



## Research Report

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Gender and Ageing in Thailand:  
A Situation Analysis of Older  
Women and Men

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A Situation Analysis of Older Women and Men**

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## Introduction

Gender equity and population ageing are two very prominent issues in discussions related to social and economic development. Both have been the focus of multiple international forums sponsored by the United Nations. Indeed the importance of gender in relation to ageing was one theme highlighted by the 2002 Second World Assembly on Ageing (UN 2002). Social researchers have also focused on the interaction between gender and ageing resulting in numerous journal articles and several edited book volumes (e.g. UN INSTRAW 1999; Metha 1997 and 2004; Troisi & Pawiliczko 2008). Typically the focus has been on inequalities that disadvantage women, often implying that women are both more vulnerable and disadvantaged with respect to virtually all dimensions of well-being whether they be social, economic or health related. Little attention has been given to the possibility that older men and women may share similar vulnerabilities or even that men may be more disadvantaged than women in particular respects (Knodel & Ofstedal 2003). To understand more fully the intersection of gender and the well-being in older ages, there needs to be recognition that gender differences are likely to vary across time and setting.

Assessments of the interaction of gender and ageing need to move beyond assumptions of universal disadvantage among older women and explore the experiences of both older men and women in specific social and temporal contexts. The present study contributes to such an approach by comparing the situations of older women and men in contemporary Thailand. We draw heavily on the most recent representative national survey of older persons conducted in 2007 by the National Statistical Office. Thus although there have been several previous studies of gender and ageing in Thailand, our study brings the situation up to date and where appropriate, calls attention to changes that may have taken place (Knodel 2004; Sobieszczyk et al. 2003; Soonthornhada et al. 2008). In conformity with the conventional definition used in most studies of ageing and older people in Thailand (and developing countries generally), we define the older population as those persons aged 60 and more years.

## Thailand's demographic, social and economic setting

*Population Ageing.* Starting in the late 1960s, Thailand experienced a rapid and extensive decline in fertility and a substantial increase in life expectancy. By 2005, average life expectancy at birth exceeded 70 years, and the total fertility rate was below two children per woman (United Nations 2007a). Driven primarily by fertility decline, according to UN estimates, the share of the Thai population aged 60 and over almost doubled between 1975 and 2000.

Statistics for the older Thai population are presented in Table 1 based on recent estimates and projections issued by Thailand's National Economic Social and Development Board (NESDB 2007). These estimates indicate that population ageing will continue at a rapid pace between 2000 and 2030 with persons aged 60 and older expected to constitute one fourth of the population by the end of that period. The trend is relatively similar for the older male and female populations although ageing will occur at a modestly faster pace for women than for men.

Also indicated in Table 1 are the percent of each older age group that will be female. In common with almost all countries in the world, the number of women exceeds the number of men at older ages and this is increasingly so at more advanced ages. Thus for each of the years shown, women constitute only a modest majority of the 60-64 age group but represent more than 60% of persons age 80 and older. Moreover, the excess of women over men is expected to increase slightly during the three decades covered, particularly at the older ages. Among persons age 80 and older, for example, the share of women is anticipated to rise from 61% to 66% and thus will constitute virtually two thirds of the oldest old by 2030. This excess of older women over older men is sometimes referred to as the "feminization of the elderly". However, while there is a considerable excess of women over men at the oldest ages, these very

old age groups represent only a small share of all older persons. Hence men still constitute a very substantial share of all Thais aged 60 and over, ranging from between 43% and 45% during the projection period.

Mortality improvements at older ages are contributing to the ageing of the older population itself. Thus as the projections indicate, the relative share of all persons age 60 and older who are 70 and older will be considerably higher in 2030 than in 2000. Some fluctuation in the changing age distribution of older persons during the 30 years covered is evident reflecting fluctuations in the size of birth cohorts during the past, particularly during the period of the Second World War and its aftermath.

The final statistical indicator shown in Table 1 is the potential support ratio, a measure intended as an indication of the potential support base of persons in ages most likely to be economically productive relative to the numbers in older ages. In the present study we define this measure as the ratio of persons 15-59 to persons aged 60 and older.<sup>1</sup> A falling potential support ratio reflects a shrinking support base of adults on whom the old age population can depend. The decline in this ratio over the 30 year period covered by the projections is very dramatic falling from 7 in 2000 to only 2.4 in 2030. Despite the imprecise nature of this index, this trend is clearly significant in its implications. There can be no doubt that older age Thais in the future will have far fewer productive age persons per capita available to provide for their support.

**Table 1.** Selected statistics on population ageing in Thailand, 2000-2030

	2000	2010	2020	2030
Population age 60+ as % of population all ages				
total	9.4	11.9	17.5	25.1
male	8.7	10.7	15.6	22.3
female	10.2	13.1	19.3	27.8
% female in age group				
60-64	52.8	53.0	53.4	53.6
65-69	54.0	54.4	54.8	54.5
70-74	54.9	56.4	56.7	56.5
75-79	56.3	59.0	59.8	59.7
80+	61.1	63.2	65.5	66.0
all persons 60+	54.7	55.8	56.4	56.7
% of 60+ population in age group				
60-64	34.0	32.7	34.4	28.5
65-69	26.4	24.9	25.5	25.4
70-74	18.6	19.5	17.5	20.4
75-79	10.8	12.8	11.6	13.6
80+	10.1	10.0	11.0	12.1
all persons 60+	100	100	100	100
Potential support ratio (population 15-59/population 60+)	7.0	5.7	3.8	2.4

Source: 2007 NESDB population projections

*Social and economic context.* The Thai population is relatively homogeneous in its cultural aspects. The vast majority are ethnic Thais and speak some form of the Thai language. About 95 per cent are Buddhists (typically of the Theravada branch). About four per cent of the older population identify themselves as Chinese, and another nine per cent as mixed Thai and Chinese (Chayovan and Knodel 1997). Both these groups are disproportionately concentrated in the urban areas. Those who still identify strongly with their Chinese heritage tend to be patrilineal and patrilocal, while ethnic Thais traditionally favour bilateral descent and inheritance and matrilineal residence (Henderson *et al.* 1971; Mason 1992). Generally among Thais, children inherit equally, except that the one who stays with the parents often gains the house and perhaps an extra share of the land, a custom which generally favours women given the tendency towards matrilineal residence.

Respect for seniority has been an integral part of Thai culture. These values may well have changed in recent decades but systematic evidence of such change is still lacking. As in other Southeast Asian societies, the family traditionally takes the primary responsibility for older people in Thailand. A prevalent norm of filial obligations to parents underlies the existing system of inter-generational relations (Knodel, Saengtienchai and Sittitrai 1995). Parents also typically feel a continuing obligation to ensure their children's well-being, and inter-generational exchanges of support and services remain pervasive. The living arrangements of older aged parents and adult children are closely linked to this system of support exchanges with most older Thais either living with or very near to at least one of their adult children.

In terms of the country's economic situation, the World Bank classifies Thailand as a lower-middle income nation. During much of the last several decades, Thailand experienced rapid economic growth, with interruption lasting several years associated with the Asian economic crisis that started in mid-1997. The economy largely recovered from that crisis but the future is uncertain as the current global financial crisis unfolds.

## **Gender and ageing in government policy**

The Thai government's response to population ageing is relatively recent but increasingly vigorous. Responses include the formulation of a new national plan on ageing in 2002, the passage of the 2003 Act on Older Persons, and the establishment of organizations to encourage consideration of elderly related issues in government programmes. Interest in gender issues has also grown recently among policy makers, partly in response to recent campaigns by the UN and other international and donor agencies. The Second Long-term Women's Development Plan (1992-2011) recommends that older women be given special attention with respect to health and welfare services in light of the increasing number of older women as the population ages. It also calls for a campaign to help women prepare for old age by increasing their self-reliance. Nonetheless, government policies related to ageing are generally gender neutral and gender and ageing issues rarely are linked.

In 1993 the Department of Public Welfare started a program to provide monthly subsistence allowances for indigent old persons in rural areas. Since then the allowance was increased from 200 to 500 Baht (about US \$15). At the start of the programme, about 20,000 elderly received the monthly allowance. According to official statistics, the number who received the monthly allowance increased steadily to 1,755,666 in 2007. The latter figure would account for almost one-third of Thai elderly. This is somewhat above the 25% who reported receipt of allowances in the 2007 Survey of Older Persons (Knodel and Chayovan 2008). No special consideration in terms of gender is specified with respect to the allocation of allowances and, as indicated in the analysis presented below, roughly the same proportion of men and women receive allowances.

Government health benefits are largely equal for older Thai men and women. In 1989, the Ministry of Public Health established a free medical care program that permitted access to most services at government health facilities for disadvantaged older persons. The scheme was later extended to cover all persons age 60 and above. In 2007, a policy of free government health care was adopted for the entire population. Thus free government health care is currently universal in Thailand regardless of age. Thai government and state enterprise employees and their spouse, parents, and children are entitled to health insurance benefits that are superior to the government plan for the general public. Since more government employees are men, fewer older women than men likely have these health benefits through primary coverage. The potential for gender inequality, however, is mitigated by women's ability to benefit as spouses or parents of civil servants.

Two major government-sponsored plans provide retirement benefits in Thailand: a long-standing (but changing) one that covers government and state enterprise employees, and a much more recent one that covers employees in private enterprises under the Social Security Act. Because men comprise the larger proportion of government employees, they have some advantage over women for associated retirement benefits. Women, however, are eligible to share in retirement benefits as spouses of retired government employees. In 1998, the broader social security scheme initiated a pension fund to employees in private enterprises. Full old age benefits are limited to employees who contribute for at least 15 years and thus are not yet in effect and hence have little bearing on the current situation of older Thais.

## Data source

Although interest in issues related to ageing is relatively recent in Thailand, government agencies and academic institutions have been quick to recognize the need for adequate information to develop appropriate policies regarding Thailand's elderly population. As a result, major nationally representative surveys of older persons have been conducted with the first taking place in 1986. The present study relies primarily on the 2007 National Survey of Older Persons.<sup>2</sup> Where appropriate, comparisons with findings from earlier surveys are provided. The 2007 survey covered persons age 50 and older living in private households. Our analysis, however, is limited to the more than 30,000 persons age 60 and older.<sup>3</sup> For 27% of these respondents, information was provided by a proxy respondent. Just over 90% of the proxy interviews were provided by another household member. In three fourths of these cases the older person was absent. Health related problems of the older persons accounted for almost all of the proxy remaining interviews. In this study, with the exception of the analysis of responses related to psychological well-being, we base results on responses provided by either the older person or a proxy. For convenience we use the term respondent to refer to either the older persons to whom the responses apply regardless of whether or not a proxy actually provided the information.

The fact that the survey is limited to private households means that older persons in institutional settings are not covered. Thus the small numbers of older persons in old age or nursing homes are omitted.<sup>4</sup> More importantly, older persons living in religious institutions such monks and nuns are omitted. Given that about 2% of Thai men age 60 and over are monks according to the 2000 census, these omissions need to be kept in mind when interpreting results for men.

## Demographic and socioeconomic characteristics

*Marital status.* An elderly persons' marital status has important implications for many aspects of their well-being. Spouses can be primary sources of material, social and emotional support and provide personal care during times of illness or frailty. Thus living with a spouse typically has advantages for older persons. As Table 2 shows, very few Thai elders never married. Almost all who are married live with their spouse with only a little over 2% being married but living separately. Likewise a similar small share are separated or divorced. Age and gender differences, however, are pronounced. The percent who

are currently married declines sharply with age while the percent widowed increases commensurately with age reflecting the impact of mortality in dissolving marriages and a likely decline in chances of remarriage with advancing age.

**Table 2.** Marital status of persons age 60 and older, by gender and age, Thailand 2007

	Never married		Married living with spouse		Married living separately		Widowed		Separated/ Divorced	
Age	men	women	men	women	men	women	men	women	men	women
60-64	1.4	4.5	87.3	58.8	2.8	3.1	6.8	29.1	1.7	4.6
65-69	1.9	4.4	84.4	50.2	2.0	2.2	9.9	40.2	1.7	3.0
70-74	0.8	3.1	77.4	37.9	3.2	1.5	16.7	55.0	2.0	2.5
75-79	1.7	3.1	66.3	33.1	2.5	1.3	27.6	61.0	1.8	1.6
80+	1.8	2.4	57.7	11.6	2.9	1.7	35.8	83.4	1.7	0.9
Total	1.5	3.8	79.8	44.2	2.7	2.1	14.3	46.9	1.7	3.0

Source: 2007 Survey of Older Persons in Thailand

The large majority elderly men (80%) are currently married and living with a spouse. In contrast, among elderly women only 44% live with a spouse and an even higher proportion are widowed (47%). This gender difference reflects a combination of higher male mortality, a tendency for men to marry women who are younger than themselves and higher remarriage rates among men than women in case of marital dissolution. Among the elderly in their early sixties substantial gender differences are already apparent in these respects but the difference become even more pronounced at older ages. Thus among the elderly in their 80s, only 12% of women live with a spouse compared to close to 60% of men.

