Analyses and Projections of Family Households, Living Arrangements and Home-based Care Needs for Disabled Older Adults in Sri Lanka, 2012-2060

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OUTLINES

1. Methodology;
2. Data sources;
3. Analysis on Sri Lanka 2012 census data;
4. Projections of households, living arrangements, and home-based care needs for disabled older adults in Sri Lanka in 2012-2060
5. Discussions and policy recommendations.

1. SUMMARY OF THE METHOD USED IN THIS PROJECT

- ☺ **In this ADB study for Sri Lanka, we applied ProFamy extended cohort-component method/software and the conventional census and demographic survey data.**
- ☺ **The ProFamy method/software does much better than the traditional headship-rates method for households and living arrangement projections.**
- ☺ **The ProFamy method/software projects detailed households, living arrangements and population age/sex distributions simultaneously.**
- ☺ **ProFamy method/software can be used for home-based consumption and services needs/costs projections. For example, ProFamy method/software was employed for the U.S. households energy consumption projections by Dalton et al. (2008); for the U.S. housing projections at national and sub-national levels by Smith et al. (2008; 2012); for Austrian and the U.S. home-based vehicles consumption projections by Prskawetz et al. (2004) and Feng et al. (2011); and for the household financing projections in People's Republic of China by Zhu (2020).**

2. Data needed in general for household projections at national and sub-national levels, using ProFamy methods

(1) Base population

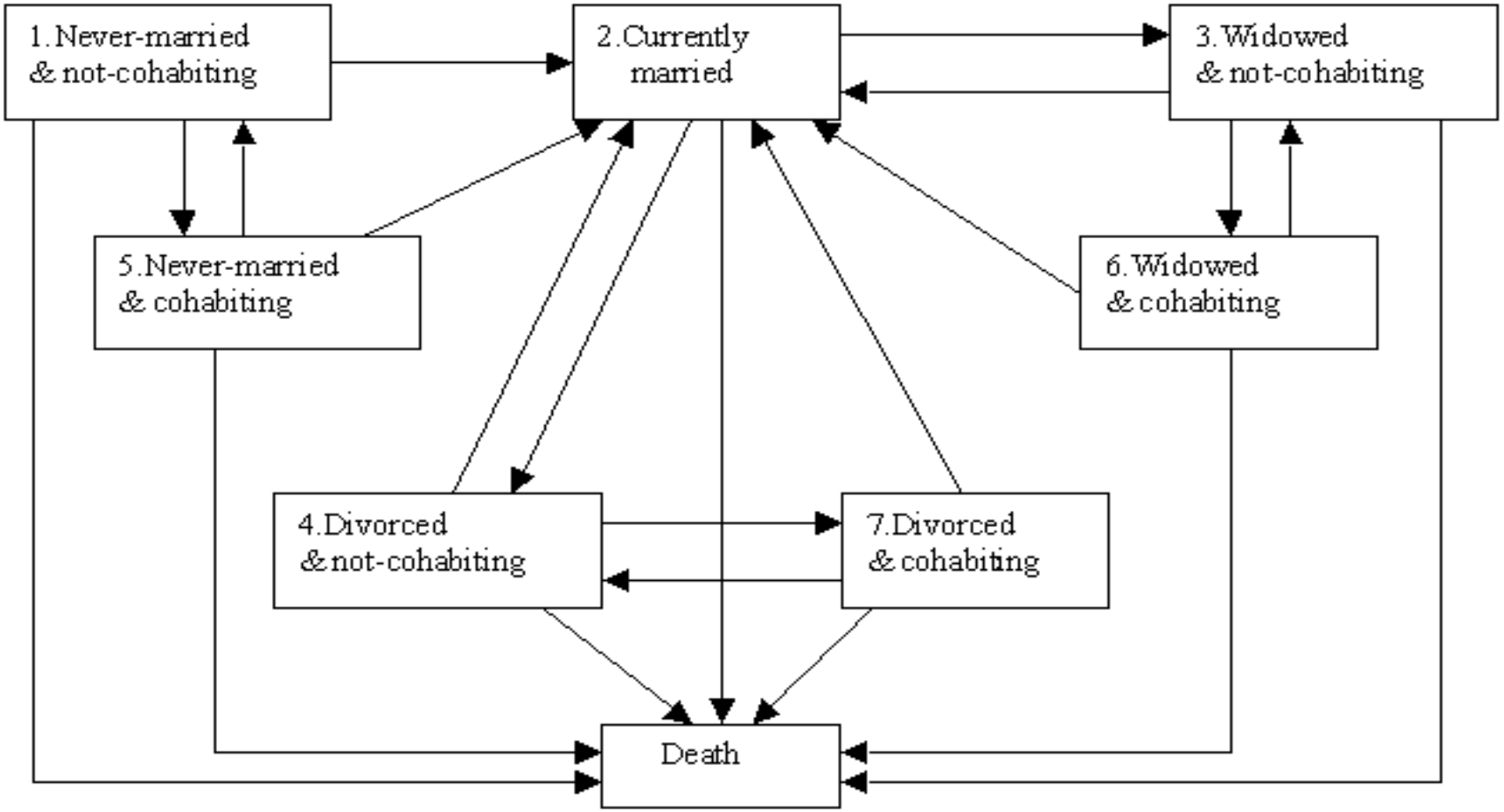
Contents of the data	Main data resources
A census micro data file, with a few needed variables of sex, age, race (optional), marital/union status, relationship to the householder, and whether living in a private or institutional household. If a sample data set is used, 100% tabulations of age-sex distributions of the entire population and those living in group quarters, derived from the census data must be provided.	Census 1% or 5% micro data or large demographic survey data files and the published online 100% census cross-tabulations.

