

## Future Living Arrangement Preferences of Middle-Aged Individuals in Turkey

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### Abstract

Turkey is swiftly transforming into an aging country due to its demographic dynamics. In Turkey predominant cultural values are "family-oriented". Older individuals are traditionally taken care of by family and the community. Today, a majority of the older age population lives in family households. While significant proportions of older adults live with their child(ren), societal change is altering co-residence patterns where older adults increasingly prefer to live independently ("Couples without resident children" or "One-person households"). We attempt to explore living arrangement preferences of middle-aged persons concerning their own old age. This study specifically intends to describe influences of family resources, socioeconomic status and cultural preferences on these preferences. Data is drawn from the 'Research on Family Structure 2011' survey. Multinomial Logistic Regression models are used to examine factors associated with older age living arrangement preferences. The analysis unit was individuals aged 50-59 who had at least one child. The findings show that individuals who have higher socioeconomic resources and have adopted more modern or secular attitudes are more likely to prefer 'nursing home' or 'home care service' options compared to 'co-residence with children'. On the other hand, those who have family resources and have adopted more traditional attitudes are more prone to choose to co-reside with their children. Familial and socioeconomic resources and cultural tendencies significantly influence preferences for old-age living arrangement choices. Considering ongoing trends of population aging and societal changes, demands and expectations of individuals regarding old age living arrangements and care needs may turn out to be among the increasingly pressing issues Turkey will face over the next one to two decades.

### Keywords:

family • home care • intergenerational relations • nursing home • values

## Türkiye'de Orta Yaşlı Bireylerin Gelecekteki Yaşam Aranjmanı Tercihleri

### Özet

Türkiye demografik dinamikleri nedeniyle hızla yaşlanan bir ülkedir. Türkiye'de kültürel değerler baskın olarak "aile odaklı"dir. Yaşlılar geleneksel olarak aile ve çevre tarafından bakılmaktadırlar. Günümüzde Türkiye'de, yaşlı nüfusun büyük çoğunluğu aile hanehalklarında yaşamaktadır. Yaşlıların öncemli bir bölümün çocuklarıyla birlikte yaşamasına karşın toplumsal değişikliklerle birlikte bu yerleşim modeli de değişmektedir. Günümüzde yaşlı yetişkinler giderek bağımsız yaşamayı tercih etmektedir ("çocuksuz çiftler" veya "tek kişilik haneler" şeklinde). Bu araştırma, ailevi ve sosyoekonomik kaynakların ve kültürel tercihlerin orta yaşlı bireylerin gelecekteki yaşam aranjmanlarına dair tercihlerine olan etkisini betimlemeye çalışmaktadır. Veriler, "2011 Türkiye Aile Yapısı" araştırmasından alınmıştır. Yaşlılık dönemine ilişkin yaşam aranjmanları ile ilgili faktörleri incelemek için Multinomial Lojistik Regresyon modelleri kullanılmıştır. Analiz birimi en az bir çocuk sahibi olan 50-59 yaşlarındaki bireylerdir. Bulgular, daha yüksek sosyoekonomik kaynaklara ve daha modern veya seküler bir bakış açısına sahip olan bireylerin, "huzurevi" veya "evde bakım" opsiyonlarını "çocuklarla birlikte yaşama"ya tercih ettiklerini göstermektedir. Öte yandan, ailevi kaynakları daha yüksek olan ve daha geleneksel bakış açısına sahip bireylerin, çocuklarıyla birlikte yaşama aranjmanını daha muhtemel olarak tercih ettikleri gözlemlenmiştir. Ailevi ve sosyoekonomik kaynakların ve kültürel eğilimlerin yaşlılık dönemi yaşam tercihlerini anlamlı derecede etkilemektedir. Türkiye'de süregelen nüfus yaşlanması ve sosyal değişim eğilimleri dikkate alındığında; bireylerin yaşlılık dönemi bakım ihtiyaçları ve yaşam aranjmanlarına ilişkin talep ve beklentilerinin bir on veya yirmi yıl içinde ihtimam gerektiren bir konu haline geleceği düşünülmektedir.

### Anahtar Kelimeler:

Aile • evde bakım • kuşaklararası ilişkiler • huzurevi • değerler

## Background

Population aging is one of the most critical social and demographic issues facing most countries throughout the world today. Although, its timing, pace and scale vary across countries, population ageing is an inevitable development for the societies completing their demographic transition. Today, Turkey is also notably an ageing country. The population of 65 years of age and over is expected to grow from the current 7.7 percent to approximately 10 percent of the population in 2023, an increase of about 2.7 million persons (TSI, 2013). That means Turkey will soon enter the “old population” category according to United Nations classification (United Nations, 2007).

