Population Ageing in East and South-East Asia, 1950-2050: Implications for Elderly Care

Since Governments in most developing countries are not in a position to bear the entire responsibility of the growing numbers of older persons, they should encourage and provide support for the maintenance/sustainability and strengthening of community-based care for the elderly, paying special attention to the needs of older women.

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Following rapid fertility declines and sustained improvements in life expectancy during the second half of the twentieth century, most countries in East and South-East Asia entered the twenty-first century faced with the problem of

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population ageing. Population ageing, defined as the increasing proportion of older persons[1] in the total population, is projected to progress in East and South-East Asia[2] at rates higher than the average for the world and the less developed regions (LDRs). Among the various challenges arising as a result of the increasing proportion and absolute numbers of the elderly population, ensuring that older persons are provided adequate care is of paramount concern. A rising proportion of the older population relative to that of the active adult and working age population means that each worker will have to contribute towards supporting an increasing number of older persons. Also, given the declining family size, the number of caregivers available per older person will continuously decline. The implications of the growing imbalance in the demographic equation are further aggravated by increasing globalization, migration, the increasing preference for the nuclear family and, in some countries, the HIV/AIDS epidemic.

This paper presents an overview of how the ageing situation is expected to evolve in East and South-East Asia during the first half of this century, focusing on its implications in terms of the provision of care[3] for the growing elderly population. The paper is divided into five sections. The first section provides a regional perspective of population ageing in view of the global situation. The second section discusses the demographic impact of population ageing that underlies the erosion in the support base for the elderly. The third section highlights two characteristic features of the emerging profile of the older population – its ageing and its feminization – that add to the complexity of care provision for the elderly. A comparison of the projected changes compared with past trends brings out the relative enormity and novelty of the emerging challenges. The fourth section examines the implications of the changes outlined in the second and third sections in terms of care for the elderly. Finally, the fifth section summarizes the main findings and policy recommendations.

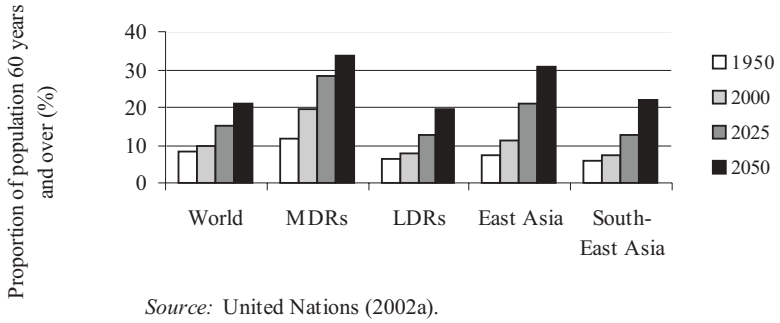
Regional perspective of population ageing: 1950-2050

Population ageing is a global phenomenon: the proportion of older persons in the World's population increased from 8.2 per cent in 1950 to 10 per cent in 2000. It is projected to increase to 15 per cent in 2025 and to 21 per cent by 2050 (figure 1). By the middle of this century one in every five persons will be "old". All countries are either experiencing population ageing or can be expected to do so over the next two decades.

Population of the more developed regions (MDRs) is more aged than of the less developed regions (LDRs) and will remain so through 2050.[4] East Asia which is currently far less aged than the MDRs will "catch up" and by 2050 reach almost

the same level as the MDRs. South-East Asia is more akin to the LDRs but is also ageing at high rates and by 2050 the proportion of older persons in its population will exceed the average of the other LDRs.

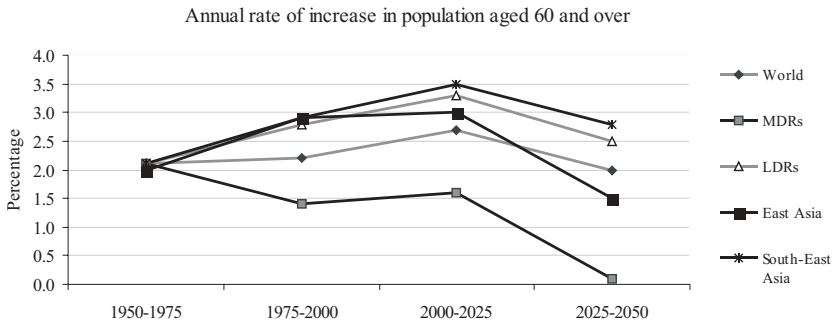
Figure 1. Trends in population ageing: 1950-2050



Source: United Nations (2002a).

