taking a bath, dressing up).

vi) Number of limitations in the seven instrumental activities of daily living (IADL) (e.g., preparing own meals, taking public transport to leave home).

Overall Health

vii) Overall self-rated health (score range = 1 to 5).

Higher scores indicate higher levels of a particular construct.

Seven baseline demographic characteristics, namely age, gender, ethnicity, education level, housing type [as a proxy of household income, in addition to education level], marital status and living arrangement were included as covariates for statistical adjustment in the analysis.

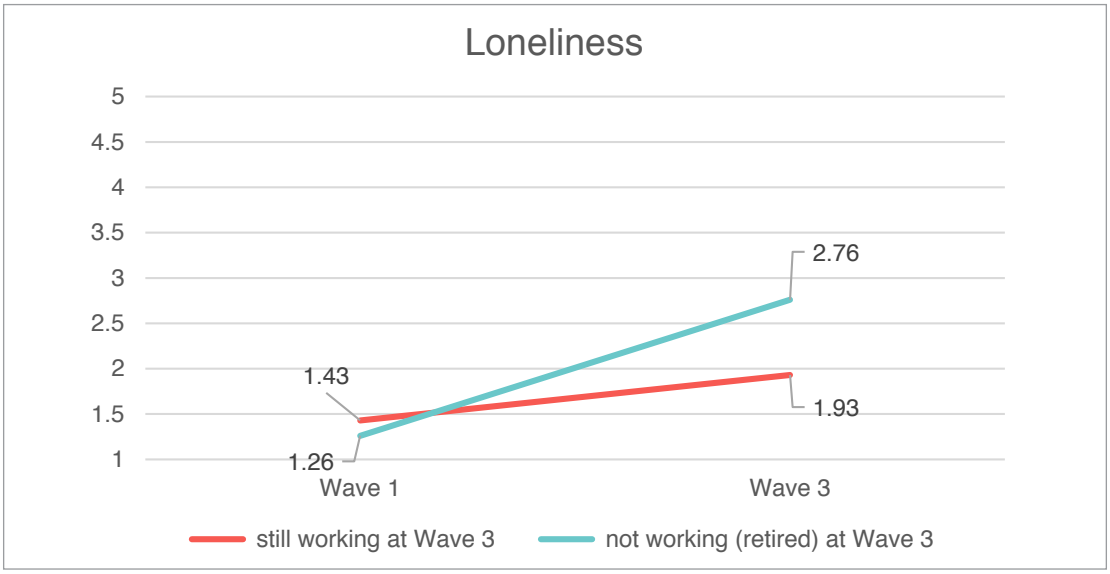
As a rule of thumb, p-values < .05 and < .10 indicate significant and marginally significant findings respectively.

Impact of Retirement versus Remaining in the Workforce on Health-related Outcomes

Loneliness

As illustrated in Figure 2, retirees reported increased loneliness over time ($p < .001$). Older adults remaining in the workforce also reported increased loneliness over time but to a smaller extent (marginally significant at $p = .060$). At Wave 3, *higher levels of loneliness were observed among retirees* ($p = .030$).