Issues concerning family composition and living arrangements are also becoming important as population aging shows its influence on societies (Bongaarts & Zimmer, 2001; Yi, 2008). Especially in the developing world, old age populations mainly depend on their children as the main provider of psychological and material support and care. Institutionalization rates are usually low due to lack of specialized facilities and cultural dispositions like filial obligations (Kevin & He, 2009). On the other hand, the forces of modernization: rapid socio-economic development, urbanization, migration, increasing labor force participation of women, increasing education levels, rise of secular-rational values at the expense of traditional-religious values and individualisation compels us to review sustainability of the prevalent intergenerational co-residence and interdependence patterns (Aytaç, 1998; Kalaycıoğlu & Rittersberger-Tılıç, 2000; Tufan & Yazıcı, 2009).

Today, according to cross-country comparisons, general trends in living arrangements of older people show that, on the one hand, there is a trend in the decline of co-residence with adult children arrangements, and, on the other hand,

there is an increase in independent forms of living arrangements—alone or with spouse only (United Nations 2017). Mutual responsibility between the generations increasingly more meet with spatial proximity. The “living nearby” arrangement allows for maintenance of both close family ties and higher levels of privacy at the same time (Gierveld, 2009, Karagiannaki, 2011). As a matter of fact, nowadays, in settings where certain levels of affluence and social change towards modernization have been reached, older adults often desire to maintain a certain level of autonomy in daily life.

### *Living arrangement of older adult population in Turkey*

Table 1 shows living arrangements of older adults (aged 65 or over) in Turkey according to TDHS-2008 and 2013 results. The majority of older adults, 8 out of 10, live in some form of family household. Figures in Table 1 show that the proportion of older adults co-residing with child(ren), whether in nuclear or extended family household form, declined by about 8 percentage points over time, from 52.8% in 2008 to 44.4% in 2013. A significant amount of this decline stemmed from the decline in living in extended family form, 34% to 27%. This trend is actually concurrent with an increase in the proportion of older persons that lived independently (sum of the “Couples without resident children” and “One-person households” categories) from 44.9% to 52.1% (7.2 percentage points). Similarly, the propensity to live in a multi-person household rose 1.2 percentage points. Nearly 1 out of 6 older persons live in one-person households according to TDHS-2013 results. Older women are almost 3 times more likely than their male counterparts to live alone.

**Table 1.** Living arrangement of older adults (aged 65 or over) in Turkey according to TDHS-2008 and 2013: Percentage distribution of aged 65 or over household members by family and non-family households

|                                               | <b>TDHS-2008</b> | <b>TDHS-2013</b> | <b>Difference</b> |
|-----------------------------------------------|------------------|------------------|-------------------|
|                                               | <b>(1)</b>       | <b>(2)</b>       | <b>(2)-(1)</b>    |
| <b>Family Households</b>                      | <b>86,2</b>      | <b>82,0</b>      | <b>-4,2</b>       |
| Nuclear family                                | 52,2             | 55,0             | 2,8               |
| Couples without resident children             | 33,4             | 37,6             | 4,2               |
| Couples with at least one resident child      | 12,9             | 11,7             | -1,2              |
| Lone parents with at least one resident child | 5,9              | 5,7              | -0,3              |
| Extended family                               | 34,0             | 27,0             | -6,9              |
| <b>Non-family Households</b>                  | <b>13,8</b>      | <b>18,0</b>      | <b>4,2</b>        |
| One-person households                         | 11,5             | 14,5             | 3,0               |
| Single male                                   | 2,5              | 3,7              | 1,2               |
| Single female                                 | 9,0              | 10,8             | 1,8               |
| Multi-person households                       | 2,3              | 3,5              | 1,2               |
| <b>Total</b>                                  | <b>100,0</b>     | <b>100,0</b>     |                   |

Source: Prepared by author using information given in Koç. et. al., (2015: 28)

TDHS: Turkey Demographic and Health Survey

**Table 2.** Number, capacity the number of individuals looked after, and proportions of occupancy of nursing homes in Turkey, 2017 (December)

| <b>Type of nursing home</b>                                                            | <b>Number of nursing homes</b> | <b>Capacity</b> | <b>Number of individuals looked after</b> | <b>Proportion of fullness (%)</b> |
|----------------------------------------------------------------------------------------|--------------------------------|-----------------|-------------------------------------------|-----------------------------------|
| Nursing homes affiliated with The General Directorate of Disability and Elder Services | 144                            | 14 793          | 13 692                                    | 92.5                              |
| Old age homes                                                                          | 47                             | 179             | 164                                       | 91.6                              |
| Nursing homes affiliated with other ministries                                         | 2                              | 570             | 566                                       | 99.3                              |
| Nursing homes affiliated with local municipalities                                     | 22                             | 3 402           | 2 381                                     | 69.9                              |
| Nursing homes affiliated with associations and foundations                             | 29                             | 2 454           | 1 717                                     | 69.9                              |
| Nursing homes affiliated with minorities                                               | 5                              | 508             | 355                                       | 69.8                              |
| Private nursing homes                                                                  | 182                            | 10 184          | 7 128                                     | 69.9                              |
| Total                                                                                  | 384                            | 32 090          | 26 003                                    | 81.0                              |

