

Making Use of Time-Use Data to Estimate Elderly Care Needs

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[DRAFT]

Abstract

The aging population and the increasing need for long-term care for the elderly have led to significant care gaps in countries with underdeveloped care regimes. Social assistance and protection policies to address elderly care needs tend to ignore the costs imposed on households and borne predominantly by women. At the same time, as representative data on the care of the elderly population are not widely available in many countries, it is very difficult to identify needs and estimate demand for elderly care. In this study, we aim to provide estimates of elderly care needs using information provided by time use survey data. Time-use surveys are the main source of information on time spent on care activities, but these surveys are generally repeated every ten years. The Turkish Time Use Survey (TUS) conducted in 2014-2015 includes not only actual time spent on elderly care but also a special module for elderly care in Turkey. In this context, we aim to estimate the demand for elderly care to adapt elderly care patterns to the present based on population statistics and data from the elderly care module of the most recent available data. The methodology we use here can be proposed in other cases with data constraints to identify the need for care.

Keywords: elderly care, projection, gender

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Introduction

Turkey has become one of the countries facing an aging population. When the proportion of the elderly population (aged sixty-five and older) exceeds 10% of the total population, it is considered an indicator of population aging. In 2023, the proportion of individuals aged 65 and over reached 10.2% of the total population, which is above the global average, particularly as many developing and middle income countries have lower elderly population proportions¹. This marks a 21.4% increase from 8.8% in 2018 (TurkStat, 2024). Population projections (Figure A1) show how this important trend is estimated to change population pyramids from 2025 to 2050. Women comprise a higher proportion of the elderly population (55%), and particularly among the elderly who have lost their spouses, the proportion of widowed women is four times higher than that of men. Turkish Statistics Institute's projections in Elderly Statistics indicate that this trend will likely result in a population structure in which the elderly population constitutes more than one-fifth of the population by 2060. Such a demographic shift implies that the elderly "dependency ratio", which has risen to 15% today, is expected to reach 37.5% by 2060 (TurkStat, 2024).

Although the 65 and over age group we use here refers to the officially defined elderly population, the feminist approach emphasizes that this age limit also varies. In addition, many people in this age group are active even as caregivers themselves. The traditional literature on aging and long-term elderly care assumes that all differences in terms of class, social status and gender suddenly disappear at a certain point in life and the population becomes a homogeneous group in terms of care needs - the elderly. Aging is an economically, politically and socially constructed concept. Elderly care is experienced and produced, with all its inequalities and power relations. Recent studies in the field of ageing shed light on this issue (Özar and Memiş, 2024).

This demographic shift, driven by increased life expectancy and a growing tendency to have fewer children at later ages, confronts society with the reality of an aging population and the growing care needs. As of 2023, Turkey's elderly population surpasses 8 million, with 35% of this group aged 75 and older. However, only 27,275 elderly individuals reside in public and private nursing homes. Additionally, 538 elderly individuals benefit from

¹United Nations Population Division. World Population Prospects: 2024 Revision. <https://data.worldbank.org/indicator/SP.POP.65UP.TO.ZS>

daytime care services² (MFSS, 2022:93).

Despite the significant population needing care support due to age and potential health conditions, the marginally low utilization of public and private care services among the elderly is not because there is no demand. Instead, it is due to the inadequacy, quality issues, and limited capacity of these services to meet existing needs. Indeed, the Turkish Family Structure Research (TAYA, 2021) indicates that as people age and require care, 30.7% prefer to receive home-based care services, 15% are willing to stay in a nursing home, and only 27.5% are willing to stay with their children (p.120).

Turkey's lack of adequate public care support necessitates a more in-depth discussion on the consequences of leaving elderly care to households. The gap in care services is often filled by women through intra- and inter-household care transfers. Analyzing who the caregivers are is a critical issue. The literature on the effects of providing elderly care is predominantly developed in health-related discussions, mostly focuses on caregiver characteristics, and is based on small samples (Akyar et al. 2016; Gök Metin et al. 2019; İnci and Kartal 2014; Kalınkara and Kalaycı 2017). While there is a rich social anthropological literature that examines the relationship between unpaid caregiving dynamics and paid work in the context of transformations in patriarchal family dynamics (Bolak, 1997; Durakbaşı and İlyasoğlu, 2001; Kandiyoti 1995; Tekeli 1995, Özbay 1995), there remains a significant gap in empirical research based on nationally representative datasets. In this context, the studies Memiş and İzdeş (2018) and İzdeş Terkoğlu and Memiş (2022) using the elderly care-related country-level representative microdata within the Time Use Statistics 2014-2015, aimed to address this gap. A more in-depth analysis of how caregiving roles are distributed within household is essential to understand elderly care dynamics which is not the main research focus in this paper. Nevertheless, we explored in more detail using again the time use data in our previous studies where we aimed to provide a more descriptive picture on who cares for elderly in Turkey.