Figure 2: Impact of retirement versus remaining in the workforce on loneliness



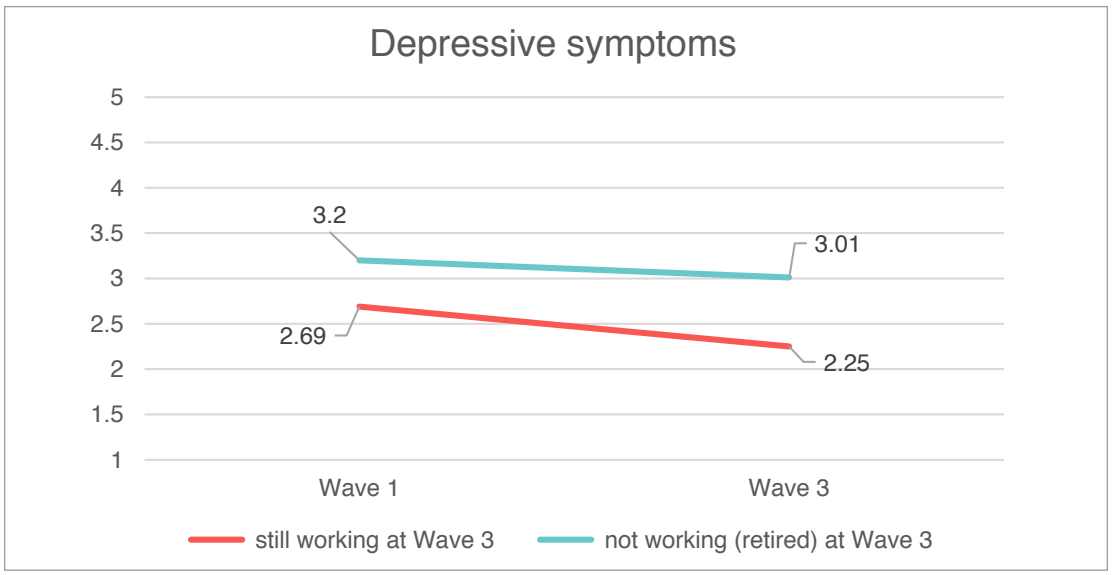
Source: Panel on Health and Ageing among Singaporean Elderly (Waves 1 & 3; n=347)

Note: All individuals were employees at Wave 1. Means after adjustment with covariates are shown.

Depressive symptoms

Figure 3 illustrates the findings on depressive symptoms. There was a reduction in depressive symptoms among older Singaporeans who remained in the workforce (marginally significant at p = .056) over the study period. A difference in depressive symptoms between the two groups was observed at Wave 1 (marginally significant at p = .086). A stronger difference was observed at Wave 3 (p = .008). At both Wave 1 and Wave 3, *retirees reported more severe depressive symptoms*.

Figure 3: Impact of retirement versus remaining in the workforce on depressive symptoms



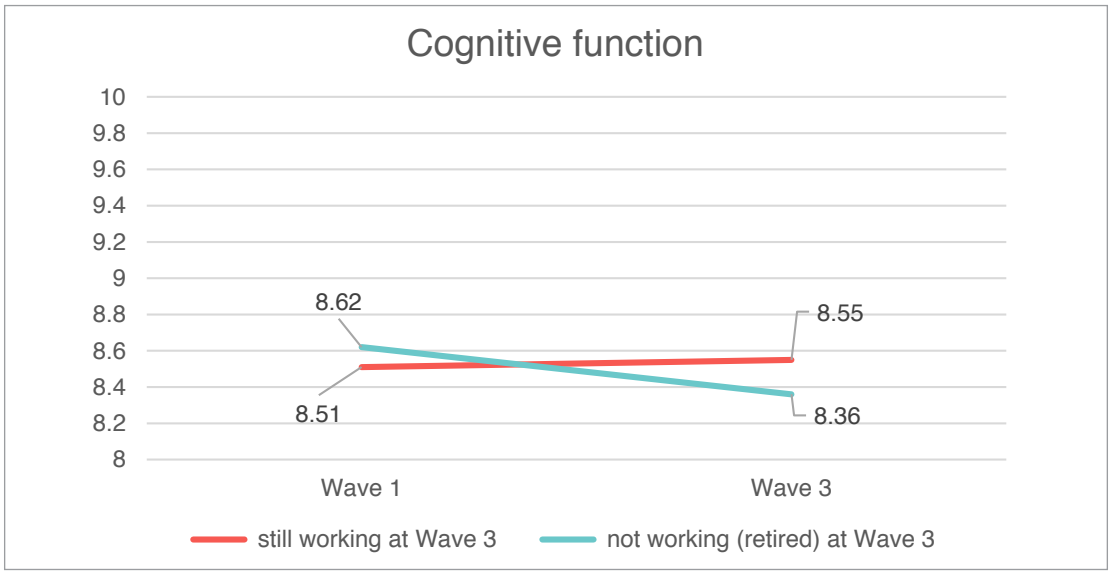
Source: Panel on Health and Ageing among Singaporean Elderly (Waves 1 & 3; n=347)

Note: All individuals were employees at Wave 1. Means after adjustment with covariates are shown.