Source: Engelli ve Yaşlı Hizmetleri Genel Müdürlüğü, 2018

In Turkey, institutional care services provided older adult populations are mainly categorized in two headings: "Nursing homes", "Older adult care and rehabilitation centers". Nursing homes are the boarding social work institutions that are found to be satisfying the social and psychological needs of individuals aged 60 years and over. Nursing homes are managed by the General Directorate of Disabled and Older Adult Services, by other ministries, and by local municipalities, non-profit organizations and the private sector. According to official figures pertaining to 2017, the total capacity of all nursing homes is 32,090 and occupancy rates are at 81 per cent (see Table 2).

Older adult care and rehabilitation centers are also boarding social work institutions though they have different purposes; these institutions aim at satisfying special health care needs of those older adults who have mental or physical deterioration. Both the number and capacity of these types of facilities have rapidly increased in recent years due to increasing interest of the private sector. There were 74 centers in 2007 for 4,349 persons in total. The number and capacity of centers has increased to 399 centers accommodating 24,474 persons, respectively, in 2014. Occupancy rates of public nursing care centers is around 90 percent whereas it is around 75 percent for private centers (TSI, 2015: 79).

Home care services are a community based care option that come to the fore when an individual becomes dependent on other persons for assistance. In Turkey home care services can be categorized into three headings; i) unofficial and paid services; individuals pay for the service from their own private financial sources, ii) unofficial and unpaid service are provided by adult children or other close relatives or neighbours, and iii) official services are provided by particularly founded institutions serving well-being and health services to disabled and older individuals (Öztop, Sener, & Güven, 2008).

In the latest 'Family Structure in Turkey 2016 (TAYA-2016)' research, individuals age 18 and over were asked the question of how they want to live in older adult ages when they are too old to care for themselves. The majority of participants (37.6%) opted for co-residence with their children. The second most desired living arrangement was getting home care service with 29.4%, and the third one was living in a nursing home with 11%. On the other hand, nearly one out of five of the participants did not have any idea about where they would live in their older years. As for the 65 and older age group, those who chose co-residence with their children was 51.3%. Home care service was the second choice with 28% and the least preferred option was to live in a nursing home with 7.7% (TSI and MFSP, 2017).

### **Aims**

Exploring the preferences and expectations of middle-aged persons about their later years is an important research topic in population aging research. This research topic has close relations to social policy planning due to the fact that, in about one or two decades, most of the members of this generation will have moved beyond age 65. Today, rapid and perpetual economic and social changes lead to increased diversity among individuals in terms of their socioeconomic situation, cultural attributes, and health conditions. Each age cohort and/or various social groups in the same age cohort would have diverse preferences and expectations about their future. Therefore, in order to develop appropriate social policies for the future, I need to take into account diversification of life circumstances of aging individuals and the influence of these circumstances on individual's preferences.

This prevalence study aims to make a contribution to the literature in this direction. The living arrangement patterns in old age are closely

interrelated with the type and extent of support one can obtain from ones family. Sociological life course perspective argues that continuities and cumulative experiences of an individual turn out to be determining factors of subsequent transitions they will experience in the future (Wingens, Valk, Windzio, & Aybek, 2011). For instance, having large numbers of children would be an enabling factor to prefer co-residence with children instead of solitary living. On the contrary, having few children, in other words a deficiency with respect to this demographic resource, might be an inhibiting factor in making the same preference. In the same fashion, individuals who have attained higher levels of socioeconomic resources and/or a more individualistic outlook throughout their lives would be more likely to choose non-traditional living arrangement patterns over the traditional ones. In contrast, those individuals who lack socioeconomic resources and/or have not gained individualistic values over against collectivist ones are less likely to do so given the same choices. In brief, demographic, socioeconomic and cultural attributes of middle-aged individuals are the three key resources that can be seen in the individual-level constitutive elements of their old age living arrangement preferences. Thereby, I suppose that demographic, socioeconomic and cultural attributes of middle-aged individuals in Turkey can be seen as their personal resources that enable or inhibit them when making preference among traditional or non-traditional old age living arrangement patterns.

## Methodology

Data of this study stems from "Research on Family Structure in Turkey" (RFST-2011) that was conducted by the General Directorate of Family and Community Services of the Turkish Ministry of Family and Social Policies (GDFSR). RFST-2011 is based on the three-phase, multi-layer and randomized sample which targeted to represent rural and urban Turkey, NUTS Level 1

as well as Ankara and İzmir. The fieldwork was conducted between August and October 2011. As part of this research, information was collected from 12,056 households and 44,117 household members. Furthermore, detailed interviews have been conducted with 23,279 household members who were 18 years of age or older.