*Number of living children.* As documented below, adult children remain important providers of material support and other forms of assistance to their older age parents and undoubtedly play an important role in their psychological well-being. Those who have no children must rely on others for these forms of assistance. Beyond this, research suggests that coresidence with children as well as the likelihood and amount of support from non-coresident children depends in part on the number of children available to provide such support (Knodel, Chayovan & Siriboon 1992; Knodel, Saengtienchai & Obiero 1995; Knodel & Chayovan 2008; Zimmer & Korinek 2008). Table 4 indicates the percent of older persons who are childless and the mean number of living children for men and women according to age.<sup>5</sup> The steady rise in number of living children with each successive five-year age group is a clear reflection of the past history of fertility decline in Thailand.

**Table 3.** Percent childless and mean number of living children among persons age 60 and older, by gender and age, Thailand 2007

Age	% with no children		Mean number of children			
			Among those with children		Among all persons	
	Men	Women	Men	Women	Men	Women
60-64	4.1	6.3	3.4	3.8	3.3	3.5
65-69	3.0	6.1	3.9	4.3	3.8	4.0
70-74	2.2	5.2	4.5	4.9	4.4	4.6
75-79	3.3	4.8	4.9	5.0	4.7	4.8
80+	3.6	5.2	5.1	5.0	4.9	4.7
Total	3.3	5.7	4.1	4.4	3.9	4.2

Note: Children include step and adopted children as well as own biological children

Although the vast majority of older persons in Thailand have living children, a clear gender difference is evident, with women in each age group being more likely to have no living children than men. However, among older persons with living children, women average modestly more children than older men. Thus the mean number of children among all older men and women in each age group is relatively similar. Moreover since the survey on which Table 3 is based is limited to private households it excludes monks, many of whom are likely to be childless. Thus, the actual gender difference in childlessness in the overall older population if all men were taken into account could be even smaller than the survey indicates.

*Education and literacy.* Educational levels and literacy of the Thai population has improved greatly over the past 80 years. As a result, as evident in Table 4, literacy rates and educational attainment decline with age for both older men and women. At the same time, for every age group shown, women are less likely to be literate, to have any education, or to have secondary or higher education. The gender gap in literacy and having any education, as measured by percentage point differences, are far less pronounced among the younger than among the older old. At the same time the gap with respect to having secondary or higher education varies little by age.

**Table 4.** Literacy and educational attainment by gender and age, Thailand 2007

Age	% literate		% with any education		% with secondary or higher education	
	men	women	men	women	men	women
60-64	90.8	81.5	93.5	87.6	17.5	9.9
65-69	87.6	74.9	91.4	81.9	14.1	6.2
70-74	84.1	63.5	88.8	75.8	11.2	3.6
75-79	77.0	60.7	85.8	75.6	7.7	3.8
80+	64.9	37.9	78.1	51.6	8.8	2.6
Total	84.9	81.5	89.9	87.6	13.6	6.2

Source: 2007 Survey of Older Persons in Thailand

Formal schooling increased rapidly in Thailand during the lifetime of the current elderly generation. At the same time the gender gap not only declined but in recent years reversed (Knodel 1997). Thus, through a process of cohort succession, the educational distribution as well as gender differences in educational attainment of future Thai elderly will increasingly differ from that of today. Since education is largely "fixed" at an earlier stages of life, projecting the changing educational composition of persons who will be in the elderly age range in the future based on information for the current adult population below the elderly ages is a relatively straightforward exercise.

A recent study provides projections of the educational characteristics of the population age 65 and over in Thailand using census data from 2000 (Hermalin, Ofstedal & Tesfai 2007). Table 5 shows the results by gender as projected from 2000 through 2045. Two indicators are provided. The first shows the percent who have no more than primary education including those lacking any formal education. The second shows the percent who have at least some upper secondary or higher education. Throughout the entire period covered by the projection, men have more education than women. Higher percentages of older women than men have no more than a primary education and a lower percentage have upper secondary or higher education. Overall, the educational profile of the older population in Thailand will improve considerably by 2045. Still, for the next few decades, a large majority of both older men and women will have had at most only a primary level education and just a small minority will have attained upper secondary or higher education. By 2030, however, the educational composition of the population 65 and older starts to show significant improvements reflecting the major expansion of secondary education in Thailand that began around 1990 (Knodel 1997).



**Table 5.** Projections of the educational characteristics of the Thai population age 65 and over (based on the 2000 census), 2000-2045

	% with primary or less education		% with upper secondary or higher education		Index of dissimilarity between educational distributions by gender
	Men	Women	Men	Women	
2000	90.1	96.7	4.5	1.6	0.194
2005	88.5	95.9	5.6	2.2	0.167
2010	85.0	94.0	7.5	3.5	0.140
2015	81.9	91.4	9.4	5.1	0.109
2020	78.8	88.7	11.8	7.2	0.100
2025	73.6	84.2	15.1	10.6	0.106
2030	68.4	78.8	18.4	14.3	0.104
2035	63.3	73.0	21.0	17.5	0.097
2040	58.0	66.3	23.4	20.9	0.090
2045	49.6	55.8	26.2	25.4	0.083

Source: Hermalin, Ofstedal and Tesfai 2006 (original data provided by authors).

Note: The index of dissimilarity equals half the sum of the absolute differences in proportions of men and women at each level of education (using five levels: less than primary, primary, lower secondary, upper secondary, and at least some tertiary).

Decreases in the index of dissimilarity indicate that gender differences in educational attainment will decrease throughout the period covered by the projection. The index refers to the minimum proportion of either sex that would have to be shifted for the compositions of men and women to be identical. The consistent decline in the index signifies decreasing educational inequality between older men and women as time progresses. Thus although male advantage is still evident in 2045, it is considerably reduced compared to the situation in 2000.

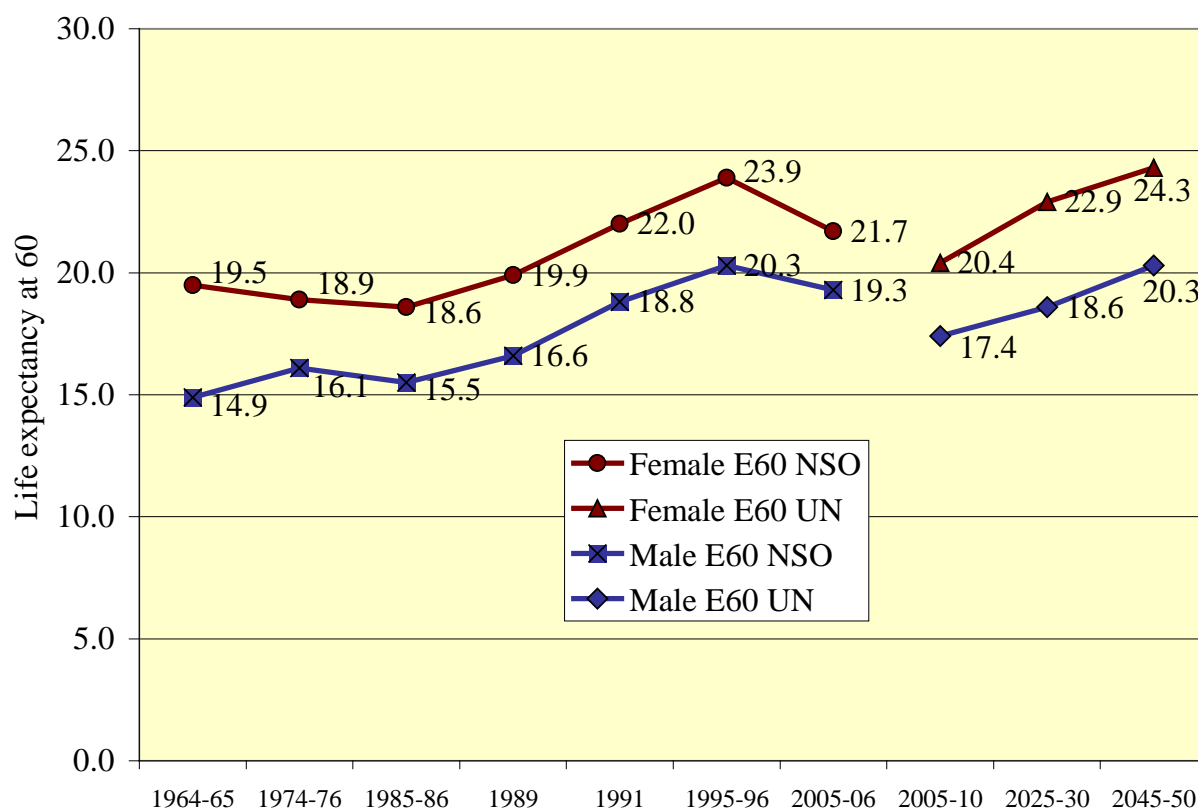
## Health

While the concept of well-being incorporates many different dimensions, perhaps none is of more central concern to older persons than their physical health. In virtually all populations, biological processes ensure not only that the risk of mortality increases steadily with age but so do functional limitations and chronic illness. Biological and social processes also shape gender differences in mortality and health. Neither the progression of changing physical well-being with age nor gender differences, however, necessarily remain static especially in light of continuing advances in medical technologies and changing environments in which people live out their lives.

*Older age mortality.* The ultimate measure of health is survival. Since death registration in Thailand is incomplete, estimates of mortality depend largely on the periodic Surveys of Population Change conducted by the National Statistical Office (NSO). The methodology and quality of these surveys have varied over time. Estimates of older age mortality are particularly sensitive to the accuracy of age-reporting, a potential problem in Thailand as in most other countries. To the extent that age tends to be overstated at older years, mortality will be underestimated at advanced ages and as a result life expectancy at older ages exaggerated.

Figure 1 presents estimates of life expectancy of older men and women based on the NSO surveys and UN projections for the future (UN 2007b).<sup>6</sup> The NSO results indicate substantial improvement in life expectancy at age 60 for both men and women between the mid-1980s and the mid-1990s. The most recent survey, for the years 2005-06, however, shows a decline in life expectancy at age 60 for both men and women. There is some evidence of data quality problems in the 2005-06 Survey of Population Change and hence the decline in older age life expectancy relative to earlier surveys may be an artifact of differing levels of accuracy (Knodel & Chayovan 2008). Moreover, the UN projections of life expectancy at age 60, which begin at the period 2005-10, start at even lower levels than indicated by NSO estimates for 2005-06 suggesting that the past results from the Survey of Population Change may underestimate older age mortality. Both sets of estimates, however, agree that men experience higher mortality than women at older ages resulting in lower life expectancy at age 60. Indeed, life tables produced by the Surveys of Population change consistently indicate a mortality disadvantage at ages below 60 as well. Although firm conclusions are not possible regarding trends, it seems reasonable to assume that the trend has been towards improved survival at older ages even if the precise levels of survivorship remain in question. Not in doubt, however, is that older males are clearly disadvantaged relative to older women with respect to their survival chances.

**Figure 1.** Life expectancy at age 60 by sex for Thailand, estimates from the National Statistical Office (NSO) and the United Nations (UN) Population Division



Sources: Surveys of Population Change conducted by the National Statistical Office, Thailand and UN (2007a).

Measures of overall life expectancy reflect mortality but do not take into account that some years may be in poor health or in a state of disability. The concept of active life expectancy has been developed to measure expected years of healthy life. Differences between active and overall life expectancy indicate the number of years that can be expected to be lived in seriously poor health or with disability. Estimates of active life expectancy, especially at older ages, need to be considered with caution. They depend not only on the same often questionable mortality data that determine the total years of life expected but also on accurate reporting of disability and health conditions by age. Thus active life expectancy estimates are even more subject to error than overall life expectancy. Moreover, they will vary with the particular definitions of good health used.

Table 6 shows recent estimates of active life expectancy at age 60 based on the life table calculated by NSO from the 2005-06 Survey of Population Change and functional limitation data from the 2007 Survey of Older persons in Thailand. Active years of life are defined as those in which a person is able to carry out three basic activities of daily living: eating, dressing, and toileting (including bathing, washing face, and brushing teeth) without assistance. Years with serious limitation refer to those during which one or more of these three activities cannot be performed by self. Estimates are shown for different ages within the elderly age span.

**Table 6:** Life expectancy (LE), Active life expectancy (ALE) and years with serious limitations by age and sex, Thailand, 2005/2007

Age from which life expectancy is estimated	Male			Female		
	LE	ALE	Years with serious limitation	LE*	ALE	Years with serious limitation
60	19.34	18.52	0.82	21.66	20.29	1.37
65	16.22	15.39	0.83	17.91	16.51	1.40
70	12.48	11.70	0.78	14.59	13.15	1.44
75	10.31	9.51	0.80	11.57	10.10	1.47
80	8.55	7.64	0.91	8.95	7.40	1.55

Notes: LE Based on Thailand Life Tables 2005-06 from the 2005-06 Survey of Population Change.

ALE refers to expected years during which three main activities of daily living (eating, putting on clothes, and toileting including bathing, washing face, and brushing teeth) can be performed by self; years with serious limitation refers to those during which one or more of these activities cannot be performed by self.