Cognitive function

Over the six-year study period, retirees exhibited a significant cognitive decline (p = .003) (Figure 4). At Wave 3, *retirees seemed to have poorer cognitive function* than those who were still working (marginally significant at p = .063).

Figure 4: Impact of retirement versus remaining in the workforce on cognitive function



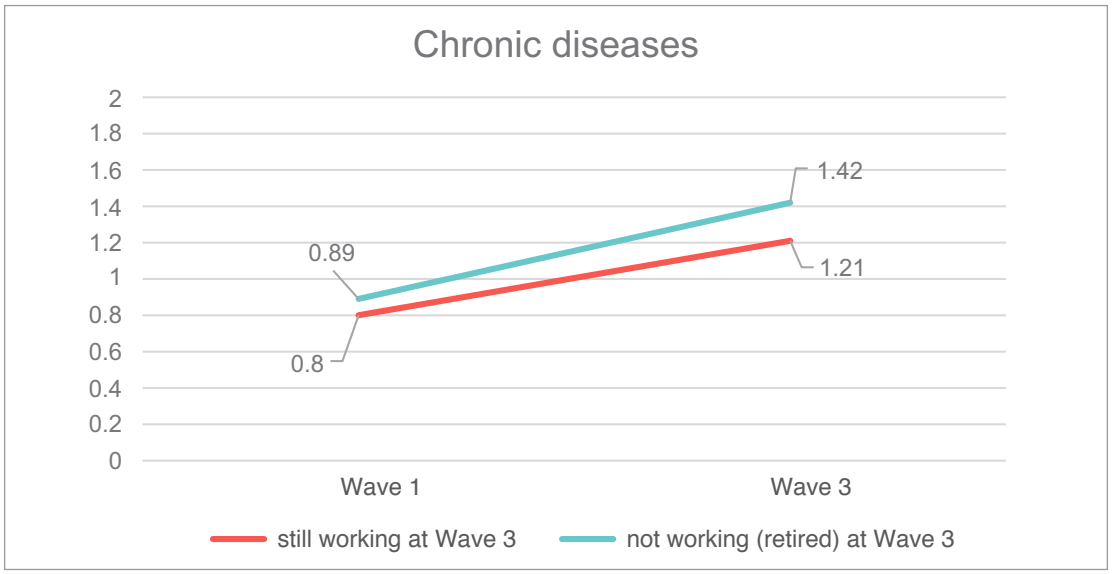
Source: Panel on Health and Ageing among Singaporean Elderly (Waves 1 & 3; n=347)

Note: All individuals were employees at Wave 1. Means after adjustment with covariates are shown.

Chronic diseases

Both groups reported more chronic diseases over time ($p < .001$) (Figure 5). However, the increase in chronic diseases was higher among retirees compared to working older adults (marginally significant at $p = .066$).