(2) Model standard schedules at national level *(can be used for households projections at sub-national level)*

Contents of the data	Main data resources
(a) Age-race-sex-specific death rates (marital-status specific, if possible).	Statistical Bureau's estimates
(b) Age-race-sex-specific o/e rates of marriage/union formation and dissolution	Pooled demographic and households survey data sets, see Zeng and Land et al. (2006).
(c) Age-race-parity-specific o/e rates of marital and non-marital fertility	
(d) Age-race-sex-specific net rates of leaving the parental home, estimated based on two adjacent census micro data files and the intra-cohort iterative method (Coale1984; 1985; Stupp 1988; Zeng, Coale et al., 1994).	Two recent adjacent censuses micro data files
(e) Age-sex-specific rates of international emigration and immigration.	Census 1% or 5% micro data or large survey data files

(3) Demographic summary measures for the nation and sub-national regions	
(a) Race-specific general rates of marriage and general rates of divorce	**Based on census micro data, vital statistics and pooled survey data sets**
(b) Race-specific general rates of cohabiting and general rates of union dissolution	
(c) Race-specific Total Fertility Rates (TFR) by parity	**Based on estimates released by the Census Bureau and the National Center for Health Statistics**
(d) Race-sex-specific Life expectancies at birth	
(e) Race-sex-specific total numbers of male and female migrants	
(f) Race-sex-specific mean age at first marriage and births	

Figure 1. Seven marital statuses model



The ProFamy mothod/software project detailed information of 40 types of households with various sizes and living arrangements

Type code	Household types	Household sizes
One generation households		
1-6	One person only by sex and marital status	1
7-12	One person & other/non-relative by sex and marital status of the person	2,3,4,5,or 6+
13-14	One married couple only; One cohabiting couple only	2
15-16	One married couple & other/non-relative; One cohabiting couple & other/non-relative	3,4,5,6,or 7+
Two-generation households		
17-18	Married couple & children; Cohabiting couple & children	3,4,5,6,7,8,or 9+
19-24	Single-parent & children by sex and marital status of the single parent	2,3,4,5,6,7,8,or 9+
Three-generation households		
25-28	Married (or cohabiting) couple with children and 1 or 2 grandparents	4,5,6,7,8,or 9+
29-40	Sex-marital status-specific single-parent & children & 1 or 2 grandparents	3,4,5,6,7,8,or 9+

3. ANALYSIS ON SRI LANKA 2012 CENSUS DATA

Table 1. Percent distributions of households by types, based on 2012 census datasets, Sri Lanka

Households types	Percent
One-generation households	
One person only	7.18
One person & others	2.70
Married couple	10.48
Subtotal of one generation	20.36
Two-generation households	
Married couple & children	47.88
Lone mother & children	6.28
Lone father & children	6.59
Subtotal of two generations	60.75
Three-generation households	
Married couple (mid-generation)	14.90
Lone mother (mid-generation)	2.41
Lone father (mid-generation)	1.58
Subtotal of three generations	18.89
Grand total	100.00