According to our previous findings, a significant proportion of households (30%-40% depending on the region) have an elderly family member receiving care in Turkey. Among

²A qualitative and deeper analysis of the population needing care, their demographic characteristics is essential for a better understanding of the population in need of elderly care. This study is based upon a nationally representative time use dataset which provides daily time spent using a diary approach 24-hours/day over and above ages 10 years in Turkey. It includes a module on elderly care spent by individuals although health-related and socio economic information on cared elderly is very limited. For a more detailed discussion on that could be accessed in more qualitative public health and social services studies (among others see Pinar and Sert, 2009; Umutlu and Epik, 2019, TurkStat, 2024)

those providing care, a large percentage (e.g., 60-70%) of caregiving tasks are taken on by women, particularly daughters and daughters-in-law. In multigenerational households, these caregiving roles may overlap with duties related to raising children, leading to the sandwiched generation. Elderly individuals, typically aged 75 and older, who require assistance with daily living activities (e.g., bathing, dressing, and feeding) are often cared for by their children, most commonly daughters. Spouses often take on caregiving responsibilities, especially for elderly individuals with mild to moderate health conditions, and in married couples, women are frequently the primary caregivers for husbands, while men tend to care for wives in less frequent cases (Memiş and İzdeş, 2018). As the elderly care recipient's age increases, the intensity of caregiving needs typically rises, which could lead to a more intensive caregiving burden for families, particularly in households where elderly individuals live with their children. A significant portion of the sandwiched generation (women aged 30-49) is responsible for elderly care (İzdeş Terkoğlu and Memiş, 2022). Women caring for both children and elderly relatives represent a key demographic, particularly in the 30-39 age group, where caregiving responsibilities peak. Daughters-in-law (28%) are more likely to provide elderly care than daughters (23%) or sons (14%), particularly in extended family households, which contrasts with caregiving patterns in more individualistic societies.

The double care burden (caring for both children and elderly relatives) leads to lower labor force participation among women. Around 68% of women in the sandwiched generation are out of the labor force, a higher proportion than the general female population (61%). The employment rate for women caring for both elderly and children is lower (29%) compared to women in the same age group overall (36%). A significant number of these women work part-time (24%) compared to the overall average of women in this age group (13%). Women aged 30-49, particularly those in the sandwiched generation, spend a substantial amount of time on caregiving activities—5:35 hours/day on average for both child and elderly care.

This caregiving workload reduces their available time for personal and leisure activities (e.g., social entertainment, hobbies, sports), which is notably lower than for women in other age groups. Women in the sandwiched generation report poorer health statuses compared to their peers, with a higher proportion of them reporting health issues as a result of the caregiving burden. For example, 65.3% of these women report having poor

or medium health, a higher percentage than other women who care for children or elderly alone. The sandwiched generation consists mostly of women in their late 30s to early 40s who are balancing child-rearing and elderly caregiving duties. These women are more likely to live in extended families and take on multigenerational caregiving roles. The gender gap in elderly caregiving is most pronounced in the 30-39 age group, where women are disproportionately involved in caring for elderly family members (İzdeş Terkoğlu and Memiş, 2022).

The time spent by caregivers providing elderly care often exceeds 15-20 hours per week, particularly for those with intensive needs. This could significantly affect caregivers' ability to maintain paid employment, almost half of caregivers reporting having to adjust their working hours to accommodate caregiving responsibilities. Women, especially in multigenerational households, may spend more hours on caregiving tasks compared to men. In many households, caregiving tasks (such as managing medications, assisting with mobility, or emotional support) are primarily assigned to women. Among those who provide elderly care, about 20-30% of caregivers may reduce their working hours, and 10-15% may leave their jobs entirely to provide care. This is especially true in households with multiple caregiving responsibilities, such as caring for both elderly parents and children. Families who provide elderly care often report a reduction in household income as the caregiver's time and earning potential are diverted toward caregiving (Memiş and İzdeş, 2018).

