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# THREE PILLARS OF ACTIVE AGEING IN INDONESIA

Evi Nurvidya Arifin, Kathryn L. Braun and Eef Hogervorst

*This paper aims to contribute to the knowledge of ageing in Indonesia—the fourth most populous country in the world—within the framework of active ageing. Data are from the 2005 Intercensus Population Survey, the first to gather information from older persons aged 60 and above. Findings are organised according to the three pillars of the World Health Organization's Active Ageing framework including health, participation and security. Findings suggest that: (1) good self-rated health status and functional ability are common among older persons; (2) Indonesian elders participate predominantly in home-centred leisure activities, but not in physical exercise; and (3) economic security, measured by main source of funding, varies by sex. There is great variation across Indonesia's provinces in the status of the three pillars of active ageing. Policymaking on active ageing should pay attention to the local situation, and expect differences in health, participation and security by gender and province.*

KEYWORDS: active ageing; self-rated health; activities of daily living (ADLs); instrumental activities of daily living (IADLs); participation; economic security

## Introduction

The term, 'active ageing', has been promoted globally and locally to develop policies related to the ageing population. At the international level, from the early 2000s, the World Health Organization (WHO), the Organisation for Economic Co-operation and Development (OECD) and the European Union (EU) have all been promoting active ageing. Walker (2006) argued that there were five main reasons for policymakers to be interested in the concept of active ageing, namely, '...work force ageing, the growth of early exit, social protection system sustainability, changing business needs and the political pressure for equal treatment' (p. 78).

This paper aims to contribute to the knowledge of ageing in Indonesia—the fourth most populous country in the world—within the framework of active ageing. Indonesia is an example of a country which will become old before becoming rich, where financial schemes are not sufficiently available, and where job opportunities for older persons are still limited (Rahardjo *et al.* 2009). Rahardjo *et al.* (2009) argued that the ageing population could generate a geriatric wave—an unprecedented increase in geriatric patients—requiring more care and services. It will result in greater financial challenges for the family, community and society.

Active ageing could be one of the mechanisms to reduce the financial burden brought about by the ageing population. However, it is not clear how much progress has been achieved in the implementation of the concept of active ageing in Indonesia. This

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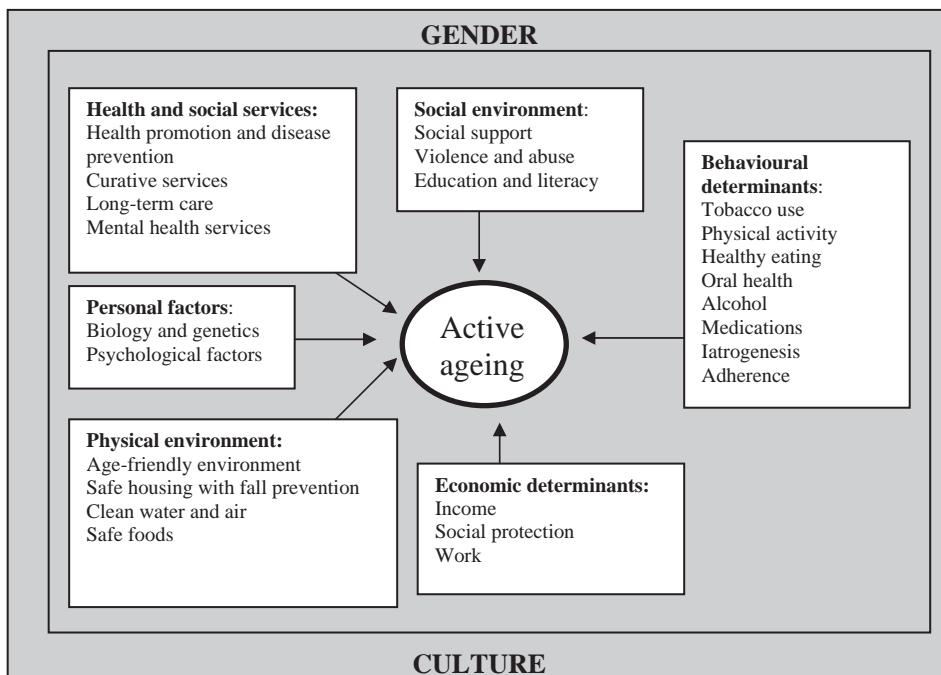
paper also shows the importance of paying attention to regional difference in a large country such as Indonesia. Attention to regional differences is particularly relevant to Indonesia (and some other countries) because it implemented regional autonomy in 2001, giving its districts much greater power than before.

### Active Ageing: The Adopted Framework

Although we used the WHO definition of active ageing as a framework for this paper, it is worth remembering that the definition of active ageing varies by country and organisation. Among OECD countries, active ageing is defined quite narrowly as 'the capacity of people, as they grow older, to lead productive lives in society and the economy' (OECD 1998, p. 4). This means that they can make flexible choices about the way they spend their time, i.e. learning, working, leisure and caregiving. Within this definition, a more flexible work–retirement transition is one example of active ageing. Similarly, the European Commission interprets active ageing as 'a coherent strategy to make ageing well possible in ageing societies. . .[which,] in practice, [should] mean adopting healthy life styles, working longer, retiring later and being active after retirement' (Christensen *et al.* 2003, p. 18). The main emphasis is on prolonged economic activity achieved by increasing the number of years in employment, postponing retirement and increasing inclusion in socially productive activities such as voluntary work or providing post-retirement care (Avramov & Maskova 2003).

Figure 1 presents a WHO policy framework in active ageing. Active ageing, according to the WHO definition, means more than productive and healthy ageing. The thought behind it is the WHO dictum: 'years have been added to life, now we must add life to years' (Walker 2006, p. 84). According to WHO (2002), 'Active Ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age' (p. 12). The main goal of policies on active ageing is to create autonomy and independence of older persons, by recognising the importance of interdependence and intergenerational solidarity. These policies are addressed to all older persons including those who are sick, disabled or retired, so they, regardless of their health status, can continue to be allowed and encouraged to contribute to families, friends, communities and nations. Active ageing can reduce the expenditures needed on caring for the health of older persons, because it also stresses individual responsibility on caring for one's own health and views the elderly as social capital, regardless of whether they are generating income or contributing in other ways. Thus, active ageing is very important, especially in poor economies.

The term, 'active ageing', as defined by WHO, recognises factors beyond healthcare. Indeed, this framework shows the importance of gender in relation to active ageing. Gender, together with culture, plays an important role as an indirect determinant to the success of active ageing. Gender influences active ageing through key direct determinants, such as access to health and social service systems, affecting behavioural determinants, personal factors, and physical, social and economic environments. Active ageing is not limited to notions of being physically active or participating in the labour market, but defined, also, as the continuing participation of the elderly in social, economic, cultural, spiritual and civil affairs.

**FIGURE 1**

Active ageing framework.

Source: Adopted from WHO (2002).

Another important concept in active ageing is the life course perspective, which recognises that healthy ageing is more likely in people who have been healthy over the life course. Thus, remaining active at an old age requires that health, participation and security be promoted for individuals of all ages. The mostly much-better-educated younger generation is expected to be healthier and happier when they reach their old age, and are more likely to be older persons with better financial support than the current generation of elderly. There is a strong relationship between health, education and socio-economic status in most large cohort studies.

### Indonesia's Economic and Demographic Setting

Indonesia is the fourth most populous country in the world after China, India and the United States, and it comprises more than 13,000 islands. In Southeast Asia, it is the largest and most populous country, as well as the largest economy. Its gross domestic product (GDP) formed 36 per cent of the total GDP in Southeast Asia in 2009, although its per capita GDP was only the fifth largest (with a per capita GPD at about USD 2400, compared with that of Singapore at USD 36,600 and that of Malaysia at USD 7000 in 2009). By 2030, the per capita GDP of Indonesia will probably still be lower than its closest neighbouring countries. Ananta and Arifin (forthcoming) predicted that its per capita GDP would be around USD 6500 (estimated based on 2005 figures) in 2030, assuming an

annual economic growth rate at five per cent, when Malaysia had already reached a per capita GDP of about USD 7000 in 2009.