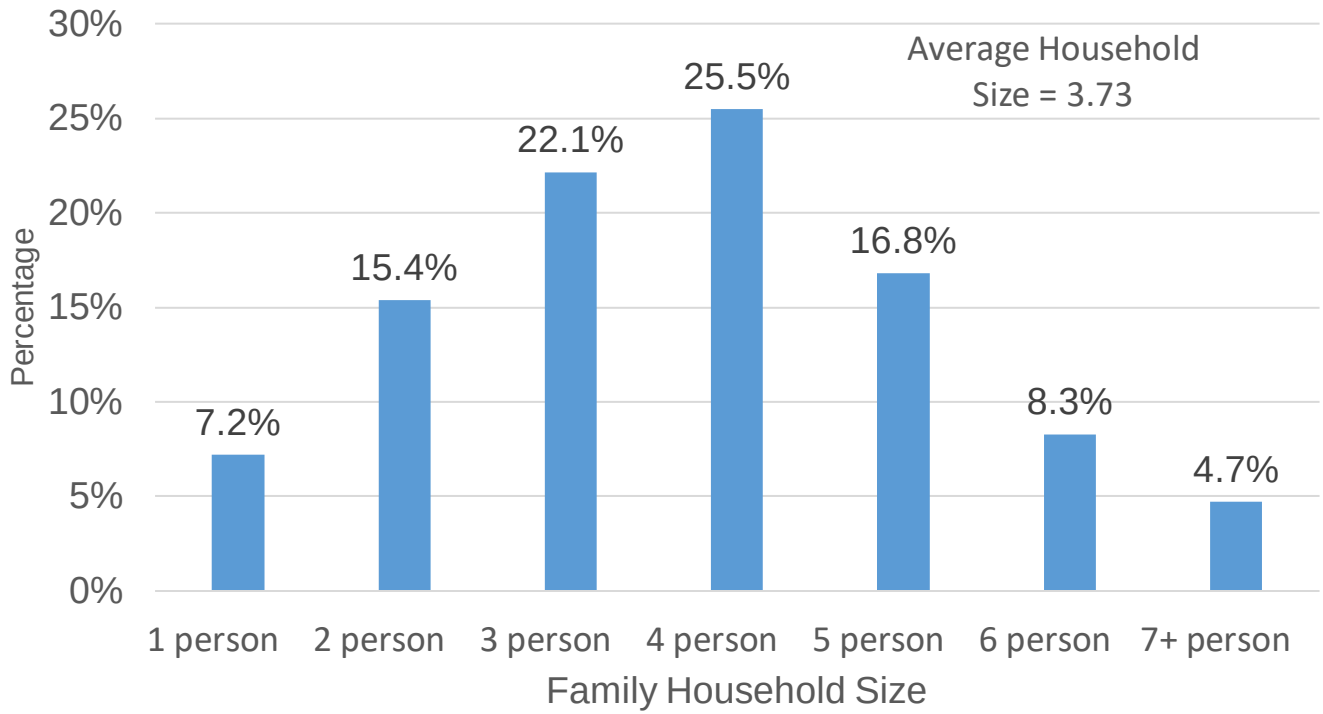