The previous studies focused on the impact of providing elderly care on labor force participation and working hours but also indicated that households tend to adopt strategies of pooling resources across generations to manage the challenges of caregiving and income deficiency. Although previous studies focus on the impact of the care gap on caregivers' socioeconomic conditions, they do not discuss the impact of the rising care gap over the recent period at the macro level. To understand the size of this gap, this study proposes a methodology to estimate inter- and intra-household elderly care transfers and adopt these needs projecting onto the rising share of the elderly population. This study aims to provide a useful tool for estimating actual elderly care needs observable from time use data, rather than focusing specifically on the impact of elderly care on caregivers and care recipients. In the literature this type of elderly care is referred as "informal elderly care" which is typically provided by household members, children, spouses, other rela-

tives, friends, neighbors or other non-professional caregivers usually within a household. It is often unpaid, flexible and unregulated without any contractual agreements. Formal elderly care on the other hand refers to professional services and care provided by trained individuals at institutional settings. This care is usually paid for, and the caregivers are either employed by public or private agencies or work independently in a professional capacity. Formal care is typically governed by legal, regulatory, and quality standards.

Data

Lacking institutional care services elderly care has been undertaken by households and compensated within the communities. Time-use data have been very useful in providing accurate and rich statistics on who is taking care of whom. The 2014-15 Turkey Time Use Survey (TUS) provides a unique data source that allows us to identify elderly care providers in a nationally representative sample. The survey is the first and the single one including a special module on elderly care. The elderly care module starts with a question asking whether the respondent has provided unpaid care or assistance to an elderly person in need of help (aged 65 and over) in the last four months. This older person can be a household member, a relative or an unrelated individual. If yes, respondents are asked about the number of elderly people they care for and the frequency of this assistance (e.g. daily, several times a week, weekly, monthly or less). If the respondent has cared for more than one elderly person, they report their answer according to the individual for whom they provided the most care or assistance.

The survey collected information on time use through interviews and diaries from 25,109 individuals aged ten years and older living in 9,073 households. Household members recorded their daily activities at ten-minute intervals over 24 hours, providing data for two designated days, a weekday and a weekend day. The survey covered all days of the week equally, with the option to postpone their diary day for up to two weeks. All household members kept their diaries on the same day. Where a respondent was engaged in more than one activity at the same time, one activity was designated as the primary activity and the data reflected the distribution of time spent on these main activities over 24 hours. Daily activities were classified according to the Eurostat (2000) activity coding list and information covering the whole week was used. Caring activities that correspond

to elderly care are derived out of all daily activities.

Projecting Elderly Care Needs to Anticipate Growing Demand

To adapt elderly care patterns to the present, we used two data sources: first, we obtained care provisioning matrices of elderly care providers and recipients in 2015 using time use data. Second, we used five-year population matrices by gender and age groups provided by TurkStat (see Table A1). The population matrices show how the demographic structure of the population changes annually over time from 2015 to 2023. Using the Elderly Care Module, we calculate intra-household transfers of care and inter-household transfers, which not only show how much unpaid elderly care is undertaken by gender but also whose participation in other activities would be affected by elderly care. Following Dukhovnov and Zagheni (2015), we estimated the profiles of elderly care providers and recipients. Categorizing both caregivers and care recipients by age groups and gender, both frequencies and duration of elderly care matrices are built up. We then aggregated the weighted sum of care time by each group of elderly care recipients. If there is more than one elderly care recipient, the time allocated by the care provider is divided equally between each of them. Matrices for informal care provided to the elderly are constructed separately for living in the same household and then the same for the elderly outside the household, indicating transfers between households. Both the age and sex information of the care recipients and whether the recipient is living in the same household or not are provided in the Elderly Care Module, and all grandfathers/mothers, brothers, sisters, uncles/aunts, friends, and neighbors are into women/men by 5-year age groups. Thus, we obtained information on who takes care of whom by sex and age groups (frequencies and duration of care) to produce the matrices for profiles of elderly care to women/men live-in/live-out by age groups. By summing up live-in and live-out time spent for the elderly, we find per-capita care provided for the specific group. As shown in Table 2 below, row totals show the contribution of the particular age group to elderly care provision, while column totals show the demand for elderly care by the elderly group.