At each age, both overall life expectancy and active life expectancy are longer for women than for men. However, the period during which women will live with at least one serious limitation in daily living is longer than for men. Thus at age 60, women can expect to live an additional 21.7 years compared to 19.3 years for men. However of these years, men will experience on average only 0.8 years during which they have a serious limitation while women will suffer such limitations for an average of 1.4 years. Regardless of this difference, these estimates suggest that most men and women will live much of their older years in sufficient health to carry out basic activities on their own without extensive hands-on long term care.

*Physical and psychological well-being.* Self assessments of health status provide a convenient and reasonably valid indicator of overall health that typically relate well to other more objective measures and are reasonably effective predictors of mortality (Idler and Benyami 1997). Table 7 provides recent information on self assessments of health as well as selected self reported health problems of older Thais. For each age group within the elderly age range, gender differences in self assessed health are in the opposite direction as those with respect to life expectancy and active life expectancy. This paradox of older women experiencing better mortality but worse health status is a common finding in many populations (Verbrugge 1989). One important part of the explanation is that older men are more prone to

fatal diseases and accidents while women are more prone to non-life-threatening illnesses. For both men and women, the percent who indicate their health is poor or very poor increases noticeably with age. The worsening of self-assessed health with age, however, is more pronounced for men so that among Thais age 80 and over, gender differences are modest.

**Table 7.** Selected measures of health by gender and age, Thailand 2007

	All 60+		60-69		70-79		80+	
	men	women	men	women	men	women	men	women
Self-assessed health (% distribution)								
good or very good	53.2	41.7	61.0	50.0	43.9	32.3	30.1	26.6
fair	26.7	30.7	24.4	28.3	30.5	34.6	29.4	31.5
poor or very poor	20.1	27.5	14.6	21.7	25.7	33.1	40.4	42.0
total	100	100	100	100	100	100	100	100
% who do not see clearly	15.9	25.0	10.2	15.5	20.8	33.7	39.9	49.3
% who do not hear clearly	13.0	15.6	6.7	7.8	18.1	20.7	40.5	42.1
% having problems with incontinence	13.6	19.8	9.3	15.0	18.3	23.3	28.2	34.9
% who were ill during past 5 years	60.5	65.8	57.7	61.1	62.9	70.2	72.9	78.1

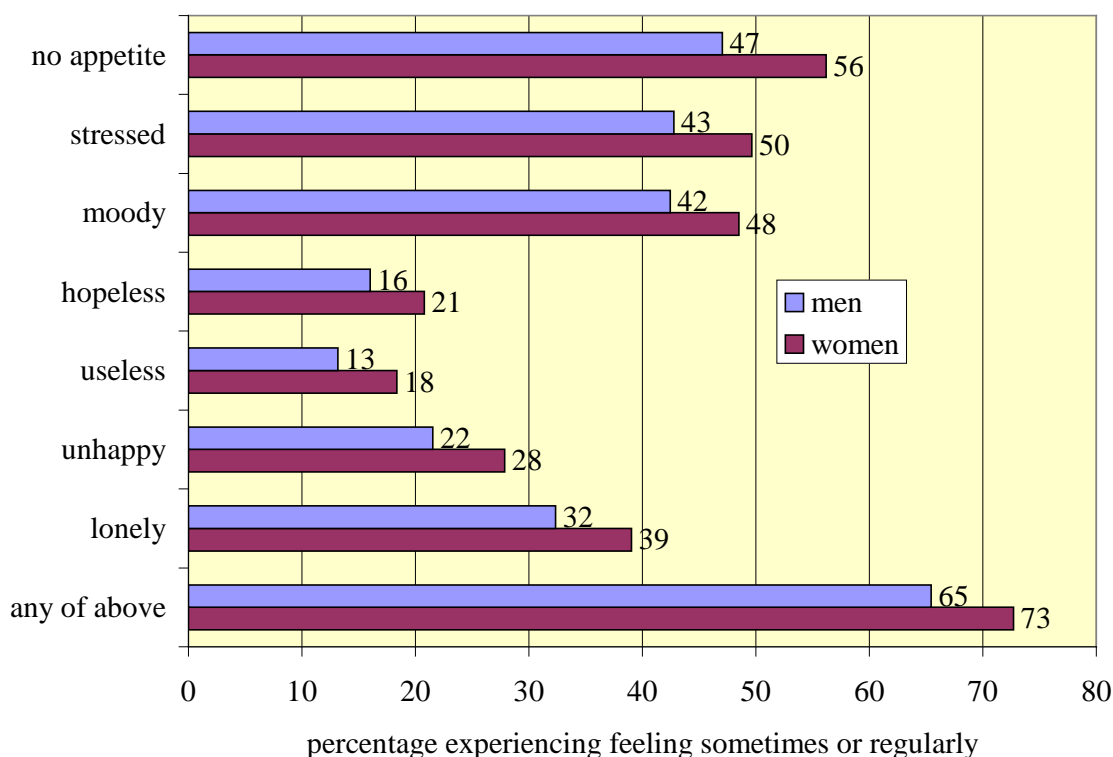
Source: 2007 Survey of Older Persons in Thailand

Note: All gender differences are statistically significant at the .01 level except for self-assessed health and hearing among those age 80+.

Table 7 also presents recent information on several health problems among older aged Thais. Consistent with self evaluations on overall health, all measures show women do worse than men. Problems with vision and hearing are both more commonly reported by women than men as is incontinence. Women are also more likely than men to report being ill during the past five years. Again for both men and women, each of these problems increases with age.

Figure 2 compares older men and women with respect to their responses about a series of items dealing with psychological well-being. On every item shown, a higher percentage of women give responses indicating they experience problems. Thus compared to men, older women are more likely to lack appetite and more likely to feel stressed, moody, hopeless, useless, unhappy, or lonely. Overall almost three-fourth of older women report experiencing at least one of these problems compared to just under two thirds of older men.

*Functional limitations.* One serious consequence of declining health and increased frailty associated with ageing is experiencing difficulty with physical movement and in carrying out basic activities of daily living. As functional limitations increase, assistance by caregivers becomes increasingly necessary. Table 8 examines measures of functioning by looking at a variety of potential disabilities.<sup>7</sup> The first three (eating, dressing, and bathing or using the toilet) are the most basic functional activities and were used to calculate active life expectancy as noted above. Only relatively small percentages of older men or women overall are unable to do these three activities by themselves. Among all elderly, women are more likely to report being limited on each of the activities listed, a pattern that largely holds for all age groups shown except with respect to the three basic limitations among persons in their 60s. Among all elderly, 45% of women report at least having one of the limitations listed compared to only 25% of men. The mean number of disabilities is also substantially higher for women than for men. For both men and women, the likelihood of limitations increases substantially with age.

**Figure 2.** Indicators of psychological well being, by gender, persons aged 60+, Thailand 2007

Source: 2007 Survey of Older Persons in Thailand

Note: Results exclude proxies. All gender differences statistically significant at the .01 level.

**Table 8.** Functional limitations by gender and age, Thailand 2007

	All 60+		60-69		70-79		80+	
	men	women	men	women	men	women	men	women
% reporting having problems performing								
eating	2.1	2.4	1.2	0.8	2.5	2.8	6.9	9.7
dressing	2.6	3.3	1.6	1.2	3.1	3.5	8.5	14.2
bathing/using toilet	2.8	3.9	1.6	1.6	3.3	3.9	9.7	16.1
squatting	8.4	15.6	4.4	8.2	12.2	21.0	24.3	38.2
lifting 5 kilos	18.0	34.2	9.5	19.4	26.2	47.4	50.1	73.0
walking 200-300 meters	12.1	20.6	5.9	8.9	17.4	28.8	38.7	58.9
climbing 2 or 3 stairs	9.9	16.6	4.6	7.3	14.6	22.4	31.7	49.0
using transportation	17.6	32.4	7.8	15.9	26.9	46.6	55.7	77.3
counting change	7.9	13.1	2.8	4.8	11.7	18.0	30.7	42.1
any of the above	25.4	44.6	13.4	27.9	38.0	60.9	67.4	85.0
any basic limitation(a)	3.2	4.2	2.0	1.7	3.5	4.3	17.4	14.8
Mean number functional limitations	0.81	1.42	0.39	0.68	1.18	1.94	2.56	3.77

Source: 2007 Survey of Older Persons in Thailand

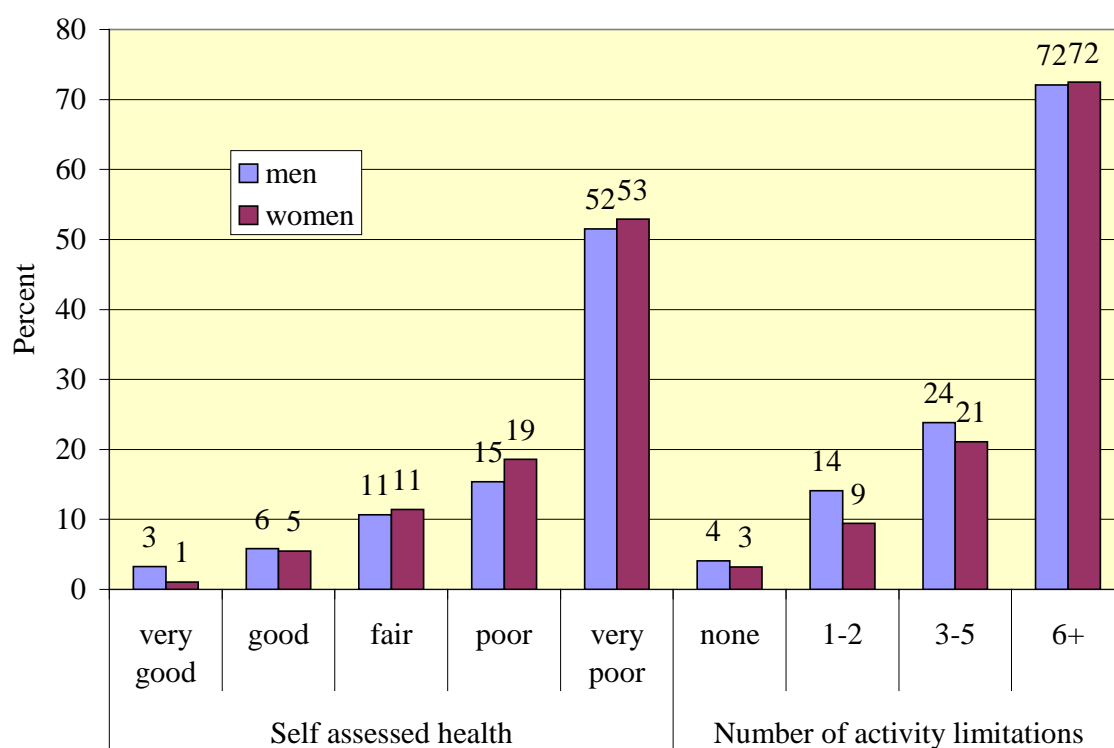
Notes: all gender differences statistically significant at .01 level except eating for those age 60-69 and 70-79; dressing and bathing/toileting for those age 60-69 and 70-79; and any basic limitation for those age 60-69 and 70-79.

(a) Basic limitations refer to problems with eating, dressing, and bathing or using toilet.

*Care assistance.* Presumably, an inability to independently eat, dress, bathe or use the toilet by oneself signifies the most severe functional limitations and the greatest need for a caregiver to assist on a daily basis. The 2007 Survey of Persons in Thailand did not ask directly if respondents were in need of assistance with their daily living activities but simply asked who the respondent's current caregiver is. The vast majority of respondents, 89% of men and 87% of women, indicated that they took care of themselves, presumably implying that they did not need a caregiver. Only 1% of both men and women indicated that they needed care but did not receive any. The remainder specified who it was that provided care.

Figure 3 shows the percent of elderly who report they receive assistance from someone in carrying out daily living activities according to their self-assessed health status and according to the number of activity limitations they reported. For both men and women, the percent who receive assistance increases with worsening health status. Particularly pronounced is the much higher percentage who receives assistance among those who report that their health status is very poor as well as among those who report six or more limitations compared to all others. At the same time, there is little gender difference in the percent who report receiving assistance within any of the self-assessed health categories or number of activity limitation categories shown.

**Figure 3.** Percent who report having someone who provides care, by gender and health condition, Thailand 2007



Source: 2007 Survey of Older Persons in Thailand

Note: Gender differences statistically significant at the .01 level among persons with very good and poor health, and among persons among persons with no and with 1-2 activity limitations.

When asked who helped them most with their daily activities, almost 90% of older persons responded that they did these activities by themselves, presumably in most cases because they did not need assistance. Table 9 indicates who serves as primary caregivers for all older persons who said someone helped them with daily activities. Results are also shown separately for married respondents who live with a spouse and all other respondents since a spousal assistance is largely limited to the former group.