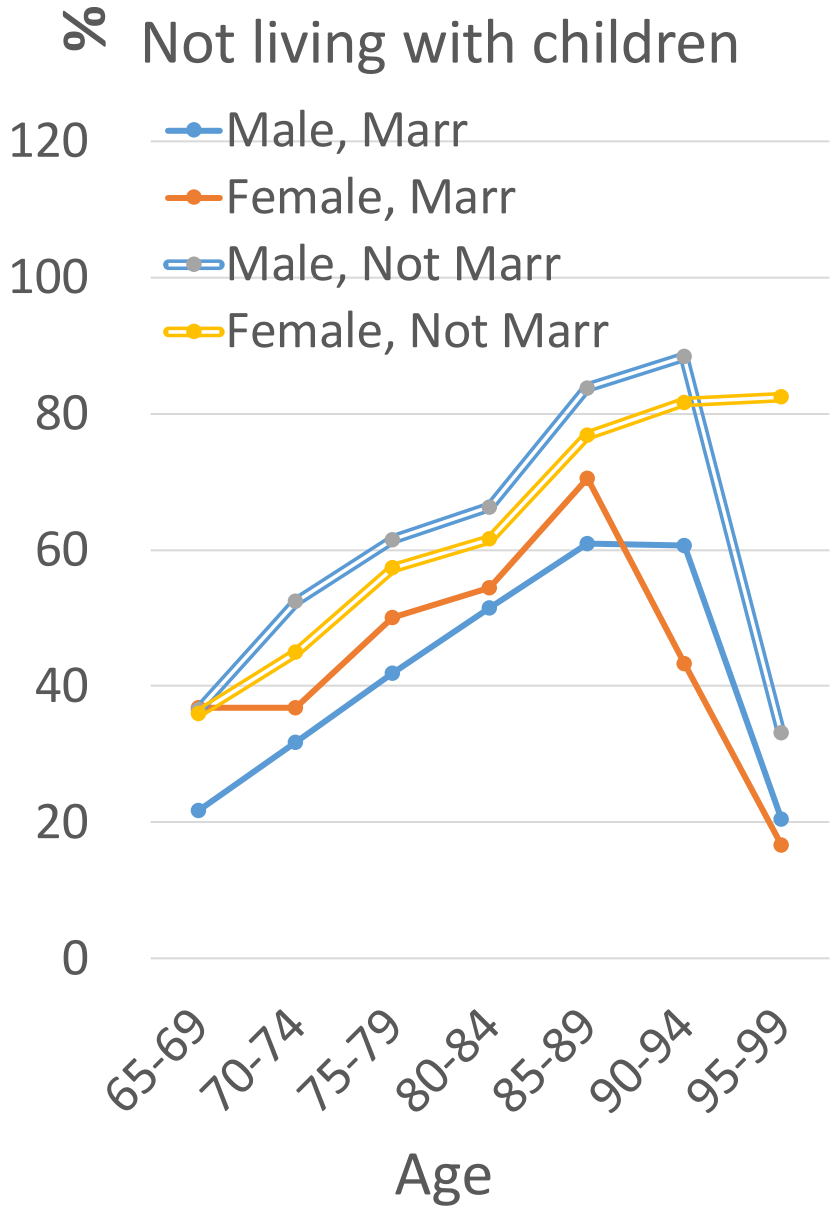