Table 2. Elderly Care Profiles

Same home	Elderly Care Recipient - Women			
Care Provider WOMEN	65-69	70-74	75-79...	All
Age group 1	w_{11}	w_{12}	w_{13}	The weighted sum of care provided by age group 1 to women ages 65-69
Age group 2	w_{21}	w_{22}
ALL WOMEN	$\sum w_{i1}$	$\sum w_{i2}$..	The weighted sum of care provided by women to elderly women
Same home	Elderly Care Recipient - Women			
Care Provider MEN	65-69	70-74	75-79	All
Age group 1	m_{11}	m_{12}	m_{13}	The weighted sum of care provided by age group 1 to women ages 65-69
Age group 2	m_{21}	m_{22}
ALL MEN	$\sum m_{i1}$	$\sum m_{i2}$..	The weighted sum of care provided by <u>men</u> to elderly women
ALL	$\sum w_{i1} + \sum m_{i1}$	$\sum w_{i2} + \sum m_{i2}$		The weighted sum of care provided to elderly women live in the hh

Table 3a. Elderly Caregivers by Age Groups and by Elderly Age and Sex,
Intra-Household/Same Home

	Women						Men					
Women	65-69	70-74	75-79	80-84	85+	All	65-69	70-74	75-79	80-84	85+	All
10-14	0%	1%	1%	0%	1%	3%	0%	0%	2%	0%	0%	2%
15-19	0%	2%	0%	0%	2%	3%	0%	1%	0%	1%	1%	3%
20-24	0%	0%	2%	2%	1%	5%	0%	0%	1%	2%	0%	4%
25-29	0%	0%	3%	0%	0%	3%	1%	0%	0%	0%	0%	1%
30-34	0%	1%	3%	1%	1%	5%	1%	2%	3%	1%	1%	8%
35-39	0%	2%	5%	0%	2%	10%	3%	4%	2%	1%	1%	11%
40-44	0%	1%	1%	3%	1%	7%	1%	2%	3%	2%	1%	8%
45-49	0%	1%	0%	4%	1%	7%	0%	1%	3%	3%	1%	8%
50-54	1%	1%	4%	2%	2%	10%	0%	1%	2%	2%	3%	8%
55-59	0%	0%	2%	4%	3%	8%	0%	0%	0%	2%	3%	5%
60-64	1%	0%	1%	0%	2%	4%	0%	0%	0%	1%	1%	2%
65-69	0%	1%	0%	0%	0%	2%	0%	0%	0%	1%	1%	2%
70-74	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
75-79	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
80+	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
ALL	3%	11%	23%	16%	16%	69%	6%	11%	15%	16%	14%	62%

Source: Authors' calculations based on Turkish TUS.

Note: The row percentages of caregivers do not sum to 100% as the cells present the percentage of total care given to the elderly women/men by that specific age group as explained by Table 2.

* In the above table 69% of the total care given to the elderly women are provided by women.

** Out of this 69%, 10% is provided by women ages 50-54 years.

Table 3b. Elderly Caregivers by Age Groups and by Elderly Age and Sex, Intra-Household/Same Home (Men Caregivers)

	Women						Men					
Men	65-69	70-74	75-79	80-84	85+	All	65-69	70-74	75-79	80-84	85+	All
10-14	0%	2%	0%	1%	0%	2%	0%	1%	0%	2%	0%	3%
15-19	0%	0%	0%	2%	0%	3%	0%	0%	1%	1%	0%	2%
20-24	1%	1%	0%	1%	0%	3%	0%	0%	0%	0%	1%	1%
25-29	0%	0%	1%	0%	0%	1%	1%	1%	0%	0%	0%	2%
30-34	0%	2%	1%	0%	0%	4%	0%	2%	0%	0%	1%	3%
35-39	1%	1%	1%	0%	2%	4%	1%	1%	2%	2%	0%	5%
40-44	0%	1%	1%	2%	1%	5%	1%	2%	1%	3%	1%	8%
45-49	1%	0%	2%	1%	0%	4%	0%	0%	2%	2%	1%	5%
50-54	0%	0%	0%	2%	1%	3%	0%	0%	1%	2%	1%	4%
55-59	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%
60-64	0%	0%	1%	0%	1%	2%	0%	0%	0%	0%	1%	2%
65-69	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
70-74	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
75-79	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
80+	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	2%	7%	7%	8%	6%	31%	4%	6%	9%	13%	7%	38%

Note: The tables on percentages of caregivers do not sum to 100% as the cells present the percentage of total care given to the elderly women/men by that specific age group as explained by Table 2.

In the above table 31% of the total care given to the elderly women are provided by men. Adding this with 69% in table 3a, total care given to elderly women adds up to 100%. In other words 69% of elderly care provided to women are spent by women while 31% by men.

Out of the 31%, 5% is provided by men ages 40-44 years.