**Table 9.** Percent distribution of caregivers of persons 60 and older who have a caregiver, by gender and marital situation, Thailand 2007

	Total		Marital situation			
	men	women	living with spouse		other	
Caregiver			men	women	men	women
spouse	53.2	11.5	72.1	45.1	1.4	0.0
son	10.9	12.7	8.6	9.2	17.6	13.9
daughter	24.4	51.0	15.1	36.5	49.7	56.0
child-in-law	4.0	8.7	2.0	4.5	9.7	10.2
other relative	5.8	10.4	1.2	3.3	18.2	12.9
non-relative	1.6	5.5	1.0	1.4	3.4	7.0
total	100	100	100	100	100	100
% care for by child or child-in-law	39.4	72.5	25.6	50.2	77.0	80.2

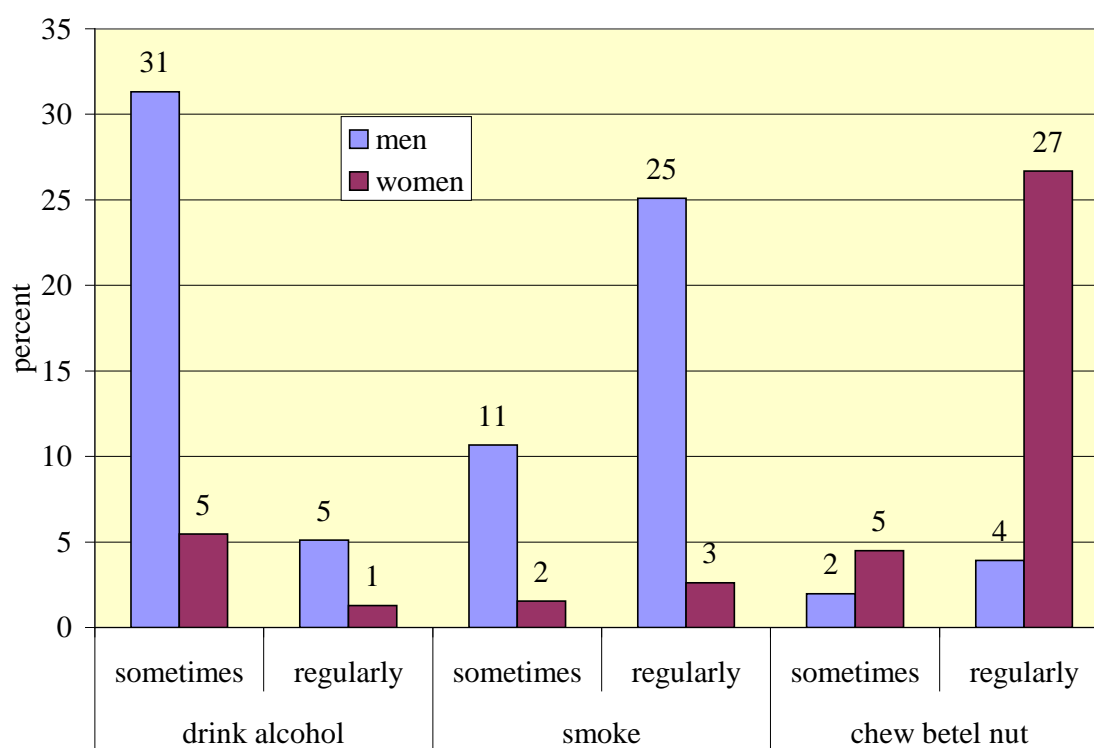
Source: 2007 Survey of Older Persons in Thailand

Note: Gender differences are statistically significant at the .01 for total and both marital situations.

Substantial differences are evident between older men and women with respect to caregivers. For men, a wife is the most common caregiver, while for women a child or child-in-law most frequently fulfilled this role. Overall, more than half of the men with a caregiver indicated that their spouse serves this role compared to only 12% of women. A large part of this difference arises because of the higher levels of widowhood among women, a condition that obviously precludes spouses as caregivers. When restricted to elderly currently married and living with their spouse, the difference in the percent of men and women who cite a spouse as the main caregiver narrows considerably, although even in this group wives are much more likely to serve as primary caregivers for their husbands than the reverse. Nevertheless, 45% of women who live with their husband and receive care report that the husband is their main caregiver.

As for those who do not live with a spouse, children are by far the most common primary caregiver with little difference between older men and older women. Men not living with a spouse are somewhat more likely than women to receive care from a son while women not living with a spouse are somewhat more likely than men to receive care from a daughter.

*Risk Behaviors.* Gender differences in health and longevity result from both biological and social risk factors. Generally men are more likely than women to engage in risk behaviors that are harmful to health (WHO 2001). As Figure 4 makes clear, this difference is pronounced in Thailand with respect to smoking and drinking, which very likely contributes to the higher male mortality among older Thais. The health implications of alcohol are complex because moderate consumption may be protective of heart disease, while excessive drinking has serious adverse effects (WHO 2001). In Thailand, however, excessive rather than moderate alcohol use is typical (Klausner 1993). At the same time, although when drinking occurs it frequently leads to excessive intake of alcohol, it tends to be occasional. Thus among men who said they drink alcohol, only a modest minority indicated it was on a regular basis. In contrast, women are much more likely than men to report currently chewing betel nut and to do it on a regular basis. Betel nut chewing can be considered a risk behavior because it is a mild narcotic associated with mouth and throat cancer (Reichart 1995).

**Figure 4.** Health risk behaviors by gender, persons aged 60 and over, Thailand 2007

Source: 2007 Survey of Older Persons in Thailand

Note: All gender difference are statistically significant at the .01 level

Table 10 shows the association of these three risk behaviors with age for older men and women. For both men and women, the percent who drink and the percent who smoke clearly decline with each successive age group. This pattern likely reflects the relinquishing of these behaviors as one ages and is thus a true age effect. In contrast, age is associated with a sharp increase in the percent who chew betel nut. This likely is largely a cohort effect reflecting declines in betel nut chewing during the period when respondents were coming of age.

**Table 10.** Health risk behaviors by gender and age, persons aged 60+, Thailand 2007

Age	% who drink alcohol sometimes or regularly		% who smoke sometimes or regularly		% who chew betel nut sometimes or regularly	
	Men	Women	Men	Women	Men	Women
60-64	48.9	9.2	39.7	5.6	4.0	22.7
65-69	39.1	7.7	40.3	4.1	4.7	27.9
70-74	28.4	5.7	31.0	3.7	6.4	35.4
75-79	23.8	4.1	31.3	2.5	8.7	40.9
80+	12.4	2.5	22.1	2.9	12.4	44.7
Total	36.4	6.8	35.8	4.2	5.9	31.2

Note: All gender differences are statistically significant at the .01 level



Overall, these results show that older Thai women report poorer health and physical functioning than do men. However, this gap must be seen in the context of higher levels of health risk behavior among men and, more to the point, greater male disadvantage in the ultimate health outcome, namely survival.

### Living arrangements

Many aspects of well-being of older persons are influenced by their living arrangements. In Thailand, as in most of East and Southeast Asia, living with or nearby adult children, typically in a stem family configuration, has been a predominant pattern and has played a central role in the context of family support (Cowgill 1968, 1972). Childlessness is not a common limitation for such arrangements since only about 5 percent of current Thai elders have no living children. Older Thais often view living arrangements that permit frequent access between the two generations as crucial to their own well-being (Knodel, Saengtienchai & Sittitrai 1995). Living alone is usually viewed as a disadvantage. Not only is it likely to be associated with less frequent interpersonal interactions, and hence feelings of loneliness, but there is also a greater chance that urgent needs for assistance in case of an acute health crisis or accident will go unnoticed. In some cases, living alone may even signify desertion by others. Although living only with a spouse also indicates that adult children or other younger generation kin are not present in the household, a spouse can be a principal source of emotional and material support and personal care during illness or frailty. Coresidence can benefit both generations but the balance typically shifts over the life course until eventually parents reach ages in which they become largely dependent on others for care and support.

A key measure of living arrangements for older persons is the percentage who live in the same household with one or more of their children. Literal coresidence in this sense has been steadily declining in Thailand from 77% in 1986 to 59% in 2007. Still the majority of older Thais continue to live with children and when situations in which a child lives next door are taken into account, 71% of the Thais age 60 and over either lived with or adjacent to a child in 2007 (Knodel & Chayovan 2008).

Table 11 shows several measures of the living arrangements of older men and women. Although relatively few older Thais live alone, and only a modest proportion lives only with their spouse, gender differences are apparent in these respects. Living alone is more common among women than men while men are more likely to living only with a spouse than are women. These overall gender differences are a function of marital status differences. The difference in the percent of men and women who live only with a spouse is negligible among married persons who live together and men are actually more likely than women to live alone among elderly who do not live with spouse (30% vs. 16%).

**Table 11.** Selected measures of living arrangements, by gender and marital situation, persons aged 60 and over, Thailand 2007

Percent living:	Total		Marital situation			
			living with spouse		other	
	men	women	men	women	men	women
alone	6.0	8.9	d.n.a.	d.n.a.	29.8	16.0
only with spouse	21.3	12.3	26.6	27.8	d.n.a.	d.n.a.
with any child	57.4	60.9	57.5	56.1	57.1	64.7
with or next to any child	69.0	72.3	69.5	69.6	67.0	74.5
with any ever-married child	36.5	44.4	33.4	37.0	42.2	50.0
with an ever-married son	13.9	16.2	13.5	14.0	15.7	18.0
with an ever-married daughter	23.2	29.7	22.1	24.8	27.6	33.6

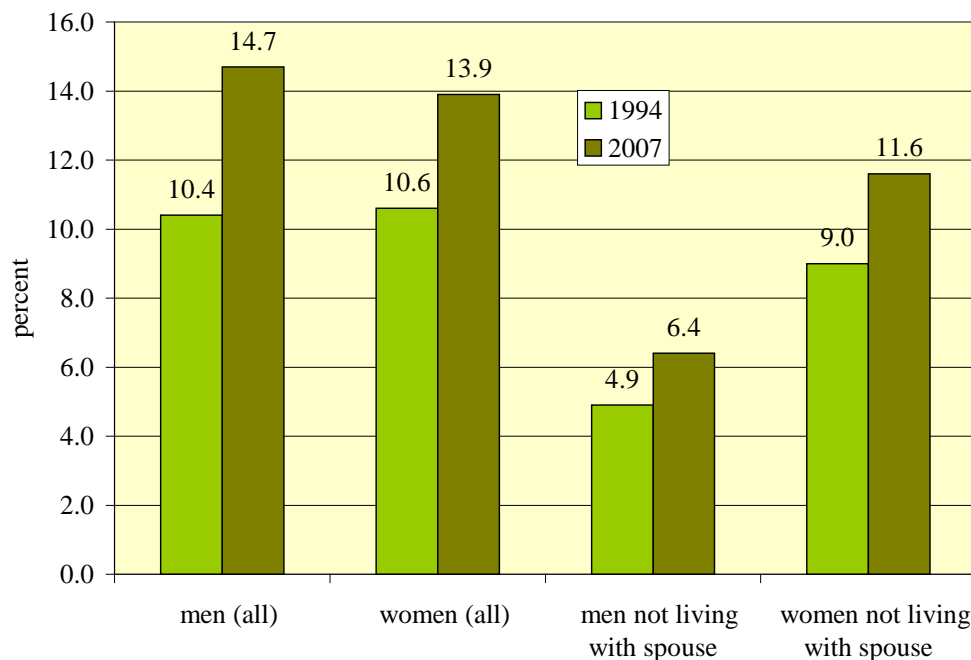
d.n.a. = does not apply.

Note: Within the total column, all gender differences are statistically significant at the .01 level; within living with spouse column only gender differences in living with any married child and with any married daughter are statistically significant at the .01 level; within the other marital situation column all gender differences except living with married son are statistically significant at the .01 level.

Gender differences with respect to coresidence or the combined percent that live with or next to a child among all elderly and among those married and living with a spouse are minimal. Among older persons not living with a spouse, however, women are modestly more likely than men to be coresident or live adjacent to a child. Coresidence with ever-married children reflects the mature stage of intergenerational living that evolves after single coresident children, who often depend on rather than support their parents, leave the household. Such coresidence is clearly related to the gender of the child with a much greater tendency to live with a married daughter than son. This tendency is even more pronounced among older women, especially those not living with a spouse. The preference to live with a married daughter reflects a well-known matrilineal tendency among ethnic Thais, especially in the northeast and upper north (Knodel, Chayovan & Siriboon 1992). It is noticeably lacking in Bangkok reflecting the far greater influence of ethnic Chinese and their traditional preference for residing with a married son.

One type of living arrangement involving older persons of particular interest is the so-called 'skip generation household'. Such households refer to situations in which grandparents live together with dependent grandchildren but in the absence of any of their adult children who have all either migrated or died. By far the main cause leading to skip generation households in Thailand is out-migration of adult children, typically to find employment, a phenomenon that has increased in recent years (Knodel & Chayovan 2008). There is no standard measure of skip generation households. For the purpose of the present study, skip generation households are defined as those which have one or more grandchildren but no married child or child-in-law in the household. Figure 5 compares the proportion of older men and women who live in skip generation households in 1994 and 2007. The results point to a substantial increase in the percent that live in skip generation households during the intervening period for both older men and women, a finding that is consistent with the substantial increase in migration of adult children of older aged rural Thai parents noted above. To some extent, deaths of adult children associated with the AIDS epidemic may also have contributed to the formation of skip generation households, especially in areas where the epidemic has been more severe.