Figure 2. Household size distributions, bases on 2012 census datasets, Sri Lanka

Table 2. Percent distributions of living arrangements of older adults, based on 2012 census datasets, Sri Lanka

Age groups	65-79			80+		
Gender	Males	Females	Both genders	Males	Females	Both genders
Living alone	2.9	8.0	5.8	3.9	6.5	5.5
With spouse only	27.7	14.9	20.5	20.5	6.6	12.1
Subtotal of not living with children	30.6	22.8	26.2	24.5	13.0	17.5
Married, with children	58.2	41.4	48.7	52.2	36.5	42.7
Not-married with children	5.1	27.7	17.8	14.9	40.2	30.2
Subtotal of living with children	63.3	69.0	66.5	67.0	76.6	72.9
Institutionalized	1.2	0.9	1.0	2.5	1.8	2.1
With others, not with spouse/child	4.9	7.3	6.2	6.0	8.6	7.5
Grand Total	100	100	100	100	100	100



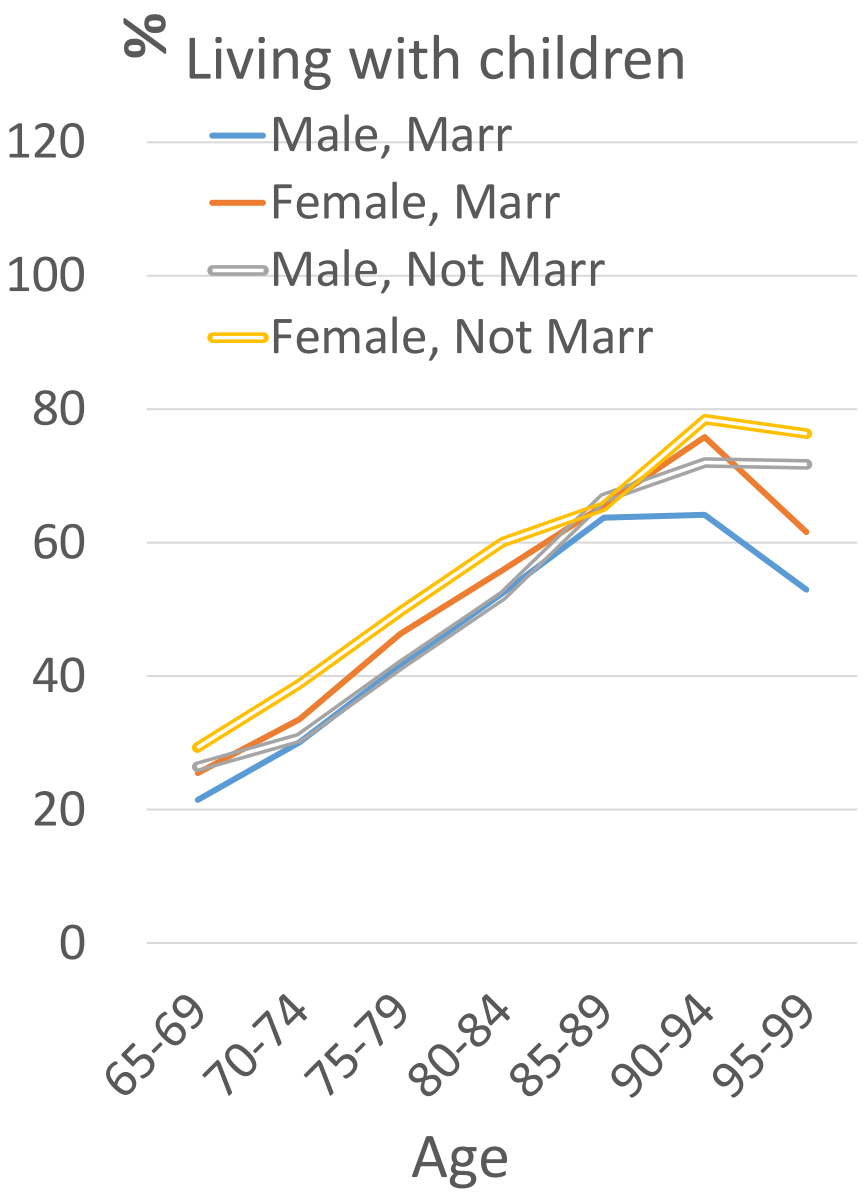


Figure 3. The percentage of disabled older adults by gender, age groups, marital status and living arrangements in Sri Lanka, 2012

3.PROJECTIONS OF HOUSEHOLDS, LIVING ARRANGEMENT, AND HOME-BASED CARE NEEDS FOR DISABLED OLDER ADULTS IN SRI LANKA IN 2012-2060

Table 3. Assumptions of demographic parameters of households and living arrangement projections in Sri Lanka, 2012-2060

	2012	2030	2050	2060
Total fertility rates	2.21	2.07	1.92	1.84
Male life expectancy at birth	72.00	75.41	79.19	81.08
Female life expectancy at birth	78.60	81.20	84.09	85.54
General marriage rates	0.14860	0.09388	0.09465	0.09465
General divorce rates	0.00790	0.01206	0.01300	0.01300
Male mean age of first marriage	29.90	29.90	29.90	29.90
Female mean age of first marriage	26.90	26.90	26.90	26.90
Mean age of births	28.90	28.90	28.90	28.90
Male general of immigration	0.01179	0.01179	0.01179	0.01179
Female general rates of immigration	0.00839	0.00839	0.00839	0.00839
Male general rates of out-migration	0.00296	0.00296	0.00296	0.00296
Female general rates of out-migration	0.00251	0.00251	0.00251	0.00251