Indonesia has gained longevity, with the rising of its life expectancy at birth from 45.7 years in the mid-1960s to 69.2 years in the period 2001–2004. However, gender differences in life expectancy at birth exist, with the female population outliving its male counterpart by a number of years. In the mid-1960s, the life expectancy at birth for females was 47.2 years, three years more than males, while in the period 2001–2004, the life expectancy at birth for the female population was 71.1 years, four years more than for the male population. However, Mujahid's (2006) estimation shows that sex differential in life expectancy at age 60 in Indonesia is smaller, as male expectation of life at age 60 is 16.0 years, and female, 17.9 years, in 2000–2005. Unfortunately, the data are not available at the province level. Low fertility has often been observed as the primary determinant of ageing in a population, with declining mortality as the second most important determinant. Migration—either in- or out-migration—can be another important factor determining the pace and speed of population ageing, particularly in small countries and subnational regions of large countries (Ananta & Arifin 2009; Skeldon 1999).

Indonesia has been experiencing an unprecedented growth of older persons, i.e. those aged 60 and above. Their number grew rapidly, at about 3.2 per cent annually between 1971 and 2005. The percentage of older persons in 2005 reached 7.2 per cent, with its distribution by age as follows: 36.1 per cent aged 60–64; 26.5 per cent aged 65–69; and 37.4 per cent aged 70 and above. The age distribution by sex at the national level is not significantly different: 36.4 per cent, 26.0 per cent and 37.6 per cent, respectively, for male elderly groups aged 60–64, 65–69, and 70 and above. The corresponding figures for the female elderly are as follows: 35.8 per cent, 27.0 per cent and 37.2 per cent, respectively, for female elderly groups aged 60–64, 65–69, and 70 and above. The growth rate of the elderly population will be accelerating in the next few decades and will always be much greater than that of the total population. As can be seen from Table 1, due to the advantage of women when it comes to survival rates, elderly women outnumber elderly

**TABLE 1**

Trends in number and annual rate of growth of older persons by gender: Indonesia, 1971–2030.

Year	Number of elderly ('000)			Ageing population		Rate of growth of elderly	
	Women	Men	Difference	Women	Men	Women	Men
1971	2784.7	2522.2	262.5	4.64	4.32	4.70	4.40
1980	4250.7	3747.8	502.9	5.76	5.14	3.31	3.58
1990	5915.9	5361.8	554.1	6.62	5.97	2.44	2.51
2000	7551.0	6889.0	662.0	7.53	6.83	2.72	2.84
2010	9915.1	9154.3	760.8	8.40	7.66	3.61	4.11
2015	11,874.6	11,241.5	633.1	9.48	8.89	4.80	4.75
2020	15,094.3	14,257.9	836.4	11.40	10.70	5.36	4.77
2025	19,732.8	18,094.6	1638.2	14.13	12.93	4.81	4.54
2030	25,100.3	22,701.6	2398.7	17.11	15.48	—	—

*Sources:*

The data for 1971–2000 are compiled and calculated from various results of population censuses, and in the case of the 2010–2030 projections, from Ananta and Arifin (forthcoming).

men in Indonesia. The female population is thus ageing faster than the male population. In addition, the gender gap among the elderly is already large and will be getting larger. In other words, feminisation of the ageing population will remain a reality for Indonesians in the next few decades. In summary, Indonesia is facing a growing, and increasingly female, ageing population with a relatively low per capita income.

Politically, Indonesia is divided into 31 provinces as of 2005; however, these provinces are home to more than 1000 distinct ethnic groups (Ananta *et al.* 2005; Suryadinata *et al.* 2003). Many provinces are rural, and some are very isolated. The pace of population ageing varies among ethnic groups, with the Javanese (the major ethnic group) ageing faster than the others (Ananta *et al.* 2005). Thus, the stages and issues of Indonesia's ageing population vary widely. Ananta and Arifin (2009) classified an ageing population into four stages, depending on the percentage of the population aged 60 and above, as follows: (i) a very young population (less than 6 per cent of the population is aged 60 and above); (ii) a youthful population (6–8 per cent of the population is aged 60 and above); (iii) a transitional population (8–12 per cent of the population is aged 60 and above); and (iv) an old population (with 12 per cent or more of the population aged 60 and above). Based on the 2005 Intercensus Population Survey (SUPAS), only the province of Yogyakarta could be classified as an old population, while provinces at the transitional population level include those in Central Java, East Java, Bali and North Sulawesi. Eight provinces in Indonesia have a youthful population, and the remaining 18 have a very young population, with Papua having the youngest population (Table 2). In other words, regional differences in the ageing of the population exist among provinces, and these differences will likely persist throughout the next few decades.

## Data and Methods

This paper follows the WHO active ageing framework using the three pillars of active ageing, namely: (i) health; (ii) participation; and (iii) security. This analysis is mostly based on the publication of the 2005 SUPAS data gathered by the Indonesia Statistical Office (Badan Pusat Statistik 2006b). The total number of the weighted sample was 213,375,287. The older persons for the analysis are defined as those aged 60 and above, and the weighted sample was 15,537,810 individuals, or 7.3 per cent of the total sample. For a few variables, the weighted number of older persons is slightly lower. This survey took place within the month of June 2005, covering nearly all provinces. The provinces that were excluded were Aceh and two regencies—Nias and South Nias—in South Sumatra, as these areas were covered under the 2005 Population Census of Aceh and Nias in the aftermath of the 2004 tsunami. Two regencies in the Papua province—Boven Digul and Teluk Wondama—were not included because the geography makes them extremely difficult to reach.

The survey collected information on demographic elements related to fertility, mortality and migration, as well as social-cultural data on employment, education, ethnicity, housing conditions and activities. It was the first nationwide survey to gather information specifically related to older persons. To enrich this analysis, data from other sources were also reviewed.

This paper limits its analysis to the macro level, namely, the national and provincial levels. Although the study of the micro (or individual) level is important to shed more light

**TABLE 2**

The percentage of older persons, life expectancy at birth and total fertility rate (TFR) ranked by the percentage of older persons: Indonesia, 2005.

<b>Rank</b>	<b>Province</b>	<b>Older persons<sup>a</sup> (%)</b>	<b>Life expectancy at birth<sup>b</sup></b>			<b>TFR<sup>b</sup></b>
			<b>Total</b>	<b>Male</b>	<b>Female</b>	
1	Papua	1.69	70.0	68.0	71.9	2.76
2	Riau Archipelago	3.32	72.8	70.8	74.7	2.04
3	East Kalimantan	3.44	70.6	68.6	72.5	2.44
4	Riau	3.80	71.8	69.8	73.7	2.58
5	Central Kalimantan	3.91	72.1	70.2	74.0	2.28
6	North Maluku	3.95	67.0	64.9	68.9	2.90
7	Banten	4.44	68.3	66.2	70.2	2.32
8	Jakarta	4.57	73.3	71.3	75.1	1.77
9	Southeast Sulawesi	4.60	67.5	65.5	69.4	3.16
10	Central Sulawesi	4.67	66.6	64.6	68.5	2.96
11	Jambi	4.70	69.2	67.1	71.1	2.43
12	Bengkulu	4.75	68.1	66.0	70.0	2.38
13	Gorontalo	4.96	64.6	62.7	66.5	2.80
14	West Kalimantan	5.22	69.7	67.7	71.6	2.72
15	North Sumatra	5.40	70.6	68.6	72.5	2.73
16	South Kalimantan	5.53	66.8	64.8	68.7	2.46
17	South Sumatra	5.55	69.5	67.5	71.5	2.26
18	Maluku	5.69	68.6	66.6	70.6	3.08
19	Bangka Belitung	6.05	71.4	69.4	73.3	2.54
20	Aceh	6.12	67.3	65.4	69.3	2.62
21	West Nusa Tenggara	6.16	60.9	69.0	72.9	2.80
22	East Nusa Tenggara	6.56	65.7	59.0	62.7	3.67
23	Lampung	6.99	70.1	68.0	72.0	2.35
24	West Java	7.05	67.8	65.8	69.8	2.33
25	South Sulawesi	7.27	68.1	66.0	70.0	2.59
26	West Sumatra	7.61	69.1	67.0	71.0	2.84
27	North Sulawesi	8.21	73.0	71.0	74.8	2.06
28	Bali	9.22	71.0	69.0	72.9	2.10
29	East Java	9.76	69.1	67.0	71.0	1.84
30	Central Java	9.82	71.3	69.3	73.2	2.01
31	Yogyakarta	12.75	72.8	70.9	74.7	1.66
Indonesia		7.23	69.2	67.1	71.1	2.26

Sources:

<sup>a</sup>Compiled and calculated from Badan Pusat Statistik (2005) for Aceh, and from Badan Pusat Statistik (2006b) for the remaining provinces.