While all regions experienced similar growth rates in older population numbers during 1950-1975, the rate of increase in the LDRs was double that of the MDRs during 1975-2000. The differentials are projected to widen during the first half of this century with South-East Asia experiencing the highest rates of growth in older population (figure 2).

Figure 2. The pace of population ageing: 1950-2050



Source: United Nations (2002a)

The percentage of the world's population of older persons living in the LDRs, which increased from 53 per cent in 1950 to 69 per cent in 2000 will increase further to 85 per cent in 2050. In the same year, East and South-East Asia will account for 35 per cent of the world's older population.

The increasing proportions of older persons in the population assume staggering dimensions when translated into absolute numbers. The world's population of older persons tripled during 1950-2000 from about 200 to 600 million, an increase of 400 million. During the next 50 years it is expected to more than triple, reaching almost two billion by 2050. The incremental increase in the older population during the first half of this century will be five times that during the second half of the last century. Most of the increases will be in the LDRs. These regions accounted for 66 per cent of the increases during 1950-2000 and this share will rise continuously during the next 50 years. LDRs will account for 81 per cent of the total increase in older population during 2000-2025 and 93 per cent during 2025-2050. East and South-East Asia will account for about a third of the increase in the world's elderly population during 2000-2050.

It is evident that during the first half of the twenty-first century, population ageing will be a much bigger issue for the LDRs both with respect to quantitative dimensions and the issue's novelty. It can be seen emerging as a very significant issue in the East and South-East Asia. In particular, with the challenge being both larger and newer, South-East Asia will be faced with a steeper uphill task in dealing with the consequences of population ageing during the next 50 years.

Demographic impact of population ageing

Population ageing, by definition, has a profound effect on the age structure of the population. As the population ages, the size of the older cohorts relative to that of the younger cohorts changes. This section examines two indicators of the changing age structure most relevant to the purpose at hand: (a) Potential support ratio; (b) Parent support ratio.[5]

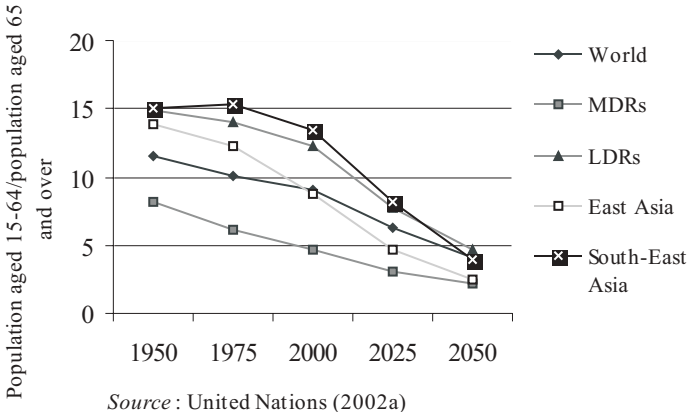
Potential support ratio

The potential support ratio is defined as the ratio of population aged 15-64 years to that aged 65 years and over. It is used to indicate the support base available to carry the "burden" of the older population. The ratio is the inverse of the old-age-dependency ratio and is more commonly used in the context of population ageing as it directly provides an index of the changing support base for the elderly as their proportion in total population changes. The ratio is based on the assumption that people aged 15-64 are working, whereas, those below 15 or those

65 and over are not. The working population provides direct or indirect support to the non-working dependant population.

A falling potential support ratio indicates a shrinking support base: a decline in the number of younger adult members, who are potential providers of both financial support and care, available per older person. The ratio is projected to decline across the world during the first half of this century by more than it did during the previous 50 years (figure 3). The decline in the potential support ratio will be most pronounced in both East Asia and South-East Asia, with the support base shrinking to less than one third of current levels by 2050.