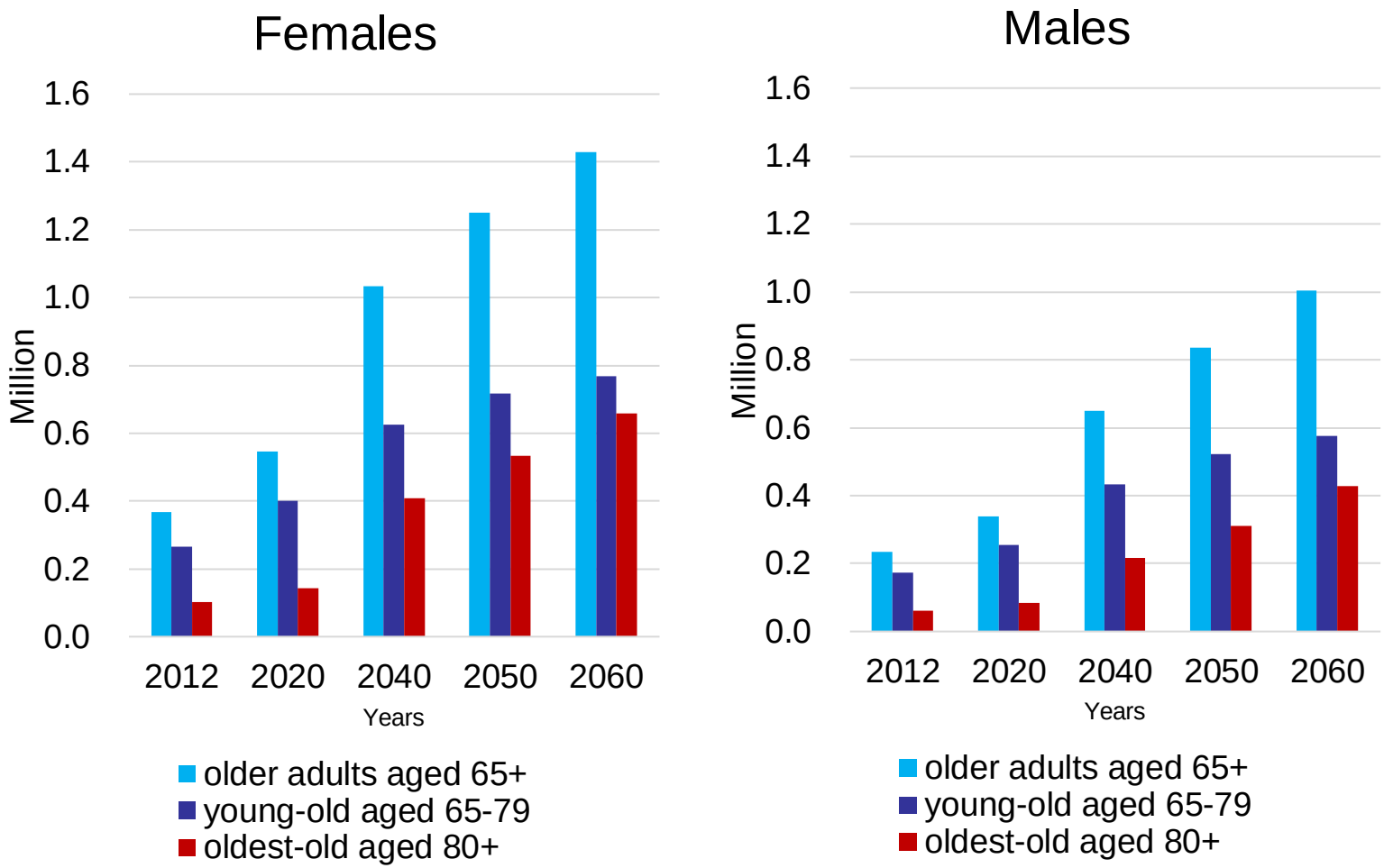


Figure 4. Numbers of disabled older adults by genders and age groups in 2012-2060, Sri Lanka