The unit of analysis for this study is individuals aged 50-59 who have at least one living child. This group represents the middle aged generation who may potentially live with their child(ren) in the future. This group is comprised of 3,065 individuals.

### *Dependent variable:*

In RFST-2011, information on old age living arrangement preferences of respondents is gathered via the following question: How would you like to live when you get too old to look after yourself? The dependent variable of the study is a categorical variable consisting of five groups: "Going to a nursing home", "co-residence with children", "taking home care service", "no idea" and "other". As given in Table 2, 4 out of 10 individuals voiced preference to co-reside with their children when they feel too feeble to look after themselves. Those participants who choose non-traditional living arrangement patterns, such as a nursing home or home care services, was composed of 30.4 per cent.

As stated in the purpose of study section, the analysis adjusted for three main dimensions, namely, family resources, socio-economic resources and cultural attributes. Each dimension contains a different number of independent variables. The independent variables are arranged in a way that the last category in each forms a point of reference for that variable.

**Table 3.** Descriptive statistics for the dependent variable (50-59 age group)

| Dependent Variable                                                                                           | Levels                                                  | N    | %     |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------|-------|
| Living Arrangement Preferences:<br>"How would you like to live when you get too old to look after yourself?" | Go to a nursing home                                    | 313  | 10,2  |
|                                                                                                              | <b>Co-residence with Children (comparison category)</b> | 1288 | 42,0  |
|                                                                                                              | Take home care services                                 | 620  | 20,2  |
|                                                                                                              | No idea                                                 | 755  | 24,6  |
|                                                                                                              | Other                                                   | 72   | 2,3   |
|                                                                                                              | Missing                                                 | 17   | 0,6   |
|                                                                                                              | <b>Total</b>                                            | 3065 | 100,0 |

**Table 4.** Descriptive Statistics for (Categorical) Independent Variables

| Independent Variables    |                                          | Levels                                                | N     | %    |
|--------------------------|------------------------------------------|-------------------------------------------------------|-------|------|
| Family Resources         | Total Number of Children                 | 1 Child                                               | 255   | 8,3  |
|                          |                                          | 2 Children                                            | 928   | 30,3 |
|                          |                                          | 3 Children                                            | 874   | 28,5 |
|                          |                                          | 4 Children                                            | 485   | 15,8 |
|                          |                                          | <b>5+ Children (ref.)</b>                             | 523   | 17,1 |
|                          | Family Types                             | Solitary                                              | 113   | 3,7  |
|                          |                                          | Single Parent                                         | 150   | 4,9  |
|                          |                                          | Husband & Wife                                        | 849   | 27,7 |
|                          |                                          | Husband&Wife and Child(ren)                           | 1440  | 47,0 |
|                          |                                          | Non Family Household                                  | 27    | ,9   |
| Socioeconomic Resources  | Education                                | <b>Extended Family (ref.)</b>                         | 487   | 15,9 |
|                          |                                          | College/University or above                           | 266   | 8,7  |
|                          |                                          | High School                                           | 334   | 10,9 |
|                          |                                          | Secondary                                             | 314   | 10,2 |
|                          |                                          | Primary                                               | 1627  | 53,1 |
| Sociocultural Attributes | Types of Place of Residence Until Age 18 | <b>Have not completed a level of schooling (ref.)</b> | 523   | 17,1 |
|                          |                                          | Province center/Abroad                                | 669   | 21,7 |
|                          |                                          | Township                                              | 984   | 32,1 |
|                          |                                          | <b>Village (ref.)</b>                                 | 1413  | 46,1 |
|                          | <b>Total</b>                             | 3065                                                  | 100,0 |      |

**Table 5.** Descriptive Statistics for (Index) Independent Variables

|                | Asset Index | Social Tolerance | Religiosity | Filial Obligation |
|----------------|-------------|------------------|-------------|-------------------|
| Mean           | 25,30       | 22,61            | 60,40       | 81,55             |
| Std. Deviation | 13,955      | 24,320           | 22,350      | 24,763            |
| Min            | 0           | 0                | 0           | 0                 |
| Max            | 100         | 100              | 100         | 100               |
| Missing cases  | 189         | 121              | 13          | 15                |

Family resources dimension:

1) "Total number of children" shows the number of children that a respondent has; categories are "1 child", "2 children", "3 children", "4 children" and "5 or more children".

2) "Family Types" presents the current living arrangement of participants. There are 6 categories for this variable: "Solitary", "Single Parent", "Husband & Wife", "Husband & Wife and Child(ren)", "Non Family Household" and "Extended Family".