Table 4a. Elderly Caregivers by Age Groups and by Elderly Age and Sex, Inter-Household- Elderly Living Outside Home (Women Caregivers)

	Women						Men					
Women	65-69	70-74	75-79	80-84	85+	All	65-69	70-74	75-79	80-84	85+	All
10-14	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	2%
15-19	0%	0%	0%	0%	0%	1%	0%	1%	1%	1%	0%	3%
20-24	0%	0%	0%	1%	0%	2%	1%	1%	1%	0%	1%	4%
25-29	1%	1%	1%	1%	0%	3%	1%	1%	1%	1%	1%	5%
30-34	2%	1%	1%	1%	1%	6%	2%	2%	1%	1%	0%	5%
35-39	2%	1%	1%	2%	1%	7%	2%	1%	1%	1%	1%	6%
40-44	2%	2%	1%	1%	2%	9%	2%	2%	1%	2%	1%	9%
45-49	0%	2%	2%	2%	1%	8%	1%	2%	2%	1%	1%	8%
50-54	0%	0%	1%	2%	1%	5%	0%	2%	3%	3%	2%	10%
55-59	0%	0%	0%	2%	1%	4%	0%	0%	1%	2%	1%	5%
60-64	0%	0%	0%	0%	1%	2%	0%	0%	0%	1%	1%	3%
65-69	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
70-74	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
75-79	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
80+	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
ALL	7%	9%	8%	13%	10%	47%	11%	12%	12%	13%	12%	60%

Table 4b. Elderly Caregivers by Age Groups and by Elderly Age and Sex, Inter-Household- Elderly Living Outside Home (Men Caregivers)

	Women						Men					
Men	65-69	70-74	75-79	80-84	85+	All	65-69	70-74	75-79	80-84	85+	All
10-14	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%
15-19	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%
20-24	0%	0%	0%	0%	1%	2%	0%	1%	1%	0%	0%	2%
25-29	1%	0%	1%	0%	1%	3%	0%	0%	0%	0%	0%	2%
30-34	1%	2%	1%	2%	1%	6%	1%	1%	1%	1%	0%	3%
35-39	2%	1%	1%	2%	1%	7%	1%	1%	0%	1%	1%	4%
40-44	1%	2%	2%	3%	2%	10%	2%	2%	1%	1%	1%	6%
45-49	1%	2%	2%	2%	1%	8%	1%	2%	1%	1%	1%	6%
50-54	0%	1%	2%	2%	1%	5%	0%	2%	2%	2%	1%	7%
55-59	0%	1%	0%	2%	2%	4%	0%	0%	1%	1%	1%	5%
60-64	0%	1%	0%	0%	1%	3%	0%	0%	0%	1%	0%	2%
65-69	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	1%	1%
70-74	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
75-79	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
80+	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	6%	11%	10%	13%	12%	53%	7%	10%	8%	9%	7%	40%

Tables 3a-b and Tables 4a-b show the same home elderly care transfers and inter-household transfers, respectively. Color highlights represent the cells with higher ratios, showing who is providing higher portions of elderly care to each group of elderly. For example, 5% of elderly care produced by women is provided by women who are ages 35-39, which is provided to elderly women who are in the age group 75-79 years. When we look at total intra-household care transfers to women, we observe that 69% of total care time is produced by women. Among those 35-39 to 55-59 present a higher share of age groups where care provided for women is concentrated. Women, when looking at row and column total produced 69% of the elderly care received by women, men on the other hand produced 31% of the total received by elderly women when lived in the same household. As for the care of elderly men living in the same household, again a very high portion of this need is met by women (62%) men's contribution increases to 38%.

To calculate the per capita demand for elderly care by age group, inter-household and intra-household transfers of care are summed. This provides how much time is spent per person for each elderly person. With this information, we can calculate the population-weighted sum of the elderly care hours that each group will need for each year. This can be converted into the number of full-time equivalent jobs when divided by the weekly hours of full-time work and multiplied by the number of weeks in each year. Figure 1a and 1b presents the calculations made with this projection. The figure simply shows that assuming that the profile of elderly care by age group and gender remains the same, demand will increase significantly given population growth.

Elderly care comes with its responsibilities to the caregiver while under certain conditions bringing mutual support reducing their care and/or livelihood burden. Caring and employment both demand the caregivers' time and energy, hence facing these challenging demands the caregivers' primary decision is on whether she or he can manage work with care responsibilities and participate in the labor market. Carmichael and Charles (1998) is one of the first and most referred studies hypothesizing the dynamics that determine the labor supply decision of the caregiver.