**Figure 5.** Percent in skip-generation households, by gender, Thailand 1994 & 2007



Sources: 1994 and 2007 Surveys of Older Persons in Thailand.

Gender differences are significant at the .01 level only for those not living with a spouse.

Note: Skip-generation households are those with grandchildren but no married child or child-in-law.

Overall, at both times, there is little difference in the percent of older men or women in skip generation households although this does not necessarily mean that grandmothers and grandfathers take equal responsibility in providing care or support for the grandchildren. Some suggestion of the more important role played by grandmothers in this respect emerges when we focus on skip generation households among older persons who are not living with their spouse. Under these circumstances, women are more likely to be in a skip generation living arrangement than are older men in both years for which Figure 5 provides data.

### Social contact with children

For most parents, maintaining contact with children who move out of the household is an important source of social and emotional well being, especially if they do not have children living with them or very nearby. The migration of children out of the local community reduces opportunities for face-to-face interactions and thus can undermine intergenerational social support if contact is not maintained through other means. In recent years, the dramatic increase in access to telephones, especially cell phones, compared to just a decade or so ago, greatly expanded the ability to keep in contact. In addition, transportation system improvements likely facilitate the ease of visits.

Table 12 summarizes contact between parents and non-coresident children in terms of visits, telephone calls and e-mail messages during the past year. Results are limited to those parents who have at least one non-coresident child. Visits can be in either direction although previous research indicates that it is far more common for Thai adult children to visit parents than the reverse (Chayovan & Knodel 1997; Knodel & Saengtienchai 2007).

**Table 12.** Frequency of contact with non-coresident children during past year, parents age 60 and over, by gender and marital situation, Thailand 2007

Percent living:	Total		Marital situation			
			living with spouse		other	
<i>Among parents with at least one non-coresident child</i>	men	women	men	women	men	women
% who had visits with at least						
daily or almost daily	23.6	24.8	23.0	25.8	25.9	23.9
at least weekly	37.1	38.4	36.5	39.1	39.6	37.9
at least monthly	55.2	56.6	54.2	56.8	59.3	56.3
at least once during year	83.9	84.1	83.7	84.1	84.4	84.1
% who had telephone contact						
daily or almost daily	12.5	11.6	13.6	13.4	8.0	10.1
at least weekly	36.2	33.0	38.8	36.5	25.4	29.9
at least monthly	66.0	62.0	68.9	67.4	53.7	57.3
at least once during year	71.2	66.9	73.9	71.6	59.8	62.8
% who had e-mail contact						
any during year	0.6	0.3	0.7	0.4	0.0	0.2

Source: 2007 Survey of Older Persons in Thailand

Note: Within the total column, gender differences are statistically significant at the .01 level for weekly, monthly and yearly telephone contact; within with spouse column gender differences are statistically significant at the .01 level for daily, weekly and monthly visits and for yearly telephone contact; within the other marital situation column, gender differences are statistically significant at the .01 level for all levels of telephone contact.

The results indicate that it is relatively rare for elderly parents with non-coresident children not to see any during the year and that this does not differ to any great extent between mothers or fathers. In the case of parents who are living together, visits typically would be to both. Thus comparisons between mothers and fathers who do not live with a spouse are more revealing as to whether gender makes a difference in terms of visits with children. Again, as seen in Table 12, there is little difference between older men and older women in terms of the frequency with which they visit with non-coresident children.

Overall, almost two-thirds of elderly Thais with non-coresident children maintain at least monthly telephone contact and over a third have weekly phone contact. Gender differences are minimal and do not seem to vary with the marital situation of the parent. At this point in time, e-mail contact is extremely rare between elderly Thais and their non-coresident children regardless of the gender of the parent.

A common concern expressed in the popular media in Thailand, based largely on anecdotal evidence, is that migration of adult children is leaving large numbers of elderly parents deserted, especially in rural areas. Although there are no standard measures of desertion, combined information on living arrangements and contact with children provides a reasonable basis for assessing the situation. Table 13 shows a cumulative index of social contact with children among older persons who have at least one living child.

**Table 13.** Cumulative index and summary indicators of social contact with children during past year, parents age 60+, by gender and marital situation, Thailand 2007

	Total		Marital situation			
			living with spouse		other	
	men	women	men	women	men	women
Percent in hierarchical categories						
Coresides or lives adjacent to a child	71.7	77.3	71.0	71.2	74.7	82.5
At least almost daily visits or phone calls	79.8	83.9	79.5	79.8	81.0	87.4
At least weekly visits or phone calls	87.8	90.3	87.9	88.0	87.3	92.2
At least monthly visits or phone calls	96.5	96.9	96.7	97.1	95.7	96.7
At least one visit or phone call	98.7	98.8	98.7	98.8	98.3	98.8
Summary indicators						
% with less than monthly contact	3.5	3.1	3.3	2.9	4.3	3.3
% with less than monthly contact and under 5000 baht remittances	2.3	1.9	2.2	1.8	2.7	2.0
% with less than monthly contact and no remittances	1.3	0.8	1.2	0.7	1.8	1.0
% with no contact during year	1.4	1.2	1.3	1.2	1.7	1.2
% with no contact and under 5000 baht remittances	1.0	0.9	0.9	0.9	1.3	0.8
% contact and no remittances	0.6	0.4	0.5	0.4	1.2	0.5

Source: 2007 Survey of Older Persons in Thailand

Note: Contact is based on coresidence, adjacent living and visits or phone calls with any child.

The gender difference in the percentage distribution of cases on which the hierarchical categories are based are statistically significant at the .01 level for the total column and for the other marital situation column; gender differences in the summary indicators are statistically significant at the .01 level only for the % with less than monthly contact and no remittances in each column.

Presumably, parents see a child on a daily basis if they live with or adjacent to a child. For other parents, frequency of contact with children can be judged through information on visits or phone calls. There is little difference between fathers and mothers with respect to the percent who have at least weekly contact with a child (88% vs. 90%) and 97% of both have at least monthly contact. Mothers are somewhat more likely to have the most frequent levels contact with at least one child than fathers. This is the results primarily of differences in living arrangements among those who do not live with a spouse, among whom mothers are more likely to live with or adjacent to a child than fathers. In general, only about 1% of older age Thai parents, regardless of gender, report they had no contact with any of their children in the past year indicating that few are completely deserted.<sup>8</sup>

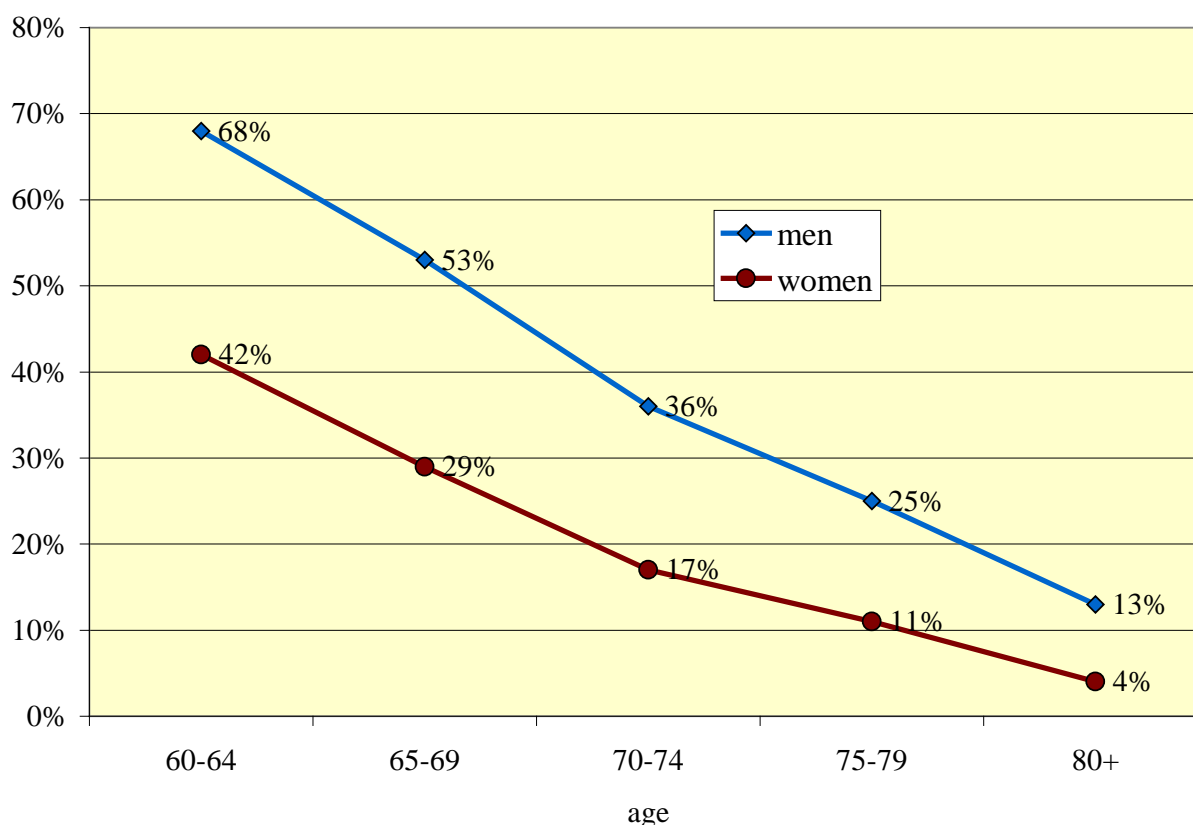
## Sources of material support

*Economic activity.* The official retirement age in Thailand is 60 for government employees and workers in state enterprises without distinction by gender. Employees of some private sector firms are also subject to a compulsory retirement age. For the majority of the population who are engaged in agriculture or the informal sector of the economy, the concept of some discrete age at which retirement occurs is largely lacking. Even among those who must leave their job at some specific age, retirement does not necessarily result in cessation of economic activity as they can find alternative work that has no compulsory retirement age. Still, for a variety of reasons including changes in physical strength and health, most Thais disengage from economic activities as they progress to older ages.

According to the 2007 Survey of Older Persons, 36% of all respondents age 60 or older reported that they worked during the previous week. As Figure 6 indicates, the percent who worked during the previous week declines steadily with age among both older men and women. At all ages within the elderly age span, men are more likely to work than women with the relative difference pronounced for each age group. Thus among those 60-64, just over two-thirds of men but only modestly more than two-fifths of women worked during the prior week. By ages 80 and over, although only 13% of men were still working this is still more than three times the 4% of women whom were still economically active. Interpretation of these results need to take account that the definition of work in NSO surveys refers to employment, work for pay or profit, and work as an unpaid family worker but excludes domestic chores within the household. The percent of older persons who worked during the prior week in 2007 resembles closely results from the 1980 census, indicating that little change has occurred in this respect (Chayovan, Knodel & Siriboon 1990).

Further detail about the work situations of older persons is provided in Table 14. Overall, among both men and women, economic activity is more prevalent in rural than urban areas likely reflecting the lack of distinct retirement ages in agricultural pursuits. In addition, the relative difference between the percentages of men and women who are economically active is somewhat greater in rural areas perhaps reflecting the need for physical strength in agricultural work and thus favors men over women.

Among those who do work, there is very little difference between men and women with respect to the number of days worked per week or hours worked per day. Distinctive gender differences are evident, however, in type of employment. Men are more likely than women to be classified as own account workers (including farmers) and women more likely than men to be counted as unpaid family workers, particularly in rural areas. Gender differences in the main reason given for working are only modest. For both, the most common reasons stated is the need for income for themselves or their household with most of the rest stating that they were sufficiently healthy to work and thus did not need to cease their economic activity. These two reasons are not necessarily alternative explanations, however, since those who say they continue to work because they are healthy may also be doing so because they need income and vice versa.

**Figure 6.** Percent who worked in previous week, by age and gender, Thailand 2007

Source: 2007 Survey of Older Persons in Thailand

Note: Gender differences are statistically significant at the .01 level for all age groups.

Among those who were not working, only a small minority of both men and women indicate they would be willing to work, although men are somewhat more likely to do so than women. With respect to the reason given for not working, the main gender difference is with respect to the need to do household work or provide family care which is distinctly more common for women than men. This difference together with the fact that work in the statistics excludes household chores strongly suggests that some of the gender difference in economic activity among older Thais reflects differences in traditional gender roles and division of labor within the family. Nevertheless, the fact that the main reason for not working for both men and women is that they feel they are too old or have health problems also suggests that the poorer health of women as indicated by the various measures reviewed above contributes to their lower level of economic activity.