*Socio-economic resources dimension:*

Measures of household socioeconomic status can be reflected by information on income, consumption or expenditure. However, the collection of accurate income and consumption data are very difficult tasks for household surveys. Under these circumstances, principal components analysis (PCA) can be used to create an asset index (Rutstein & Johnson, 2004; Vyas & Kumaranayake, 2006). I have computed an asset index using availability of household durable items that are supposed to capture socioeconomic differences among households. Thus, this variable can be seen as a proxy variable to represent socioeconomic conditions of middle-aged individuals. Appendix tables show the detailed list of variables used in this procedure. Min-Max normalization procedure employed to normalize the generated factor scores that normalized the distribution to have a range of 0-100. Lastly, the distribution is divided at the points that form the five 20 percent sections so as to form a categorical variable:

1) "Asset Index" is a categorical variable that is supposed to represent socioeconomic status of households. It has 5 categories; "Highest", "High", "Middle", "Low" and "Lowest" groups.

2) "Education" is a categorical variable that provides information about attained level

of education. There are 6 categories for this variable: "College/University or above", "High School", "Secondary", "Primary", and "Have not completed a level of schooling".

*Cultural tendencies dimension:*

I have followed a similar procedure to that mentioned above. Factor scores again normalized in a way that the distribution has had a range of 0-100. Lastly, each distribution is categorized into three equal groups (33 per cent sections): "Low", "Middle" and "High". A detailed list of items and further explanations about the procedure can be found as a table in the Appendix.

1) "Types of Place of Residence Until Age 18" intends to show whether a participant has a rural or urban background.

2) "Social Tolerance Index" is assumed to show to what extent a participant sees certain individualistic behaviors as acceptable. Items we employed to form this index are representing atypical situations in Turkey's collectivistic cultural setting. For example, if a person gets a "High" value from this index we suppose that he/she has a high degree of permissiveness for marriages between individuals from different religious or ethnic backgrounds.

3) "Religiosity Index" shows religiousness of a participant. The items used in construction of this variable measure the extent to which a participant considers religious precepts in his/her decision making; namely in choosing: spouse, friend, neighbor, job, political party to vote for, dressing and eating. If religion has a decisive role in most of these decisions, then that participant receives a "High" value in the Religiosity Index.

4) "Filial Obligation Index" presents to what extent a participant values having a son or daughter and to what extent they have

expectations of their children (today and in the future). For example, higher degree of consent about the statements “The child provides material support to his parents when he grows up” and “The child takes care of his parents when they are old” means that participant received “High” value in the Filial Obligation Index.

Background characteristics of the study population are provided in Tables 4 and 5.

### *Method of analysis*

Multinomial Logistic Regression models are used to evaluate factors associated with older age living arrangement preferences. Multinomial logistic regression is the extension for the (binary) logistic regression when the categorical dependent outcome has more than two categories (Retherford & Choe, 1993; Chan, 2005). Analysis display, if an independent variable, has an effect on the outcome of the dependent variable, and if so, gives information about the size of that effect.

In the analysis, a reference category of a dependent variable has to be chosen for comparison. In this study, preferring to stay with children was chosen as a reference category, for it is the most frequently preferred old age living arrangement pattern. The odds ratios display how the risk of preferring other options, namely, the ‘nursing home’, ‘home care services’ and ‘not having any idea’ compared to risk of preferring ‘co-residence with children’ changes with the independent variable in question, while holding all other variables constant in the models. Parameters with significant positive (negative) coefficients increase (decrease) the likelihood of that response category with regard to the reference category.

## **Results**

The multinomial logistic regression analysis indicates to what extent differences in old age

living arrangement preferences arise due to differences in family resources, socioeconomic resources and cultural tendencies. The model results are presented in Table 5. The indicators about model fitting information show that the model with all independent variables outperformed the null model (i.e. model without any independent variable). - 2 Log Likelihood (-2LL) is lower for the final model (6122,0) than the null model (6681,9); this shows inclusion of independent variables has improved upon the null model. The Likelihood Ratio chi-square test,  $p < .001$ , also indicates that our model predicts significantly better than the null model.

### *Effect of family resources*

The number of children has a significant influence for “going to nursing home” option relative to co-residence with children preference. The lesser the number of children a participant has the higher the likelihood they will opt for “going to nursing home” option instead of choosing co-residence with children. For instance, of those middle-aged participants with one child, odds ratio of preferring “going to nursing home” option is more than 4.3 times higher than the “co-residence with children” choice, given the other variables in the model are held constant.

There is high-level relationship between participant’s prevalent family type and their old age living arrangement preferences. Those participants living alone, in non-family households, in husband & wife and in husband & wife and children family types are respectively more prone to choose “nursing home” and “home care” options compared to middle-aged individuals living in extended family households. That is, given all other independent variables remain constant, the simpler the form of participant’s family type, the more likely they will choose non-traditional old age living arrangement patterns.

*Effect of socioeconomic resources:*

The model findings about the asset index variable has shown that those participants who got the highest level in this index are more likely to prefer a non-traditional old age living arrangement pattern compared to the participants who live in the least affluent households. That is, for the highest level of affluence relative to the lowest level, the relative risk of preferring nursing home and home care would be expected to increase by nearly two times, given that other variables remain constant.