Figure 5: Impact of retirement versus remaining in the workforce on chronic diseases



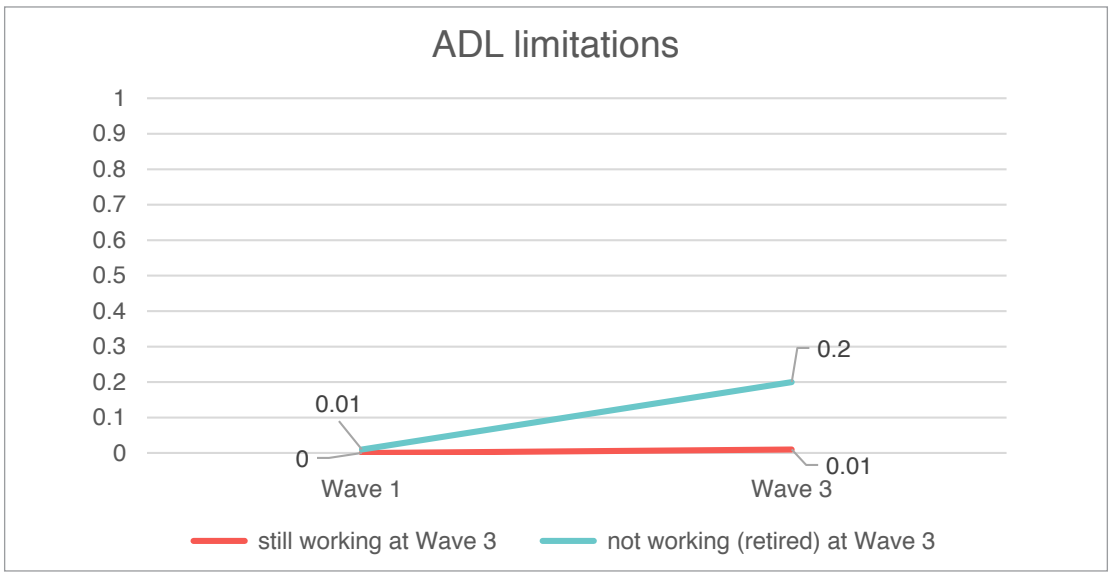
Source: Panel on Health and Ageing among Singaporean Elderly (Waves 1 & 3; n=347)

Note: All individuals were employees at Wave 1. Means after adjustment with covariates are shown.

Limitations in activities of daily living (ADL) and limitations in instrumental activities of daily living (IADL)

The impacts of retirement versus remaining in the workforce on ADL and IADL limitations were similar (Figures 6 & 7). Retirees developed more ADL and IADL limitations over time ($p < .001$). At Wave 3, retirees reported more ADL and IADL limitations than their working counterparts ($p = .006$; $p < .001$).

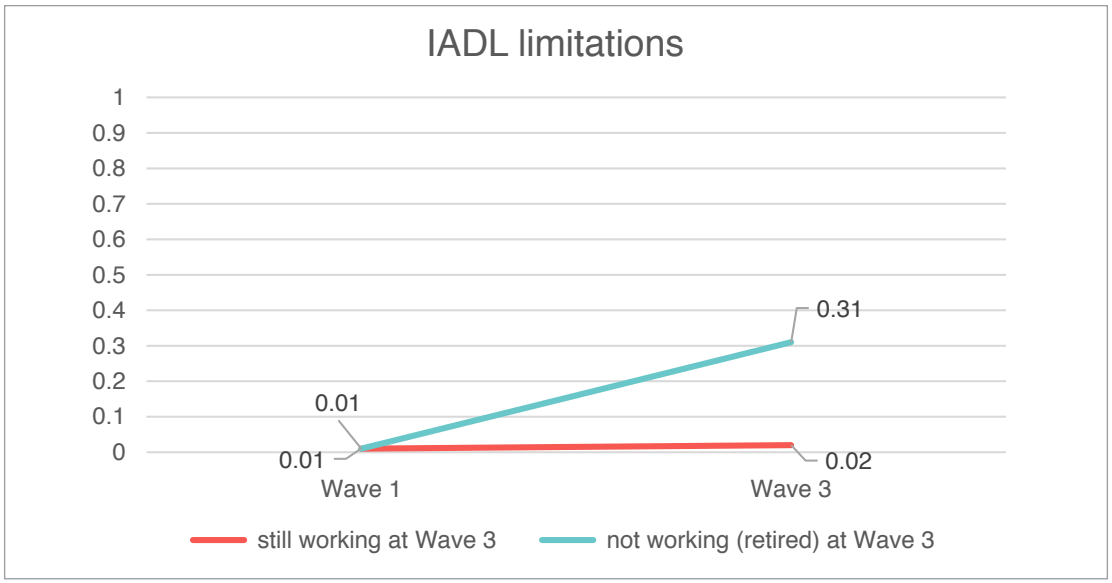
Figure 6: Impact of retirement versus remaining in the workforce on the number of ADL limitations