Figure 3. Potential support ratio: 1950-2050

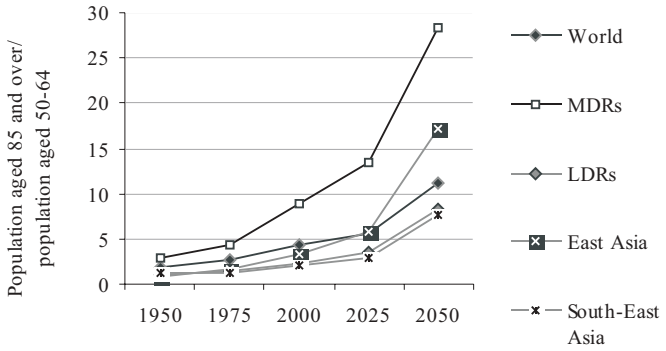


Source : United Nations (2002a)

Parent support ratio

The parent support ratio is defined as the ratio of population aged 85 years and over to the population aged 50-64 years. The parent support ratio relates those aged 85 and over to their presumed offspring assumed to have been born to them during their twenties and thirties. As such the ratio reflects the burden placed by those aged 85 years and over on their offspring. Though people in the numerator and those in the denominator are not necessarily related, the parent support ratio does provide a reasonable approximation of the family support available. The ratio is projected to increase more rapidly during the first half of the century than it did during the preceding 50 years (figure 4). In the MDRs the parent support ratio will increase to more than three times its current level by 2050. The increase will be more pronounced in the LDRs. The ratio is expected to go up most in South-East Asia and East Asia: to 3 and 5 times (respectively) its current level by 2050.

Figure 4. Parent support ratio: 1950-2050



Source: United Nations (2002a).

Demographic profile of the older population

Two distinct features of the changing age and sex structure of the older population have implications for the provision of elderly care and support. These are: (a) Ageing of the older population; (b) Feminization.

Ageing of the older population

The older population in the MDRs is "more aged", that is, the proportion of the "oldest old"[6] (those aged 80 years and over) in total population is higher in these countries. The older population will remain "less aged" in the LDRs, but the oldest population has been increasing and will continue to increase at higher rates in the LDRs:

Table 1. Trends in the oldest old population, 1950-2050

Region	Oldest old as percentage of older population				Annual percentage rate of increase in oldest old population			
	1950	2000	2025	2050	1950-1975	1975-2000	2000-2025	2025-2050
World	6.7	11.4	12.9	19.3	3.4	3.2	3.2	3.7
MDRs	8.9	16.0	19.2	28.6	3.2	2.8	2.4	2.2
LDRs	4.8	8.6	10.4	16.9	3.7	3.7	4.1	4.6
East Asia	4.0	10.2	15.8	24.1	4.8	3.9	4.1	4.0
South-East Asia	5.8	8.1	9.3	15.8	2.3	4.1	4.1	5.0

Source: United Nations (2002a).

Both East Asia and South-East Asia will experience the same rate of increase in the oldest old population from 2000 to 2025. From 2025 to 2050, the rate is expected to increase significantly in South-East Asia while it will stabilize in East Asia. The LDRs currently account for almost 50 per cent of the world's oldest old population and by 2050, this proportion will have increased to 70 per cent. The proportion of the world's oldest old population living in East and South-East Asia will increase from 29 per cent in 2000 to nearly 40 per cent in 2050.

These increasing proportions of the oldest old population signal very large increments in absolute terms. The world's population of the oldest old increased from 14 million in 1950 to nearly 70 million in 2000. During the next 50 years it is expected to increase to almost 340 million. This means that additions to the number of the oldest old during the next 50 years will be almost five times the number added during the preceding 50 years. Most of the increase in the oldest population will be in the LDRs which accounted for 49 per cent of the increase from 1950 to 2000 and will account for 72 per cent of the increase from 2000 to 2050. Moreover, while the number of the oldest old added in the MDRs from 2000 to 2050 will be about three times the numbers added during the preceding 50 years, the additions in the LDRs will be seven times as many. By 2050, East Asia's population will be among the most aged. China (99 million) and Japan (17 million) are projected to be two out of the six countries where the number of persons aged 80 years and older will exceed 10 million; the others being India, the United States of America, Brazil and Indonesia.