*Sources of income.* Although important, work is but one of a number of possible sources of income for older aged Thais. As Table 15 indicates, children are by far the most common source of income regardless of gender of the older person. Overall four-fifths or more of both women and men receive some income from children. One's own work is distinctly the second most common source for men with about half reporting income from work, a figure consistent with the proportion who indicated they were economically active. For women there is no single pronounced second most common source. Overall 20% to 30% indicate they receive income from each of several sources including work, elderly allowances, spouse, and some combination of interest, savings and rent.

**Table 14.** Work situations of Thais age 60+, by gender and residence, Thailand 2007

	Total		Urban		Rural	
	men	women	men	women	men	women
% who worked last week	48.2	25.7	37.0	21.5	52.5	27.5
<i>Among those who worked last</i>						
Mean days worked per week	6.2	6.2	6.2	6.2	6.2	6.1
Mean hours worked per day	6.9	6.6	7.8	7.5	6.6	6.3
Type of employment						
employer	5.4	2.6	8.0	3.3	4.7	2.4
employee	16.2	13.9	22.3	17.8	14.5	12.7
own account worker	71.6	50.6	60.1	54.9	74.7	49.2
unpaid family worker	6.8	32.9	9.5	24.0	6.1	35.8
total	100	100	100	100	100	100
Main reason for working						
still healthy	36.6	36.8	40.6	42.9	35.5	34.9
needs income for self/household	53.0	48.6	50.0	44.5	53.9	50.0
to support children/others	2.0	5.7	1.9	4.4	2.1	6.2
other	8.3	8.8	7.5	8.3	8.5	9.0
total	100	100	100	100	100	100
<i>Among those not working</i>						
% willing to work	11.2	8.3	7.8	5.2	13.0	9.7
Main reason for not working						
too old/health problem	82.2	79.6	78.6	78.5	84.1	80.1
household work or family care	1.9	13.3	1.3	10.9	2.3	14.4
has pension	8.3	2.8	16.1	6.7	4.3	1.0
other	7.6	4.3	4.1	3.8	9.4	4.5
total	100	100	100	100	100	100

Source: 2007 Survey of Older Persons in Thailand

Note: All gender differences are statistically significant at the .01 level except for mean days worked per week under the total and urban columns.

Men and women differ only minimally with respect to the percent who report a spouse as a source of income. This results from two counteracting influences. Women are more likely to be widowed than men and thus less likely to have a spouse available as a possible source. At the same time, among married elderly who live with a spouse, women are considerably more likely than men to report a spouse as a source of income (48% vs. 30%), presumably largely because of the higher level of economic activity among men. Women are modestly more likely than men to report children and relatives as sources of income but the differences are small. There is also little gender difference in the percent who report elderly allowances. However men are more likely than women to report pensions as a source of income although even among men, fewer than 10% receive a pension. This low level reflects the high proportions of elderly Thais whose main occupation was in farming or otherwise outside the formal sector.

Table 15 also examines the main source of income. Although quite a few elderly have several sources, in most cases they differ considerably in their importance. For example, while children are a very common source of income, in some cases their contributions are largely of symbolic value and not a meaningful component of overall income. Several striking gender differences are apparent. Among the older

population overall, children are by far the most common main source of income for women while for men, children and work are almost equally common as the main source. Together children and work account for the main sources of income for about four fifths of older persons regardless of gender. Pensions are more common as the main source for men than for women while the reverse is true with regards to spouses as the main income source. Among married older persons living with spouses, the gender difference with respect to spouses as the main source is particularly pronounced. This undoubtedly reflects the higher level of economic activity among older men than women. Among older persons who do not live with a spouse, children are the most common main source of income for both men and women although even more so for women. Much of this difference among those who do not live with spouse is made up for by the higher percentages of men than women who report work as a main source.

**Table 15.** Sources of income and main source of income, by gender and marital situation, Thailand 2007

	Total		Marital situation			
	men	women	living with spouse		other	
			men	women	men	women
<i>Percent receiving income from the following sources</i>						
work	51.0	27.2	55.5	35.1	33.0	20.9
pension	8.5	2.9	8.7	3.0	7.5	2.8
elderly allowance	23.1	25.5	20.6	18.3	33.0	31.2
interest/savings/rent	33.8	30.1	35.0	32.0	29.1	28.6
spouse	24.8	22.1	30.3	48.1	3.1	1.4
children	79.5	85.3	79.8	85.6	78.2	85.0
relatives	9.5	12.3	7.3	7.7	17.9	16.0
other	1.3	1.7	1.2	1.2	1.5	2.2
<i>Main source of current income</i>						
work	41.4	18.8	45.2	24.6	26.7	14.1
pension	6.6	2.5	6.7	2.5	6.2	2.5
elderly allowance	2.5	3.0	1.8	1.4	5.3	4.4
interest/savings/rent	3.0	2.7	3.1	2.9	2.6	2.6
spouse	3.8	7.9	4.6	17.6	0.5	0.3
children	40.8	61.5	38.0	50.4	52.0	70.2
other relatives	1.4	2.9	0.2	0.3	6.2	5.0
other	0.4	0.6	0.3	0.3	0.5	0.9
total	100	100	100	100	100	100

Source: 2007 Survey of Older Persons in Thailand

Note: All gender differences are statistically significant at the .01 level except for percent receiving income from relatives and other under both with spouse and other marital situation columns and elderly allowance and interest/savings/rent under the other marital situation column.

*Family support.* Children can be important sources of economic support to elderly parents through providing money, food, and goods and indeed are frequently cited as a source of income. Results in Table 16 provide information on material support to parents from children during the prior year. Exchanges of money are shown separately for coresident and non-coresident children. In each case, results are limited to parents who have at least one child of the relevant type. Since members of the household typically share meals and amenities, exchanges within the same household, particularly with respect to food and goods, are difficult to interpret. Thus provision of food and goods were only asked in relation to non-coresident children in the 2007 survey.



**Table 16.** Material support from children during the past year, parents age 60+, Thailand 2007

	Total		Marital situation			
			living with spouse		other	
	Men	Women	Men	Women	Men	Women
% who received money from coresident children among parents with at least one coresident child						
any money	65.4	78.0	63.5	72.2	72.8	81.9
at least 1000 Baht	58.2	68.9	57.5	65.1	61.2	71.6
at least 5000 Baht	33.5	38.7	33.9	38.7	31.8	38.7
at least 10000 Baht	18.6	22.4	19.2	21.9	16.1	22.8
% who received material support from non-coresident children among parents with at least one non-coresident child						
Money						
any money	75.4	81.6	75.1	80.6	76.4	82.5
at least 1000 Baht	70.7	76.3	71.2	76.6	68.3	76.0
at least 5000 Baht	48.8	52.3	49.5	53.9	45.6	50.8
at least 10000 Baht	32.5	34.9	33.5	35.9	28.2	34.0
Food						
daily or almost daily	16.3	19.0	14.7	17.4	23.0	20.5
at least weekly	32.7	36.3	31.9	35.8	36.3	36.8
at least monthly	52.9	57.4	52.6	57.7	54.0	57.2
Goods or clothes						
at least monthly	16.3	18.9	16.1	17.8	16.8	19.9
at least once during year	79.7	83.2	80.1	83.6	77.9	83.0

Source: 2007 Survey of Older persons in Thailand

Note: All gender differences are statistically significant at the .01 level except for percent receiving food weekly under the other marital situation column and percent receiving goods under the total and other marital situation columns.

A substantial majority of parents coresiding with children received money during the year from at least one coresident child and almost two-thirds received at least 1000 baht in total. Receipt of larger amounts are considerably less common with just over a third receiving at least a total of 5000 baht and only a fifth at least 10,000 baht from a coresident child. Mothers are somewhat more likely than fathers to receive money from coresident children. This holds both for older age parents who are living with a spouse and those who are not. Receipt of money from non-coresident children is somewhat more common than from coresident children, especially with respect to larger amounts. Again mothers are favored regardless of marital situation.

Receipt of food from non-coresident children is very common in Thailand although in many cases it is provided only during occasional visits and is primarily of symbolic value. Regular provision of food is not unusual, however, and can be a meaningful source of material support. Receipt of food on a regular basis, is associated with increased age of parents and is modestly more common for elderly women than men. Receipt of clothing or goods at least occasionally is also very common but on a far less frequent basis than food. As with food, such gifts can often be more symbolic than of substantial material value but unlike food a single gift could also be a major item of significant value. Women compared to men are only minimally more likely to receive such help.

## Support provided by older persons

Older age Thais not only receive services and material support from other family members but also contribute to these exchanges within the family. In just over three-fourths of the cases in which the older age parents coreside with one or more of their children, the parents own the dwelling unit and thus in this sense provide shelter for the children who live with them. Although equivalent information is lacking in the 2007 survey, a 1995 survey of older persons indicates that men who coreside with an adult child are more likely to own the residence than are women who coreside. Thus in this respect older age men are more likely than women to contribute to providing shelter to adult children.<sup>9</sup> Older age parents also often provide useful services within the household including helping with chores, minding the house, and preparing meals. Regardless of residence, parents may provide direct financial assistance to their children. In addition, as grandparents they often assist with the care of grandchildren, from both coresident and non-coresident children. This frees the parents of the grandchildren to engage in economic activity outside the home. In the case of grandchildren from migrant children, the grandparents may virtually take full responsibility for their upbringing during their formative years.

*Financial.* Material support can flow in either direction. As Table 17 indicates, the flow of money from parents to children in the household is rather uncommon, and far less common than flows in the reverse direction (see Table 16). Nevertheless, men were more likely than women to give money to coresident as well as to non-coresident children, a gender difference that holds regardless of marital situation.

**Table 17.** Monetary support provided by parents age 60+ to children during the past year, by gender and marital situation, Thailand 2007

	Total		Marital situation			
	men	women	living with spouse		other	
			men	women	men	women
<i>Support to coresident children from parents with at least one coresident child</i>						
any money	16.9	7.8	17.6	10.4	13.9	5.9
at least 1000 Baht	14.7	6.2	15.7	8.8	10.7	4.5
at least 5000 Baht	9.2	3.2	9.8	5.0	7.1	2.1
at least 10000 Baht	6.0	1.9	6.4	3.2	4.4	0.9
<i>Support to non-coresident children from parents with at least one non-coresident child</i>						
any money	8.9	5.4	9.4	6.6	6.4	4.3
at least 1000 Baht	7.6	4.3	8.2	5.5	5.1	3.3
at least 5000 Baht	5.2	2.5	5.8	3.5	3.0	1.6
at least 10000 Baht	3.7	1.6	4.1	2.2	2.2	1.0

Source: 2007 Survey of Older Persons in Thailand

(a) Includes divorced, separated and living separately from spouse

Note: All gender differences are statistically significant at the .01 level.

*Grandchild care.* The 2007 Survey of Older Persons in Thailand includes information specifically about the number of coresident grandchildren with a parent in the household and the number without a parent in the household (i.e. whose parents either live elsewhere or have died). For grandchildren who have no parent living in the household, information is also available on who provides care and who supports them financially. Thus it provides more direct and detailed information on the extent to which older age grandparents are involved in raising grandchildren than estimates of skip generation households.

Table 18 presents information on coresident minor age grandchildren (i.e. under age 18) in the household of Thais age 60 and older. Over 40% of both older men and women live with at least one minor age grandchildren and one-fourth of both have coresident minor age grandchildren whose parents are absent. Among elderly overall, there is little difference the percent of men or women with a coresident grandchild. However, in situations where only one grandparent is in the household, grandmothers are more likely than grandfathers to live with a minor grandchild, especially when the grandchild has no parent present. This likely reflects the traditional division of labor in which women are more likely than men to take main responsibility for childrearing including for grandchildren.

**Table 18.** Presence of coresident minor age grandchildren and their care and support, persons age 60 and over, Thailand 2007

	Total		Marital situation			
	men	women	living with spouse		other	
			men	women	men	women
<b>Among all persons 60 and older</b>						
% with coresident minor age grandchild	41.7	44.9	43.8	45.4	33.5	44.5
% with coresident minor age grandchild whose parents are absent or dead <sup>(a)</sup>	25.4	25.2	27.9	28.7	15.2	22.5
<b>Among persons age 60 and over with coresident minor age grandchild whose parents are absent or dead</b>						
<i>% distribution of who cares for grandchild</i>						
self	12.5	33.9	10.8	25.3	25.2	42.6
spouse	22.2	4.1	25.3	8.0	0.0	0.2
self and spouse	20.7	12.1	23.6	23.7	0.0	0.4
other person	42.6	47.4	38.6	40.4	71.9	54.4
no one	1.9	2.4	1.7	2.5	2.9	2.3
total	100	100	100	100	100	100
<i>% distribution of who financially supports grandchild</i>						
self	6.2	5.5	6.3	3.2	6.0	7.9
spouse	2.4	1.8	2.7	3.5	0.0	0.1
self and spouse	7.1	3.9	8.1	7.7	0.0	0.0
parent of child	82.3	85.2	81.3	83.2	89.7	87.0
other person	1.2	2.7	0.9	1.4	3.6	3.9
no one	0.7	1.0	0.7	0.9	0.7	1.0
total	100	100	100	100	100	100

Source: 2007 Survey of Older Persons in Thailand

Notes: Minor age grandchildren are under age 18. All gender differences are statistically significant at the .01 level except percent with coresident minor age grandchild whose parents are absent or dead under the total column and living with spouse column and percent with coresident minor age grandchild under the living with spouse column.