<sup>b</sup>Compiled from Badan Pusat Statistik (2006a).

on our understanding of the active ageing index, which quantifies the older person's level of activity, this is beyond the scope of this paper. Age adjustments are precluded due to lack of access to the 2005 SUPAS dataset. In addition, the measures for health, participation and security of older persons are limited. Yet, the limited measures can shed some light on the aged population in Indonesia.

Health, as defined by the WHO, refers to physical, mental and social well-being. In an active ageing framework, policies and programmes that promote mental health and social connections are as important as those that improve physical health. The 2005 SUPAS enables exploration of two health measures—self-rated health status (SRHS) and

functional health—indicating the limitations in physical ability to perform activities of daily living (ADLs). SRHS was determined by asking the question, '[m]enurut Bapak/Ibu, bagaimana keadaan kesehatan Bapak/Ibu? (in your opinion, how is your health?)'. Three options were available: 1 for 'baik (good or healthy)'; 2 for 'cukup (somewhat healthy)'; and 3 for 'kurang (somewhat unhealthy)'. To measure functional health, the 2005 SUPAS asked about four ADLs—dressing, toileting, bathing and eating—and one instrumental activity of daily living (IADL)—food preparation. Older persons were asked, with yes or no answer options, whether they needed other people's help with each of these tasks. Although other ADL indices ask about the level of difficulty in performing tasks, such as 'a little difficulty', 'a lot of difficulty' or 'unable to perform task at all' (see Wiener *et al.* 1990), the 2005 SUPAS did not distinguish between mild and severe functional disability.

To examine participation, the survey gathered and published information on activities ranging from watching television programmes, reading or writing, travelling for leisure (recreation), exercising, fishing, gardening, and social activities. On economic security, it collected information on the sources of funds, with the main response options related to funds/money from work/business, pension, transfer payments from child(ren)/child(ren)-in-law, and others.

## **Health—The First Pillar of Active Ageing**

### *Self-Rated Health Status (SRHS)*

The 2005 SUPAS data suggest that, at the national level, good SRHS is more common among elderly men than women, at 41.7 per cent and 36.4 per cent, respectively. This pattern is not uniform across provinces, though, with the national pattern being seen in 24 out of 30 provinces. However, four provinces—East Nusa Tenggara, North Sulawesi, Gorontalo and Papua—show a higher percentage of good self-rated health among elderly women than men, and two provinces show no sex differentials.

Considering differences across the provinces, Table 3 shows clear variation, with the proportion of healthy older women ranging from 21.1 to 50.8 per cent, and the proportion of healthy older men ranging from 20.9 to 52.9 per cent. For both women and men, East Nusa Tenggara—one of the poorest provinces in the country—has the smallest percentage of elders rating themselves as healthy, while Jakarta (one of the wealthiest provinces) has the highest. It is important to note that life expectancy at birth for both males and females is also the lowest in East Nusa Tenggara, and that the percentage rating themselves as healthy is also the lowest there. It was hypothesised that there would be a positive relationship between life expectancy at birth and health status among both the female and male population. Figure 2 supports this hypothesis, as expectancy of life at birth has a markedly strong correlation with SRHS in both male and female elderly. The correlation coefficient is 0.713 for men and 0.644 for women. This positive correlation indicates that it may be possible to witness a larger cohort of healthy active older persons emerging in Indonesia, as life expectancy at birth has shown a steady increase over the past decades.

Health-promoting behaviour is thus important at all stages of the life course. Engaging in appropriate physical activities and healthy eating, abstaining from smoking, using medication wisely, and having regular medical check-ups can prevent or delay the emergence of diseases and functional decline, and thus, can enhance the quality of life.

**TABLE 3**  
Provincial variation in self-rated health status (SRHS) by gender and province: Indonesia, 2005.

Province	Female's SRHS			Male's SRHS		
	Healthy	Somewhat healthy	Somewhat unhealthy	Healthy	Somewhat healthy	Somewhat unhealthy
Total	36.4	44.9	18.6	41.7	40.8	17.5
North Sumatra	36.9	34.7	28.4	40.2	33.5	26.2
West Sumatra	30.1	41.1	28.8	38.1	36.9	25.0
Riau	31.3	45.8	22.9	42.1	38.8	19.1
Jambi	36.5	47.3	16.2	40.3	42.7	17.0
South Sumatra	36.5	46.4	17.2	40.8	45.7	13.5
Bengkulu	32.1	42.7	25.2	37.5	45.0	17.5
Lampung	44.7	40.3	15.0	45.0	39.1	15.9
Bangka Belitung	37.8	43.9	18.3	44.0	37.9	18.0
Riau Archipelago	38.3	42.3	19.4	40.8	42.1	17.1
Jakarta	50.8	38.2	11.0	52.9	36.3	10.8
West Java	28.7	48.1	23.2	35.8	43.8	20.4
Central Java	40.7	44.3	15.0	45.6	40.3	14.1
Yogyakarta	49.4	37.4	13.1	50.1	37.7	12.2
East Java	38.9	48.1	13.0	47.1	40.8	12.0
Banten	34.5	44.9	20.6	35.9	38.7	25.5
Bali	37.7	46.3	16.0	44.3	39.6	16.1
West Nusa Tenggara	25.3	42.0	32.7	29.4	42.6	28.0
East Nusa Tenggara	21.1	43.1	35.8	20.9	40.3	38.8
West Kalimantan	32.4	45.9	21.8	36.2	40.9	22.9
Central Kalimantan	28.1	51.9	20.0	33.2	46.5	20.2
South Kalimantan	27.5	49.3	23.2	35.4	46.9	17.7
East Kalimantan	46.2	34.8	19.0	47.7	33.1	19.2
North Sulawesi	50.6	39.6	9.7	46.7	40.5	12.8
Central Sulawesi	24.8	42.1	33.1	29.1	43.4	27.5
South Sulawesi	27.6	44.1	28.3	34.5	40.4	25.1
Southeast Sulawesi	29.2	43.3	27.4	31.2	48.0	20.7
Gorontalo	40.7	38.9	20.3	36.5	42.1	21.4
Maluku	34.5	42.3	23.2	35.2	41.2	23.6
North Maluku	30.2	35.9	33.8	30.1	38.2	31.7
Papua	35.5	48.6	15.9	31.3	46.4	22.3

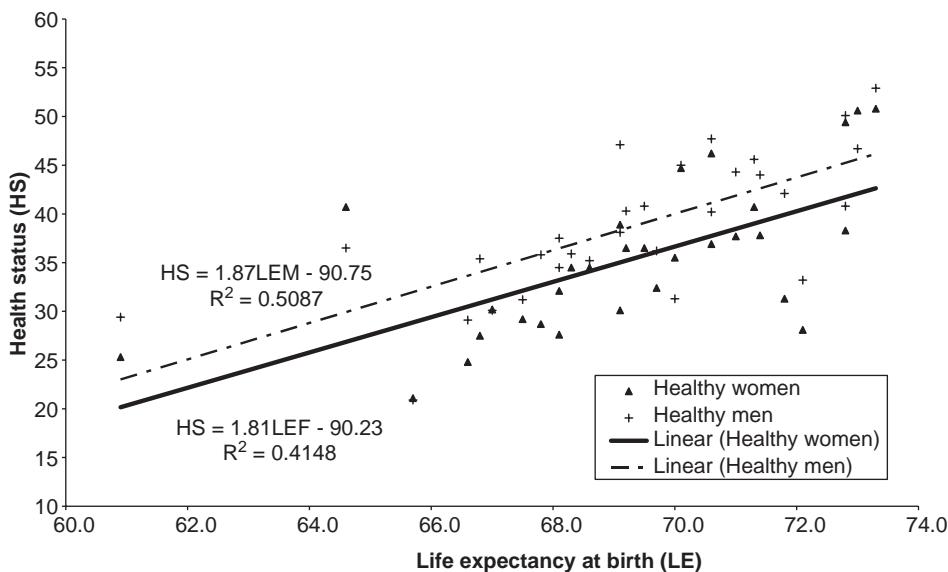
There is no data for the province of Aceh.