Feminization of ageing

Women constitute a majority of the older population (table 2). At the global level, women comprised 55 per cent of the population of older persons in 2000. While this share is projected to decline during the next 50 years, women will continue to comprise a majority of the older population.

Table 2. Percentage of females in the older population

Region	1950	1975	2000	2025	2050
World	55.5	56.1	55.2	54.2	54.1
MDRs	57.5	60.0	58.5	56.5	56.1
LDRs	53.8	52.9	53.1	53.3	53.5
East Asia	55.5	55.1	53.2	53.7	54.2
South-East Asia	53.8	53.5	54.2	54.1	54.6

Source: United Nations (2002a).

In the MDRs, women comprise a larger proportion of the older population than in the LDRs. However, the proportion of females in the older population in the MDRs is expected to decline gradually until 2050. In the LDRs there will be a marginal increase in the proportion of women in the older population during the next 50 years. The trends will be similar in both East and South-East Asia from 2000 to 2050. In both MDRs and LDRs, women will also continue to constitute a majority of the oldest old population:

Table 3. Percentage of females in the oldest old population

Region	1950	1975	2000	2025	2050
World	62.0	63.3	65.4	63.4	62.2
MDRs	63.5	68.1	69.3	66.1	64.2
LDRs	59.5	56.4	60.6	61.3	61.3
East Asia	68.9	59.0	66.0	64.5	63.3
South-East Asia	57.7	59.6	58.9	61.2	63.4

Source: United Nations (2002a).

The proportion of women in the oldest old population is considerably higher than that of women in the older population. This is explained by the higher survival rate among females and their higher life expectancy at age 80 (United Nations, 2002a). A larger proportion of females enter the oldest population and on average live longer than their male counterparts.

Gender differences in marital status

A higher proportion of older women than older men are unmarried, divorced and widowed. This pattern of gender differentials in marital status, with a higher proportion of older females than older males being "single", is similar across all regions.

Table 4. Percentage of "singles" in the older population

Region	Males	Females
World	22	56
MDRs	21	56
LDRs	23	56
East Asia	27	53
South-East Asia	18	58

Source: United Nations (2002b).

The differences in the marital status of older men and older women result from several factors. First is relative female longevity: women usually live longer than men. Second, the husband is usually older, which further increases the chances that husband dies before his wife. Third, widowed men have higher remarriage rates than widowed women. This could be explained partly by cultural norms and partly by the surplus of older women to older men. The majority of the single "older" and "oldest old" females are widowed (United Nations, 2002b). Widowhood adds to the psychological strain, particularly on women and more so in certain male-dominated cultures. Older persons who are single are likely to be less financially secure and are not likely to enjoy as much care in illness and disability as those having a spouse. The hardships attached to being single in old age indicate the greater vulnerability of older women compared with older men.

Lower female labour force participation

Labour force participation rates are significantly lower for older women than for older men. The interpretation of economic activity of older persons has always been ambiguous. Should a higher labour force participation rate in old age be interpreted as positive or negative? An economically active person is productive, feels more confident and is financially independent and therefore able to afford better care. Hence, it could be presumed that an employed older person earning an income would be better off than one not employed. It could also be argued that those who are not economically activity do not need to work as they may be able to rely on accumulated wealth, pensions or other means of support and care. The lower proportions of economically active persons among the 65 years and over population[7] in the MDRs may be explained by the wider coverage of pension and old-age security schemes. However, in the LDRs, where pensions and security schemes are virtually non-existent or, at best, have limited coverage, economic activity could be the only means to achieve financial security and independence. In both East and South-East Asia, labour force participation rates for the 65 years and over group are much lower for women than for men:

Table 5. Labour force participation of 65 years old and over

Region	Percentage economically active	
	Males	Females
World	30.2	10.1
MDRs	12.6	5.7
LDRs	40.5	13.5
East Asia	28.6	9.3
South-East Asia	47.8	24.1

Source: United Nations (2002a).