Source: Panel on Health and Ageing among Singaporean Elderly (Waves 1 & 3; n=347)

Note: All individuals were employees at Wave 1. Means after adjustment with covariates are shown.

Figure 7: Impact of retirement versus remaining in the workforce on the number of IADL limitations



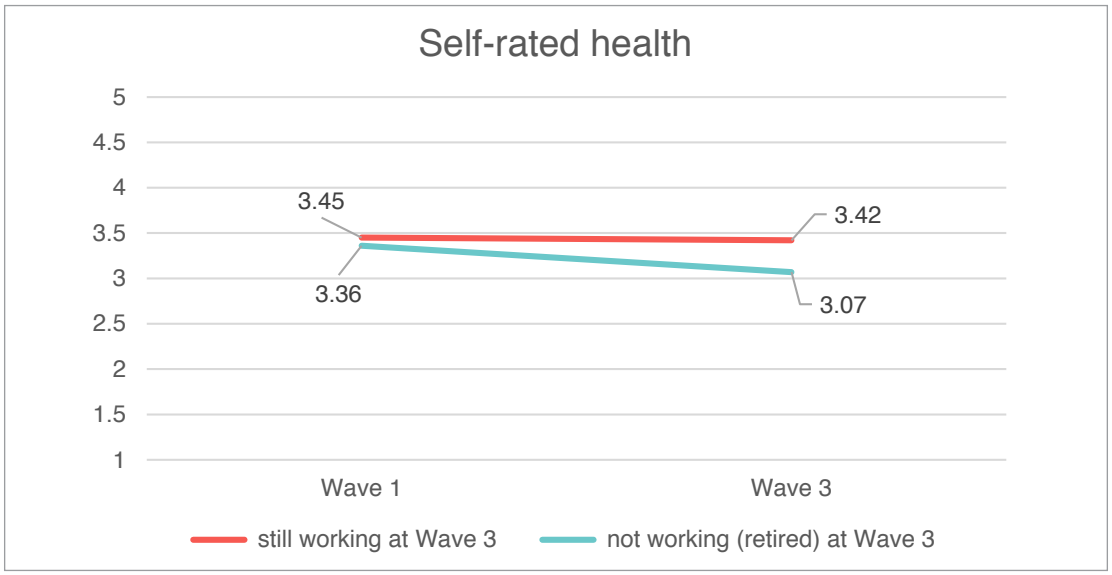
Source: Panel on Health and Ageing among Singaporean Elderly (Waves 1 & 3; n=347)

Note: All individuals were employees at Wave 1. Means after adjustment with covariates are shown.

Overall self-rated health

Finally, retirees perceived a significant reduction in their overall health over six years ($p < .001$) (Figure 8). At Wave 3, retirees also *perceived* poorer *overall* health than their working counterparts ($p < .001$).

Figure 8: Impact of retirement versus remaining in the workforce on self-rated health



Source: Panel on Health and Ageing among Singaporean Elderly (Waves 1 & 3; n=347)

Note: All individuals were employees at Wave 1. Means after adjustment with covariates are shown.