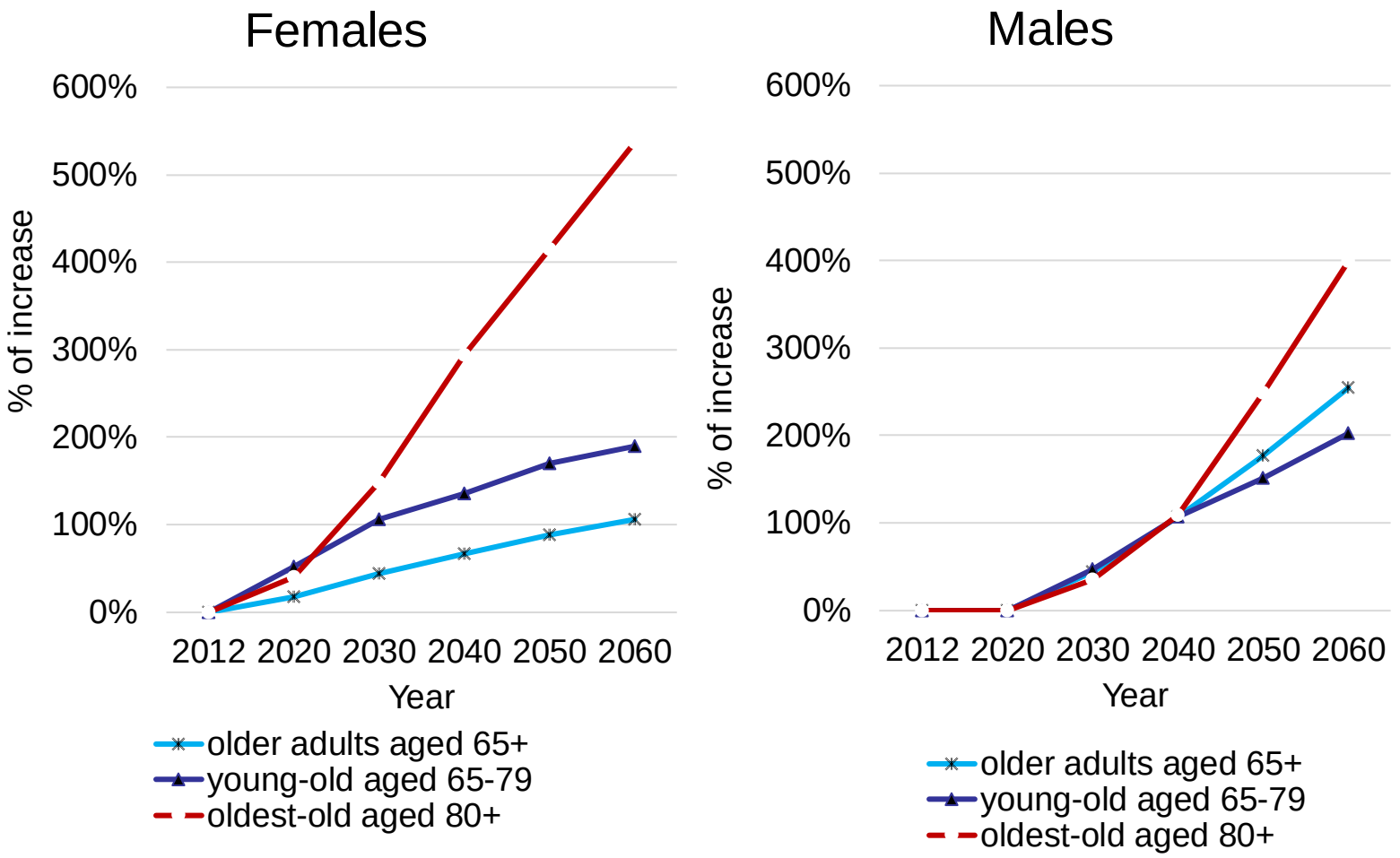


Figure 5. The relative increase (%) of numbers of disabled older adults by genders and age groups in each of the selected years as compared to 2012, Sri Lanka