Some of this disparity could be due to the underreporting of women's economic activity, particularly in the LDRs where much of women's work is either not captured in censuses and surveys or is not considered "economic activity". The lower rates in East Asia can also be explained by the relatively more developed pension and social security systems in China and Japan compared to those in most countries of South-East Asia. Overall, however, the gender differences in labour force participation rates in South-East Asia (alike in most LDRs) can be interpreted as indicating that more older women than older men are dependant and vulnerable to financial insecurity and economic dependence thereby having greater difficulty in accessing the required care.

Implications for elderly care

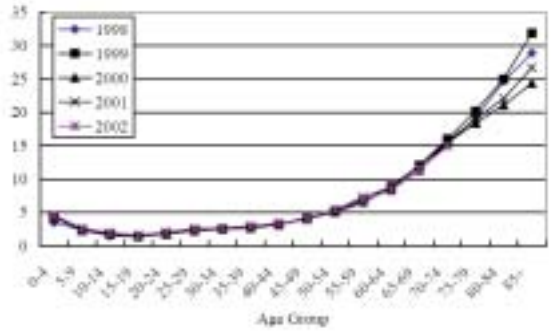
It is evident that the number of those entering the older and the oldest old age groups have been growing and will continue to grow at an increasing pace throughout the first half of this century, more so in South-East Asia. The higher increase in the oldest old population combined with the feminization of ageing will add to the burden on the relatively declining active population of working ages, who will be called upon to provide support to the elderly. This includes the provision of health care and special care facilities as well as ensuring appropriate living arrangements for the older population.

Health care

Older people are prone to a higher incidence of morbidity.[8] Population ageing is also accompanied by what has been termed the "epidemiological transition" – a shift in the patterns of morbidity and the causes of mortality (ESCAP, 2002). With the share of older people increasing relative to that of the younger people, infectious and nutritional disorders yield place to chronic, degenerative and mental illnesses as the leading causes of morbidity and mortality. Many disabling diseases and impairments such as heart ailments, stroke, hearing and visual impairments as well as the effects of trauma among older people are incurable and require long-term medical attention and care. So do terminal diseases such as cancer and Alzheimer's disease. The higher incidence of morbidity coupled with the epidemiological transition calls for the provision of more health services as well as altering the package of services to better treat and manage the diseases of old age.

Per capita health expenditures of older persons are estimated to be 3-5 times higher than of the not old; while within the older population, the oldest old spend 2-3 times more than the "younger elderly" (Mahal and Berman, 2001; Iwamoto, 2001). Evidence from Japan (figure 5) shows how health expenditure per capita increases with age:

Figure 5. Per capita health expenditure as percentage of per capita GDP by age group: Japan, 1998-2002



Source: Fukawa and Izumida (2004)

The impact of population ageing on budgetary allocations for health has been widely discussed in the literature. A World Bank study documented a strong positive relationship between the percentage of public spending allocated to health and the percentage of population aged over 60.[9] Another more recent study attempts a breakdown in the projected increase in health expenditures over the period 2005-2025 into two components: the increase owing to population increase and the increase owing to change in age-sex structure:

Table 6. Impact of population ageing on health expenditures

Region	Percentage increase in health expenditures: 2005-2025		
	Total	Percentage increase owing to	
		Population increase	Change in age structure
Europe and Central Asia	37	15	22
East Asia and the Pacific	14	1	13
Latin America and Carribean	47	25	22
Middle East and North Africa	62	37	25
South Asia	45	27	18
Sub-Saharan Africa	52	43	9

Source: Gottret and Schieber (2006).

East Asia, the Pacific,[10] Europe and Central Asia are faced with a similar problem: namely that a higher share of health expenditure will change due to the age-sex structure rather than population increase.