Discussion

Utilising longitudinal data from a sample of older Singaporeans, we look at how retirees differ from working older adults in terms of seven health outcomes, including loneliness, depressive symptoms, cognitive function, chronic diseases, ADL limitations, IADL limitations and self-rated health. Consistent with the existing retirement literature [3], our data showed that after retirement, older adults felt lonelier, had more depressed moods and exhibited poorer cognitive function. In addition, retirees developed more chronic diseases, ADL limitations and IADL limitations. Overall, they perceived a significant deterioration in health over time. In comparison, during the same period, older adults who remained in the workforce showed less extensive deterioration in their health, regardless of age, gender, ethnicity, education, income (housing type as proxy), marital status and living arrangement.

A possible explanation for this can be made with reference to the literature on social connections and well-being [14;15]. Engagement in social relationships is a fundamental human need with its deprivation associated with a slew of ill effects, including poor health and well-being [4]. Specifically, poor social relationships have been deemed as risk factors for comorbidity [6;7], while social isolation has been found to be associated with more limitations of activities of daily living (ADL) and instrumental activities of daily living (IADL) [8]. It is plausible that the opportunities provided by work places for interactions and socialisations with colleagues, business partners, customers and others contribute to the health and well-being of older adults. In comparison, retirees who generally have fewer social ties and feel lonelier develop poor health conditions.

Policy and practice recommendations

Our data, together with the literature reviewed, suggest that older adults' health and well-being decline upon retirement, possibly as a result of fewer social ties and contacts. Various measures can be undertaken both prior to retirement and after retirement to mediate this decline. One strategy is to work on developing the individual's personal resources in dealing with the changes that retirement brings about. Training and coaching sessions aimed at developing the individual's levels of personal mastery [16], psychological resilience [17] and cognitive flexibility [18] can enable retirees to cope better with social disconnections and maintain their well-being.

Beyond developing such personal resources, abundant opportunities can be created to nurture the development of non-work related interests and preoccupations among older adults, ideally prior to their retirement. Pursuing new interests and partaking in new engagements will expose older adults to new social circles and networks, which can buffer the loss of their work-based ties. Initiatives to strengthen social networks through greater social participation such as volunteering or community involvement can also be further enhanced. These can be organised through various existing platforms such as the grassroots agencies, or any other social or religious services. The more localised the platforms and activities, the higher the possibility of attracting retirees' participation. With over 80% of Singapore's population living in public housing, these local activities can be organised at the block or even floor level to facilitate participation. The Singapore government's National Senior Volunteerism Movement that targets to recruit an additional 50,000 older volunteers is definitely a step in the right direction [19].

Finally, with the rapid ageing of Singapore's population, it is critical to have a thorough understanding of the issues associated with work and retirement to facilitate proactive planning. Research in Western countries have demonstrated that human resource practices in organisations (e.g., flexible work schedules, fair treatment regardless of age) may reduce older workers' retirement intentions [20]. These studies also pointed out that less age discrimination in the workplace is associated with a lower desire to retire [21]. However, such relevant local data is lacking. Efforts to understand the transitions between work and retirement need to be intensified if Singapore is to harness the potentials of her older population. One such effort is the longitudinal data collection work that CARE has recently embarked on in relation to work, retirement and health. Other key areas of research must include an understanding of the ageing worker to develop insights into factors which impact on their job performance such as age discrimination. Local knowledge on the organisational strategies necessary for a changing demographic landscape must also enhanced if we are to encourage older workers to remain in the workforce.

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The Centre for Ageing Research and Education (CARE) is an academic research centre based in Duke-NUS Medical School. It aims to harness the potentials of population ageing both in Singapore and the region through its interdisciplinary expertise and collaborations across medical, social, psychological, economics and environmental perspectives. Recognising the need for a consolidated and long term approach towards longevity, CARE spearheads educational programmes to build competencies in ageing among researchers, policy and programme professionals. CARE also actively engages with government and industry partners to meet the needs of population ageing.

CARE's vision is an ageing population that is healthy, socially included and enjoys a high quality of life.

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- Implement and evaluate best practices to improve health and function of older adults
- Inform policy and practice agenda on ageing

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