Figure 1a. Projected Full-time Equivalent of Elderly Care Needs of Men (in Thousands)

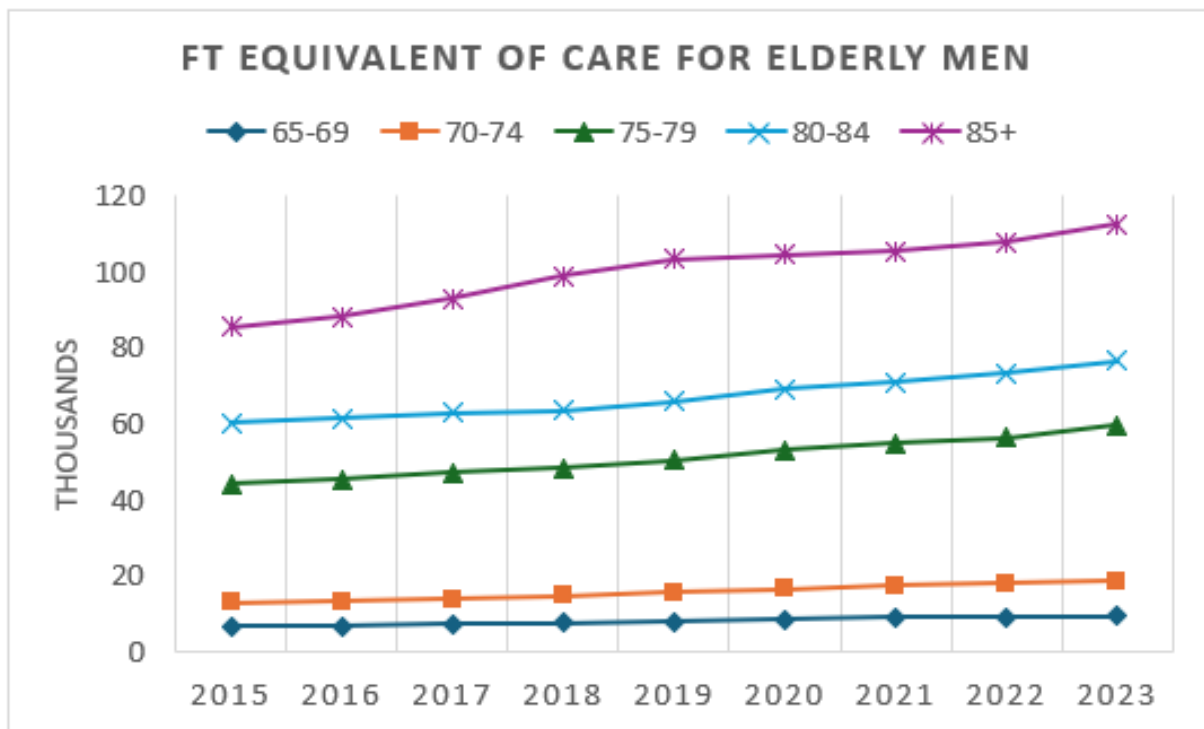
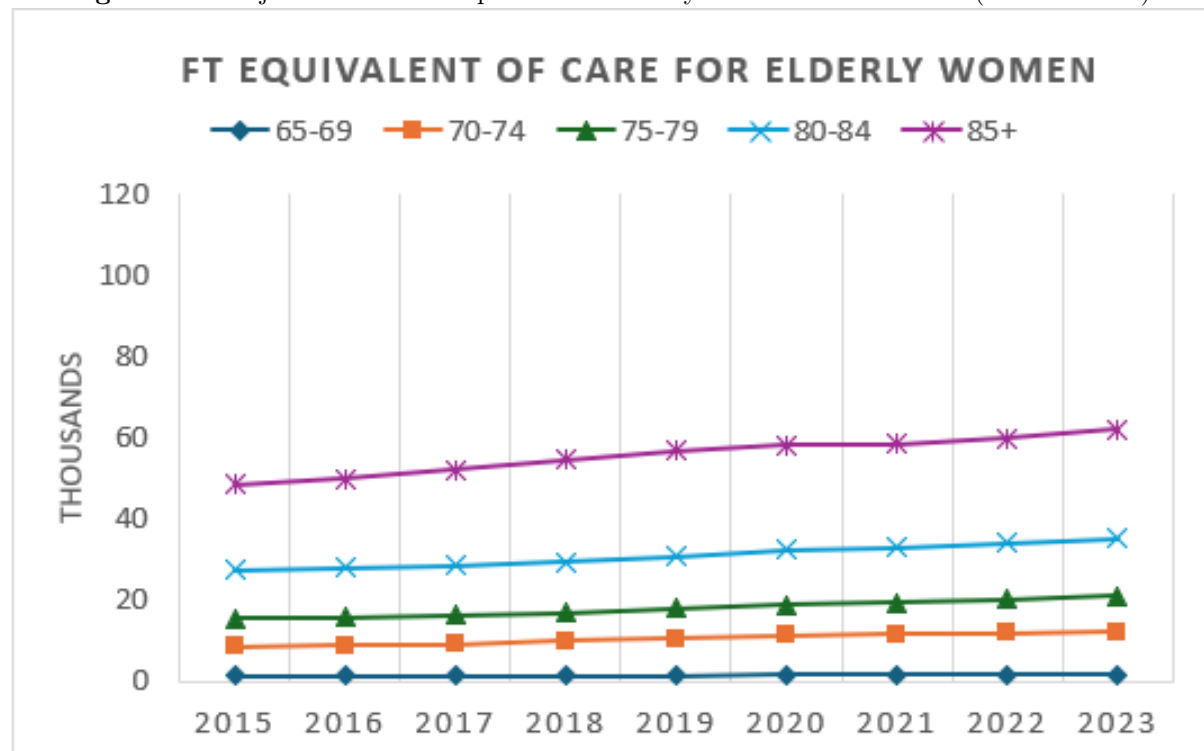