To meet the health-care requirements of the fast growing older and oldest old populations will necessitate diverting resources from investment and other areas of current expenditure. Policymakers will be faced with making hard choices in allocating health-care resources. Unless other expenditures are scaled down, they will have to choose between raising taxes or shifting part of the burden to older persons by either raising insurance premiums or passing at least part of the costs to the users through service charges.[11] Whatever path a Government chooses to take, some sections of the population are bound to be adversely affected.

Special care

The incidence of disability is known to increase with old age. The first most likely casualty of disability is mobility. Impaired mobility increases dependence on caregivers. In a number of cases the disability may be permanent which makes the elderly person dependent until death. As such, the intensity of care an older person requires increases with disability.

Several studies have shown that with age the chances of moving from active to disabled status increase, while the chances of recovery to active status decrease (Waidmann and Manton, 1998; Danan and Zeng, 2004). Evidence from surveys conducted in China, Cambodia and Thailand indicates the progression of disability with age among the older population and its higher incidence among older women (table 7).

Table 7. Incidence of disability by age and sex

Age (years)	China 1992		Cambodia 2004	Thailand 1999	
	(reporting at least one functional limitation)				
	Males	Females	Total	Males	Females
60-69	4.8	8.6	16.2	14.6	14.9
70-79	14.5	25.8	30.4	19.4	23.4
80+	37.4	58.7	44.2	27.6	36.0

Sources: China: Kaneda, Zimmer and Tang (2004); Cambodia: Zimmer (2005); and Thailand: Jitapunkul and others (1999).

Given the increasing incidence of disability with age, the ageing of the older population contributes towards increasing the proportion of the older population suffering from disability. Moreover, a higher incidence of disability among older women implies that feminization of ageing would contribute towards increasing the proportion of the disabled among the older and oldest old populations. A number of studies have also shown that women have a lower probability of recovering from disability than men (Danan and Zeng, 2004).[12] People with a disability, particularly those who are bed-ridden, need special care. Trends in population ageing in East and South-East Asia imply that there will be a growing need for providing such special care facilities for an increasing proportion of the older population, particularly the oldest old women.[13]

Living arrangements

In most Asian countries the norm has been for older persons to co-reside with and be taken care of by family members. Though not the only form of family support, co-residence is the main component of family support and has been considered its best proxy indicator. Traditionally, in most cases, it is the male offspring who bears the responsibility of taking care of parents in their old age. Depending on circumstances, a common alternative is co-residing with daughters, younger siblings or their families as well as with nephews, nieces and other relatives. Table 8 summarizes data on gender differences in the proportion of elderly persons living alone:

Table 8. Percentage of older persons living alone

Country (Age group)	Year	Total	Males	Females
China	1990	9.5	8.4	10.8
(65+)	2000	9.5	8.4	10.7
Indonesia	1991	7.3	2.3	12.0
(60+)	1997	7.3	2.3	11.9
Japan	1985	8.7	n.a	n.a
(60+)	2000	12.7	n.a	n.a
Philippines	1993	3.6	2.7	4.4
(60+)	1998	5.3	4.0	6.4
Republic of Korea	1981	4.3	n.a	n.a
(60+)	1988	7.7	n.a	n.a
Singapore	1986	2.3	1.7	2.8
(60+)	1995	2.3	1.6	2.7
Thailand	1990	3.7	1.8	5.7
(60+)	1995	4.3	2.9	5.5

Source: United Nations (2005).

What the data highlight is that over the years, there has not been any significant change in the proportion of older persons living alone except in Japan and the Republic of Korea. However, in all cases where gender disaggregated data are available, more older women than older men live alone.[14] This also reflects the higher proportion of married older men than older women. Though there has been no significant decline in most countries in the proportion of older persons living alone due to the continued stability of the family structure, there could be changes in the future (as in Japan and the Republic of Korea) owing to a number of socio-economic changes and value shifts. Globalization has led to an increase in the pace at which the divide between the attitudes of the older and younger generations is widening. Hence, the younger may prefer to live independently. Owing to the widening inter-generational divide in attitudes, older persons may not find it easy to adapt themselves to the rapidly changing life styles of their offspring.15 Increasing economic activity among women adds to the difficulties surrounding co-residence. Traditionally, it has been the daughter-in-law or the daughter who has had to provide or supervise the day-to-day care of the older relatives, yet a working woman is neither available nor can be expected to provide the required care and support. With falling fertility levels, the probability of older persons having grandchildren to keep themselves busy with will decline. The inclination for co-residence may therefore be declining not only among the new generations but among the older generations as well.[16] All these factors contribute to a growing need to ensure that the increasing number of older persons, more women than men, are provided with appropriate living arrangements and adequate care.