*Source:*

Compiled and calculated from Badan Pusat Statistik (2006b).

### *Functional Health*

As people grow older, maintaining autonomy and physical independence is a key goal for both individuals and policymakers. Independence is commonly understood as the ability to perform functions related to daily living, i.e. having the capacity to live independently in the community without help from others (WHO 2002). One important measure is a person's ability to perform ADLs, which are tasks necessary for daily self-maintenance. ADLs, IADLs, such as shopping and cooking, and psychological and social variables are key constructs of functional health. The functional ability of older persons is crucial in determining how well they perform ADL and IADL tasks, which, in turn, affects their quality of life. It is well known that the ability to perform ADL and IADL tasks declines

**FIGURE 2**

Linear relationship between life expectancy at birth and good health status: Indonesia, 2005.  
Source: Authors' calculation based on the data presented in Tables 2 and 3.

with age, and that the quality of life will deteriorate accordingly (Arslantas *et al.* 2009). When people are unable to perform basic personal care, they become dependent on support either from informal or formal caregivers, which are usually female. Physical disability may lead to depression in both elders and their caregivers. Furthermore, difficulty in performing ADLs is an important determinant of the use of physician, hospital and nursing home services, as well as mortality (Dunlop *et al.* 1997). Long-term care insurance also relies on disability in ADLs as a deciding factor on whether to pay benefits (Koh 2009).

Table 4 shows that, in general, the functional ability of Indonesian older women and men is quite good, with more than 80 per cent of older persons not needing help with any of the ADL or IADL tasks presented in the survey. This finding is in line with Rahardjo *et al.*'s (2011) finding on the elderly in Indonesia reporting relatively low levels of disability. The percentage of female older persons performing ADLs without support is higher than that of men ( $p < 0.001$ ) in every province, but there is variance by province (Table 4). The narrowest gap between women and men is 2.0 percentage points (found in Bali), and the widest is as high as 20.0 percentage points (found in the Riau Archipelago and North Maluku). In certain provinces, however, a reduction in the prevalence of functional disability can have a dramatic effect on further advancing the well-being of older persons. For example, in East Nusa Tenggara and North Maluku, less than 60 per cent of men, and less than 55 per cent of women, have reported that they do not need help. Not only is the well-being of these elderly jeopardised, these elders are also likely to spend more on healthcare and demand significant attention from caregivers, who are usually female (Knodel & Chayovan 2008; Population Research Bureau 2007). Lowering the rates of functional disability among older women and men can thus reduce the economic and social costs of caring for these elderly. Not surprisingly, there is a positive association

**TABLE 4**

Percentage of older persons that do not need help performing basic daily activities by gender and province: Indonesia, 2005.

Province	Does not need help	
	Female	Male
North Sumatra	86.3	77.8
West Sumatra	88.7	81.5
Riau	88.1	79.1
Jambi	82.2	73.2
South Sumatra	81.9	75.1
Bengkulu	83.9	83.0
Lampung	86.9	80.5
Bangka Belitung	89.5	80.4
Riau Archipelago	86.8	66.2
Jakarta	81.9	76.3
West Java	89.1	82.2
Central Java	90.7	85.8
Yogyakarta	90.8	87.5
East Java	91.0	87.3
Banten	87.8	81.3
Bali	88.9	86.7
West Nusa Tenggara	81.1	65.1
East Nusa Tenggara	71.8	57.3
West Kalimantan	80.9	71.5
Central Kalimantan	81.4	73.9
South Kalimantan	82.6	75.5
East Kalimantan	85.3	74.7
North Sulawesi	89.1	77.6
Central Sulawesi	80.1	68.0
South Sulawesi	75.9	65.2
Southeast Sulawesi	81.4	65.8
Gorontalo	78.6	70.1
Maluku	74.9	66.7
North Maluku	73.0	53.3
Papua	85.8	79.3
Total	87.9	81.3

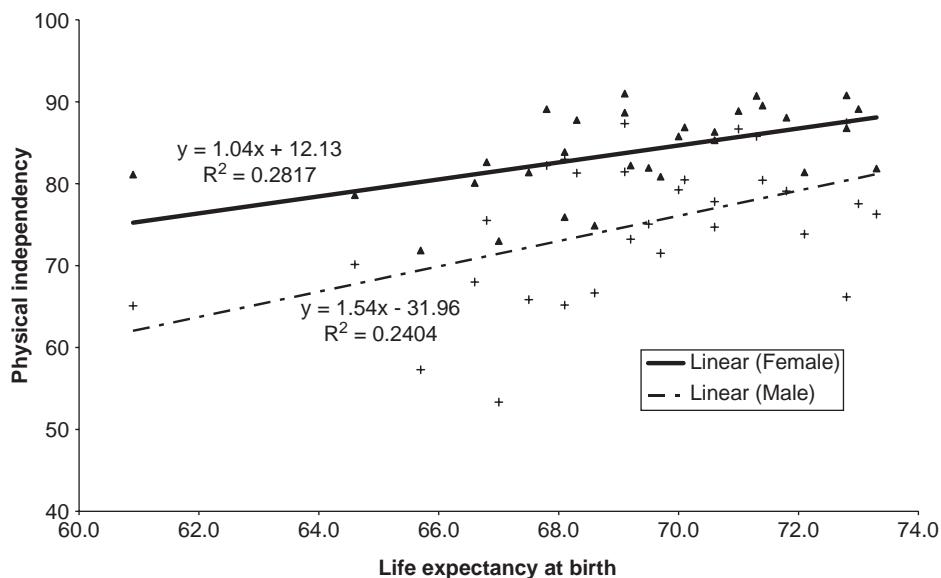
There is no data for the province of Aceh.

*Source:*

Compiled and calculated from Badan Pusat Statistik (2006b).

between functional ability and life expectancy at birth, as shown in Figure 3. Specifically, having a longer life is associated with a better physical functional ability. This may be because of 'healthy survivor' effects, with those who are more able and healthier having survived childhood morbidity, e.g. infectious diseases, and reaching an older age in a better physical condition.

Fayers and Sprangers (2002) argued that SRHS is related to functional ability, as well as medical diagnoses and the number of physical and mental symptoms reported. Figure 4 supports their hypothesis of a positive relationship between SRHS and independence in performing ADLs. Therefore, perhaps unsurprisingly, healthy elderly tend to be able to perform their basic daily activities without support.

**FIGURE 3**

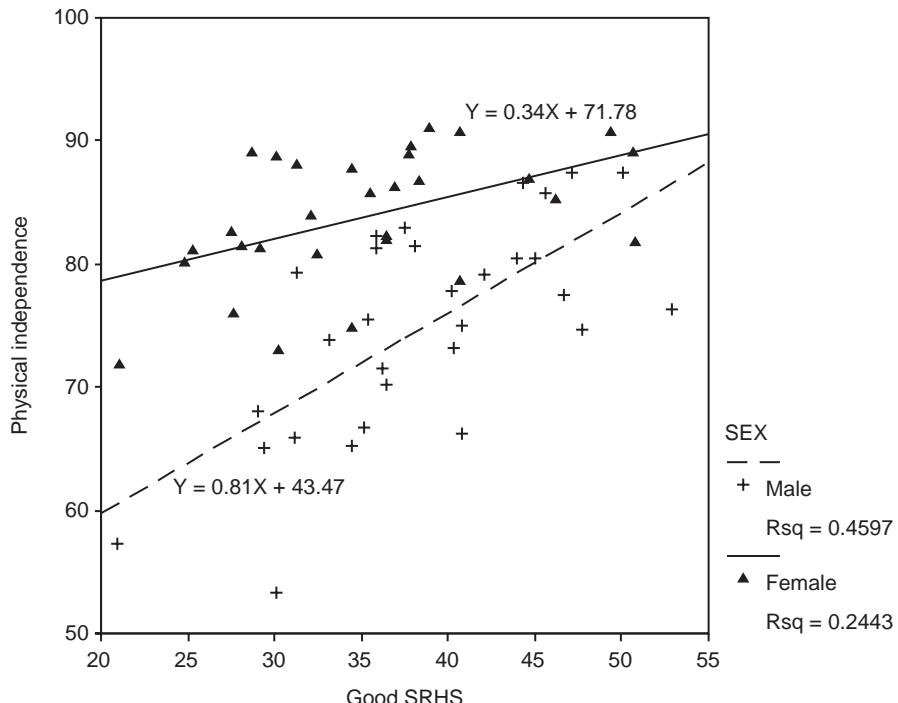
Linear relationship between life expectancy at birth and physical independency of older persons: Indonesia, 2005.