(a) Because of ambiguity in the survey questionnaire a small number of cases with only adult grandchildren may be included in this category

Also shown in Table 18 is who provides care and material support for the minor age grandchildren who live with their grandparents but whose parents are absent. Grandmothers are more likely than grandfather's to be responsible for the care of the grandchildren. Regardless of the marital situation of the grandparents, grandmothers are considerably more likely than grandfathers to say that they are the one ones themselves who are in charge of the care. At the same time, however, among those who are married

and living together it is quite common for both spouses to share the care. It is also true that in a sizable proportion of cases some other household member other than the grandparents is the main caregiver for the grandchildren.

With respect to financial support of the grandchildren, in the large majority of cases it is the grandchild's own parents who are primarily responsible. A similar finding emerged from a recent specialized survey addressing the implications of migration of adult children for their older age rural parents (Knodel et al. 2007). This undoubtedly reflects an ability to send remittances by adult children who migrated elsewhere to find employment. In a small number of cases grandchildren take care of and financially support themselves, presumably reflecting that some are themselves adults. Among the small minority in which the grandparents are responsible, grandfathers appear to be somewhat more likely to be financially responsible than grandmothers except in cases where the grandparent is not living with a spouse.

### **Economic well-being**

To assess the material well-being of older persons we examine income, worth of major assets, quality of housing, and number of household possessions. Each of these indicators has limitations that require care when interpreting results. This is especially true for older persons who live in households shared with younger members who may be the main source of household support. Under such circumstances the direct income of the elderly members may be less important for their material well-being than the income of other members of the household. Also when older persons coreside, specific household possessions do not necessarily belong to the elderly themselves. Nevertheless, the possessions reflect the overall wealth status of the household and in many cases the older person typically benefit from them.

*Income and assets.* Table 19 presents measures of income and assets of persons age 60. The upper panel shows the percent distribution of the reported average annual income in Thai Baht (approximately 33 Baht = US \$1 at the time of the survey). The lower panel shows the percent distribution with respect to the total value of their property and savings. Property was defined broadly to include gold, expensive possessions such as a car, house, or land. Interpreting gender differences in income among married persons is complicated since spouses likely share benefits from each other's incomes. While access to income does not necessarily imply decision making and control over resources, in Thailand wives have considerable power within the family and typically control household budgets.<sup>10</sup> Likewise with ownership of assets, both partners in a married couple may benefit from the asset regardless of which spouse owns it. Among those not living with a spouse, gender comparisons are far less ambiguous since there is no spouse who may be sharing income or assets with the respondent.

Overall, older men have a more favorable distribution of income than do women. Women are more concentrated than men in the lower income categories and the reverse is true in the higher income categories. When the income distribution of men and women not living with a spouse are compared, however, there is far less difference and men are actually more likely to fall into the lowest income category than are women. Thus the overall gender difference reflects the situation of persons living with a spouse among whom many likely share the benefits of the spouse's income and may not necessarily signify a disadvantage for women.

Somewhat similar patterns are evident with respect to the combined value of property and savings. Overall, men tend to show a more favorable distribution in this regard than do women. But again, this pattern of female disadvantage is absent among those not living with a spouse among whom the distributions of the total value of property and savings for men and women are similar. The difference thus is limited solely to married older persons who live together. Since among couples, spouses likely benefit from each other's assets, these findings do not necessarily reflect a disadvantage with respect to material well-being among women compared to men.

**Table 19.** Percent distributions of average annual income, value of property and savings (in baht) and debt of persons age 60+, by area of residence, gender and marital status, Thailand 2007

	Total		Marital situation			
			living with spouse		other	
	men	women	men	women	men	women
Annual income						
under 10,000	13.9	19.1	10.8	14.4	26.2	22.8
10,000-19,999	15.1	19.2	14.9	18.3	16.0	20.0
20,000-29,999	17.2	18.0	17.7	19.0	15.0	17.2
30,000-49,999	18.4	17.0	19.4	18.3	14.4	16.0
50,000-99,999	17.4	13.4	17.9	15.3	15.5	11.9
100,000+	18.0	13.3	19.4	14.7	12.8	12.2
Total	100	100	100	100	100	100
Value of property and savings						
none	26.6	35.0	24.2	32.6	36.3	36.9
under 100,000	23.6	24.9	23.3	24.5	24.4	25.2
100,000-399,999	26.8	23.4	28.3	24.8	20.8	22.3
400,000-999,999	16.0	11.6	16.6	12.2	13.6	11.1
1,000,000+	7.0	5.2	7.5	5.9	4.9	4.6
Total	100	100	100	100	100	100

Source: 2007 Survey of Older Persons in Thailand

Note: All gender differences are statistically significant at the .01 level.

*Debt and potential assistance.* Regardless of income and assets, the economic situation of the household depends also on the extent of their debt and their ability to gain assistance in case severe financial difficulties arise. Table 20 provides information on both debt and potential assistance. Overall, slightly more than half of both older men and women live in households that are debt free. Likewise among those who live with a spouse there is little gender difference in this respect although among those not living with a spouse a modestly higher proportion of men indicate their household is not in debt.

More pronounced gender differences are evident with respect to who it is in the household who is in debt. Men are more likely to be themselves in debt or to share debt with another household member than are women. In contrast, for women who are in households in debt, the debt generally is the responsibility of some other member. This pattern is particularly pronounced among older persons who live with a spouse and thus suggests that husbands rather than wives tend to be responsible for household debt. No information is available on the nature of the debt. However if these debts are incurred in terms of household businesses such as borrowing for agricultural inputs, the gender difference in who is responsible for debt may reflect traditional gender roles in such matters as well as the higher level of economic activity among men compared to women.

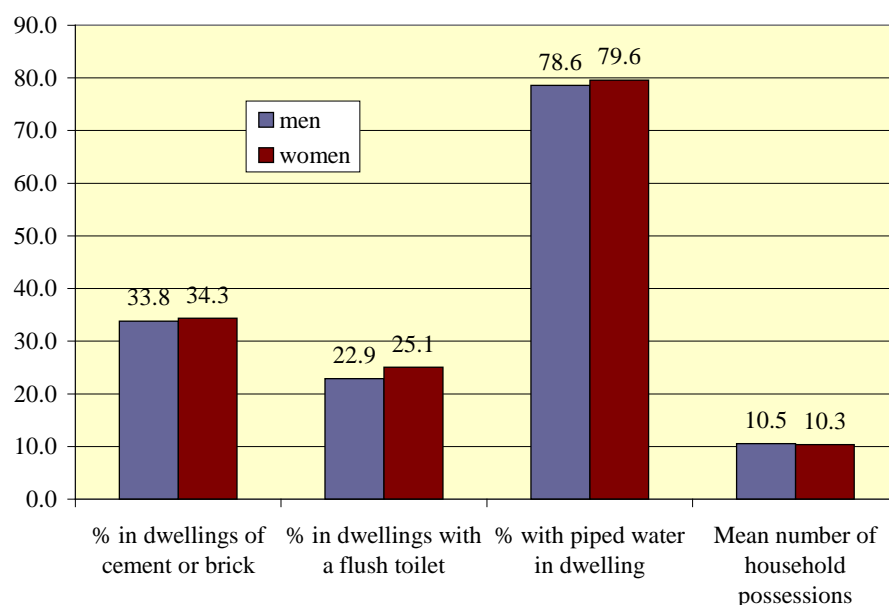
Over three fourths of both older men and women indicated that someone would be available to provide financial assistance in case it was needed. This is somewhat higher for those who live with a spouse than for those in other marital situations. Regardless of marital situation, however, gender differences are largely absent in this respect.

**Table 20.** Percent distribution according to debt in household and availability of someone who could provide financial assistance

	Total		Marital situation			
			living with spouse		other	
	Men	Women	Men	Women	Men	Women
Debt in household						
self only	14.6	7.1	15.5	4.5	11.0	9.2
other member only	19.7	30.9	18.2	30.0	25.8	31.6
self and other	14.7	9.1	16.9	13.8	5.9	5.4
no one in debt	51.0	52.9	49.4	51.7	57.3	53.8
Total	100	100	100	100	100	100
Availability of someone to provide financial assistance if needed						
yes	77.0	75.5	78.5	78.2	71.3	73.3
no	8.8	9.1	8.4	8.2	10.3	9.8
unsure	14.2	15.4	13.2	13.6	18.4	16.9
total	100	100	100	100	100	100

Note: All gender differences on debt in household are statistically significant at the .01 level; gender differences on availability of assistance are statistically significant at the .01 level only under the total column.

*Housing quality and household possessions.* Several indicators of housing quality are shown in Figure 7. These are living in dwellings constructed of cement or brick, having a flush toilet, and having piped water in the dwelling. Each of these is superior to their alternatives and thus reflects better economic standing. The material possessions of a household also reflect wealth. The 2007 survey on which Figure 7 is based asked about a series of items; the mean is a count based on 19 of these.

**Figure 7.** Gender differences among Thais age 60+ in housing quality and household possessions, Thailand 2007

Source: 2007 Survey of Older Persons in Thailand

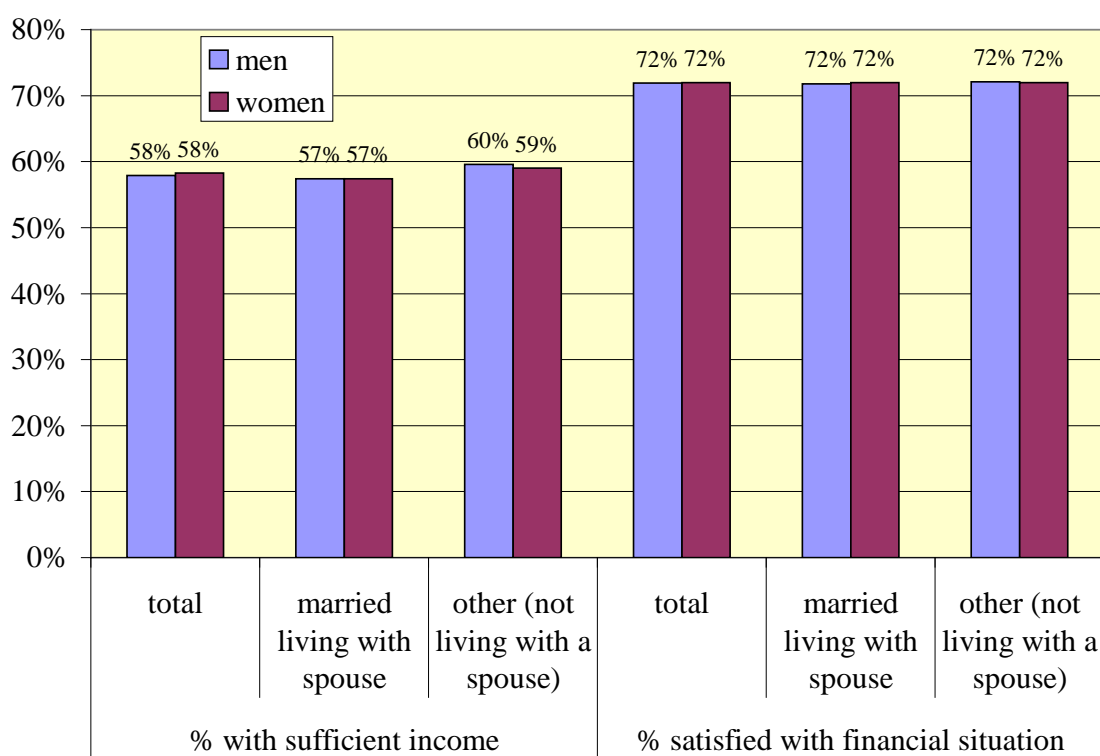
Note: Household possession score based on a total of 19 items. Gender differences in flush toilet and mean number of possessions are statistically significant at the .01 level

Gender differences among older Thais with respect to wealth as indicated by the quality of housing and number of household possessions are minimal. As Figure 7 shows, there is very little difference in the percent of older men and women who live in dwellings made of brick or cement, that have a flush toilet, or that have piped water within the house. Likewise, older men and women live in households with roughly the same number of possessions.

*Self assessed economic well-being.* The 2007 Survey of Older Persons in Thailand asked respondents to judge the sufficiency of their income and their satisfaction with their financial situation. Figure 8 summarizes the results.<sup>11</sup> Gender differences are almost nonexistent and accord reasonably well with the more objective measures of material well-being reviewed above. Moreover there is virtually no relationship between the marital situation of the older person and these measures of self-assessed economic well-being. Nor do gender differences appear either among those who are living with a spouse or those who do not.

Analyses of national surveys conducted in 1994 and 1995 produced quite similar findings with respect to perceived economic well-being (Sobieszczyk, Knodel & Chayovan 2003). Thus while being in an intact marriage is likely to provide important social support for an elderly person and may be critical for meeting caregiving needs, it appears to confer little advantage with respect to the self perceived material well being of elderly Thais.