Conclusion and recommendations

Conclusion

During the next 50 years, East and South-East Asia will be faced with an unprecedented rapid increase in the population of older persons. The population of the oldest old will increase even more rapidly. Older women, who are more prone to morbidity, disability and economic hardship, will constitute the majority of both the older and oldest old cohorts. There will be an increasing demand for health care as well as specialized care for the disabled. At the same time, the traditional support base through family and kinship can be expected to shrink owing to reduced family size, nuclearization of families, as well as migration both within and outside the country. The changes taking place in living arrangements indicate that the chances of older persons receiving care and support through co-residence may decline. The gap between the demand for care and the traditional supply of

care will continue to widen, as indicated by the higher proportion of older women who are single and those who are living alone. The decline in traditional family support is expected to affect older women more adversely than older men.

The emerging ageing situation has received attention at all levels, notably at the Second World Assembly on Ageing, held in Madrid in April 2002. The Assembly adopted the Madrid International Plan of Action on Ageing a comprehensive plan to deal with the challenges emerging from the rapid ageing of populations. Later in the same year, the countries of the Asian and Pacific region drew up the Shanghai Implementation Strategy for the implementation of the Madrid Plan and the 1999 Macao Plan of Action on Ageing for Asia and the Pacific. In the light of the Shanghai Implementation Strategy, Governments in a number of East and South-East Asian countries have strengthened or initiated measures to deal with the various challenges of population ageing.

Recommendations

On the basis of the findings of this paper, the following recommendations can be put forward for continued and effective action to ensure that older persons have adequate care and support and are provided with an enabling environment to lead a healthy, productive and dignified life:

1. The family remains the main provider of care for the elderly in most Asian countries. There is a tacit traditional inter-generational agreement that parents raise children and when children attain adulthood they, in turn, "repay" their parents by providing them with care and support in their old age. As such the family remains not only the most preferred but also the most suitable provider of care and support to the older population. However, the resources and capacity of an average family are on the decline and Governments should provide support and incentives to maintain the strength of the family structure. Some countries have introduced tax rebates and allowances for families that include older members.

2. Traditional community-based support systems for elderly care are also likely to weaken. Since Governments in most developing countries are not in a position to bear the entire responsibility of the growing numbers of older persons, they should encourage and provide support for the maintenance/sustainability and strengthening of community-based care for the elderly, paying special attention to the needs of older women.

3. Specialized health services and medical care should be made available to the older population. Hospitals in some countries have started setting-up geriatric units specializing in the treatment and management of diseases connected with old age. In addition to ensuring that medical establishments are appropriately equipped to provide geriatric services, the provision of community-based geriatric care at both the family and community levels should also be developed and strengthened.

4. Opportunities for the employment of older persons capable of and willing to work should be fully explored and employers willing to employ older persons provided with necessary incentives such as tax rebates and subsidies.

5. There should be public education and health promotion not only for older persons but for all age groups so that they enter old age in good health, remain independent and postpone the need for special care for as long as possible by adopting healthy life styles and behaviours.

6. Adequate arrangements of institutional care should be available for those older persons who have no other option owing to their physical or mental condition or for those who do not have access to family- or community-based support.

In addition to the above measures, it is necessary to educate both the younger and older populations to view ageing in a positive light and not to consider the elderly population as a burden or a problem. Advocacy too is required to build political commitment to addressing the emerging ageing situation and ensure that the concern for older persons is mainstreamed into all development programmes.