Source: Authors' calculation.

Table 5 provides more detail on the ability to perform each of the four ADLs—dressing, bathing, toileting and eating. On average, only a relatively small percentage of older persons are unable to do one or more of the four basic activities by themselves. For example, 3.0 per cent of the elderly women need help with toileting, 3.5 per cent with bathing, 3.2 per cent with dressing and 3.5 per cent with eating. Among provinces, needing help in getting dressed among elderly women ranges from 1.8 per cent in Papua to 6.1 per cent in South Sumatra. Meanwhile, needing help with toileting ranges from 1.7 per cent in Jambi to 5.7 per cent in North Maluku, with needing help with bathing ranging from 2.2 per cent, also in Jambi, to 8.2 per cent in North Maluku. Needing help with eating/drinking ranges from 2.3 per cent in East Java to 9.6 per cent in North Maluku. It is interesting to note that for elderly men, the highest percentage of elderly needing help for each of these four basic activities is found in North Maluku.

At the national level, elderly women are more likely than men to report difficulties in getting dressed, toileting and taking a bath. Yet, elderly men are more likely to report needing help with eating. At the provincial level, gender disparity for each of these four ADLs exists. However, the differences do not follow the same pattern for each ADL across provinces. For example, in South Sumatra, 6.1 per cent of elderly women reported needing help getting dressed, compared to 3.0 per cent of elderly men. However, in North Sumatra, for instance, 10.4 per cent of elderly men reported needing help with getting dressed, compared to 5.2 per cent of elderly women.

The irregular gender-specific pattern for each of the ADLs across provinces also indicates regional variation in the demands on caregivers. With the assumption that almost all caregivers are women, this issue has become more urgent when elders need help with 'intimate' tasks, such as getting dressed, taking a bath and toileting, and when

**FIGURE 4**

Linear relationship between health status and physical independency of older persons by sex: Indonesia, 2005.

*Source:* Authors' calculation.

the older persons needing help are men. Nevertheless, the challenge will be reversed as the availability of female caregivers dwindles due to a higher participation of women in both domestic and international labour markets. The question is whether more males will take on caregiving roles, and if so, will older women be comfortable being cared for by male caregivers, especially if these women need help with 'intimate' tasks? The same question can also apply to men being cared for by women, especially those outside the family.

The purchasing, preparation and serving of food requires a certain degree of physical strength and mental agility. Nationally, more elderly men (17.6 per cent) need help in preparing food than elderly females (10.9 per cent). The same pattern is seen across the provinces, although there is great variation in self-reported ability with this task. For example, 11.7 per cent of men need help with food preparation in East Java and Yogyakarta, compared to 44.4 per cent in North Maluku. A smaller range is seen for women, from 7.9 per cent needing help with meal preparation in East Java to 26.4 per cent needing help with this in East Nusa Tenggara. However, traditional patterns, where women are mainly responsible for meal preparation, could confound these data.

Nonetheless, a high percentage of dependency in preparing food raises an important question in relation to health status and, in turn, in relation to the potential for an active life in old age. However, the relationship between the need for help with food preparation and health status can be bidirectional, whether the latter is assumed to be the

**TABLE 5**

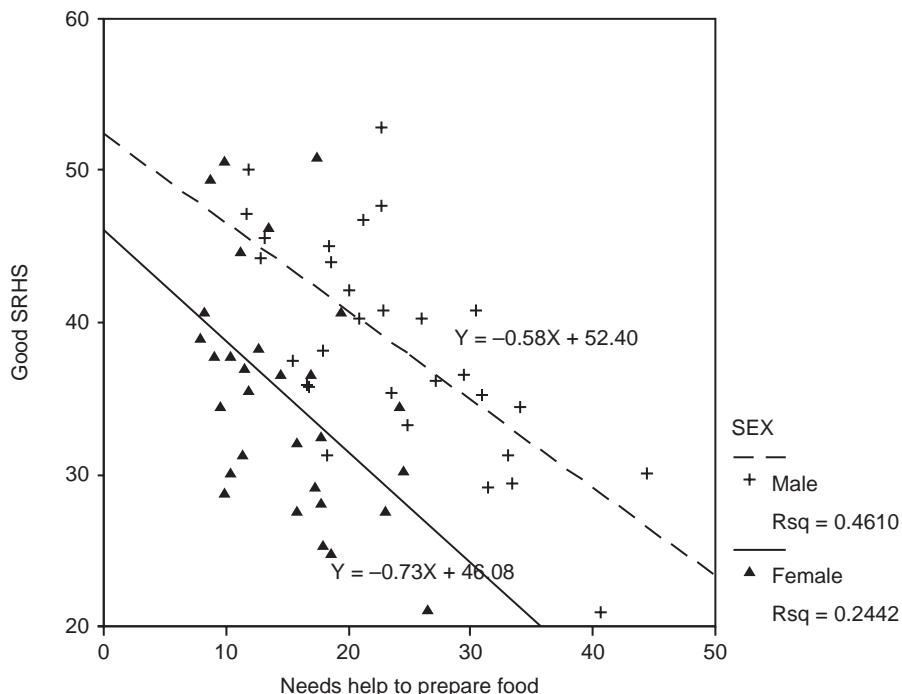
Percentage of older persons needing help in performing ADLs by gender and province: Indonesia, 2005.

Province	Female					Male				
	Getting dressed	Toileting	Taking a bath	Eating/ drinking	Preparing food	Getting dressed	Toileting	Taking a bath	Eating/ drinking	Preparing food
North Sumatra	4.4	3.7	4.6	4.7	11.6	4.8	3.62	4.30	4.8	20.9
West Sumatra	3.3	3.8	4.1	3.9	10.4	3.1	3.20	3.85	3.9	17.9
Riau	2.5	2.3	2.9	3.6	11.3	3.3	1.84	2.40	4.1	20.1
Jambi	2.0	1.7	2.2	3.6	17.0	1.2	1.24	1.27	3.8	26.
South Sumatra	6.1	5.0	5.6	5.5	14.5	3.0	3.07	3.70	6.0	22.9
Bengkulu	5.6	4.8	5.9	6.3	15.8	3.2	3.25	3.42	4.3	15.5
Lampung	3.2	2.2	2.9	4.2	11.2	3.4	2.31	3.20	4.8	18.4
Bangka Belitung	3.6	3.8	4.8	3.7	9.0	4.5	5.24	4.46	4.6	18.6
Riau Archipelago	2.8	3.4	3.0	4.9	12.7	6.0	5.63	4.71	7.5	30.4
Jakarta	4.6	4.6	5.0	7.1	17.4	3.7	2.82	3.02	6.4	22.8
West Java	2.5	2.3	2.3	2.8	10.0	2.4	2.08	2.22	3.2	16.8
Central Java	3.3	3.2	3.5	2.8	8.2	3.1	2.60	2.77	2.5	13.2
Yogyakarta	2.7	2.6	3.2	2.3	8.8	1.7	2.33	2.85	2.5	11.8
East Java	2.7	2.4	2.6	2.3	7.9	2.2	2.19	2.17	2.1	11.7
Banten	4.7	4.7	5.3	5.6	9.6	3.5	3.23	5.04	6.4	16.6
Bali	3.5	3.5	4.2	3.8	10.4	2.8	2.57	3.08	4.0	12.8
West Nusa Tenggara	2.8	2.8	3.7	4.1	17.9	4.4	4.72	5.43	5.0	33.3
East Nusa Tenggara	3.5	3.3	5.1	7.2	26.4	3.9	3.70	5.13	8.4	40.6
West Kalimantan	3.7	3.8	4.8	6.2	17.8	4.6	4.31	5.00	8.1	27.1
Central Kalimantan	3.4	2.1	3.7	4.0	17.8	2.3	2.73	3.36	5.4	24.9
South Kalimantan	3.2	3.8	4.6	5.4	15.8	3.7	3.64	3.67	6.9	23.4
East Kalimantan	3.2	2.2	3.6	5.1	13.5	4.8	3.07	3.39	5.5	22.8
North Sulawesi	4.5	4.3	4.5	4.5	9.8	6.0	5.03	5.73	5.6	21.2
Central Sulawesi	4.1	3.8	4.9	4.2	18.5	2.9	3.90	3.12	4.2	31.4
South Sulawesi	3.8	4.0	5.0	5.1	23.0	2.9	2.82	3.98	4.7	34.0
Southeast Sulawesi	3.3	4.4	5.4	4.7	17.2	2.2	2.59	3.26	4.9	33.0
Gorontalo	6.0	3.8	4.6	4.8	19.4	4.1	2.92	3.17	4.0	29.4
Maluku	4.1	5.7	5.7	6.9	24.2	5.2	5.09	5.35	9.9	31.0
North Maluku	5.2	5.7	8.2	9.6	24.5	10.4	9.22	12.39	14.6	44.4
Papua	1.8	1.8	4.6	4.8	11.8	3.6	3.72	7.33	4.9	18.2
Total	3.2	3.0	3.5	3.5	10.9	3.0	2.67	3.02	3.7	17.6

There is no data for the province of Aceh.