Figure 1b. Projected Full-time Equivalent of Elderly Care Needs of Women (in Thousands)



The potential dynamics are described as three effects that compete with each other. The substitution effect addresses the increase in the reservation wage with the emergence of caregiving responsibility, the income effect increases the tendency to participate in employment with the increasing need for financial resources to provide care, and respite care describes the willingness to work to take a break from caregiving. In the UK, where 75 to 80% of long-term elderly care is informal (Levine et al., 2010) and primarily provided by women, studies show that the substitution effect dominates the income effect and care provisioning negatively affects labor force participation, and/or increases the probability of leaving employment only if there is substantial time commitment (Carmichael, Charles and Hulme, 2010; Heitmueller, 2007). Lilly, Laporte, and Coyte (2007) assess the literature with a focus on the UK and the US and as the common ground of findings, they conclude that low levels of care provision may not greatly influence labor market participation yet those who are heavily involved are significantly more likely to withdraw from the labor market. Furthermore, coordination of multiple responsibilities is more challenging for the sandwiched caregivers and most often results in trimming of the work hours (De Rigne and Ferrante, 2012; Couch, Daly and Wolf, 1999; Williams, 2004; Spiess and Schneider, 2002; Keene and Prokos, 2007). Earlier we focused on identifying who provides care in families and explored more deeply the relationship between caring elderly and paid work for sandwiched-generation women. In both cases, we found evidence for the significance of the issue and relevance for current policy debates and discussions (İzdeş Terkoğlu and Memiş, 2022).

The impacts levied on the informal caregiver are not limited to labor market-related ones. Difficulties and complexity of caregiving, managing multiple roles without sufficient support, often lead to wearing out and sometimes burning out of the caregiver. Studies show that particularly, long-term and intensive care provisioning leads to deprivation in psychological and physical health, causing stress, depression, and chronic diseases, and degrading life quality of the caregiver by causing social isolation, leaving no time for oneself and causing family conflicts (Broe et al., 1999; Almberg et al., 1998; Gallichio et al. 2002; Beeson et al. 2000; Wilson et al., 2007; Reinhard et al., 2012). Overall, caregiving to a parent, with multiple roles and a lack of information on what to expect next for the aging parents, is a stressful path to walk. Rubin and White-Means (2009) compare those caring for their elderly parents with those who also have a child living at home. Their study shows that the sandwiched caregivers face higher subjective stress, burden, and strain and more often tend to feel that ‘they are pressured with more than they can handle’ and ‘they have no time left for themselves.’ Chassin et al. (2010) addresses the behavioral transformation of caregivers and underline that due to the combined effect of reduced available time and depression, sandwiched caregivers tend to compromise their health and their self-care, and their health behavior deteriorates.

Certainly, the availability of formal elderly care to support caregivers helps in managing multiple roles. In countries with better care systems, making work-care arrangements is more feasible, and neither employment probability nor health conditions of the care provider are as adversely impacted (Spiess and Schneider, 2002; Heger, 2014; Di Novi et al., 2015) In addition to the availability of public elderly care, provision of care to elderly parents and intergenerational support is closely related to the socio-economic status, ability to afford private care services, and pooling of income resources (Arber and Ginn, 1992;

Argyle, 2001 and Peek et al., 2000). Furthermore, from a policy perspective on long-term care needs, various issues such as why people prefer home care over institutional facilities are important and require more in-depth analysis with data compiled for specific purposes. Such an exploration would be useful to analyze the impact of changes in socioeconomic conditions, including the income opportunities of the elderly, such as pensions, and their situation in the face of the cost-of-living crisis³, on their caregiving decisions.