Likewise, when the effect of the education level is considered, we found that those participants who have at least obtained a university or college degree, compare to those who have not completed a school, are more than 2 times more likely to prefer going to a "nursing home" and receiving "home care" options relative to the "co-residence with children" option. Moreover, the relative risk of high school and primary school graduates preferring the "home care" arrangement over "co-residence with children", is also higher than that of uneducated individuals, given all other independent variables in the model remain constant.

*Effect of cultural tendencies:*

Cultural tendency variables also have significant influence on old age living arrangement preferences. For the province center/abroad type of residence until age 18, relative to village type residence, the odds ratio of choosing "nursing home" to "co-residence with children" would be expected to increase by a factor of 2.28. There is a similar result when comparing "home care" preference relative to "co-residence with children". That is, those participants who lived in a province center/abroad or in township until the age of 18 are more likely to choose modern options of old aged living arrangements over co-residence with children than those participants

originating from villages.

High individualistic values are seen to lead participants to prefer the "nursing home" option in old age living arrangement relative to the "co-residence with children" choice. Likewise, participants who are less religious and have a low level of filial expectations are more likely to prefer modern types of old age living arrangements.

**Discussion**

Turkey is a country where predominant cultural values are familistic and relations among family members are strong. Care of older adults is accepted as the responsibility of family and the community by tradition. Nevertheless, intensive social and economic factors such as urbanization, economic development, female labor force participation, migration, secularization and changing life styles, increasing level of education have been transforming Turkey's social structure into a modern, urban and industrial one. The persisting familistic practices are more and more intertwined with cultural trends of modern urban middle-class. There has been a trend of transition from complex and crowded family types to simple and small (i.e. nuclear) families where increasingly more older people live near their adult children as opposed to residing with them. In brief, Turkey is in a period wherein relations and interdependencies between cohorts are being redefined along with increasing diversity in society.

This study aimed to provide insight into the old-age living arrangement preferences and care expectations of middle-aged individuals, between 50 and 59 years of age, in Turkey. We found that middle-aged individuals preferences are related mainly with their familial and socioeconomic resources and cultural attributes. These three main factors could be seen as important resources that enable or constrain individuals in making preference among

Table 6 – Multinomial logistic regression analysis to identify factors associated with preferring nursing home service or home care services relative to co-residence with children option

|                                           | Nursing home relative to co-residence with child(ren) |                                    | Home Care relative to co-residence with child(ren) |                                    |
|-------------------------------------------|-------------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
|                                           | Odds ratio                                            | 95% Confidence Interval for Exp(B) | Odds ratio                                         | 95% Confidence Interval for Exp(B) |
| <b>Total Number of Children</b>           |                                                       |                                    |                                                    |                                    |
| 1 Child                                   | 4.28***                                               | (2.08 - 8.80)                      | 0.86                                               | (0.51 - 1.44)                      |
| 2 Children                                | 2.97**                                                | (1.57 - 5.63)                      | 1.19                                               | (0.83 - 1.69)                      |
| 3 Children                                | 1.92**                                                | (1.01 - 3.65)                      | 0.90                                               | (0.64 - 1.27)                      |
| 4 Children                                | 3.04**                                                | (1.54 - 5.99)                      | 1.73                                               | (1.20 - 2.51)                      |
| <b>5+ Children (ref.)</b>                 | 1.00 (ref)                                            |                                    | 1.00 (ref)                                         |                                    |
| <b>Family Types</b>                       |                                                       |                                    |                                                    |                                    |
| Solitary                                  | 3.77**                                                | (1.64 - 8.65)                      | 3.41***                                            | (1.77 - 6.56)                      |
| Single Parent                             | 1.58                                                  | (0.77 - 3.23)                      | 0.74                                               | (0.39 - 1.41)                      |
| Husband & Wife                            | 1.83**                                                | (1.08 - 3.09)                      | 2.03***                                            | (1.42 - 2.89)                      |
| Husband&Wife and Child(ren)               | 1.72**                                                | (1.06 - 2.77)                      | 1.83***                                            | (1.32 - 2.52)                      |
| Non Family Household                      | 3.66**                                                | (1.06 - 12.6)                      | 1.60                                               | (0.45 - 5.70)                      |
| <b>Extended Family Household (ref.)</b>   | 1.00 (ref)                                            |                                    | 1.00 (ref)                                         |                                    |
| <b>Asset Index</b>                        |                                                       |                                    |                                                    |                                    |
| Highest                                   | 2.20**                                                | (1.09 - 4.43)                      | 1.98**                                             | (1.37 - 2.88)                      |
| High                                      | 1.61                                                  | (0.86 - 3.04)                      | 1.29                                               | (0.91 - 1.83)                      |
| Middle                                    | 1.09                                                  | (0.58 - 2.04)                      | 1.47**                                             | (1.05 - 2.06)                      |
| Low                                       | 1.05                                                  | (0.63 - 1.73)                      | 1.70**                                             | (1.19 - 2.43)                      |
| <b>Lowest (ref.)</b>                      | 1.00 (ref)                                            |                                    | 1.00 (ref)                                         |                                    |
| <b>Education</b>                          |                                                       |                                    |                                                    |                                    |
| College/University or above               | 2.20**                                                | (1.09 - 4.43)                      | 3.01***                                            | (1.72 - 5.28)                      |
| High School                               | 1.61                                                  | (0.86 - 3.04)                      | 2.19**                                             | (1.36 - 3.53)                      |
| Secondary                                 | 1.09                                                  | (0.58 - 2.04)                      | 1.07                                               | (0.68 - 1.71)                      |
| Primary                                   | 1.05                                                  | (0.63 - 1.73)                      | 1.41*                                              | (1.01 - 1.96)                      |
| <b>Have not completed a school (ref.)</b> | 1.00 (ref)                                            |                                    | 1.00 (ref)                                         |                                    |