*Source:*

Compiled and calculated from Badan Pusat Statistik (2006b).

**FIGURE 5**

Linear relationship between ability to prepare food and health status by sex: Indonesia, 2005.  
Source: Authors' calculation.

dependent variable predicting the former or vice versa. It could be assumed that health status depends on the need for help with food preparation. Figure 5 shows a significant negative relationship, indicating that provinces that have a higher percentage of older persons who need help with food preparation also have a lower percentage of older persons reporting good health. For men, about 46 per cent of the variation in the reporting of good health is explained by the need for help with food preparation. A lower R-square value is seen for women, indicating that only 24 per cent of the variance in the reporting of good health is explained by the need for help with food preparation. In addition, the regression coefficient for food preparation is greater for men than for women ( $-0.58$  versus  $-0.73$ , respectively), indicating that the SRHS of older men is more sensitive to changes in their ability to prepare food.

Functional status and changes in health status may also affect living arrangements of older persons. Living arrangements are determined by numerous factors including the death of a spouse or other household member, divorce, a change in economic circumstances, the availability and needs of children or relatives, and personal preferences. The majority of older persons in Indonesia live in extended families (Cameron 2000; Frankenberg *et al.* 2002; Keasberry 2001). Arifin (2006) found that elderly women were more likely to co-reside with their children than elderly men. Living together increases opportunities for the sharing of finances and domestic services. This arrangement is especially important for elders in poor health, which decreases one's likelihood of living independently.

Using survey data from 2006, Lutz *et al.* (2009) argued that lower disability rates would imply reduced health expenditures, a lower demand for caregivers, a greater potential to be physically and socially active, and a better quality of life among older women and men. This line of reasoning suggests that raising the education of young people, especially of young girls, will significantly lower disability rates in future older persons, and therefore, reduce future expenditures, as well as improve the active life status of future older persons. Goujon and Samir (2006) projected that by 2030, the bulk of the working-age population in Indonesia would have had a secondary education, whereas in 2000, the bulk had only a primary education. Also, the education gender gap is expected to decrease by 2030, when about 55 per cent of females, and about 59 per cent of males, aged between 20 and 64 will have a secondary education. This will represent a significant improvement over the 2000 figures, which were 32 per cent for women and 41 per cent for men.

### **Participation—The Second Pillar of Active Ageing**

The second pillar of active ageing is participation. The social environment and social life of the elderly are aspects of social gerontology that influence participation. Socially isolated individuals are at an increased risk of decreased participation, as well as poor health outcomes, because of their limited access to resources such as information, activities, instrumental aid and emotional support. The Indonesian elderly are encouraged by their families and the local government to be actively involved in community activities. For example, Article 9 of Law 13/1998 on *The Well-being of Older Persons* speaks of the importance of empowering older persons, and supporting them in having active roles and performing important social functions in the community, the nation and the state (Departemen Sosial Republik Indonesia 2004).

Participation in social activities is the second most common activity of older persons, reported by 18.1 per cent of older females and 16.6 per cent of older males ( $p = 0.736$ ). More than half of the provinces have above-average percentages of older persons who are mainly active in social activities (Tables 6a & 6b).

Many opportunities for social activities exist including religious activities, funerals, cultural activities and *arisan* (a practice by which members of a group or community contribute a fixed amount of money each month, and one individual wins it; the winners' names are removed from the pool until all members have won once). In addition, the number of organised groups of and services for older persons is growing. An example is the Pusat Santunan Keluarga (PUSAKA) or Home-based Care Centre—a community-based women's group at the neighbourhood level that uses a non-nursing home system to provide social services for the poor living in communities in Jakarta. PUSAKA provides its members with meals six days per week, and organises meetings of religious groups as well as regular health examinations by local health providers (Abikusno 2009).

As in other countries, it is not unlikely that many Indonesian older women and men are actively engaged in political organisations, especially as Indonesia has entered a democratising era since 1998. There is evidence to suggest that involvement in spiritual and religious activities is higher among older adults than younger generations. Political and religious organisations both have the potential for encouraging social participation, and thus, active ageing.

**TABLE 6a**

Types of main activity of female older persons by province: Indonesia, 2005.

Province	Watching TV	Read/write	Recreation	Sports	Social activity	Fishing	Gardening	Total
North Sumatra	62.3	5.7	1.7	0.4	26.3	0.3	3.4	100.0
West Sumatra	57.0	15.4	2.2	1.4	20.2	0.1	3.7	100.0
Riau	63.8	6.2	2.3	0.6	22.3	1.3	3.6	100.0
Jambi	63.5	8.7	1.2	0.0	23.5	1.0	2.1	100.0
South Sumatra	69.0	6.2	1.5	0.3	19.5	0.9	2.7	100.0
Bengkulu	66.5	5.9	2.5	0.9	20.2	0.0	4.0	100.0
Lampung	80.0	3.2	0.3	2.2	11.6	0.3	2.4	100.0
Bangka Belitung	90.1	0.8	3.4	0.2	4.6	0.3	0.5	100.0
Riau Archipelago	85.3	2.8	0.8	1.9	6.2	0.4	2.6	100.0
Jakarta	78.2	8.1	1.1	2.4	8.1	0.0	2.1	100.0
West Java	67.1	7.3	0.9	0.7	21.4	0.0	2.6	100.0
Central Java	72.7	1.4	0.7	0.6	23.7	0.1	0.8	100.0
Yogyakarta	77.1	1.6	2.0	1.5	16.3	0.0	1.6	100.0
East Java	86.0	1.9	0.4	0.6	10.1	0.2	1.0	100.0
Banten	73.1	5.8	0.3	0.0	20.7	0.0	0.1	100.0
Bali	75.8	0.4	1.4	0.5	20.1	0.0	1.8	100.0
West Nusa Tenggara	71.4	2.0	0.7	0.3	25.5	0.0	0.2	100.0
East Nusa Tenggara	42.7	3.2	3.6	1.4	46.8	0.7	1.6	100.0
West Kalimantan	80.4	2.4	1.5	0.9	10.2	2.0	2.6	100.0
Central Kalimantan	60.0	6.7	2.3	0.5	19.5	8.8	2.3	100.0
South Kalimantan	53.8	9.4	1.4	0.0	31.4	1.5	2.5	100.0
East Kalimantan	87.7	3.1	0.4	0.1	4.2	1.2	3.3	100.0
North Sulawesi	68.6	3.9	1.4	0.3	19.4	0.0	6.4	100.0
Central Sulawesi	78.8	4.5	0.9	0.7	11.5	0.3	3.3	100.0
South Sulawesi	77.3	3.3	3.1	0.4	11.0	0.5	4.4	100.0
Southeast Sulawesi	72.8	1.4	5.3	0.6	17.2	0.4	2.3	100.0
Gorontalo	61.7	8.6	0.7	1.2	19.0	0.0	8.9	100.0
Maluku	65.5	15.0	1.8	3.6	10.3	0.3	3.5	100.0
North Maluku	72.4	3.1	0.4	1.4	19.9	1.4	1.4	100.0
Papua	72.9	4.7	0.8	0.0	10.8	8.2	2.7	100.0
Total	74.1	4.0	1.0	0.7	18.1	0.3	1.8	100.0

*Source:*

Compiled and calculated from Badan Pusat Statistik (2006b).