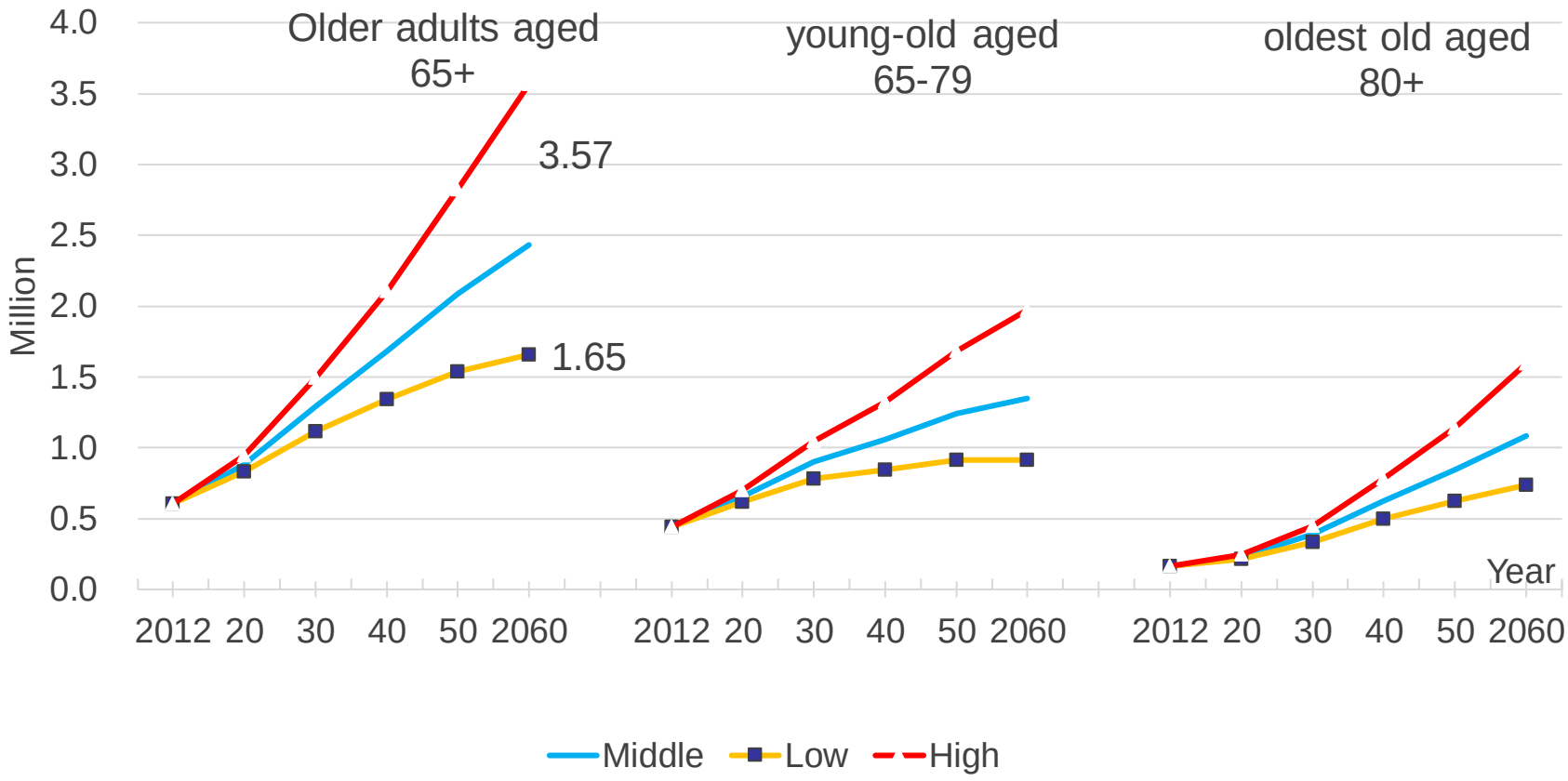


Figure 6. Numbers of disabled older adults by age groups under the Medium, Low and High scenarios in 2012-2060, Sri Lanka

4. DISCUSSIONS AND POLICY RECOMMENDATIONS

☺ Our analyses show that female older adults have significant disadvantages in disability status as compared with male counterparts

☺This study shows that changes in older adults' disability status are the most important determinants of home-based care needs for disabled older adults in Sri Lanka, 2012-2060.

☺ Our analysis also shows that, regardless of whether older adults' disability statuses are assumed to improve or deteriorate over time, the home-based care needs for older adults in Sri Lanka will increase substantially due to rapid population aging and extremely fast increases of the oldest-old.

☺ Consequently, relevant reforms of policies and socioeconomic planning should be taken to respond to the serious challenges of large and rapid increases in home-based care needs.

4. DISCUSSIONS AND POLICY RECOMMENDATIONS (continuous)

☺ **Our projections found that if older adults' disability statuses substantially improve (under the low disability scenario) or substantially deteriorate (under the high disability scenario), the care needs for disabled elders would remarkably decrease or larger increase.**

→ **Thus, the society and policy-makers need to pay serious attentions on reducing older adults' disability.**

☺ **Our projection results also show that care needs for disabled unmarried elders living alone increase substantially faster than care needs for those disabled unmarried elders living with children.**

→ **We suggest to promote older adults live together or nearby their adult children, to reach win-win outcomes.**


Comments are most
welcome; Thank you!