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.001$

**Table 6** – Multinomial logistic regression analysis to identify factors associated with preferring nursing home service or home care services relative to co-residence with children option (Continues)

|                                     | Nursing home relative to co-residence with child(ren) |                                    | Home Care relative to co-residence with child(ren) |                                    |
|-------------------------------------|-------------------------------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|
|                                     | Odds ratio                                            | 95% Confidence Interval for Exp(B) | Odds ratio                                         | 95% Confidence Interval for Exp(B) |
| <b>Residence type until age 18</b>  |                                                       |                                    |                                                    |                                    |
| Province center/Abroad              | 2.28***                                               | (1.53 - 3.39)                      | 1.30*                                              | (0.97 - 1.76)                      |
| Township                            | 1.81**                                                | (1.25 - 2.63)                      | 1.53**                                             | (1.18 - 1.96)                      |
| <b>Village (ref.)</b>               | 1.00 (ref)                                            |                                    | 1.00 (ref)                                         |                                    |
| <b>Individualistic Values Index</b> |                                                       |                                    |                                                    |                                    |
| High                                | 1,39*                                                 | (0.96 - 2.01)                      | 1,25                                               | (0.95-1.65)                        |
| Middle                              | 0,84                                                  | (0.55 - 1.27)                      | 1,20                                               | (0.91-1.58)                        |
| <b>Low (ref.)</b>                   | 1,00 (ref)                                            |                                    | 1,00 (ref)                                         |                                    |
| <b>Religiosity Index</b>            |                                                       |                                    |                                                    |                                    |
| Low                                 | 2,37***                                               | (1.61 - 3.49)                      | 1,51**                                             | (1.15 - 2.00)                      |
| Middle                              | 1,08                                                  | (0.72 - 1.63)                      | 0,81                                               | (0.62 - 1.07)                      |
| <b>High (ref.)</b>                  | 1,00 (ref)                                            |                                    | 1,00 (ref)                                         |                                    |
| <b>Filial Obligation Index</b>      |                                                       |                                    |                                                    |                                    |
| Low                                 | 1,64**                                                | (1.09 - 2.47)                      | 1,48**                                             | (1.10 - 2.00)                      |
| Middle                              | 1,15                                                  | (0.81 - 1.70)                      | 1,07                                               | (0.83 - 1.37)                      |
| <b>High (ref.)</b>                  | 1,00 (ref)                                            |                                    | 1,00 (ref)                                         |                                    |
| R <sup>2</sup> (Nagelkerke)         | 0,204                                                 |                                    |                                                    |                                    |
| Wald F                              | 111,544                                               |                                    | 117,963                                            |                                    |

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.001$

traditional or non-traditional living arrangement patterns.

Middle-aged individuals who have fewer children, live in small and simple families, live in more affluent conditions, have a high level of education, are exposed to urban environments longer and have embraced individualistic values, and have modern and secular values are significantly more likely to prefer non-traditional living arrangement patterns over a “co-residence with children” arrangement. In contrast, our analysis has shown that having high numbers of children and living in more complex households, in low socioeconomic status and having adopted popular collectivistic, traditional and religious values are associated with increased propensity to choose a “co-residence with children” living arrangement pattern over other options. This finding suggests that having high familial resources is an enabling factor for middle-aged individuals to prefer a traditional living arrangement pattern. On the other hand, lack of socioeconomic resources might inhibit choosing a non-traditional path for old age living arrangements. Less affluent middle-aged individuals presumably prefer to stay with their children more often because they might think that their socio-economic resources will be insufficient to obtain the services provided by the private care market.

Preferences of these individuals are subject to change over time in relation to changes in local environmental, individual, institutional and political conditions. This is one of the limitations of the study. Thus, studies in this direction need to be repeated at regular intervals. Additionally, the factors that determine the preferences of individuals in Turkey need to be examined under different scientific models.