However, the majority of older persons in Indonesia report that their main activity is watching television (74.1 per cent of elderly women and 70.4 per cent of elderly men). Except in East Nusa Tenggara, watching television programmes is the major activity among both older women and men in which the percentages range from 90.1 per cent in Bangka Belitung to 53.8 per cent in South Kalimantan for elderly women, and from 53.2 per cent in Central Kalimantan to 82.0 per cent in East Java for elderly men. Generally, more elderly women than men watch television ( $p = 0.02$ ). Unfortunately, data on how many hours were spent watching television or which programmes are not available.

Future investigations should examine whether elders watched television together with other family members. This information will provide insights on intergenerational interactions and communication within a family. In many houses in Indonesia, the television is located in the living room, enabling all household members to sit together, exchange opinions and listen to the programmes. This can be a highly significant social

**TABLE 6b**

Types of main activity of male older persons by province: Indonesia, 2005.

Province	Watching TV	Read/write	Recreation	Sport	Social activity	Fishing	Gardening	Total
North Sumatra	65.8	9.9	2.3	1.0	18.0	1.3	1.7	100.0
West Sumatra	57.6	15.6	2.2	2.1	18.4	2.7	1.3	100.0
Riau	65.6	8.7	1.2	0.4	19.7	1.4	3.0	100.0
Jambi	65.4	8.7	1.5	0.6	19.6	3.3	0.9	100.0
South Sumatra	64.0	9.8	2.9	1.4	17.4	2.2	2.4	100.0
Bengkulu	60.4	6.7	3.0	1.3	23.3	2.3	3.0	100.0
Lampung	74.2	6.6	1.9	2.1	11.7	1.3	2.1	100.0
Bangka Belitung	79.0	6.2	2.1	1.0	6.4	3.0	2.3	100.0
Riau Archipelago	71.8	7.3	0.8	2.8	4.8	9.0	3.6	100.0
Jakarta	65.8	17.5	2.8	4.4	7.6	0.0	1.9	100.0
West Java	68.4	7.8	1.4	2.5	16.5	0.7	2.7	100.0
Central Java	69.2	3.8	1.0	1.5	22.7	0.4	1.4	100.0
Yogyakarta	68.1	5.7	1.4	1.8	20.9	0.2	1.9	100.0
East Java	82.0	4.1	0.7	1.6	9.8	0.4	1.4	100.0
Banten	70.0	6.4	0.3	0.5	19.8	0.3	2.7	100.0
Bali	70.0	5.1	1.4	1.1	19.2	1.2	1.9	100.0
West Nusa Tenggara	64.1	7.1	1.6	1.4	22.6	1.4	1.8	100.0
East Nusa Tenggara	35.3	8.5	3.8	1.0	44.9	3.9	2.6	100.0
West Kalimantan	68.0	4.1	1.6	2.8	17.2	5.5	0.9	100.0
Central Kalimantan	53.2	8.5	2.6	0.8	18.1	14.5	2.3	100.0
South Kalimantan	55.7	9.8	2.8	1.6	21.9	6.3	1.8	100.0
East Kalimantan	71.3	7.2	1.9	1.4	8.0	3.7	6.5	100.0
North Sulawesi	68.4	6.9	1.6	0.6	18.4	1.4	2.6	100.0
Central Sulawesi	68.3	8.7	1.7	1.0	12.6	5.7	2.1	100.0
South Sulawesi	71.4	6.8	1.8	1.1	13.4	2.1	3.5	100.0
Southeast Sulawesi	56.5	8.0	4.1	1.4	19.8	6.5	3.6	100.0
Gorontalo	58.7	12.6	1.9	0.0	17.2	6.6	3.0	100.0
Maluku	63.4	16.4	1.8	1.9	8.1	6.0	2.5	100.0
North Maluku	55.9	8.9	1.3	0.0	21.8	12.2	0.0	100.0
Papua	61.8	9.3	1.5	1.5	10.2	12.3	3.3	100.0
Total	70.4	6.6	1.4	1.7	16.6	1.2	2.0	100.0

*Source:*

Compiled and calculated from Badan Pusat Statistik (2006b).

and psychological occasion to prevent isolation, exclusion and neglect. However, the opposite may also occur, depending on other factors such as the number of televisions in the house and the elderly's living arrangement.

A gender difference is seen in the percentage of elderly who engage in reading or writing—another indoor activity (6.6 per cent of elderly men in contrast to 4.0 per cent of elderly women,  $p < 0.001$ ). Among elderly women at the provincial level, the lowest percentage of those engaging in reading or writing is seen in Bali (0.4 per cent), and the highest in West Sumatra (15.4 per cent). Among elderly men, the lowest percentage of those engaging in reading or writing is found in Central Java (3.8 per cent), and the highest in Jakarta (17.5 per cent). Far fewer older people engage in reading or writing than in television viewing, which may reflect a relatively low level of education among these elders, and the existence of vision impairments, especially presbyopia. This is a natural condition in ageing in which the lens of the eye loses the ability to focus, making it difficult

to focus on objects close up. More research is needed on vision- and hearing-related problems among Indonesian elders, and how this impacts on their ability to participate in activities and work. As noted, the lowest percentages of older men and women engaging in television viewing is found in East Nusa Tenggara (35.3 and 42.7 per cent, respectively). In this province, more than half of the elderly reported engaging in outdoor activities including recreation, sports, social activities, fishing and gardening. This may be because East Nusa Tenggara is one of the poorest provinces in Indonesia, which increases the chances of elders to engage in traditional cultural and subsistent activities, rather than television viewing.

Participation in outdoor activities is lower in other provinces. Nationally, fewer than 2.0 per cent of older men and 1.0 per cent of older women report engaging in recreation, fishing and gardening in the past one month (with no gender difference for recreation and gardening:  $p = 0.213$  and  $p = 0.405$ , respectively). Engagement in fishing is found to be statistically different ( $p < 0.001$ ) between the genders, with more elderly men than women engaging in this activity.

It is also noted that many elderly do not practice a healthy lifestyle; only 1.7 per cent of elderly men and 0.7 per cent of elderly women reported engaging in exercise or sports. In some provinces, the percentage is negligible, and the highest percentage among elderly women and men, respectively, is only 3.6 per cent (Maluku) and 4.4 per cent (Jakarta). The low percentage of Indonesian elderly engaging in physical exercise is also found by Rahardjo *et al.* (2011). Although the percentages are small, the gender difference in engaging in physical exercise is statistically significant ( $p = 0.014$ ). Physical inactivity poses a risk to several major chronic diseases. Public health messages need to focus on increasing these activities to reduce this risk, which will impact on active ageing. Engaging in physical activity has been found to be associated with a better quality of life (Clifford *et al.* forthcoming) and better memory (Clifford *et al.* 2011) in Indonesian elderly.

### **Security—The Third Pillar of Active Ageing**

WHO's definition of 'security' refers to personal safety and dignity, as well as economic security. Unfortunately, the 2005 SUPAS included a single question related to security, and that was about source of income (including work, pension and family).

Older persons in developing countries, such as Indonesia, cannot rely on pensions or savings. Indonesia has no universal pension scheme, and the scheme is still limited to certain groups, e.g. government officials. The inflation rate is always high (6 per cent is considered low), and it is higher than the interest rate of savings. Worse, a relatively high inflation rate has resulted in a declining value of savings. Elders cannot also fully rely on their children or relatives for financial support. Therefore, the need to remain active in the labour market is common among older persons in Indonesia and other Southeast Asian countries, to enable older persons to support themselves (Arifin & Ananta 2009; Rahardjo *et al.* 2009). Promoting an increase in the labour force participation of older persons has been high on the agenda of active ageing promoters. However, for many older adults in Indonesia, lifelong engagement in the labour force is a necessity, rather than an option.

The findings show that more than half (53.1 per cent) of elderly men report earning money from work or business, compared to only 23.7 per cent of older women. Table 7 shows that the percentages are the lowest in Jakarta (32.4 per cent of older men and

13.2 per cent of older women), and the highest, for older men, in Lampung (65.2 per cent) and, for older women, in Yogyakarta (30.4 per cent). It should be noted that this information concerns the main source of funds for elders, and elders may obtain funds/money from more than one source. Older persons in more economically advanced Jakarta may have a wealthier family than their Lampung counterparts, and therefore, older persons in Jakarta may afford not to work.