**Figure 8.** Gender differences among persons age 60+ in self-assessed income sufficiency and financial satisfaction, Thailand 2007



Source: 2007 Survey of Older Persons in Thailand

Note: No gender difference is statistically significant at the .01 level.

## **Discussion and conclusions**

Thailand is fortunate in having extensive representative data available to provide an up to date assessment of the interaction between gender and well being in older ages. As our analysis based largely on the 2007 Survey of Older Persons in Thailand illustrates, similarities in the situation of older men and women on many dimensions are often more dominant than clear contrasts. On some measures older Thai women face disadvantages compared to their male counterparts. This is clearly the case in terms of most measures of current physical and psychological health including functional limitations. However, older Thai women experience substantially lower mortality and thus are clearly advantage with respect to survival chances, undoubtedly the most crucial measure of health. Thus although older women suffer more non-life-threatening illness than do men in Thailand, this must be balanced against lower male survivorship among older persons.

In part due to this survival advantage, older Thai women are significantly more likely than men to experience marital dissolution through widowhood. Moreover, gender differences in educational opportunities in the past clearly evidence themselves in lower levels of literacy and educational attainment among older age women. This education gender gap among the older population is declining as new more equally educated cohorts move into the elderly age span and older cohorts die out. Women are also significantly more likely to live alone, although this is largely a function of gender differences in marital status distributions. Older Thai women also differ from men in ways that potentially but not necessarily convey disadvantage. For example, older women are less likely than older men to be in the labor force and more likely to depend on children or relatives as their main source of income. The latter is related to the fact that women are not only less likely to be economically active but also comprise a larger proportion of non-married older persons, who are most economically dependent on their children.

There also are areas for which gender differences point to a disadvantaged situation for older Thai men. In part related to their higher mortality, older men have worse health risk behaviors with respect to smoking and drinking. Also in cases where a spouse is not present, older men are less likely than women to coreside with a child. Men are also somewhat less likely than older women to receive money from a child and more likely to experience debt.

Gender differences are also apparent with respect to contributions that older age parents make to their adult children. Consistent with traditional caregiving and child rearing roles, older women as grandmothers are more likely than grandfathers to care for minor aged grandchildren whose parents live elsewhere or are deceased. However, consistent with their higher level of economic activity, older aged men are more likely than women to provide financial assistance to both coresident and non-coresident children, although only a modest minority does so.

On numerous measures of well being, we find little association with gender. With respect to social contact with children, differences between elderly fathers and mothers are not pronounced and few of either sex appear to be deserted by all their adult children. Perhaps most encouraging is that older men and women appear similar in their material well being as measured by the quality of their housing, the number of household possessions, and self-assessed adequacy of income and satisfaction with financial situation. Although women are far more likely to be widowed than men, for neither is not living with a spouse associated with lower perceived income sufficiency or financial satisfaction. Among persons living with a spouse, women disproportionately report lower personal income and wealth compared to men but as wives they may well benefit from their husband's income and wealth. Among older persons who do not live with a spouse, women fare at least as well as men. At the same time, although there is evidence that the material well-being of older Thais has been improving in recent decades, substantial proportions still are quite poor. Thus close to 40% of both men and women indicate they do not consistently have sufficient income and over one fourth are unsatisfied with their financial situation.



Marital status often mediates gender differences in well-being among older persons. As our analyses show, controlling for whether or not an older person is living with a spouse reduces or eliminates gender differences for a number of aspects of well-being. In other cases, analysis of gender in conjunction with marital status reveals that certain groups face particular disadvantage in old age. For instance, women who do not have a coresident spouse are significantly less likely than their male counterparts to have access to pensions. Also given the past sharp fall in fertility rates in Thailand, future cohorts of older persons will have far fewer children available to provide support. Because older women, and particularly non-married older women, tend to be more dependent than men on children, they may constitute a disproportionate share of those who will be most in need of government financial assistance.

## Endnotes

<sup>1</sup> Conventionally the potential support ratio is defined as the ratio of the population age 15-64 to that 65 and older but to be consistent with the definition of the older population used in the present study, we use ages 15-59 and 60 and older. The relative trend is very similar regardless of which definition is used. For example, using the conventional definition the ratio declines from 11.1 in 2000 to 3.8 in 2030 or by 66% which is identical to the percent decline based on the alternative definition provide in Table 1.

<sup>2</sup> Details of the methodology and sample are available in NSO, 2008.

<sup>3</sup> Because of the large number of respondents, small differences between men and women can reach most standard levels of statistical significance. Thus statistical significant differences are not necessarily substantively important. In the tables where we indicate statistical significance, we only indicate if differences are statistically significant at the .01 level. Less stringent criteria would be almost totally meaningless.

<sup>4</sup> Only a few thousand older persons live in government sponsored nursing homes. Although accurate statistics on the number of older persons in private establishments are unavailable, it is believed that the number is quite modest (Jitapunkul, Chayovan & Kespichayawattana, 2002).

<sup>5</sup> Children in Table 3 refer to step and adopted children as well as the respondents' own biological children.

<sup>6</sup> The United Nations projections did not include estimates for the past.

<sup>7</sup> We define a functional limitation as either not being able to perform the activity or only being able to do so with assistance or an aid.

<sup>8</sup> Even among the 1% that had no contact with a child during the prior year, more than half of both men and women report receiving at least some money from a child during the year (Knodel & Chayovan 2008).

<sup>9</sup> According to The 1995 Survey of the Welfare of Elderly in Thailand, among the population age 60 and over who coreside with an adult child, 48% of men compared to 37% of women reported themselves as the owner of the residence (original tabulations by the authors).

<sup>10</sup> See Knodel, Chamrathirong & Debavalya 1987, p.158 for references to a series of studies documenting the role of wives and husbands within the family.

<sup>11</sup> The question on income sufficiency permitted for answers: more than sufficient, sufficient, sometimes sufficient and insufficient. Respondents who indicated either the first or second response are considered to have sufficient income. The question with respect to satisfaction with current financial status allowed three answers: very satisfied, satisfied and dissatisfied. Respondents who indicated either the first or second response are treated as being satisfied with their financial situation.

## References

- Chayovan, Napaporn, John Knodel & Siriwan Siriboon. 1990. Thailand's Elderly Population: A Demographic & Social Profile Based on Official Statistical Sources. Comparative Study of the Elderly in Asia, Research Report No. 90-2, Population Studies Center, University of Michigan.
- Chayovan, Napaporn & John Knodel. 1997. *A Report on the Survey of the Welfare of the Elderly in Thailand*. Chulalongkorn University, Bangkok
- Cowgill, Donald O. 1968. The social life of the aged in Thailand. *The Gerontologist* 8:159-163.
- Cowgill, Donald O. 1972. The role and status of the aged in Thailand. In D. O. Cowgill & L. D. Holmes (eds.), *Aging and Modernization*, pp. 91-101. New York: Appleton-Century-Crofts.
- Henderson, J. Barth, H., Heimann, J., Moeller, P., Shinn, R., Soriano, F., Weaver, J. & White, E. 1971. *Area Handbook for Thailand*. U.S. Government Printing Office, Washington, D.C.
- Hermalin, Albert I., Mary Beth Ofstedal & Rebecca Tesfai. 2007. Future characteristics of the elderly in developing countries & their implications for policy. *Asian Population Studies* 3(1):5-36.
- Idler, Ellen L. and Yael Benyami. 1997. Self-rated health and mortality: A review of twenty-seven community studies. *Journal of Health and Social Behavior* 36: 21-37.
- Jitapunkul, Sutthichai, Napaporn Chayovan & Jiraporn Kespichayawattana, 2002. Chapter 6: National Policies and Long Term Care of Elderly in Thailand. In *Ageing and Long-Term Care: National Policies in the Asia Pacific*, edited by David R. Phillips and Alfred C. M. Chan, Singapore: Institute of Southeast Asian Studies, pp. 181-213.
- Klausner, W.J. 1993. The drunkard: challenge and response. In Klausner, W.J. (ed.), *Reflections on Thai Culture*. Siam Society, Bangkok, 331-33.
- Knodel, John. 1997. The Closing of the Gender Gap in Schooling: The Case of Thailand. *Comparative Education* 33(1): 61-86.
- Knodel, John. 2004. Older Women in Thailand: Are They Really Worse Off Than the Men? In K. Mehta (ed.), *Untapped Resources: Women in Ageing Societies Across Asia*, 2<sup>nd</sup> edition (pp. 141-160). Singapore: Marshall Cavendish Academic Press.
- Knodel, John & Chanpen Saengtienchai. 2007. Rural Parents with Urban Children: Social and Economic Implications of Migration on the Rural Elderly in Thailand. *Population, Space and Place* 13(3):193-210.
- Knodel, John, Chanpen Saengtienchai & Walter Obiero. 1995. Do Small Families Jeopardize Old Age Security? Evidence from Thailand, *BOLD* 5(4): 13-17.
- Knodel, John, Chanpen Saengtienchai, and Werasit Sittitrai, 1995. The living arrangements of elderly in Thailand: views of the populace. *Journal of Cross-Cultural Gerontology*, **10**, 79-111.
- Knodel, John, Jiraporn Kespichayawattana, Suvinee Wiwatwanich and Chanpen Saengtienchai. 2007. *Migration and Inter-generational Solidarity: Evidence from Rural Thailand*. In UNFPA Country Technical Services Team for East and Southeast Asia, Papers in Population Ageing Series, Number 2. Bangkok: UNFPA.
- Knodel, John & Mary Beth Ofstedal 2003. Gender & Aging in the Developing World: Where Are the Men? *Population & Development Review* 29(4):677-98.
- Knodel, John & Napaporn Chayovan 2008. *Population Ageing and the Well-being of Older Persons in Thailand*. In UNFPA Country Technical Services Team for East and Southeast Asia, Papers in Population Ageing Series, Number 5. Bangkok: UNFPA (Forthcoming)
- Knodel, John, Napaporn Chayovan & Siriwan Siriboon. 1992. The Impact of Fertility Decline on Familial Support for the Elderly: An Illustration from Thailand, *Population & Development Review* 18(1): 79-102.

- In UNFPA Country Technical Services Team for East and Southeast Asia, Papers in Population Ageing Series, Number 2. Bangkok: UNFPA
- Mason, K.O. 1992. Family change and support of the elderly in Asia: what do we know? *Asia-Pacific Population Journal*, **7**, 3, 13-32.
- Mehta Kalyani 1997. *Untapped Resources: Women in Ageing Societies*. Times Academic Press: Singapore.
- Mehta, Kalyani (ed.) 2004, *Untapped Resources: Women in Ageing Societies Across Asia*, 2<sup>nd</sup> edition (pp. 141-160). Singapore: Marshall Cavendish Academic Press.
- National Economic & Social Development Board (NESDB). 2007. Population Projections for Thailand, 2000-2030, Bangkok: National Economic & Social Development Board
- National Statistical Office (NSO). 2008. *Report on the 2007 Survey of the Older Persons in Thailand*. Bangkok: National Statistical Office.
- Reichart, P.A. 1995. Oral cancer and precancer related to betel and *miang* chewing in Thailand: a review. *Oral Pathology & Medicine*, **24**, 241-43.
- Soonthorndhada, Amara, Rossarin Gray, Kusol Soonthorndhada, P.K. Viswanathan. 2008. Elderly women in Thailand: Roles and Position. In Joseph Troisi & Ann Lencyk Pawiliczko (eds.) *The Elderly Women in Asia: Her Roles and Position*, pp. 285-310, Malta: United Nations International Institute on Ageing.
- Sobieszczyk, Teresa, John Knodel & Napaporn Chayovan. 2003. Gender & Well-Being among the Elderly: Evidence from Thailand. *Ageing & Society* 23(6):701-735.
- Troisi, Joseph & Ann Lencyk Pawiliczko (eds.) 2008. *The Elderly Women in Asia: Her Roles and Position*, pp. 285-310, Malta: United Nations International Institute on Ageing.
- United Nations 2002. *Rep. Publication A/CONF.197/9*, New York: United Nations
- United Nations 2007a. World Population Prospects: the 2006 Revision, New York: United Nations
- United Nations (UN). 2007b. *World Population Ageing 2007*. New York, United Nations.
- United Nations International Research and Training Institute for the Advancement of Women (INSTRAW). 1999. *Ageing in a Gendered World*, United Nations International Research and Training Institute for the Advancement of Women (INSTRAW). Santo Domingo, Dominican Republic: INSTRAW
- Verbrugge, Lois. 1989. The Twain Meet: Empirical Explanations of Sex-Differences in Health and Mortality. *Journal of Health and Social Behavior* 30(3):282-304.
- World Health Organization (WHO). 2001. *Men, Ageing and Health*. Publication WHO/NMH/NPH/01.2. WHO, Geneva
- Zimmer, Zachary & Kim Korinek 2008. Does Family Size Predict whether an Older Adult Lives with or Proximate to an Adult Child in the Asia-Pacific Region? *Asian Population Studies* 4(2):135-159.



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