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³See Özar and Memiş (2024) for further discussion on elderly care and women's poverty issues in Turkey.

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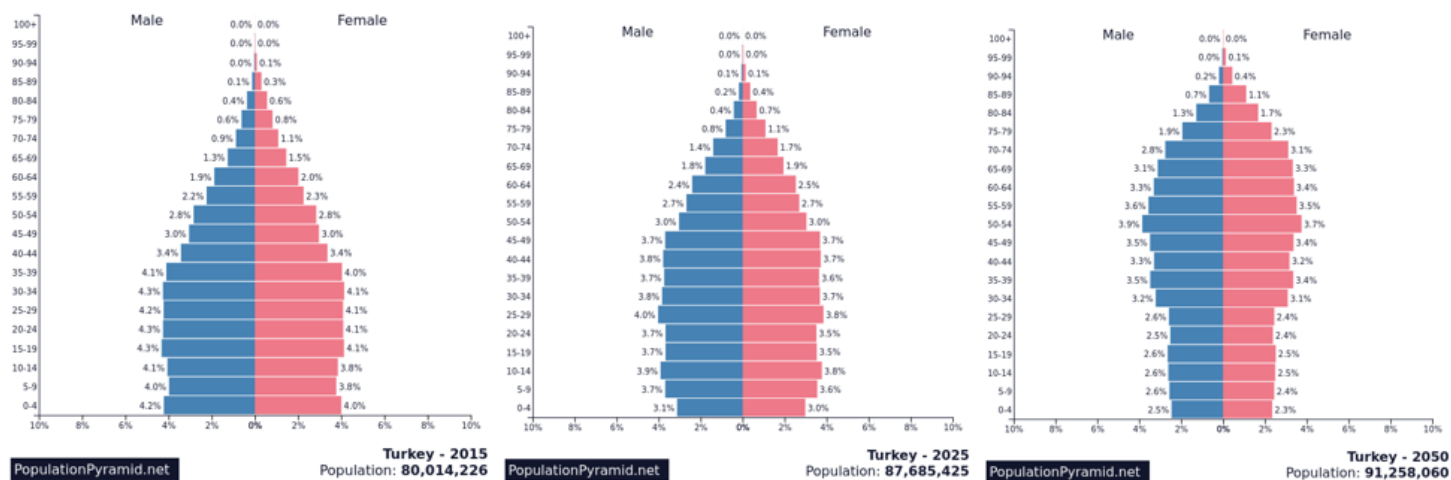
APPENDIX

Table A1. Population Statistics by Age Groups and Sex

		2015	2016	2017	2018	2019	2020	2021	2022	2023
65-69	M	1.100.734	1.132.464	1.188.986	1.245.979	1.301.371	1.399.052	1.508.990	1.523.412	1.554.059
	W	1.255.651	1.280.073	1.322.918	1.366.228	1.421.301	1.539.663	1.647.458	1.661.877	1.686.354
70-74	M	737.892	763.121	784.614	835.353	907.850	960.742	982.573	1.031.897	1.077.788
	W	888.292	917.371	952.653	1.021.569	1.109.063	1.170.963	1.192.451	1.232.222	1.267.553
75-79	M	501.411	512.607	533.757	539.825	560.695	583.671	598.307	617.021	656.329
	W	682.335	689.443	715.428	722.725	747.604	771.675	794.411	827.777	886.599
80-84	M	339.904	336.206	330.240	318.882	323.732	339.767	340.568	353.290	357.820
	W	470.584	473.119	471.436	474.854	493.998	521.432	520.841	540.167	546.603
85+	M	163.501	174.994	195.836	230.093	243.612	230.660	224.271	224.628	234.360
	W	354.935	372.105	399.517	430.696	441.501	435.930	435.254	439.378	455.341
Total		6.495.239	6.651.503	6.895.385	7.186.204	7.550.727	7.953.555	8.245.124	8.451.669	8.722.806

Source: Turkstat Population Statistics. General Population Censuses, 1935-2000, Address Based Population Registry System (ADNKS) 2007-1935.

Figure A1. Population Pyramids by Age Groups and Sex



Source: <https://www.populationpyramid.net/>