While work and business is the primary source of funds for more than half of the older men, about half of the older women reported that their primary source of funds is from their children and children-in-law. At the provincial level, the percentage of elderly women relying financially on their children ranges from 40.4 per cent in North Sulawesi to more than 60.0 per cent in Bangka Belitung, Banten, West Nusa Tenggara and West Kalimantan (Table 7). A higher economic dependency of elderly women on their children is consistent across provinces. This suggests that elderly women, as a group, are more vulnerable than elderly men, especially when an economic crisis hits their offspring. Although smaller percentages of men than women reported economic dependency on their children, 28.6 per cent of older men still reported their children and children-in-law as their primary source of income (ranging from 23.8 per cent in Yogyakarta to about 40 per cent or more in Bangka Belitung, West Nusa Tenggara and West Kalimantan).

Pensions or other forms of social security are the third source of funds, after money/funds from work and transfers from children or children-in-law. Pension is the main source of funds for 12.7 per cent of the Indonesian male elderly and 7.0 per cent of the Indonesian female elderly. Across provinces, the pension recipients range between 4.0 per cent in Lampung and 29.0 per cent in Jakarta. These findings also indicate that intergenerational transfer of financial support remains strong in Indonesia. For elderly women, transfer from a spouse accounts for a larger percentage of income than pension or social security. Again, it shows that elderly women are highly dependent, financially, on their children and spouse. As source of funds was the only variable related to security in the 2005 SUPAS, more items should be added to future surveys to better capture information on security as a multidimensional construct.

### Concluding Remarks

Issues and policies around active ageing will become increasingly challenging in the near future as the growth of Indonesia's aged population outpaces the growth of its economy. Like many developing countries, Indonesia will become old before she becomes rich. Individuals, families, communities and the nation must increase their preparations to face an ageing society. The Second Global Summit on Ageing in Madrid in 2002 introduced the concept of active ageing as a model for planning the future. Under this concept, the contributions of older persons to society are valued, and active contributions by elders are encouraged in all facets of life within societies.

Utilising data from Indonesia, this paper provides a baseline against which to measure progress towards an active ageing society, particularly in relation to the three basic pillars of active ageing—health, participation and security. Findings suggest a great variation across Indonesia's provinces, implying that policymaking on active ageing at the regional level should pay attention to the local situation. Good SRHS and functional ability are common among Indonesian older persons. Findings also suggest that relative to older

**TABLE 7**

Provincial variation in older persons' source of income by gender and province: Indonesia, 2005.

	Female				Male			
	Work/business	Child/child-in-law	Pension/social security	Others	Work/business	Child/child-in-law	Pension/social security	Others
Indonesia	23.7	50.2	7.0	19.1	53.1	28.6	12.7	5.6
North Sumatra	29.3	41.9	11.2	17.6	53.1	25.2	16.2	5.6
West Sumatra	21.7	53.2	9.0	16.1	51.3	27.4	13.7	7.6
Riau	20.6	46.3	8.2	24.9	57.9	24.2	12.1	5.9
Jambi	25.9	47.9	8.4	17.9	59.9	24.9	7.5	7.6
South Sumatra	28.6	45.2	7.9	18.4	56.2	24.5	14.3	5.0
Bengkulu	27.9	47.4	6.2	18.5	60.0	26.0	9.2	4.8
Lampung	30.4	50.0	2.3	17.4	65.2	25.0	4.0	5.8
Bangka Belitung	13.4	62.4	6.9	17.4	42.0	41.2	12.7	4.0
Riau Archipelago	16.3	52.0	8.6	23.2	42.2	38.0	15.2	4.7
Jakarta	13.2	54.1	15.3	17.5	32.4	32.4	29.2	6.0
West Java	19.9	48.9	8.3	22.8	51.3	27.3	16.7	4.7
Central Java	25.9	49.8	5.6	18.7	56.1	28.8	10.1	5.0
Yogyakarta	30.4	41.7	9.1	18.9	52.3	23.8	18.6	5.4
East Java	26.6	50.6	5.7	17.0	57.4	27.0	10.0	5.6
Banten	12.4	62.8	8.1	16.7	45.0	39.0	11.4	4.6
Bali	26.9	51.2	3.7	18.2	44.5	37.7	10.9	6.9
West Nusa Tenggara	17.5	63.0	1.8	17.7	45.4	41.4	6.3	6.9
East Nusa Tenggara	28.6	47.3	5.8	18.3	50.7	30.0	9.7	9.7
West Kalimantan	15.2	63.1	6.0	15.8	43.0	40.1	9.0	7.9
Central Kalimantan	29.8	50.8	5.7	13.7	56.2	29.3	11.4	3.1
South Kalimantan	21.9	52.7	9.2	16.1	48.6	26.5	15.4	9.5
East Kalimantan	17.6	53.7	8.6	20.1	41.8	33.0	15.0	10.2
North Sulawesi	18.5	40.4	13.5	27.6	47.4	26.9	17.0	8.6
Central Sulawesi	25.1	44.9	6.8	23.2	60.9	26.0	8.5	4.6
South Sulawesi	14.9	56.7	7.2	21.3	47.7	31.7	14.8	5.8
Southeast Sulawesi	25.1	50.0	4.8	20.1	59.2	24.3	11.9	4.6
Gorontalo	18.8	44.6	6.8	29.9	55.3	27.4	9.5	7.8
Maluku	19.1	49.3	10.4	21.2	39.5	35.8	18.9	5.8
North Maluku	22.2	52.0	3.8	22.1	47.4	35.6	8.6	8.4
Papua	23.9	44.1	5.9	26.0	44.7	35.8	8.7	10.88

*Source:*

Compiled and calculated from Badan Pusat Statistik (2006b).

men, the female survival advantage is not followed by a better health status in later life. A higher life expectancy at birth is significantly associated with a higher degree of physical independence, and elders reporting good health are less likely to report needing help to perform basic daily activities. Fewer older women than men need help in preparing food and eating.

This paper demonstrates that Indonesian older persons actively participate in their communities, although the degree of active participation needs to be improved. Very few elders engage in physical exercise, recreation, fishing and gardening. The paper also shows the predominance of home-centred leisure activities among the elderly, who are most likely to engage in television viewing, with a minority engaging in active mental activities such as reading or writing. A lack of educational skills or uncorrected vision impairments may be related to this. Future studies should investigate whether television viewing occurs mainly in isolation or is part of a discursive family activity. A higher percentage of elderly women spend more time watching television programmes than elderly men. Nevertheless, Van der Wardt *et al.*'s study (2010) has also shown that television viewing is associated with better memory in rural Javanese elderly.

Finally, economic security, as measured by the main source of funds, varies by gender, in that earnings from work is the main source of funds among males while transfer payments is the main source among females. Economic dependency, along with a worse health status, makes older women more vulnerable to ageing than older men. Nevertheless, in general, the majority of older persons still live with their children, and the intergenerational transfer of financial and domestic support remains strong in the society. This may help reduce economic hardship and social isolation for older women and men.

To project the future gendered pattern, we can examine the ageing situation in other countries, particularly those that have been through the higher stages of an ageing population such as Thailand. Thanakwang and Soonthorndhada (2006) concluded that Thai elderly women and men who had a higher education, or who had completed secondary school, had more attributes of active ageing than those with no schooling or with only a primary education. Another study by Lutz *et al.* (2009) reported that age-specific disability rates by gender in four Asian countries—Malaysia, Singapore, the Philippines and South Korea—would likely decline in the future because of higher educational attainment of future older persons, which might help mitigate some of the costs of an ageing society.

Improving educational attainment of young Indonesian women and men should be emphasised as a way to change the paradigm of development, and to transform older populations from a burden into an asset, and from being a passive into an active ageing population. Active ageing also means helping to narrow the gender gap, and active ageing with a gender lens should be one of the objectives of further development. In Indonesia, where the ageing population is predominantly female, policies to reduce the burden of older persons should pay attention to the features of ageing that are different between men and women. Great variation across Indonesia's provinces in the status of the three pillars of active ageing has also been found. Policymaking on active ageing should pay attention to the local situation, and differences in health, participation and security by province should be expected. Ignorance of these issues may result in a heavy financial burden and welfare deterioration in the Indonesian population.

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