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Endnotes

1. The International Plan of Action on Ageing adopted at the first World Assembly on Ageing (Vienna, 1982) used "aged 60 years and older" for defining "older persons". This was endorsed by the Second World Assembly on Ageing (Madrid, 2002). In this paper, this United Nations definition of "60 and over" for "older" persons is therefore used. The terms "older", "old" and "elderly" are used interchangeably.

2. East Asia comprises: China; Democratic People's Republic of Korea; Hong Kong, China; Japan; Macao, China; Mongolia; and Republic of Korea. South-East Asia comprises: Brunei Darussalam; Cambodia; Indonesia; Lao People's Democratic Republic; Malaysia; Myanmar; Philippines; Singapore; Thailand; Timor-Leste; and Viet Nam.

3. The term "care" as used in this paper is defined to cover the needs of care in terms of health care and living arrangements. It does not refer to the older persons' requirements in terms of financial and social security although these are of great significance too. The subject has received extensive treatment in the literature. See for example, Devasahayam (2004) and Gubhaju (2006).

4. More Developed Regions (MDRs) comprise all countries in Europe, North America and also Australia, New Zealand and Japan. Less Developed Regions (LDRs) comprise all countries in Africa, Asia (excluding Japan), Latin America, the Caribbean, Melanesia, Micronesia and Polynesia. Figures for Japan are included in the totals of both the MDRs and East Asia.

5. Given the constraints of space and time, it has been decided to leave out the discussion of the other two indicators – the Ageing Index and the Median Age. It would not add much to the evidence provided by the trends in the Potential Support Ratio and the Parental Support Ratio pertaining to widening gap between the human resource base available and the need for elderly care.

6. The term "oldest old" is used for population aged 80 years and over. The terms "oldest old", "oldest" and "older old" are used here interchangeably.

7. Normally working age population is defined as 15-64 years, as a large proportion of 60-64 are economically active. For comparing gender differences among the old in economic activity we therefore use rates for 65+.

8. Evidence available from Singapore, for example, shows that in 1995, while people aged 65 and over comprised seven per cent of the population, they accounted for 17 per cent of all hospital admissions and 19 per cent of outpatient polyclinic visits, Phua Kai Hong (2000).

9. For the evidence based on data for 66 countries, see World Bank (1994).

10. The World Bank's demarcation of regions varies from that of the United Nations.

11. In view of rapid population ageing, the Government of Japan has been introducing reforms in its universal health insurance system for the elderly. Measures to safeguard the financial viability of the system have included raising the minimum age of coverage, increasing premiums and reintroducing partial payments for treatment costs depending on income criteria (Fukawa and Izumida, 2004).

12. Data for 1985-1989 for Indonesia, Japan, Myanmar and Thailand shows a higher percentage of male than female life expectancy at age 65 as free of disability (Waidmann and Manton, 1998).

13. In a study on the impact of ageing on health and elderly care, Leslie Mayhew concludes: "The association between ageing and disability will lead to potentially large increases in the numbers of people requiring personal care in both MDCs (more developed countries) and LDCs (less developed countries), although the estimates for LDCs are much less certain than those for MDCs. Whereas in the earlier number of people with disabilities is projected to plateau around 2050, the number of individuals with disabilities in the latter LDCs will continue to grow" (Mayhew, 2000).

14. In most countries, including the few of the East and South-East Asian Region for which data are available, the proportion of population living in an institution increases sharply for those aged 75 and over. Also, a higher proportion of women than men live under institutional care (United Nations, 2005).

15. This is typical in the case of marriages outside the family and even more so of cross-cultural marriages as the older people may find it particularly difficult to adjust to an offspring's "strange" spouse.

16. The attitudinal changes have been the most marked and the best documented in Japan. In 1963, a survey of Japanese women of childbearing age showed that about 80 per cent thought it was either "a good custom" or "a natural duty" to care for ageing parents. By 1992, this figure had dropped to 49 per cent. Two thirds of the Japanese women surveyed in 1950 had expressed an expectation of depending on their children for support in old age. This proportion had dropped to 16 per cent by 1992 (Ogawa,1994).

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