Modernization experiences of several societies has shown that there is important relationship between rising levels of education, affluence

and rise in individualism. Considering ongoing trends of population aging and societal changes, we argue that demand and expectations of individuals regarding old age living arrangements and care needs may turn out to be among the more pressing issues that Turkey will face over the next one or two decades.

The magnitude of importance of this issue will likely depend upon the expansion rate of the urban middle class and to what extent they will serve as a model of behavior for social segments, including socioeconomically less affluent and culturally more traditionalistic segments of society. In this respect, we anticipate that prevalence of co-residence with adult children will continue to decline in Turkey along with declining fertility rates, increases in educational levels and income, and the spread of non-traditional outlooks on life. Even so much so that some parts of middle-aged individuals who would prefer to live with their children in their old age may not be able to do so due to declines in adherence to traditional patterns among younger generations. Regarding the fact that old age care institutions, in particular nursing homes, have been negatively stigmatized in Turkey, there would be increasing demand for home care services. Presently, such services are mainly provided by adult children of older adults, and there is an acute shortage of qualified professional personnel working in this field. Social policies should be directed such that both the number and quality of service providers in the home care services area should be raised rapidly.

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**ANNEX: Construction of Index variables**

| Indexes                       | Items used to construct indexes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Asset Index</b>            | <p><b>Residential heating system:</b> (0: no, 1: yes)</p> <ul style="list-style-type: none"> <li>- central heating</li> <li>- independent boiler</li> <li>- space heaters</li> </ul> <p><b>Ownership of residence:</b> (0: no, 1: yes)</p> <p><b>Ownership of household durables:</b> (0: no, 1: yes)</p> <ul style="list-style-type: none"> <li>- internet connection</li> <li>- gas/electric oven</li> <li>- microwave oven</li> <li>- food processor/mixer/blender</li> <li>- dishwasher</li> <li>- garbage disposal</li> <li>- washing machine</li> <li>- dryer</li> <li>- iron</li> <li>- vacuum cleaner</li> <li>- LCD/plasma television</li> <li>- paid TV channels</li> <li>- satellite TV</li> <li>- camcorder</li> <li>- DVD/VCD player</li> <li>- camera</li> <li>- laptop computer</li> <li>- desktop computer</li> <li>- private car</li> <li>- taxi/minibus/bus</li> <li>- tractor</li> </ul> <p><b>Index Construction:</b> The higher the socioeconomic status, the higher is the index value derived from the Principal Component Analysis.</p> <p>Factor scores derived from the analysis results are divided into five equal groups and turned into categorical variable:</p> <p>5. Lowest, 4. Low, 3. Middle, 2. High, 1. Highest</p> |
| <b>Social Tolerance Index</b> | <p><b>Agreement with statements: 1: I agree, 3: I don't agree</b></p> <ul style="list-style-type: none"> <li>- Couples can live together out of wedlock (official or religious)</li> <li>- Men can marry women from a different religion or nationality</li> <li>- Women can marry from a different religion or nationality</li> <li>- Couples can have children out of wedlock</li> <li>- One could marry a person s/he met on the Internet</li> <li>- Confession is not an issue in marriage</li> </ul> <p><b>Index Construction:</b> The higher having individualistic values, the higher is the index value derived from the Principal Component Analysis.</p> <p>Factor scores derived from the analysis were divided into three equal groups and turned into categorical variable:</p> <p>1. High, 2. Average, 3. Low</p>                                                                                                                                                                                                                                                                                                                                                                                                                          |

**ANNEX: Construction of Index variables (continue)**

| Indexes                        | Items used to construct indexes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Religiosity Index</b>       | <p><b>How important is your religious belief to: 1: Not at all, 5: Very</b></p> <ul style="list-style-type: none"> <li>- Spouse selection</li> <li>- Friend selection</li> <li>- Neighborhood relations</li> <li>- Job selection</li> <li>- Voting</li> <li>- Clothing</li> <li>- Food selection</li> </ul> <p><b>Index Construction:</b> The higher the religiosity, the higher is the index value derived from the Principal Component Analysis.</p> <p>Factor scores derived from the analysis results are divided into three equal groups and turned into categorical variable: 1. High, 2. Average, 3. Low</p>                                                                                                                                                                           |
| <b>Filial Obligation Index</b> | <p><b>Agreement with statements: 1: I agree, 3: I don't agree</b></p> <ul style="list-style-type: none"> <li>- Only male children continue the bloodline</li> <li>- Daughters are closer to the family</li> <li>- Male children increase the mother's prestige</li> <li>- Having children helps spouses grow closer</li> <li>- The child provides material support to his parents when he grows up</li> <li>- The child takes care of his parents when they are old</li> </ul> <p><b>Index Construction:</b> The higher the filial obligations, the higher is the index value derived from the Principal Component Analysis.</p> <p>Factor scores derived from the analysis results are divided into three equal groups and turned into categorical variable: 1. High, 2. Average, 3. Low</p> |